2021 Hazardous Waste Scanning Project

File Form Naming Convention.

(*File_Type*).(*Program*).(*Site_Number*).(*YYYY-MM-DD*).(*File_Name*).pdf

Note 1: Each category is separated by a period "."
Note 2: Each word within category is separated by an underscore "_"

Specific File Naming Convention Label:

Report. HW. 915008A. 1988-01-01. Phase_I .pdf

915008A

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE I INVESTIGATION

Ashland Petroleum Corp.
Town Of Tonawanda

Site No. 915008A
Erie County

Prepared for:

New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233
Thomas C. Jorling, *Commissioner*

Division of Hazardous Waste Remediation
Michael J. O'Toole, P.E., *Director*

By:

ENGINEERING-SCIENCE

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

ASHLAND PETROLEUM CORPORATION
NYS SITE NUMBER 915008A
TOWN OF TONAWANDA
ERIE COUNTY
NEW YORK STATE

Prepared For

DIVISION OF SOLID AND HAZARDOUS WASTE
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
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DATE OF SUBMITTAL: January 1988

ASHLAND PETROLEUM CORPORATION

TABLE OF CONTENTS

SECTION I

EXECUTIVE SUMMARY

ASHLAND PETROLEUM CORP.

This report, prepared for the New York State Department of Environmental Conservation (NYSDEC) presents the results of the Phase I investigation for the Ashland Petroleum Corp. Site (NYS Site Number 915008A, EPA Site Number D0063653133) located in the Town of Tonawanda, Erie County, New York (see Figure I-1).

SITE BACKGROUND

The site is located within the Ashland Petroleum facility in the Town of Tonawanda, New York. The site is suspected of being used for the weathering of tetraethyl lead sludge and is located within the diked area of Tank No. 24. The Tank No. 24 site is approximately 10 feet by 30 feet. Tetraethyl lead sludge was reportedly disposed of within the diked area in 1953. After the sludge had weathered (volatilized), the sludge was removed for off-site disposal. No records exist which indicate where the sludges were disposed of off-site.

There appears to be some confusion as to the actual location of the site used by the Ashland Petroleum Corporation for the weathering of tetraethyl lead sludge. Based on an Industrial Chemical Survey completed by Ashland Petroleum, an estimated three tons/year of tetraethyl lead sludge were removed during the cleaning of gasoline holding tanks (Scalise, 1976). The NYSDEC indicated that the diked area of Tank No. 24 was used for the weathering of sludge in 1953 while Ashland Petroleum personnel report that only the Tank No. 22 diked area was used in 1976 for sludge weathering. However, Ashland personnel believe that the Tank

No. 24 area may have been used in the 1950's for sludge weathering (Scalise, 1985). No detailed records of the quantity of wastes generated or where the sludges were weathered exist. Therefore, the Tank No. 24 site as designated by the NYSDEC, was the site evaluated during the Phase I investigation.

No groundwater, surface water, soil or waste sampling has been conducted at the Tank No. 24 site. However, an extensive monitoring program was conducted in the stream that receives surface water from Ashland's tank farm outfall. Surface water conveyed from the Ashland Tank Farm (including Tank No. 24) and other portions of the plant discharge from this outfall. Concentrations of lead (5.94 ppm) were detected that exceeded Class AA surface water levels (0.05 ppm).

ASSESSMENT

In an attempt to quantify the risk associated with this site, the Hazard Ranking Scoring system (HRS) currently being used by the New York State DEC was applied 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 40CFR Subpart H Section 300.81, the HRS scoring system was developed to be used in evaluating the relative potential of uncontrolled hazardous disposal substances 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 hazardous potential of the substances at a facility; 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 is:

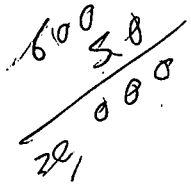
S_M = 0.41	S_A = 0
S_{GW} = 0.70	S_{FE} = 0
S_{SW} = 0	S_{DC} = 0

These scores reflect the fact that only a small quantity of tetraethyl lead sludge was spread within a diked area and removed after the lead had volatilized.

RECOMMENDATIONS

The following recommendations are made for the completion of Phase II:

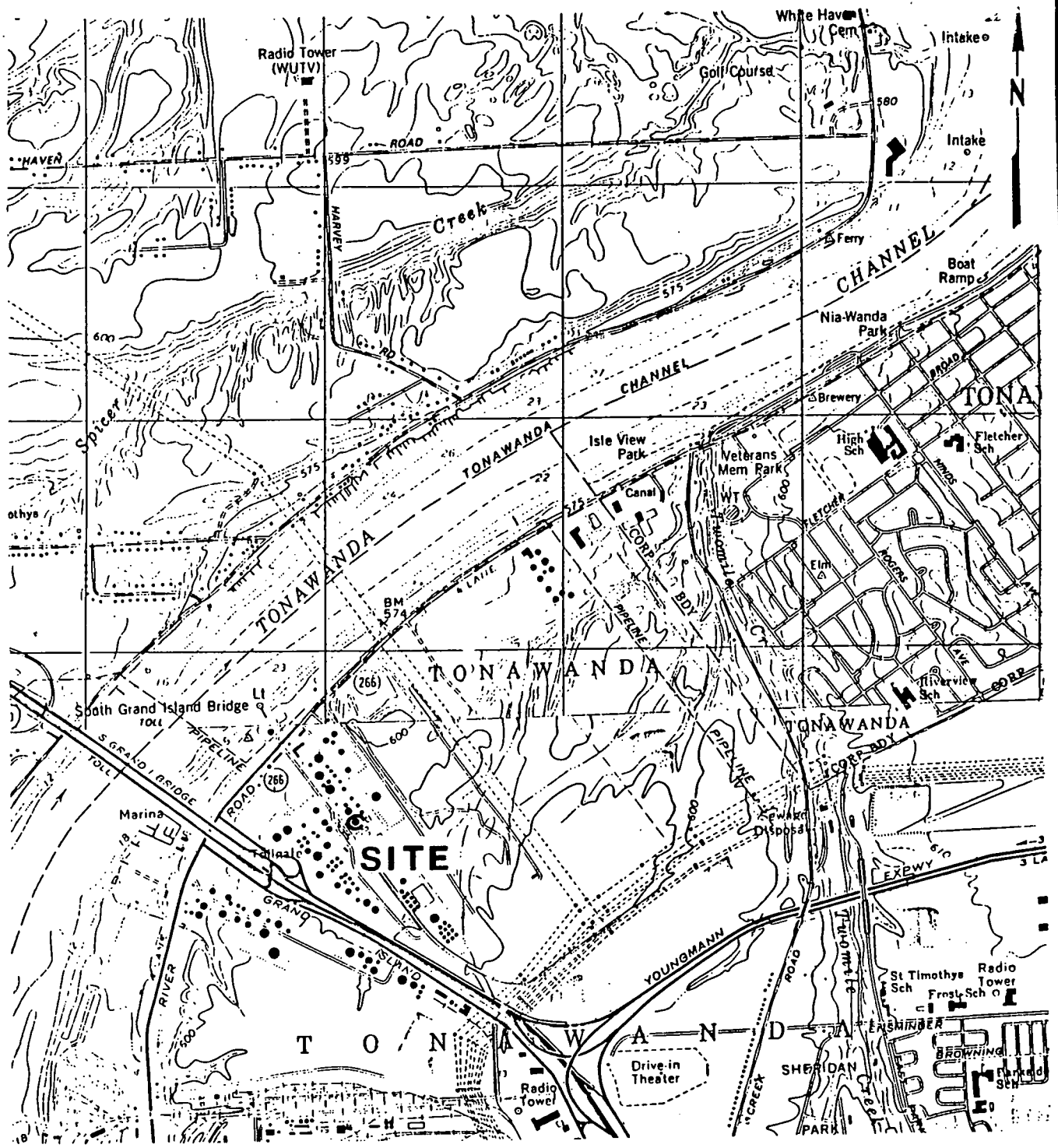
- Groundwater sampling will not be required based on the following information:
  - TEL-ladened sludge was placed within an impermeable soil lined dike for weathering, thereby reducing the potential for groundwater contamination.



- After weathering, the material was removed for offsite disposal.

o Subsurface soil samples consisting of 8 samples collected at 2 foot intervals at four locations within the diked area of Tank 24. Background subsurface soil samples consisting of 2 samples collected in an area away from the suspected disposal site. Samples will be analyzed for hazard substance list (HSL) metals.

The estimated man-hour requirements to complete Phase II are 594, while the estimated cost is $29,135.



LATITUDE: 43°00'08"
LONGITUDE: 78°55'11"

SCALE

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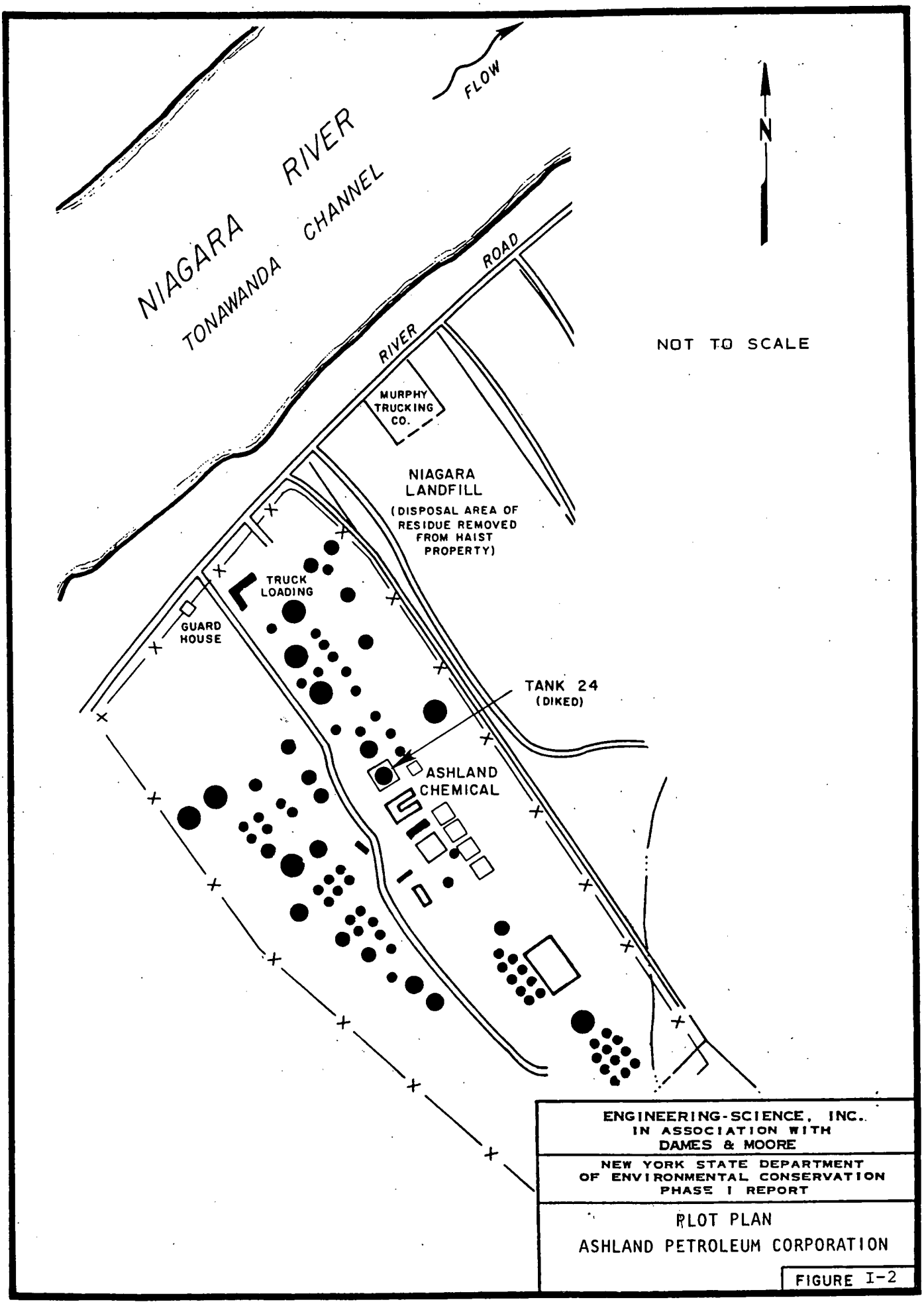
PHASE I REPORT

SITE LOCATION MAP
ASHLAND PETROLEUM CO.

FIGURE I-1

REFERENCE: U.S.G.S. 7.5' Topographic Map
Tonawanda West, NY (1980) and Buffalo NW,
NY-ONT. (1965) Quadrangles


NIAGARA RIVER
TONAWANDA CHANNEL
FLOW
N
NOT TO SCALE
RIVER ROAD
MURPHY TRUCKING CO.
NIAGARA LANDFILL
(DISPOSAL AREA OF RESIDUE REMOVED FROM HAIST PROPERTY)
TRUCK LOADING
GUARD HOUSE
TANK 24
(DIKED)
ASHLAND CHEMICAL
ENGINEERING-SCIENCE, INC.
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NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
PHASE I REPORT
PLOT PLAN
ASHLAND PETROLEUM CORPORATION
FIGURE I-2

SECTION II
PURPOSE

The purpose of the Phase I investigation at the Ashland Petroleum Corp. 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 disposal of tetraethyl lead sludges in 1953. Based on this initial evaluation of the Ashland Petroleum Corp. site, a Phase II Work Plan has been prepared for collecting any additional data needed to complete the HRS score. In addition, a cost estimate for the recommended Phase II work is provided.

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 this list is to identify all persons, departments, and/or agencies contacted during the fourth round of the Phase I investigation even though useful information may not have been collected from each source contacted.

SECTION IV

SITE ASSESSMENT

SITE HISTORY

The Ashland Petroleum-Tonawanda Facility, engaged in the refining of petroleum products, was established in 1928 as the Frontier Oil & Refining Company. The Ashland Petroleum Company assumed ownership of Frontier Oil in 1952, and is the current owner of the refining plant. In July 1982, the Ashland Refining Plant went out of production and remains closed to this date. The facility is currently owned by the Ashland Petroleum Company and is used as a petroleum storage depot. The facility has four confirmed Phase I disposal sites located on the property (ES and D&M Site Interview - Don Scalise, 12/10/85).

The processes previously used at the Ashland Petroleum Plant included crude distillation, catalytic cracking, platinum reforming, light ends treating and asphalt blowing. The products produced at the plant from these manufacturing activities included gasoline, liquified petroleum gas, distillates, aromatics, asphalt and synthetic natural gas (NYSDEC, 1976).

The Ashland Petroleum site being investigated consists of a 10 ft by 30 ft diked area around Tank 24. This area was reportedly used as a weathering area for tetraethyl lead (TEL) sludges (NYSDEC, Registry, 1985). In 1953, an estimated 420-630 gallons (10-15 barrels; one barrel equals 42 gallons) of TEL ladened sludge were generated during the cleaning of Tank 24. The sludge was spread in a 6-inch layer within the dike. The sludge was weathered for several weeks to allow the tetra-ethyl lead to volatilize. The sludge was then excavated and disposed of off-site. (NYSDEC-Buechi Memo, 1982).

It is noted that several other tanks in the same vicinity as Tank 24 were also cleaned following the same procedure. No records exist which indicate where the sludges were disposed of after being removed from the Ashland property. (ES and D&M Site Visit - Scalise, 1985; Du Pont Procedures Form).

Although there are no records which indicate where the excavated sludges were disposed off-site, two landfill sites are located in the vicinity of the Ashland Petroleum Facility that may have received these wastes. Ashland Petroleum operated a landfill to dispose of general plant refuse and several industrial wastes including phosphoric acid polymerization catalyst, spent clay and lime slurry sludge. Also, the Seaway Industrial Park, presently the Niagara Landfill, is located adjacent to Ashland Petroleum Site. However, no records are available which indicate if Ashland utilized these facilities for the disposal of weathered TEL sludges. (ES and D&M Site visit, 1985).

SITE TOPOGRAPHY

Ashland Petroleum Company site is located at 4545 River Road, Town of Tonawanda, Erie County, New York State. The refinery encompasses approximately 140 acres of land; the majority of the property is occupied by petroleum storage or process tanks.

The surrounding land use is primarily heavy industrial operations. The nearest residences are approximately 1-1/4 miles to the east, 1-1/4 miles to the west, and over 2 miles to the north and south. Within a one mile radius of the site are 8 NYSDEC Identified Inactive Hazardous Waste Disposal Sites including the Ashland Petroleum Company Landfill and the "Haist Property." (NYSDOH, 1986)

The weathering area is reported to be within the bermed confines of Tank Number 24, FCC Tank. As a fire-control requirement, the tank is surrounded by 6-8 foot berms forming a 10 ft. by 30 ft. impoundment. The berms are grass covered as well as the floor of the impoundment.

Small areas of staining occur near the tank. Since the berms are required for product containment, the design materials call for clay (ES & D&M Site Visit, 1985).

Access to the site is restricted. The weathering area is within the Ashland Petroleum Facility which is fenced. The weathering of tetra-ethyl lead sludge reportedly occurred once in 1953 (NYSDEC Registry, 1985). This sludge treatment practice is no longer in use at the Ashland Petroleum facility (Scalise, 1985, ES and D&M Site Inspection, 1985).

There is no natural drainage for the impoundment nor are there any surface drains. Storm water collected within the bermed impoundment is manually pumped to the plant oil/water separator and then discharged into Two Mile Creek (Ashland, 1982). Two Mile Creek joins Tonawanda Creek which in turn discharges into the Niagara River.

The Town of Tonawanda obtains potable water from surface water sources and no groundwater drinking water wells exist within three miles of the site (ECDEP, 1982).

Local Sensitive Environments

A NYSDEC registered wetland is located 0.3 miles south of the site. This wetland is identified as BW-8 (NYSDEC, 1986).

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 (NYS Museum and Science Service Bedrock Geology Map).

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 (La Sala, 1968).

As glacial ice retreated from the region, meltwater formed lakes in front of the ice margin. The Erie County region is covered by lake sediments; the most recent being from Lake Warren (a larger predecessor to Lake Ontario and Lake Erie). The sediments consist of blanket sands and beach ridges which are occasionally underlain by lacustrine silts and clays (indicating quiet or deeper water deposition (La Sala, 1968).

Site Hydrogeology

Bedrock beneath the site is reported to be Camillus Shale ocurring at a depth of approximately 80 feet (USGS, 1985). Inactive industrial wells in the vicinity of the site have produced yields of 125 gpm to 500 gpm from this rock unit (La Sala, 1968).

Soils in the immediate vicinity of the site are identified as Urban Land, a unit composed of urban areas that have been intensively developed for commercial and industrial use. Adjacent to the site are Churchville-Remson and Odessa units. Characteristic of these units are reddish-colored sediments with a high clay content. The units generally mantle glacial till deposits. Permeability is slow to very slow (USDA, 1979). The soils forming the impoundment probably consist of the above units.

The aquifer of concern is the bedrock aquifer. Due to their low permeability, the site soils are not considered to form a shallow aquifer, although seasonal perched water tables may occur within permeable zones of the Urban Land (NYSDOH, 1985; USGS, 1985).

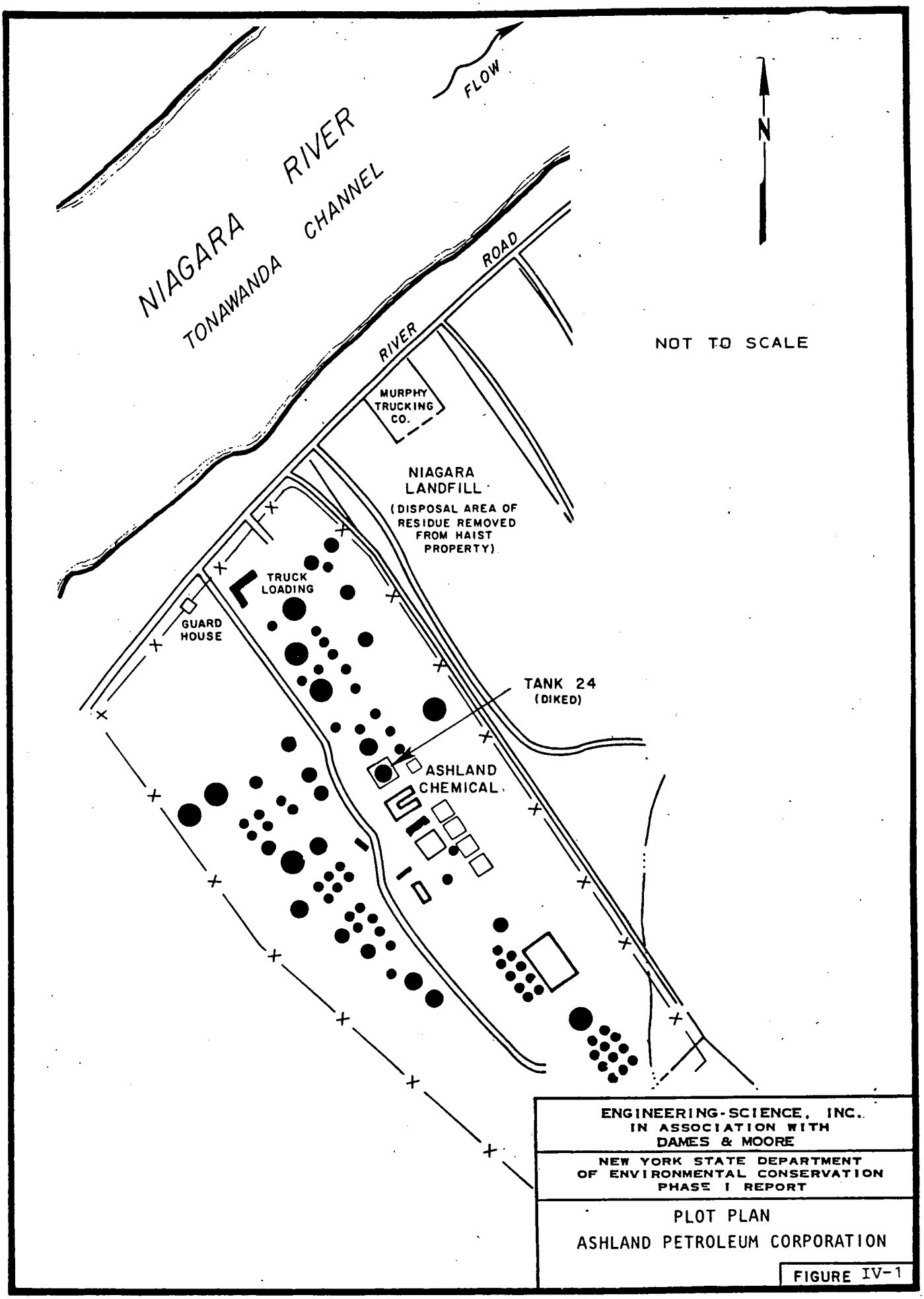
Site Contamination

The Ashland Petroleum Corporation previously treated tetraethyl lead (TEL) sludges utilizing a weathering process. The TEL sludges were generated from the cleaning of bulk gasoline storage tanks. The

treatment process consisted of spreading sludges containing TEL to allow volatilization of the lead. In 1953, this method was used to treat sludge generated from the cleaning of tank 24 at the Ashland tank farm (NYSDEC Registry Sheet, 1985). The sludge was reportedly spread in a 6-inch layer within the diked area of Tank 24 (DuPont Leaded Gasoline Disposal Procedure). After the sludge was allowed to volatilize for several weeks, the sludge was excavated from the dike area and disposed of off-site. No records exist which indicate where the sludges were disposed of off-site. (ES and D&M Site Interview - Scalise, 1985).

No monitoring of surface water, groundwater or soil has been conducted in the vicinity of the Tank 24 site to determine if contamination resulted from the past sludge management practices (NYSDEC Registry Sheet, 1985). However, surface water samples were collected from the Ashland Petroleum outfall during an extensive surface water study done in 1980. This study was conducted by the NYSDEC to determine the impact of the "Haist Property" on Two Mile Creek. The Haist Property was previously used to dispose of low-level radioactive waste. Concentrations of lead (5.94 ppm) were detected at levels which exceed New York Class AA surface water levels (0.05 ppm) (Phase I Site Investigation-Haist Property, ES). It is noted that the outfall conveys surface water from the tank farm area, not just the tank 24 site. Because the gasoline bulk storage tanks are within diked areas which do not discharge to the surface water outfall, the tanks are not expected to have contributed to the lead concentrations (ES and D&M Site Visit, 1985).

HNu meter readings were taken upwind and downwind of the site in April 1986 by ES and D&M. As a result, the HNu meter readings indicated no measurable concentrations of volatile organics above background concentrations (1 ppm).



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PHASE I REPORT

PLOT PLAN
ASHLAND PETROLEUM CORPORATION

FIGURE IV-1

SECTION V

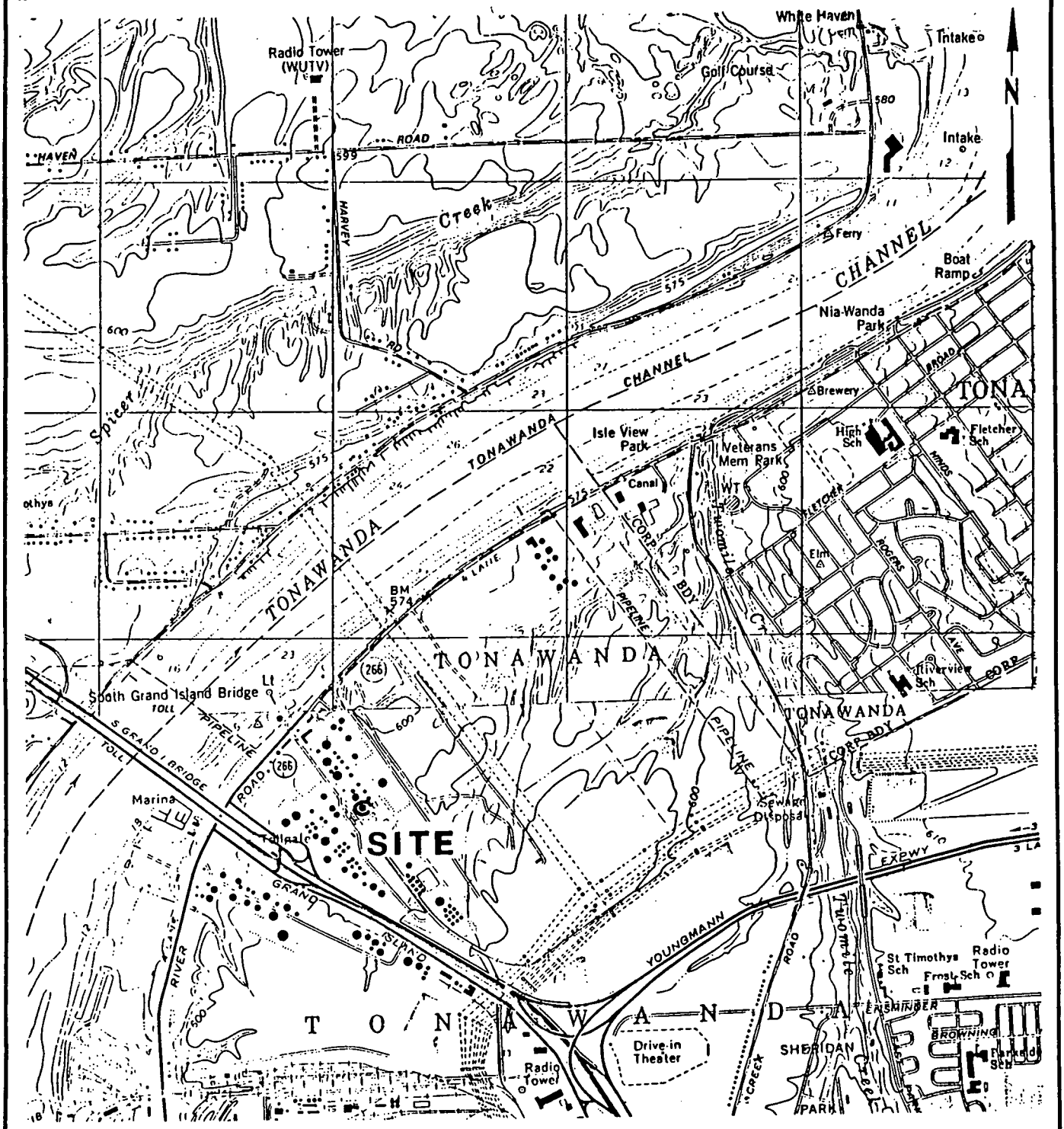
NARRATIVE

PRELIMINARY APPLICATION OF HAZARD RANKING SYSTEM

NARRATIVE SUMMARY

The Ashland Petroleum facility is located in the Town of Tonawanda, Erie County, New York. The 10 ft by 30 ft site is located within the diked area of Tank 24 at the Ashland Petroleum facility. The Ashland Petroleum Corporation owned and operated the facility in 1953 when the TEL ladened sludge (10-15 barrels) was cleaned from Tank 24 and spread within the diked area. The lead sludge contained approximately 0.5 gallons of TEL. No monitoring data are available for the site (EPA March 1985; ES and D&M Site Visit, 12-10-85). The site is located within a half mile of the Niagara River and is fenced and guarded 24 hours a day (Site Inspection, December 1985).

HNu meter readings were taken upwind and downwind of the site in April 1986 by ES and D&M. As a result, the HNu meter readings indicated no measurable concentrations of volatile organics above background concentration of 1 ppm.



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LONGITUDE: 78°55'11"

SCALE

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PHASE I REPORT

SITE LOCATION MAP
ASHLAND PETROLEUM CO.

FIGURE V-1

REFERENCE: U.S.G.S. 7.5' Topographic Map
Tonawanda West, NY (1980) and Buffalo NW,
NY-ONT. (1965) Quadrangles

HRS COVER SHEET

Facility Name: Ashland Petroleum Corp.

Location: 4545 River Road, N. Tonawanda, Erie County, New York

EPA Region: II

Person(s) in charge of the facility: J. Donald Scalise
Jack Patton (Plant Manager)

Name of Reviewer: Cathy J. Bosma Date: 01-13-86

General Description of the facility:

Sludge ladened with tetraethyl lead (TEL) was removed from Tank 24 (FCC - Fluid Catalytic Cracker) in 1953. This waste material was spread in a 6-inch layer on a 10x30 foot section within the tank dike area. This sludge treatment process was used to permit volatilization of TEL. An estimated 420-630 gallons of TEL ladened sludge were deposited within the berm. No monitoring of surface water, groundwater or soil has been conducted in the vicinity of the Tank 24 site to determine if contamination resulted from past sludge management practices.

Scores: $S_M = 0.41$ ($S_{GW} = 0.70$ $S_{SW} = 0$ $S_A = 0$)

$S_{FE} = 0$

$S_{DC} = 0$

Facility Name: Ashland Petroleum Corp. Date: Jan. 86

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	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	2	6	
Net Precipitation	0 1 (2) 3	1	2	3	
Permeability of the Unsaturated Zone	(0) 1 2 3	1	0	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			7	15	
3 Containment	0 (1) 2 3	1	1	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	1	8	
Total Waste Characteristics Score			19	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			399	57,330	
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} = 0.70		

GROUND WATER ROUTE WORK SHEET

Facility Name: Ashland Petroleum Corp. Date: Jan, 86

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	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
3 Containment	(0) 1 2 3	1	0	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	1	8	
Total Waste Characteristics Score			19	26	
5 Targets					4.5
Surface Water Use	0 1 2 (3)	3	9	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	20	40	
Total Targets Score			31	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			0	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S_{sw} = 0		

SURFACE WATER ROUTE WORK SHEET

Facility Name: Ashland Petroleum Corp. Date: Apr, 86

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: April 1986, upwind and downwind of site					
Sampling Protocol: HNu meter					
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]				35,100	
[5] Divide line [4] by 35,100 and multiply by 100			S_a = 0		

AIR ROUTE WORK SHEET

Facility Name: Ashland Petroleum Corp. Date: Apr. 1986

Worksheet for Computing S_M

	S	S^2
Groundwater Route Score (S_{gw})	0.76	0.49
Surface Water Route Score (S_{sw})	0	0
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		0.49
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		0.70
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		0.41

WORK SHEET FOR COMPUTING S_M

Facility Name: Ashland Petroleum Corp Date: JAN 1995

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	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: Ashland Petroleum Corp. Date: Jan, 1986

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: Ashland Petroleum Corp.

LOCATION: 4545 River Road, Town of Tonawanda, Erie County, New York

nNYSDEC 1:48

GROUND WATER ROUTE

1. OBSERVED RELEASE

Contaminants detected (5 maximum):

No analytical groundwater data available.
(NYSDEC Registry Sheet, 1985)

Rationale for attributing the contaminants to the facility:

Not applicable.

* * *

2. ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) in concern:

Bedrock aquifer in Camillus Shale.
(NYSDOH, 1985)

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

Greater than 80 feet to Camillus Shale.
(USGS, 1985)

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

Zero (0) - waste weathered on surface.
(Scalise, 1985)

Net Precipitation

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

Mean annual precipitation is 36"
(Climatic Atlas of the United States, 1979)

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

Mean annual lake evaporation is 27"
(Climatic Atlas of the United States, 1979)

Net precipitation (subtract the above figures):

36" - 27" = 9" net precipitation
(Climatic Atlas of the United States, 1979)

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Clays and compacted till.
(USDA, 1979, and ES and D&M Site Visit, 1985)

Permeability associated with soil type

Greater than 10^{-7} cm/sec .
(CFR 40, part 300, App. A.)

Physical State

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

Sludge.
(NYS Hazardous Waste Survey, 1976; Scalise, 1985 and NYSDEC Registry Sheet, 1985)

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Surface impoundment: nonpermeable soil liner with sound run-on diversion. No leachate collection system HRS = 1.
(ES and D&M Site Visit, 1985)

Method with highest score:

Same as above.

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Tetraethyl lead (TEL).
NYSDEC Registry Sheet, 1985; NYS Hazardous Waste Survey, 1976; and Scalise, 1985)

Compound with highest score:

Tetraethyl lead = 18.
(SAX, Dangerous Properties of Industrial Materials, 6th Edition, 1984)

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):

An estimatead 420-630 gallons of TEL ladened sludge were removed from a 420,000 gallon storage tank.
For HRS scoring assign a value of one.
(Interview and Letter - Jay Hill, Ashland Petroleum; NYSDES, P. Buechi Memo, 1982)

Basis of estimating and/or computing waste quantity:

10-15 barrels of TEL ladened gasoline removed from storage tank. 15 barrels (one barrel = 42 gallons) = 630 gallons TEL sludge.
(Interview and Letter - Jay Hill, Ashland Petroleum; NYSDES, P. Buechi Memo, 1982)

5. TARGETS

Ground Water Use

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

No known users within 3-mile radius. Aquifer is not used but is usable. HRS = 1.
(Erie County DEP, 1982)

Distance to Nearest Well

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

None within 3-mile radius.

Distance to above well or building:

Not applicable.

Population Served by Ground Water Wells Within a 3-Mile Radius

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

None within 3-mile radius.
(NYS Atlas of Community Water System Sources, 1982)

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):

None within 3-mile radius.

Total population served by ground water within a 3-mile radius:

Zero (0).

SURFACE WATER ROUTE

1. OBSERVED RELEASE

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

No record of surface water monitoring attributed to Tank 24. Plant does have SPDES permit and monitoring for lead was previously conducted at the outfall. (Maximum lead concentration detected was 5.94 ppm.)
(SPDES Permit #NY-0001678, Erie County, and Ashland Petroleum Phase I report 915061)

Rationale for attributing the contaminants to the facility:

Not applicable.

* * *

2. ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Zero (0) - closed basin.
(ES and D&M Site Visit, 1985)

Name/description of nearest downslope surface water:

Niagara River, approximately 2500' west.
(USGS Topographic Map, Tonawanda West Quad)

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

2% west.
(USGS Topographic Map, Tonawanda West Quad)

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

No.
(ES and D&M Site Visit, 1985)

Is the facility completely surrounded by areas of higher elevation?

No, the tank farm area is not surrounded by higher elevations, but diked impoundment around the tank has dike walls of 6-8' high.

1-Year 24-Hour Rainfall in Inches

2.1"
(CFR 40, Part 300, App. A, 1983)

Distance to Nearest Downslope Surface Water

Niagara River, approximately 2500' west of Tank 24.
(USGS Topographic Map, Tonawanda West Quad)

Physical State of Waste

Sludge.
(NYSDEC Hazardous Waste Survey, 1976; Scalise, 1985; and NYSDEC Registry Sheet, 1985)

* * *

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Surface impoundment with sound diking, adequate freeboard, and no erosion evident. Compacted soil liner.
(ES and D&M Site Visit, 1985)

Method with highest score:

Same as above.

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Tetraethyl lead
(NYSDEC Registry Sheet, 1985; NYS Hazardous Waste Survey, 1976; and Scalise, 1985)

Compound with highest score:

Tetraethyl lead = 18
(SAX, Dangerous Properties of Industrial Materials, 6th edition, 1984)

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):

420-630 gallons TEL sludge obtained from 420,000 gal gasoline storage tank.
(Interview and Letter - Jay Hill, Ashland Petroleum; NYSDEC, P. Buechi Memo, 1982)

Basis of estimating and/or computing waste quantity:

10-15 barrels of TEL gasoline (one barrel = 42 gallons)
630 gallons.
(Interview and Letter - Jay Hill, Ashland Petroleum; NYSDEC, P. Buechi Memo, 1982)

* * *

5. TARGETS

Surface Water Use

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

Municipal water supply intakes for the Town of Tonawanda and the Town of N. Tonawanda. Recreational uses.
(NYS Atlas of Community Water System Sources, 1982)

Is there tidal influence?

No.
(USGS Topographic Map, Tonawanda West Quad)

Distance to a Sensitive Environment (NYSDEC Region 9 Wetlands Map, 1986)

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

None within 2 miles.
(NYSDEC, M. McMurry, 1986; Wetlands Map)

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

Wetland BW-8 is located 0.3 miles south of the site.
(NYSDEC, M. McMurry, 1986; Wetlands Map)

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

None within 1 mile.
(NYSDEC, M. McMurry, 1986; Wetlands Map)

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:

City of Tonawanda - intake in the Niagara River East Branch approximately 2.7 miles north (downstream) of site. Population served is 18,538 people.

North Tonawanda City - intake in the Niagara River East Branch approximately 2.5 miles north of site. Population served is 36,000 people.
(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):

None for given intakes.
(USGS Topographic Map, Tonawanda West Quad)

Total population served:

City of Tonawanda:	18,538
North Tonawanda City:	36,000
Total:	54,538 people

(NYS Atlas of Community Water System Sources, 1982)

Name/description of nearest of above water bodies:

Niagara River - East Branch.
(USGS Topographic Map, Tonawanda West Quad)

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

City of Tonawanda: 2.7 miles
North Tonawanda City: 2.5 miles
(USGS Topographic Map, Tonawanda West Quad)

AIR ROUTE

1. OBSERVED RELEASE

Contaminants detected:

No volatile organics were observed using an HNu meter. Readings were taken upwind and downwind of the site (ES and D&M Site Visit, Apr. 86).

Date and location of detection of contaminants:

No air release observed.
(ES and D&M Site Visit, 1986)

Methods used to detect the contaminants:

See previous notes.

Rationale for attributing the contaminants to the site:

Not applicable.

* * *

2. WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

No reactive compounds are known to exist on-site.
(NYSDEC Registry Sheet, 1985)

Most incompatible pair of compounds:

No incompatible compounds are known to exist on-site.
(NYSDEC Registry Sheet, 1985)

Toxicity

Most toxic compound:

Tetraethyl lead sludge was previously weathered on-site prior to off-site disposal. Therefore, no hazardous wastes which could potentially impact the air pathway are known to exist on-site.
(NYSDEC Registry Sheet, 1985; NYS Hazardous Waste Survey, 1976; and Scalise, 1985)

Hazardous Waste Quantity

Total quantity of hazardous waste:

Not applicable.

Basis of estimating and/or computing waste quantity:

Hazardous wastes are not attributed to the site for the purposes of scoring the air pathway.

* * *

3. TARGETS

Population Within 4-Mile Radius

Underline 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

101,373
(Compiled from 1980 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:

None within 2 miles.
(NYSDEC, M. McMurry 1986; NYS Wetland Maps)

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

None within 1 mile.
(NYSDEC Region 9, Div. of Fish and Wildlife Files - Ashland Petroleum Phase I Report, Site No. 915061)

Land Use

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

Site is industrial area. BFI (Seaway) Landfill adjacaent to site. Approx. 0.3 mile.
(ES and D&M Site Visit, 1985)

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

Sheridan Park - 1-1/2 mile
Veterans Memorial Park - 1-1/2 mile.
Isle View Park - 1-1/4 mile.
(Interview - Charley Hudson, NYSDOH, Bureau of Toxic Substance Assessment; and USGS Topographic Map, Tonawanda West Quad)

Distance to residential area, if 2 miles or less:

Residents - Canadian site 3/4 mile.
0.6 miles.
ES and D&M Site Visit, 12/85; USGS Topographic Map)

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

None within 1 mile.
(USGS Topographic Map, Tonawanda West Quad)

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

None within 2 mile.
(USGS Topographic Map, Tonawanda West Quad)

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 information was discovered during the Phase I Study which indicates that a fire and explosion situation existed or presently exists at the site.

Type of containment, if applicable:

Not applicable.

* * *

2. WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

No measurements to determine the fire and explosion potential were taken on-site.
(ES and D&M Site Visit, 1985)

Ignitability

Compound used:

No ignitable compounds are known to exist on-site.
(NYSDEC, Registry Sheet, 1985)

Reactivity

Most reactive compound:

No reactive compounds are known to exist on-site.
(NYSDEC, Registry Sheet, 1985)

Incompatibility

Most incompatible pair of compounds:

No incompatible compounds are known to exist on-site.
(NYSDEC, Registry Sheet, 1985)

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

No hazardous wastes with the potential to cause a fire or explosion hazard are known to exist on-site.
(NYSDEC Registry Sheet, 1985; NYS Hazardous Waste Survey, 1976; Scalise, 1985)

Basis of estimating and/or computing waste quantity:

Hazardous wastes are not attributable to the site for purposes of scoring the fire and explosion pathway.

* * *

3. TARGETS

Distance to Nearest Population

0.6 miles.
(ES and D&M Site Visit, 12/86; USGS Topographic Map)

Distance to Nearest Building

<1/4 mile.
(ES and D&M Site Visit, 12/86; USGS Topographic Map)

Distance to Sensitive Environment

Distance to wetlands:

None within 2 miles.
(NYS Wetlands Map)

Distance to critical habitat:

None within 1 mile.
(Ashland Petroleum Phase I Report, Site No. 915061, and Div. of Fish and Wildlife Files - NYSDEC)

Land Use

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

Site is industrial area. BFI Landfill is located approximately 0.3 miles from the site.
(ES and D&M Site Visit, 1985)

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

Sheridan Park - 1-1/2 miles
Veterans Memorial Park - 1-1/2 miles
Isle View Park - 1-1/4 miles
(Interview - Charley Hudson, NYSDOH, Bureau of Toxic Substance Assessment; and USGS Topographic Map, Tonawanda West Quad)

Distance to residential area, if 2 miles or less:

0.6 miles.
(ES and D&M Site Visit, 12/85; USGS Topographic Map)

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

None within 1 mile.

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

None within 2 miles.

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

14,340 people.
(US Bureau of Census, 1980)

Buildings Within 2-Mile Radius

Greater than 260 but less than 790.
(USGS Topographic Map, Tonawanda West Quad)

DIRECT CONTACT

1. OBSERVED INCIDENT

Date, location, and pertinent details of incident:

Based on review of information collected during the Phase I Investigation of this site, no evidence of past or present direct contact with hazardous substances has occurred at this site that caused injury, illness or death to humans or animals. Note that sludge was removed from the dike in approximately 1955 for off-site disposal.

* * *

2. ACCESSIBILITY

Describe type of barrier(s):

Fenced site with 24 hour guard. Tank site is diked.
(ES and D&M Site Visit, 1985)

* * *

3. CONTAINMENT

Type of containment, if applicable:

Tetraethyl lead sludge, previously treated on-site, was removed for off-site disposal. Also, the former sludge treatment area is enclosed by 6-8 foot dike. Therefore, hazardous substances are not accessible to direct contact at the site.
(NYSDEC Registry Sheet, 1985; NYS Hazardous Waste Survey, 1976; and Scalise, 1985)

* * *

4. WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Hazardous wastes are not present on-site for purposes of scoring a direct contact score.

Compound with highest score:

Not applicable.

5. TARGETS

Population within one-mile radius

4,988 people
(US Bureau of Census, 1980)

Distance to critical habitat (of endangered species)

None within 1 mile.
(Ashland Petroleum Phase I Report, Site No. 915061)

HRS REFERENCES*

1. Ashland Petroleum SPDES Request, 1982.
2. Code of Federal Regulations, Protection of Environment, No. 40, Parts 190 to 399, 1983.
3. ES and D&M Site Inspection and Interview, Don Scalise and Jay Hill of Ashland Petroleum, December 1985.
4. Engineering-Science (ES) and Dames & Moore (D&M), Phase I Investigation-Ashland Petroleum Company (915061).
5. Erie County, Department of Environment and Planning, Site Survey Phase II Reports, 1982.
6. Hudson, Charley, NYSDOH, Interview, 12-30-85.
7. NYS Atlas of Community Water System Sources, NYS Department of Health, 1982.
8. NYSDEC, Hazardous Waste Survey, 1976
9. NYSDEC, Memo from Peter Buechi to file, 6/8/82.
10. NYSDEC Region 9, Division of Fish and Wildlife Files and Wetlands Map, Mike McMurry, 1986.
11. NYSDEC Registry Sheet, 1985.
12. Sax, Dangerous Properties of Industrial Materials, 6th Edition, 1984.
13. US Bureau of the Census, 1980.
14. USDA, General Soil Map for Erie County, 1979.
15. US Dept. of Commerce, National Climatic Center, Climatic Atlas of the United States, 1979
16. USGS, Draft Report, Boring Information (1982), EPA/USGS Study, 1985.
17. USGS Topographic Map, Tonawanda West Quadrangle.

*For general references, see Appendix A.

REF. 1

ASHLAND OIL, INC. • POST OFFICE BOX 391 • ASHLAND, KENTUCKY • 41101 • PHONE (606) 329-3333

MICHAEL J. DUFFY
Environmental Coordinator
(606) 329-4457

February 25, 1982

Mr. William L. Garvey, P.E.
Chief, Permit Administration Section
Division of Water
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, New York 12233

0001678 Erie

Re: SPDES Permit NO. NY-0001678
Buffalo Refinery

Dear Mr. Garvey:

On February 1, 1982 Ashland Petroleum Company received a summary modification to the referenced SPDES permit. Ashland did not receive a draft of the modification nor is it aware of a public notice or comment period on this modification. Additionally, Ashland has still not been advised of the basis for the modification, which adds immediately effective effluent limitations for iron and lead for outfalls 002 and 004. Wrong

Ashland Petroleum believes the inclusion of these parameters for outfall 002 is inappropriate for the reasons discussed below and respectfully requests that they be deleted from the permit.

A single large crude oil storage tank is located approximately one-half mile northeast of the refinery proper. Due to SPCC and fire code requirements, this tank is enclosed by an earthen dike. The discharge from outfall 002 consists solely of the stormwater which accumulates in the dike. This accumulated dike water is treated in an oil water separator and then discharged to Two Mile Creek. The presence and operation of this crude oil storage facility should in no way contribute iron or lead to the runoff.

In summary, this discharge consists solely of treated stormwater runoff; Ashland's operations do not contribute either iron or lead to the discharge and consequently the treatment system is not designed for the removal of either. Finally, review of the data submitted on the form 2C shows that these effluent limitations cannot be consistently met. Ashland Petroleum Company therefore requests that these parameters be deleted.

Ashland has reviewed the facts regarding discharge 004 and the activities contributing thereto and is of the opinion that this outfall should not be considered an SPDES discharge for which Ashland's refinery should have responsibility.

The discharge from outfall 004 consists of stormwater runoff from several sources: 1) an undeveloped area of the refinery, 2) a commercial industrial landfill which adjoins the refinery's north property line, 3) approximately one mile of River Road (four lane highway), 4) the Agway tank farm and service station and 5) the Murphy Motor Freight terminal and garage. Since this area of the refinery contains neither processing units nor leaded gasoline storage and no runoff from the leaded gasoline storage areas is directed to this outfall, there is no reason to believe that any lead or iron found in this discharge are the result of Ashland's operations. Notwithstanding the fact that the runoff from Ashland's property represents a small portion of the total effluent in this discharge, in order to avoid adverse environmental effects in the Niagara River from actions in the drainage basin Ashland installed outside of its property boundry a small oil-water separator in the drainage ditch just prior to its confluence with the Niagara. However, since Ashland has no way of controlling the activities of others such as Murphy Motor Freight, Agway or users of River Road whose activities affect the quality of water in the drainage ditch, Ashland does not feel that it should be charged with the responsibility for the discharge. Further, as with outfall 002, the form 2C data for outfall 004 indicates that these effluent limitations cannot be consistently met. Accordingly, Ashland Petroleum requests that outfall 004 be removed from the refinery's SPDES permit.

It should be noted that neither outfall 002 nor outfall 004 would require an SPDES permit except for Ashland's installation of facilities such as oil-water separators to mitigate the environmental effects of any unplanned releases of materials. Both discharges are composed entirely of storm runoff relatively uncontaminated by any industrial or commercial activity and have not been identified as significant contributors of pollution.

The imposition of stringent effluent limitations on stormwater runoff such as outfalls 002 and 004 is inconsistent with the impending revisions of the applicable NPDES permit regulations (40 CFR 122.57) resulting from the litigation of the consolidated permit program regulations. If the impending revisions of 40 CFR 122.57 had been in effect at the time Ashland submitted its application for renewal of its SPDES permit, no quantitative data whatsoever would have been required regarding outfalls 002 and 004 for the pollutants in question.

REF-1

The impending revisions of 40 CFR 122.57 would also significantly alter the permit requirements applicable to outfall 004. Under the revisions, if a stormwater discharge system includes the discharges of more than one owner or operator, any permit would identify the effluent limitations, if any, which would apply to each owner or operator and no stormwater dischargers would be subject to a permit condition for discharges other than its own discharges into that system without its consent.

It is Ashland Petroleum Company's position that the proposed effluent limitations and monitoring requirements for iron and lead are not authorized by Section 301, 302, 303, 306, 307, 402 or any other provision of the Clean Water Act and are not authorized by any provision of state law or regulation. It is also Ashland Petroleum Company's position that the modification of its SPDES permit without prior notice or opportunity for comment or public hearing was inconsistent with the Clean Water Act, the NPDES permit program regulations, and state laws and regulations implementing the SPDES program. The modification of the permit is contrary to fact and injurious to the Company and will cause it damage by invading or interfering with its private right to conduct its business without unreasonable and unlawful governmental restraint. Ashland has not previously requested or participated in a hearing on this issue since it received no prior notice or opportunity to comment on the modification of its permit.

Pursuant to state law and regulations applicable to the SPDES program, Ashland Petroleum Company hereby petitions the Department for a hearing on the modification of its SPDES permit.

Ashland appreciates your prompt consideration of our requests and would be happy to meet with representatives of the department at your convenience to discuss this matter further.

Very truly yours,

Michael J. Duffy

MJD:kl

cc: George Hansen
Walter Loveridge

REF. 2

List of Illustrations

Figure No.

List of Tables

Table No.

1.0 Introduction

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) (Pub. L. 96-510) requires the President to identify the 400 facilities in the nation warranting the highest priority for remedial action. In order to set the priorities, CERCLA requires that criteria be established based on relative risk or danger, taking into account the population at risk; the hazardous potential of the substances at a facility; the potential for contamination of drinking water supplies, for direct human contact, and for destruction of sensitive ecosystems; and other appropriate factors.

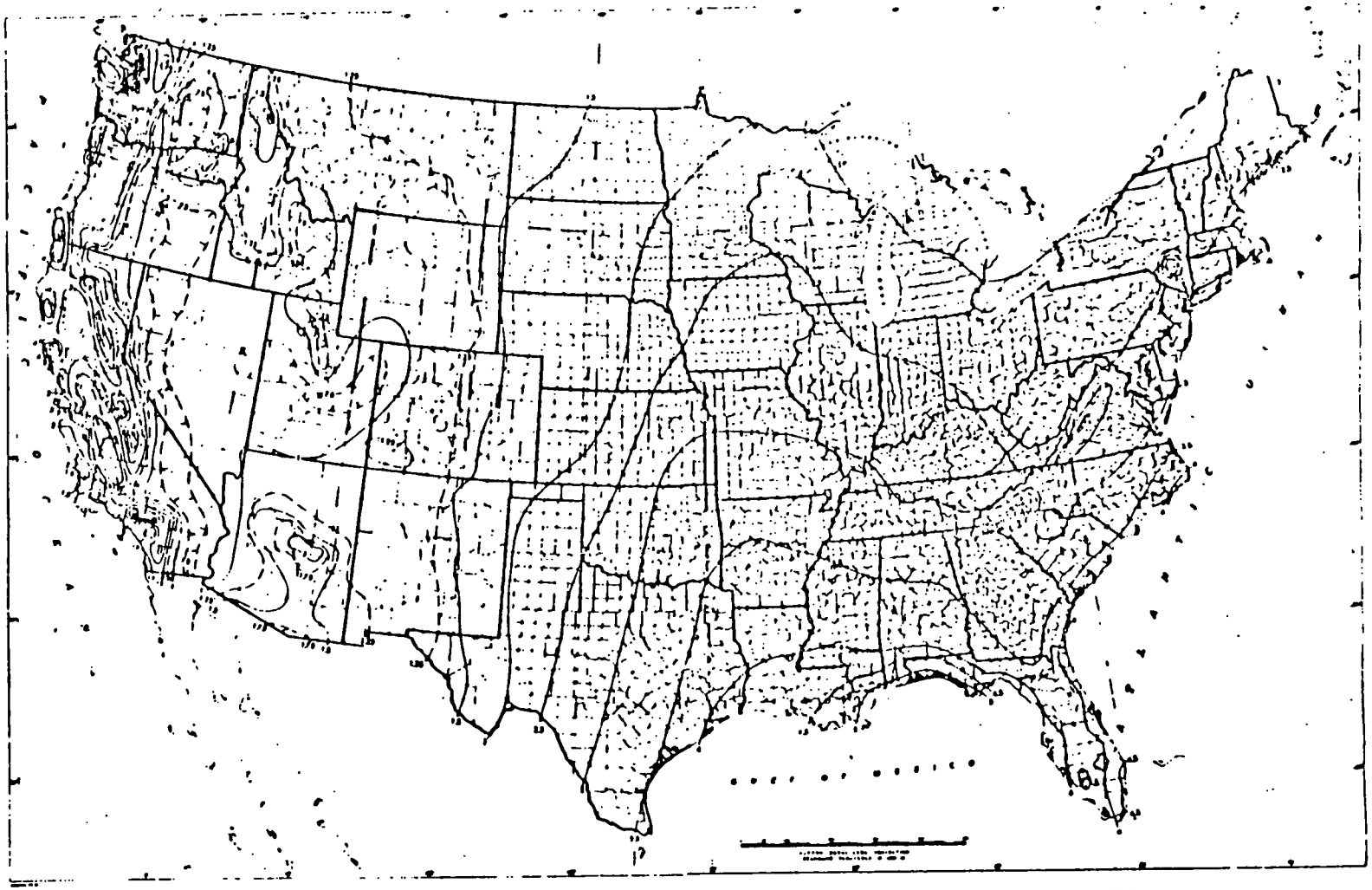
This document describes the Hazard Ranking System (HRS) to be used in evaluating the relative potential of uncontrolled hazardous substance facilities to cause health or safety problems, or ecological or environmental damage. Detailed instructions for using the HRS are given in the following sections. 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. However, the HRS by itself cannot establish priorities for the allocation of funds for remedial action. The HRS is a means for applying uniform technical judgment regarding the potential hazards presented by a facility relative to other facilities. It does not address the feasibility, desirability, or degree of cleanup required. Neither does it deal with the readiness or ability of a State to carry out such remedial action as may be indicated, or to meet other conditions prescribed in CERCLA.

The HRS assigns three scores to a hazardous facility:

- 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 ground water, surface water, or air. It is a composite of separate scores for each of the three routes.
- 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 score for each hazard mode (migration, fire and explosion and direct contact) or route is obtained by considering a set of factors that characterize the potential of the facility to cause harm (Table 1). Each factor is assigned a numerical value (on a scale of 0 to 3, 5 or 8) according to prescribed guidelines. This value is then multiplied by a weighting factor yielding the factor score. The factor scores are then combined: scores within a factor category are added; then the total scores for each factor category are multiplied together to develop a score for ground water, surface water, air, fire and explosion, and direct contact.

BILLING CODE 6560-50-M



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)

BILLING CODE 6560-50-C

REF. 2

REF. 3

INTERVIEW FORM

INTERVIEWEE/CODE DON SCALISE / JAY HILL /

TITLE - POSITION Ashland Petroleum

ADDRESS 4545 RIVER RD.

CITY TONAWANDA STATE NY ZIP

PHONE (716) 879-8630 RESIDENCE PERIOD TO

LOCATION RIVER RD INTERVIEWER LARRY REGA / CATHY BOSMA

DATE/TIME 12-10-85 / 12:00 - 4:00pm

SUBJECT: SITE No. 915008-A ASHLAND PETROLEUM CORP.

REMARKS: The cleaning of the tank (TANK # 22) was done once in 1953. The cleaning involved the removal of scaly rust inside the tank. The rust may contain some tetraethyl lead (TEL) since is was a constituent in the leaded gasoline held in the tank (volume = 2 gal/gal TEL) (possible) The total volume of rust is estimated to be between 1-2 barrels (42 gal). The common method of disposal was to spread the rust and allow the microorganisms ordered to the rust to decompose. This was done once within the confines of the dikes (GOS 8200') at Tank 22. Total volume of #22 is 10,000 barrels (420,000 gal). No cleaning has been done since 1953. No samples have been taken of the soils within dikes; no excavation or cover has been done at the diked areas. Dike is 5-6' high, area is grass covered, sub-surface main by clay.

I AGREE WITH THE ABOVE SUMMARY OF THE INTERVIEW: Jay J. Hill (See attachment)

SIGNATURE:

COMMENTS: Pete Bucki (DEC - ALBANY) thought the above stated to occur at Tank 24. This tank was an FCC tank which is not believed to contain any of the above mentioned TEL. Tanks

REF, 3

Attachment

Given

2 barrels of rust that must be fairly dry of liquid before men can scrape it safely off the bottom of a tank that contained gasoline.

$$2 \text{ bbl } Fe_2O_3 \times \frac{42 \text{ Gal. } Fe_2O_3}{\text{bbl } Fe_2O_3} \times \frac{2 \text{ parts material}}{3 \text{ parts space}}$$

$$= 56 \text{ Gal. } Fe_2O_3$$

Fe_2O_3 has a specific gravity of 5.24
Water weights 8.35 lb./gal.

$$56 \text{ Gal. } Fe_2O_3 \times \frac{43.7 \text{ lb. } Fe_2O_3}{\text{Gal. } Fe_2O_3} - 2{,}447 \text{ lb. } Fe_2O_3$$

Assume 1% Gasoline on the Fe_2O_3
Assure a high TEL addition of 3 gr/gal gasoline

Therefore, 24.5 lb. Gasoline contains 0.162 lb. TEL

Mol. Wt. of Pb = 207
Mol. Wt. of TEL = 324

Therefore, 0.162 lb. TEL contains 0.102 lb. Pb

TEL is 99% Volatile
TEL Evaporation Rate is 1.0 (water = 1.0)

CJB Calculation:

But 10-15 barrels $\left(\frac{42 \text{ gal. of gas}}{1 \text{ barrel}}\right)$ = 420 - 630 gal. of TEL laden sludge.

JJH DEC 85
NY [illegible]
915008A

REF-3

INTERVIEW FORM

INTERVIEWEE/CODE Don Scalise/Jay Hill /

TITLE - POSITION Ashland Petroleum

ADDRESS 4545 River Rd.

CITY Tonawanda STATE NY ZIP

PHONE (716) 879-8630 RESIDENCE PERIOD TO

LOCATION River Road INTERVIEWER Larry Keffe/Cathy Bosma

DATE/TIME 12/10/85 / 2:00 - 4:00 p.m.

SUBJECT: Site No. 915008-4 Ashland Petroleum Corp.

REMARKS: The cleaning of the tank (No. 22) was done once in 1953. This cleaning involved the removal of scaley rust inside this tank. The rust may contain some tetraethyl lead (TEL) since it was a constituent in the leaded gasoline held in the tank (volume ~2 gal TEL/gal gasoline). The total volume of rust is estimated to be between 1-2 barrels (42 gal). The common method of disposal was to spread the rust and allow any organics adhered to the rust to decompose. This was done once within the confines of the dikes (100' x 200') at Tank 22. Total volume of No. 22 10,000 barrels (420,000 gal.). No cleaning has been done since 1953. No samples have been taken of the soils within dikes; no excavation or cover has been done at the diked area. Dike is ~5-6 ft. high, area is grass covered, soil surface mainly clay

I AGREE WITH THE ABOVE SUMMARY OF THE INTERVIEW: /s/ Jay J. Hill (see attachment)

SIGNATURE:

COMMENTS: Peter Buechi (DEC-Albany) thought the above stated to occur at Tank 24. This tank is an FCC tank which is not believed to contain any of the above mentioned TEL. Focus will be on Tank 22.

REF. 3

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. 4

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

ASHLAND PETROLEUM COMPANY

NYS SITE NUMBER 915061

TOWN OF TONAWANDA

ERIE COUNTY

NEW YORK STATE

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

ENGINEERING-SCIENCE
290 ELWOOD DAVIS ROAD
LIVERPOOL, NEW YORK 13088

In Association With

DAMES & MOORE
2996 BELGIUM ROAD
BALDWINSVILLE, NEW YORK 13027

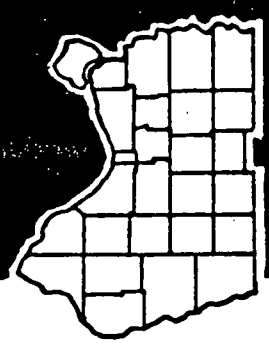
ENVIRONMENTAL CONTROL SERIES

REF. 5

HAZARDOUS WASTE INACTIVE SITE SURVEY PHASE II - REPORT

DECEMBER, 1982

DIVISION OF ENVIRONMENTAL CONTROL
SOLID WASTE SECTION



County of Erie
DEPARTMENT OF
ENVIRONMENT AND PLANNING

(5)

ASHLAND PETROLEUM

3701 RIVER RD.

TONAWANDA, N.Y.

DEC SITES # 915008 a & b

GENERAL INFORMATION

The 1980 Interagency Task Force on Hazardous Waste reported that the Ashland Petroleum company operated four (4) sites at the Tonawanda facility. One (1) site, 915008-c, Haist Property, was profiled previously.

Site # 915008-a is reported as a weathering area for tetraethyl lead sludges.

Site # 915008-b is reported as a storage pit for sediments, oil sludges and spill recovery.

INSPECTION FINDINGS

Mr. Campbell of our Department inspected these sites on May 29, 1981, and found that they pose no apparent environmental hazards.

Site # 915008-a, the tetraethyl lead sludge weathering area, is a small (10 x 30 feet) area, last used in 1953. The site was well contained and there were no signs of any leaching to the surroundings.

Site # 915008-b is a 280 x 220 foot concrete pit used to store API separator sludges, tank water and sediment, sewer sediment and spill

recovery. Oils are reclaimed from this unit. The DEC had determined that a Part 360 permit was not necessary for this facility. Mr. Campbell did not find any evidence of leaching or spillage associated with the operation of the facility.

BACKGROUND DATA

The information generated during the preparation of the "Haist Property", # 915008-c, profile would apply to sites # 915008-a & b as well. Since early 1982 the firm has ceased refining operations at the Tonawanda facility. Any lead sludges to be removed from process equipment will be disposed of at an off-site disposal area. The drainage from the refinery and tank farm areas will be processed by the API separator prior to discharge.

CONCLUSIONS

There are no apparent problems associated with either sites # 915008-a or b. Site # 915008-a is currently coded as an IATF "A" site indicating further field inspection, preliminary hydrogeological information, and/or additional information on chemicals present is needed. Site # 915008-b is currently listed as an "E" site indicating periodic surveillance and chemical analysis is required for a properly closed and maintained site.

(5)

RECOMMENDATION

Based on the small contained area which was utilized for the weathering of tetraethyl sludges, it is not felt that the site poses any hazard in its industrial setting. We would recommend that the classification be changed to "F" indicating that no further action is required.

It has become apparent that site # 915008-b is not an inactive disposal site, but an actively used storage pit for the control and containment of sediments and oil spills. For this reason it is believed that the site was erroneously listed as a hazardous waste disposal site. It is therefore recommended that the site be removed from the list.

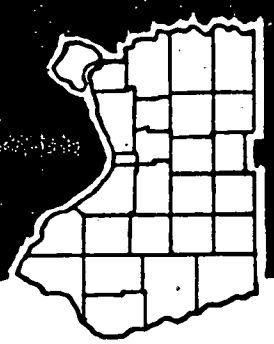
ENVIRONMENTAL CONTROL SERIES

(5)

HAZARDOUS WASTE INACTIVE SITE SURVEY PHASE I - REPORT

FEBRUARY, 1982

DIVISION OF ENVIRONMENTAL CONTROL
SOLID WASTE SECTION



County of Erie
DEPARTMENT OF
ENVIRONMENT AND PLANNING

Ashland Petroleum Co. # 915008-c

This site, also referred to as the "Haist Property", received low level radioactive material produced during 1944-46. Approximately 8000 tons of residue containing uranium (est. 0.54 Uranium) were spread over the site to a depth of 1 to 5 feet. In 1979, possibly 30-40% of the residue was removed from the Haist property and taken to the adjacent Seaway Industrial Park (now Niagara Landfill). The Haist site first appeared in a 1951 aerial photograph and has remained virtually unchanged since that time. A 1962 photo showed some activity immediately to the northwest of the disposal site. It could not be determined if the activity was landfilling of wastes or site grading. Surface runoff from the Haist property would be tributary to Two Mile Creek via drainage ditches and culverts.

On June 17, 1981, the DEP sampled the drainage downstream of the site and evidence of radioactivity was found in the water.

The results of analyses of the June 17, 1981 water samples were evaluated. The following observations were made.

1. Iron concentrations increased from 2.06 to 18.5 mg/l from upstream of the Niagara Landfill to downstream of the Ashland Landfill. This suggests leaching of iron from the area in between. The levels exceed the NYS Water Quality Standard of 0.3 mg/l.

2. Lead concentrations ranged from 0.03 to 0.10 mg/l. These values exceed the NYS Water Quality Standard of 0.025 mg/l.

3. Magnesium levels decreased from 138 to 86 mg/l. There was no evident reason for this decrease. The levels reported are not considered to be significant.

(5)

Site: 915008-C	Uranium tailing disposal
Owner:	Ashland Petroelum Company River Road Tonawanda, New York
Surrounding Land Use:	Heavy industrial - nearest residential approximately 1¼ mile to the East, 1¼ mile to the West, 1 mile to the North, and 1 mile to the South.

Anticipated Effect of Disposal Site On:

Groundwater Supplies:	None-area served by surface source public water supply.
Surrounding Area:	Low Level Radiation has been documented leaving the site via surface drainage and could affect the Two Mile Creek and Niagara River. Two Mile Creek flows past a residential area along Two Mile Creek Road and through a recreation area. (Isle View Park) and enters the Niagara River.
Airborne Transport of Pollutants:	None- site is inactive. Vegetative cover will preclude dust problems.
Need for Immediate Action:	None. Federal Government has concluded site poses no threat given present usage.
Need for Future Action:	ERDA Re-evaluation of site.
Responsible Agency:	NYSDEC and E.R.D.A.
	DEP sampling of Two Mile Creek in June/ July 1982.
	DEP resampling of four (4) sites previously sampled for parameters of concern.

(6)

INTERVIEW FORM

INTERVIEWEE/CODE Charley Hudson /

TITLE - POSITION NYSDOH Bureau of Toxic Substance Assessment

ADDRESS

CITY Albany STATE NY ZIP

PHONE (518) 473-8427 RESIDENCE PERIOD TO

LOCATION NYSDOH offices INTERVIEWER S. Powers

DATE/TIME 12/30/85 / 10:30 a.m.

SUBJECT: Ashland Petroleum 914008-A

REMARKS: Notes taken from NYSDOH Bureau of Toxic Substance Assessment Hazardous Waste Site Inspection Report* Inspection by Y. Khaikin and K. Mann. Land use: have 8 other hazardous waste sites in 1 mile radius.

Consolidated Freight 915083 1700m NE from site

Veterans Memorial Park 915078 18500m NE " "

Ashland Petroleum 915061 500 m NE from site

Seaway/Niagara/LF 915074 200m NE " "

Ashland Petroleum 915008-b 200m SE " "

" " 915008-c 400m SE " "

Tonawanda Coke 915055-c 1500m SSE " "

single residence homes NE from site

Sheridan Park Veterans Memorial Park, drive-in theatre nearby

site accessible to workers in area estimate direct contact 1 person 0.5 hr/day

site fenced and has 24 hr surveillance system; area of soil stain $10m^2$

Aquifer in unconsolidated depostis 80ft.; bedrock aquifer in Camillus shale 80 ft.

I AGREE WITH THE ABOVE SUMMARY OF THE INTERVIEW:

SIGNATURE: /s/ CH

*This report is in draft form. Copies of it could not be made

COMMENTS: (see page 2)

INTERVIEW FORM

INTERVIEWEE/CODE _____ / _____

TITLE - POSITION _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE ( ) _____ RESIDENCE PERIOD _____ TO _____

LOCATION _____ INTERVIEWER _____

DATE/TIME _____ / _____ _____

SUBJECT: _____

REMARKS: _____

Ashland Petroleum (cont)

distance between haz waste & highest level of aquifer 75 ft

soil is clay K 10^{-7} cm/sec

no groundwater data

prevailing wind is from SW

Surface water

- small tributary - adj 300 ft - no known uses

- 2 mile creek

facility slope - 0 - 3%

intervening slope (SW-site) 0 - 3%

I AGREE WITH THE ABOVE SUMMARY OF THE INTERVIEW: _____

SIGNATURE: _____

COMMENTS: _____

REF. 6

INTERVIEW FORM

INTERVIEWEE/CODE Charley Hudson /

TITLE - POSITION NYSDOH Bureau of Toxic Substance Assessment

ADDRESS

CITY Albany STATE NY ZIP

PHONE (518) 473-8427 RESIDENCE PERIOD TO

LOCATION NYSDOH office INTERVIEWER S. Powers

DATE/TIME 12/30/85 / 10:30 AM

SUBJECT: Ashland Petroleum 915008-A

REMARKS: Notes taken from NYSDOH Bureau of Toxic Substance Assessment. HAZardous Waste Site Inspection Report *
- Inspection by Y. Khaikin & K. Mann
Land use:
- have 8 other hazardous waste sites in 1 mile radius
Consolidated freight 915083 1700m NE from site.
Veterans Memorial Park 915078 1850 m NE
Ashland Petroleum 915061 500 m NE
Seaway/Niagara/L.F 915074 200 m NE
Ashland Petroleum 915008-b 200 m SE
" " 915008-c 400 m SE
Tonawanda Coke 915055-C 1500 m SSE
- single resident homes NE
- Sheridan Park, Veterans Memorial Park, Drive in Theater Nearby
- Site accessible to workers in area estimate direct contact ~~the~~
1 person 0.5 hrs/day
- Site fenced & has 24 hr surveillance system
- area of soil stain >10 m²
Aquifer in unconsolidated deposits < 80'
bedrock aquifer in Camillus shale 80'

(OVER)

I agree with the above interview summary:

Signature/Title: CHH

Comments:

* This report is in draft form. Copies of it could not be made.

Ashland Petroleum (cont)

distance between haz. waste & highest level of aquifer < 75'

soil is clay $K < 10^{-7}$ cm/sec

No G.W data

prevailing wind is from SW

Surface Water

- small tributary - adj. } No known uses
- 2 mile creek 300'

Facility slope - 0-3%

Intervening slope (SW-site) 0-3 %

New York State Atlas of Community Water System Sources 1982

NEW YORK STATE
DEPARTMENT OF HEALTH

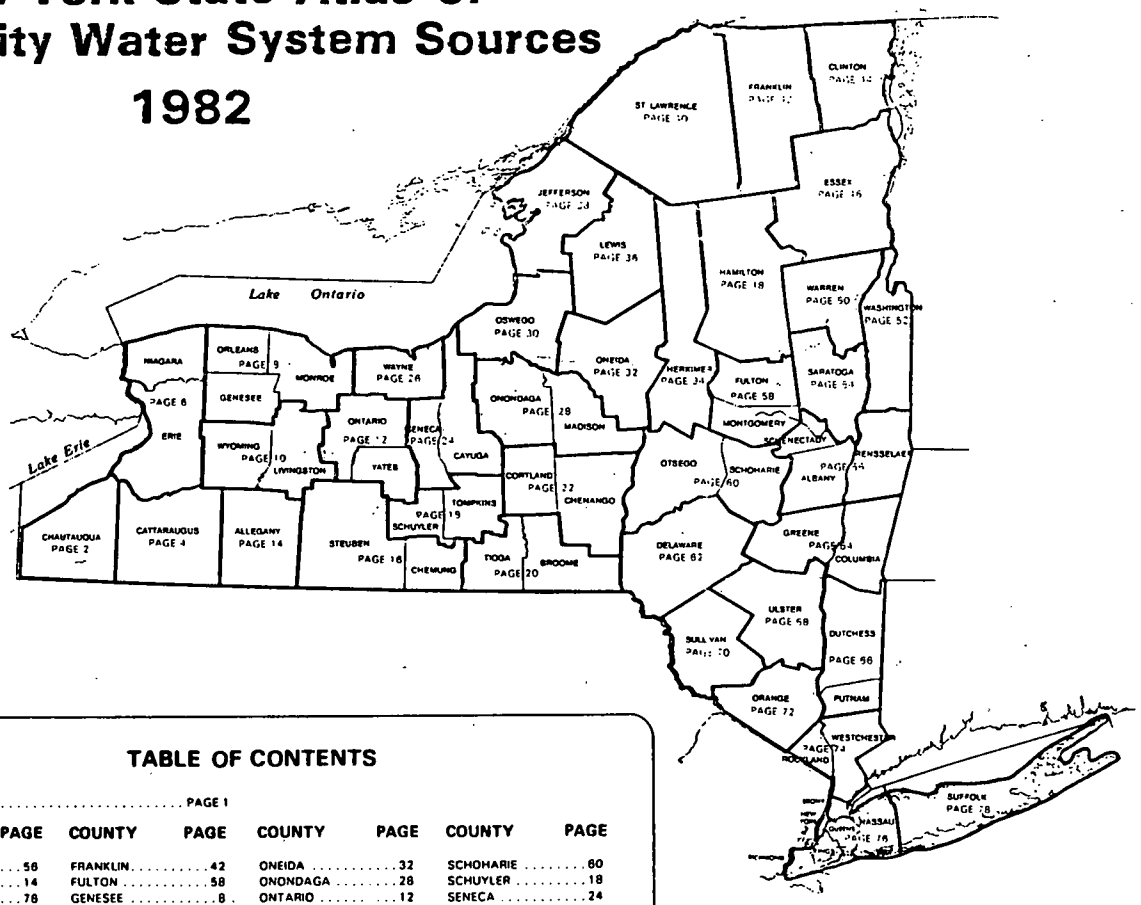


TABLE OF CONTENTS

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 — Hampton Bays
250 to 2,500 — Boiceville
250 or less — Corbett

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 — DELAWARE AND HUDSON
- Owner (If Other than Operator) — (PENN CENTRAL)
- Company Having Trackage Rights — (CONRAIL)

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. 7

ERIE COUNTY

ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE
Municipal Community			
	Akron Village (See No 1 Wyoming Co, Page 10)	3640	
1	Alden Village	3460	Wells
2	Angola Village	8500	Lake Erie
3	Buffalo City Division of Water	357870	Lake Erie
4	Caffee Water Company	210	Wells
5	Collins Water District #3	704	Wells
6	Collins Water Districts #1 and #2	1384	Wells
7	Erie County Water Authority (Sturgeon Point Intake)	375000	Lake Erie
8	Erie County Water Authority (Van DeWater Intake)	NA	Niagara River - East Branch
9	Grand Island Water District #2	9390	Niagara River
10	Holland Water District	1670	Wells
11	Lawtons Water Company	138	Wells
12	Lockport City (Niagara Co)		Niagara River - East Branch
13	Niagara County Water District (Niagara Co)		Niagara River - West Branch
14	Niagara Falls City (Niagara Co)		Niagara River - West Branch
15	North Collins Village	1500	Wells
16	North Tonawanda City (Niagara Co)		Niagara River - West Branch
17	Orchard Park Village	3671	Pipe Creek Reservoir
18	Springville Village	4169	Wells
19	Tonawanda City	18538	Niagara River - East Branch
20	Tonawanda Water District #1	91269	Niagara River
21	Wanakah Water Company	10750	Lake Erie
Non-Municipal Community			
22	Aurora Mobile Park	125	Wells
23	Bush Gardens Mobile Home Park	270	Wells
24	Circle B Trailer Court	50	Wells
25	Circle Court Mobile Park	125	Wells
26	Creekside Mobile Home Park	120	Wells
27	Donnelly's Mobile Home Court	99	Wells
28	Gowanda State Hospital	NA	Clear Lake
29	Hillside Estates	160	Wells
30	Hunters Creek Mobile Home Park	150	Wells
31	Knox Apartments	NA	Wells
32	Maple Grove Trailer Court	72	Wells
33	Millgrove Mobile Park	100	Wells
34	Perkins Trailer Park	75	Wells
35	Quarry Hill Estates	400	Wells
36	Springville Mobile Park	114	Wells
37	Springwood Mobile Village	132	Wells
38	Taylors Grove Trailer Park	39	Wells
39	Valley View Mobile Court	42	Wells
40	Villager Apartments	NA	Wells

NIAGARA COUNTY

ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE
Municipal Community			
	Lockport City (See No 12, Erie Co)	25000	
1	Middleport Village	2000	Wells (Springs)
	Niagara County Water District (See No 13, Erie Co)	48	
2	Niagara Falls City (See also No 14 Erie Co)	77384	Niagara River - East Branch
	North Tonawanda City (See No 16 Erie Co)	36000	
Non-Municipal Community			
3	Country Estates Mobile Village	28	Wells

LOCATION OF COMMUNITY WATER SYSTEM SOURCES-1982

ERIE and NIAGARA COUNTIES

ADAPTED FROM THE FOLLOWING: 1:250,000 SCALE NEW YORK STATE MAP © 1980 BY THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION

NEW YORK STATE DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL PROTECTION
BUREAU OF PUBLIC WATER SUPPLY PROTECTION

[illegible] Phone Visit 11/4/86 by JEI
[illegible]-up 11/18/86 by JEI
[illegible] Completed 12/2/86 by JEI
[illegible]ts:

Address Frontier Division - 2606 Elmwood Ave. Kenmore, N.Y. 14217
County Erie Phone (716)-877-7177
SIC Codes 1. 2911 3.
2. 4.

New York State Hazardous Waste Survey
Department of Environmental Conservation
Division of Solid Waste Management
50 Wolf Road, Albany, N.Y. 12233 Telephone: (518) 457-6605

CONFIDENTIAL
CONFIDENTIAL

REF. 8

General Information

1. Company Name Ashland Petroleum Company

Mailing Address 4545 River Road, Tonawanda, N.Y. 14150
Street City State Zip

Plant Location /✓/ Same as above

Street City State Zip

2. If Subsidiary, Name of Parent Company Ashland Oil, Inc.

3. Individual Responsible for Plant Operations A. V. Peppard
Name

Plant Superintendent (716)-877-7177 EXT. 300
Title Phone

4. Individual Providing Information Joseph D. Scalise
Name

Environmental Supervisor (716)-877-7177 EXT. 229
Title Phone

5. Department of Environmental Conservation Interviewer John E. Iannotti

6. Standard Industrial Classification (SIC) Codes for Principal Products

Group Name	SIC Code (4 Digit)	Approximate % of /✓/ Production / / Value Added
a. Petroleum Refining	2911	100
b.		
c.		
d.		

7. Processes Used at Plant
a. crude distillation
b. catalytic cracking
c. platinum reforming
d. light ends treating
e. asphalt blowing

8. Products
a. gasoline
b. L.P.G.
c. distillates
d. aromatics
e. asphalt
S.N.G. - Synthetic Natural Gas

b. CRG, molybdenum
c. sulfuric acid
d. caustic - NaOH (50%)
e. chlorine
g. tetra ethyl lead
h. additives
i.
j.

CONFIDENTIAL (8)

. On Site Waste Water Treatment /✓/Yes / /No

. On Site Waste Water Treatment by July 1977 /✓/Yes / /No

c. On Site Waste Water Treatment by July 1983 /✓/Yes / /No

. Industrial Sewer Discharge /✓/Yes / /No Name of Sewage Treatment Plant API Separator effluent to Niagara River

. SPDES No. _____ NPDES No. 0001678

a. Air Pollution Control Devices /✓/Yes / /No Types CO Boiler, catalyst cyclones, sulphur recovery unit, (amine scrubbers for H_2S gas, SO_2 tail gas incinerated

b. To Be Built / /Yes /✓/No by / /

c. Air 100 Emission Point Registration Numbers 27, all registered

. Number of manufacturing employees 246 b. Manufacturing Floor Space N.A. sq.ft.

. Attach a plat or sketch of the facility showing the location of on-site process waste storage (if available).

. Attach flow diagrams of chemical processes including waste flow outputs (if available).

. House waste treatment capabilities: API separator separates oil from water H_2S from HC cleaning

. Is there a currently used or abandoned landfill, dump or lagoon on plant property? /✓/Yes /✓/No

. Industrial wastes produced or expected to be produced by plant.

1) settled sludge from API separator and froth from air flotation unit
2) spent catalyst
3) oil skimmings from API separator
4) sulphur recovery system
5) spent platinum catalyst
6) spent sulfuric acid
7) tetraethyl lead sludge
8)

. Comments:

Company Code |_|_|_|_|_|_|_|_|

I Waste Characterization and Management Practice
(Use separate form for each waste stream)

CONFIDENTIAL

(8)

1. Waste Stream No. 7 (from Form I, Number 17)

2. Description of process producing waste cleaning of scale from gasoline holding tanks

3. Brief characterization of waste tetra ethyl lead sludge

4. Time period for which data are representative current to _____

5. a. Annual waste production 3 /✓/tons/yr. /_/gal./yr.

b. Daily waste production — /_/tons/day /_/gal./day

c. Frequency of waste production: /_/seasonal /✓/occasional /_/continual

/_/other (specify) _____

6. Waste Composition

a. Average percent solids ____% b. pH range __ to __

c. Physical state: /_/liquid, /_/slurry, /✓/sludge, /_/solid,

/_/other (specify) _____

d. Component	Average Concentration	/_/wet weight /_/dry weight	
1. tetra ethyl lead		/_/wt.%	/_/ppm
2.		/_/wt.%	/_/ppm
3.		/_/wt.%	/_/ppm
4.		/_/wt.%	/_/ppm
5.		/_/wt.%	/_/ppm
6.		/_/wt.%	/_/ppm
7.		/_/wt.%	/_/ppm
8.		/_/wt.%	/_/ppm
9.		/_/wt.%	/_/ppm
10.		/_/wt.%	/_/ppm

CONFIDENTIAL

Company Code

e. Analysis of composition is ☐ theoretical ☐ laboratory ☐ estimate (8)
(attach copy of laboratory analysis if available)

f. Projected ☑ increase, ☐ decrease in volume from base year: 0 % by July 1977;
____ % by July 1983.

g. Hazardous properties of waste: ☐ flammable ☑ toxic ☐ reactive ☐ explosive
☐ corrosive ☐ other (specify) _____

7. On Site Storage

a. Method: ☐ drum, ☐ roll-off container, ☐ tank, ☐ lagoon, ☑ other (specify) aerat

b. Typical length of time waste stored ____ ☐ days, ☐ weeks, ☐ months

c. Typical volume of waste stored ____ ☐ tons, ☐ gallons

d. Is storage site diked? ☐ Yes ☐ No

e. Surface drainage collection ☐ Yes ☐ No

8. Transportation N.A.

a. Waste hauled off site by ☐ you ☐ others

b. Name of waste hauler _____

Address _____
Street

_____
State Zip Code ( ) Phone City

9. Treatment and Disposal

a. Treatment or disposal: ☑ on site ☐ off site

b. Waste is ☐ reclaimed ☐ treated ☑ land disposed ☐ incinerated
☐ other (specify) _____

c. Off site facility receiving waste

Name of Facility _____

Facility Operator _____

Facility Location _____
Street

_____
State Zip Code ( ) Phone City

REF 9

MEMO

TO: FILE

FROM: PETER BUECHI PJ Buechi

SUBJ: ASHLAND OIL REFINERY, DISPOSAL SITE 116

DATE: 6/8/82

PHONECONVERSATION DON SCHUSE OF ASHLAND PETROLEUM REGARDING DISPOSAL SITE NO. 116 WHICH ALLEGEDLY RECEIVED TETRAETHYL LEAD WASTES.

MR. SCHUSE STATED THAT TETRAETHYL LEAD SCALE FROM TANK #24 WAS TEMPORARILY STORED AT THIS SITE WHEN THE TANK WAS CLEANED PRIOR TO REFURBISHING. SCALE WAS ALLOWED TO WEATHER IN THE SUNLIGHT FOR PERIOD OF TIME TO CONVERT ORGANIC LEAD TO INORGANIC LEAD. SCALE THEN COLLECTED AND DISPOSED OFF SITE.

CLEANING OF TANK TOOK PLACE ON SEP 3, 1953. MR. SCHUSE DIRECTLY INVOLVED. ONE OF HIS FIRST JOBS ON REPORTING TO REFINERY. ESTIMATES THAT 10 - 15 BARRELS OF SCALE REMOVED FROM THE TANK. SITE HAS RECEIVED NO FURTHER SCALE SINCE THAT TIME.
this indicates that the barrels were used for transporting the debris.
MR. SCHUSE ALSO INDICATED THAT BURIED UTILITIES IN THE AREA WOULD MAKE ANY DRILLING PROGRAM DIFFICULT

REF. 10

INTERVIEW FORM

INTERVIEWEE/CODE ~~MC Murry~~ Mc Murray MIKE ~~MACMURRY~~ /

TITLE - POSITION ENVIRONMENTAL ANALYST

ADDRESS 600 Delaware Ave

CITY Buffalo STATE N.Y. ZIP 14202

PHONE (716) ~~649-8275~~ 847-4531 . RESIDENCE PERIOD _____ TO _____

LOCATION DEC REGULATORY AFFAIRS / BUFFALO INTERVIEWER ERIC NYE - DEM

DATE/TIME 1/3/86 /

SUBJECT: WETLANDS & FLOOD INFO - REGION 9

REMARKS: MET WITH MIKE WHO GAVE ME ACCESS TO BOTH WETLAND AND FLOODWAY MAPS FOR THE LOCAL REGION

~~X~~ ALSO LEFT SITE LOCATIONS FOR THE IDENTIFICATION OF WILDLIFE CRITICAL HABITAT & NATIONAL WILDLIFE REFUGES

I agree with the above interview summary:

Signature/Title: Michael J. McMurray, Environmental Analyst

Comments:

REF. 10

INTERVIEW FORM

INTERVIEWEE/CODE Mike McMurry /

TITLE - POSITION Environmental Analyst

ADDRESS 600 Delaware Ave.

CITY Buffalo STATE NY ZIP 14202

PHONE (716) 847-4551 RESIDENCE PERIOD ____ TO ____

LOCATION DEC Regulatory Affairs Buffalo INTERVIEWER PRC, NYE, DIM

DATE/TIME 1/3/86 / ____

SUBJECT: Wetlands & Flood info- Region 9

REMARKS: Met with Mike who gave me access to both Wetland and Floodway maps for the local Region

Also left site locations for the indentificatcn of wildlife critical Habitat & National Wildlife Refuges

I AGREE WITH THE ABOVE SUMMARY OF THE INTERVIEW:

SIGNATURE: /s/ Michael J. McMurray, Environmental Analyst

COMMENTS:

REF. 10

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. 11

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: 915008a

NAME OF SITE : Ashland Petroleum Corp.
STREET ADDRESS: 4545 River Road

TOWN/CITY:	COUNTY:	ZIP:
Tonawanda	Erie	14217

SITE TYPE: Open Dump-X Structure- Lagoon- Landfill- Treatment Pond-
ESTIMATED SIZE: 1 < Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME....: Ashland Petroleum Corp.
CURRENT OWNER ADDRESS.: 2630 Elmwood Ave., Kenmore, NY 14217
OWNER(S) DURING USE...: Ashland Petroleum Corp.
OPERATOR DURING USE...: Same
OPERATOR ADDRESS.....: Same as above
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From To 1953

SITE DESCRIPTION:
This site was used as a weathering area for tetraethyl lead sludge that resulted from the cleaning of storage tanks. The site was reportedly used only once in 1953. After the lead sludge had weathered, it was reportedly excavated from the site and disposed off site.

HAZARDOUS WASTE DISPOSED: Confirmed-X Suspected -

TYPE	QUANTITY (units)
Tetraethyl lead sludge	Several tons

REF. 11

SITE CODE: 915008a

ANALYTICAL DATA AVAILABLE:

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

CONTRAVENTION OF STANDARDS:

Groundwater- Drinking Water- Surface Water- Air-

LEGAL ACTION:

TYPE..: None State- Federal-
STATUS: In Progress- Completed-

REMEDIAL ACTION:

Proposed- Under Design- In Progress- Completed-X
NATURE OF ACTION: Lead sludge was reportedly excavated.

GEOTECHNICAL INFORMATION:
SOIL TYPE:
GROUNDWATER DEPTH: Unknown

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Extent of environmental problems is unknown, although significant problems appear unlikely.

ASSESSMENT OF HEALTH PROBLEMS:

Insufficient information

PERSON(S) COMPLETING THIS FORM:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NAME.: Peter Buechi
TITLE: Assoc. Sanitary Engr.

NAME.: Roberto A. Olazagasti
TITLE: Solid Waste Management Spec.

DATE.: 01/24/85

NEW YORK STATE DEPARTMENT OF HEALTH

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

NAME.:
TITLE:

DATE.: 01/24/85

REF. 12

Dangerous Properties of Industrial Materials

Sixth Edition

N. IRVING SAX

Assisted by:

Benjamin Feiner/Joseph J. Fitzgerald/Thomas J. Haley/Elizabeth K. Weisburger

VNR VAN NOSTRAND REINHOLD COMPANY

New York

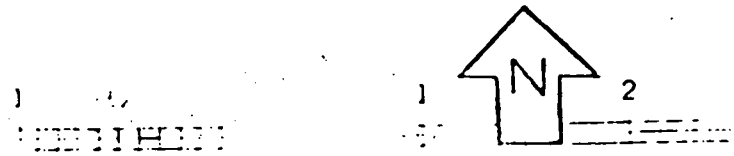
REF. 13

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.

REF. 13

ERIE COUNTY



50,000 ... New York coordinate System ...

ERIE COUNTY PLANNING DEPARTMENT

1980 CENSUS TRACTS

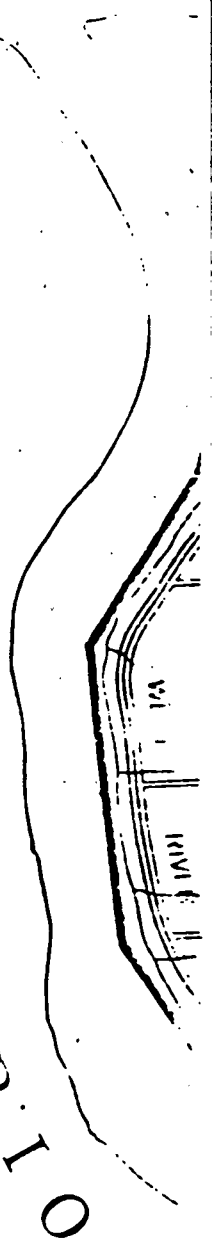
Tract Boundaries

Tract Boundaries Extending to the International Boundary

Tract Portion

Source: U.S. Bureau of the Census, 1980.

Prepared: Erie County Department of Environment and Planning, Division of Planning. October 1980.



REF. 14

GENERAL SOIL MAP

ERIE COUNTY, NEW YORK
(Scale 1:62,500)

Prepared for

ERIE COUNTY SOIL AND WATER
CONSERVATION DISTRICT

by the
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

In cooperation with
CORNELL UNIVERSITY
AGRICULTURAL EXPERIMENT STATION

Report prepared by:
John P. Wulforst, Soil Scientist, Soil Conservation Service
Willis E. Hanna, Soil Scientist, Soil Conservation Service

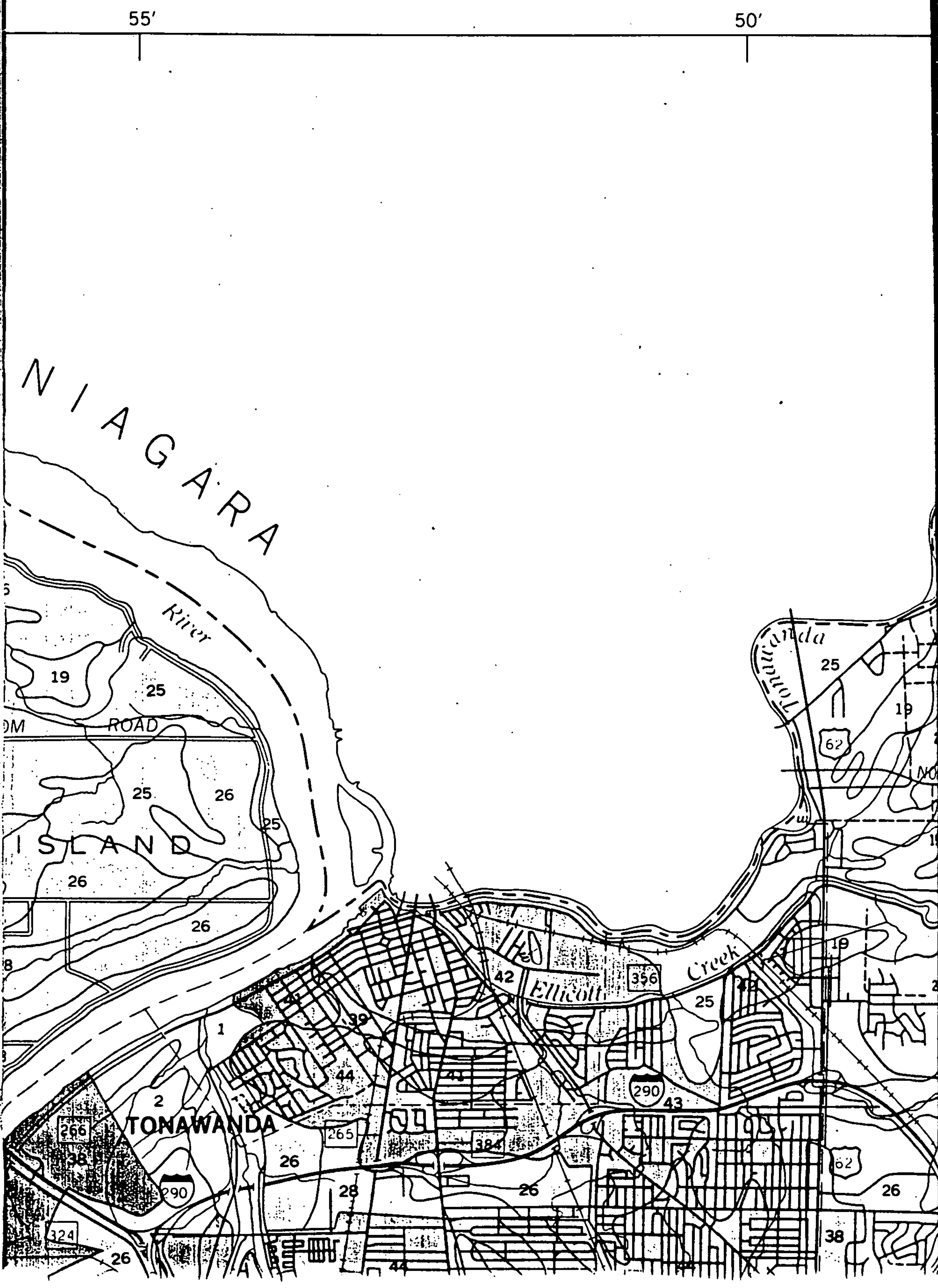
May 1979

This report is a supplement to the Soil Survey of Erie County, New York. The detailed soil survey provided a basis for preparation of this report and accompanying general soil map. The reader should consult the Soil Survey of Erie County for detailed soils information.

Note - Because this report is published in advance of the detailed Soil Survey of Erie County, a few soil names and interpretations may differ slightly from the final published detailed soil survey.

Partial funding for publication of this report was provided by the Erie County Soil and Water Conservation District.

14


55′
50′
NIAGARA
River
ROAD
ISLAND
Tonawanda
Ellicott
Creek
TONAWANDA
19
25
26
62
290
265
266
384
356
324

1. CAZENOVIA-CAYUGA, GENTLY SLOPING

Deep, moderately well drained to well drained, loamy and clayey soils, on plains

This general soil unit consists of gently sloping and sloping soils on ridges, knolls, and slightly raised island-like benches on the lowland plain in the northern part of the county. A few areas in the southern portion of the county are on plateau shoulder slopes. Slope ranges from 3 to 15 percent, but is dominantly 3 to 8 percent.

This unit covers about 7,400 acres or 1.1 percent of the county. Cazenovia soils make up about 55 percent of the unit, Cayuga soils about 35 percent, and soils of minor extent comprise the remaining 10 percent.

The Cazenovia soils formed in loamy, reddish-colored, glacial till deposits with a moderate amount of soft shale fragments. The Cayuga soils formed in a thin layer of gravel-free, clayey sediments about 2 feet thick that mantle loamy glacial till deposits. Both soils are well drained and moderately well drained, and dominantly neutral in reaction in the subsoil and moderately alkaline in the substratum. They have a seasonal high water table perched at depths of 1.5 to 4.0 feet below the soil surface during early spring and other excessively wet periods. The rate of water movement (permeability) through the subsoil of Cayuga soils is slow, and in the subsoil of Cazenovia soils it is slow or moderately slow.

Soils of minor extent are those of the Ovid, Churchville, and Lima series. Ovid and Churchville soils are somewhat poorly drained and occur on foot slopes and in other low areas. Moderately well drained Lima soils are in areas where the clay content of the subsoil is lower than in the major soils.

Most areas of this unit near the urban fringe are idle, while more rural areas are used for farming. Seasonal wetness in low areas containing the minor soils will delay normal spring tillage operations. Erosion is a hazard, particularly on long slopes and where the soils are left bare of vegetative cover.

2. CHURCHVILLE-REMSON, NEARLY LEVEL

Deep, somewhat poorly drained, clayey soils, on lowland plains and fringe areas to the uplands

This general soil unit consists of nearly level to sloping soils on lowlands in the northern part of the county, and on plateau fringe areas extending from the central part to the southwestern portion of the county. Slope ranges from 0 to 15 percent, but is dominantly 0 to 3 percent.

This unit covers about 41,000 acres or 6.1 percent of the county. Churchville soils make up about 45 percent of the unit, Remson soils about 35 percent, and soils of minor extent make up the remaining 20 percent.

The Churchville soils formed in reddish, clayey sediments about 2 feet thick that mantle loamy glacial till deposits. The Remson soils formed in clayey glacial till with a moderate content of gray shale fragments. Both soils are somewhat poorly drained and have a seasonal high water table perched in the upper part of the subsoil during spring and other wet periods. Generally, surface water runs off these soils quite slowly. Rate of water movement (permeability) through the subsoil of Churchville soils is slow or very slow, and in Remson soils it is very slow.

Soils of minor extent include those of the Cayuga, Niagara, Danley, Lakemont, and Canadice series. Well drained and moderately well drained Cayuga soils are on convex knolls and ridges, and poorly drained and very poorly drained Lakemont soils are in depressions and along drainageways. In areas adjacent to Remson soils, moderately well drained Danley soils are on knolls and poorly drained Canadice soils are in low areas. Somewhat poorly drained Niagara soils are in areas where the subsoil has a lower clay content than in the major soils.

Most areas of this unit were originally cleared and used for farming. However, because of seasonal wetness and poor soil tilth, many of these areas are now idle and have reverted to brush. Some areas are used for pasture. Erosion is a serious hazard in more sloping areas.

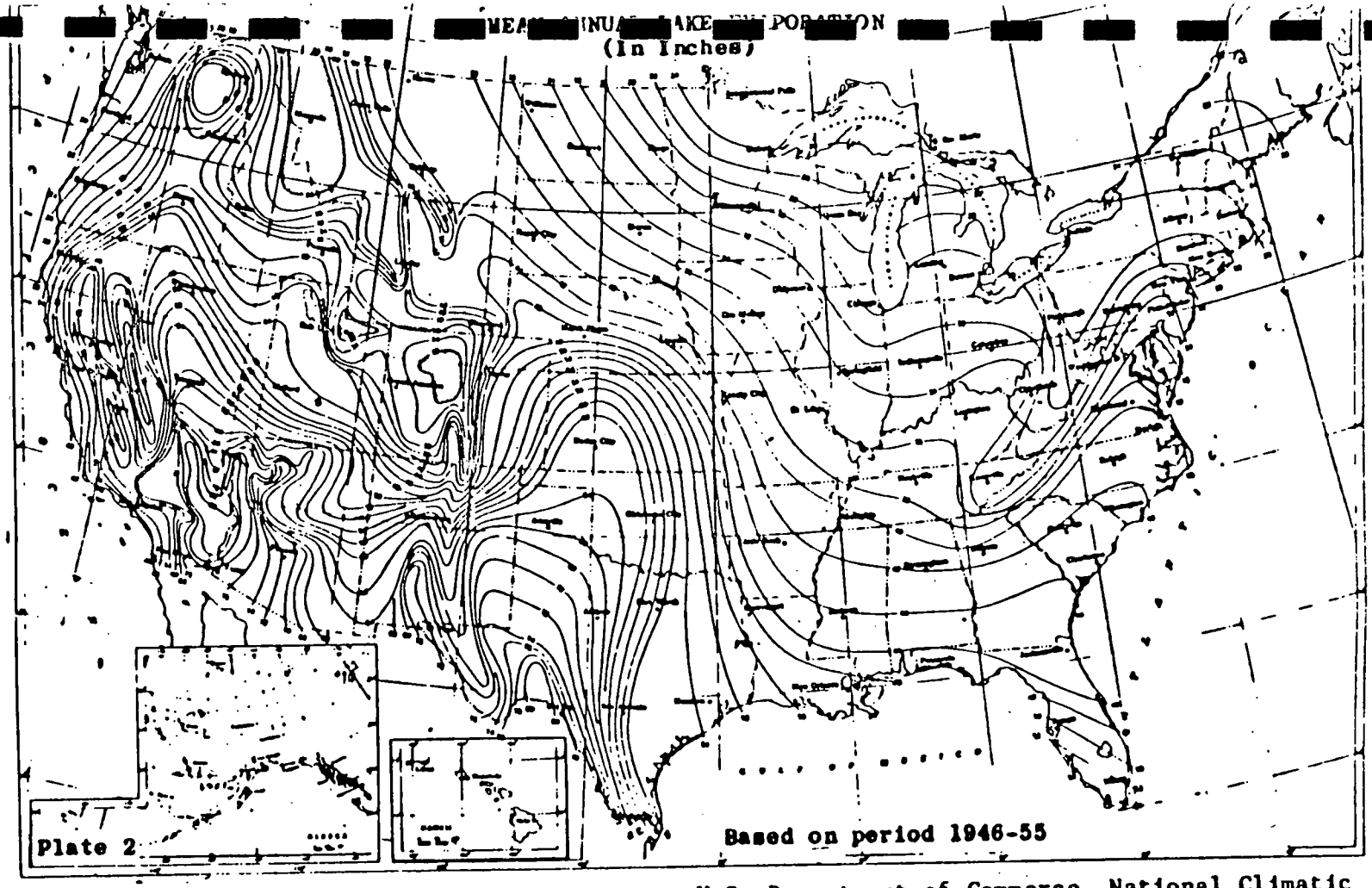
38. URBAN LAND

Nonsoil areas consisting of commercial and industrial developments

This unit is composed of urban areas that are intensively developed for commercial and industrial uses. Very few areas of undisturbed soil which originally covered the landscape remain. Slope is mostly less than 3 percent, but in a few areas it ranges up to 8 percent. This unit covers about 15,400 acres or 2.3 percent of the county.

Practically all of the downtown commercial and industrial areas of the cities of Buffalo and Lackawanna, and a sizable portion of Tonawanda are in this unit. Most areas are covered with buildings, roads, or parking lots; however, a sizable portion of the unit includes landfills, industrial waste, and extensive fill and dredge areas such as those near the Buffalo harbor.

Some areas of this unit extend into, or occur as islands, in suburbs. These areas are mostly industrial parks, railroads, airports, and exceptionally large shopping plazas.

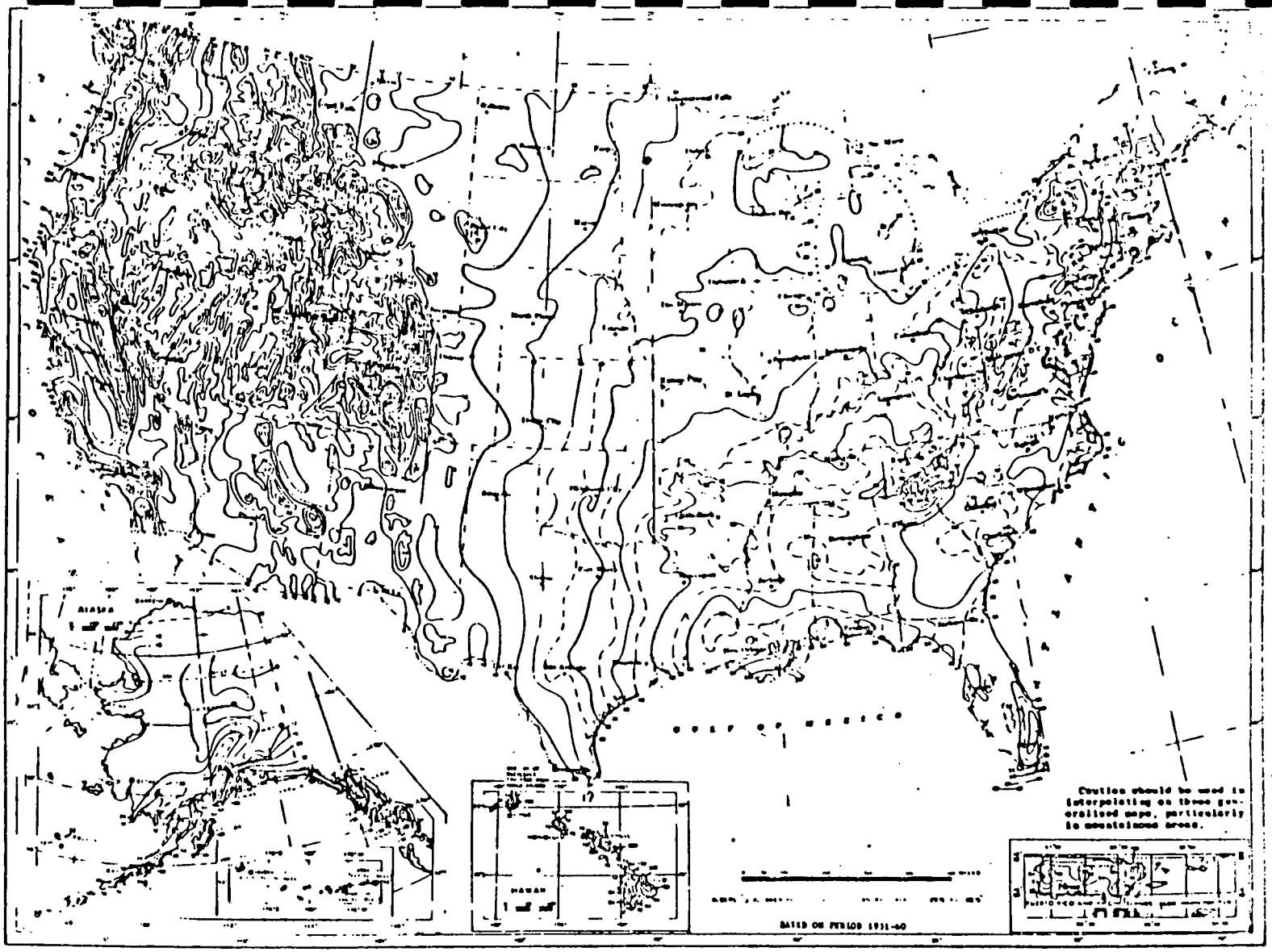


Source: Climatic Atlas of the United States, U.S. Department of Commerce, National Climatic Center, Ashville, N.C., 1979.

Figure 4

Mean Annual Lake Evaporation (In Inches)

REF. 15



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)

BILLING CODE 6560-50-C

REF. 15

REF. 16

"Preliminary Evaluation of Chemical Migration to Groundwater and the Niagara River from Selected Waste-Disposal Sites"

By

Edward J. Koszalka, James E. Paschal, Jr.,

Todd S. Miller and Philip B. Duran

Prepared by the U.S. Geological Survey

in cooperation with the

New York State Department of Environmental Conservation

for the

U.S. ENVIRONMENTAL PROTECTION AGENCY

1985

(16)

114. ASHLAND PETROLEUM COMPANY (Literature review) NYSDEC 915061

General information and chemical-migration potential.--This site, in the northern part of the town of Tonawanda, is a solid-waste landfill containing spent lime, clay, wood, concrete, metal, and phosphoric acid catalysts. The potential for contaminant migration is indeterminable because data are lacking.

Geologic information.--The U.S. Geological Survey drilled four test borings on the site in 1975. The geologic logs indicated bedrock (Camillus Shale) at approximately 80 ft below grade. Overlying the bedrock is a sequence of silt and clay layers with occasional embedded gravel.

Hydrologic information.--No hydrologic information is available.

Chemical information.--No chemical data are available, and no monitoring has been proposed.

115. ASHLAND PETROLEUM COMPANY (Literature review) NYSDEC 915008c

General information and chemical-migration potential.--This site, received low-level radioactive material during 1944-46. Approximately 8,000 tons of uranium ore tailings containing 0.54 percent uranium was spread over the area to a depth of 2 ft.

No data are available to determine contaminant migration by ground-water movement. However, the chemical analyses of water from adjacent drainage ditches indicate the presence of some heavy metals and low-level radiation, which indicates possible offsite migration by surface runoff. The potential for contaminant migration in ground water is indeterminable.

Geologic information.--The site is underlain by glacial lacustrine clay of unknown thickness that in turn overlies bedrock of Camillus Shale. No geologic test borings have been made.

Hydrologic information.--No ground-water data are available. Surface water flows from the site into drainage ditches and culverts, which drain into Two Mile Creek, a tributary to the Niagara River (pl. 2).

Chemical information.--The U.S. Energy Research and Development Administration (ERDA) and the Erie County Department of Environmental Planning (ECDEP) have collected and analyzed several surface-water and soil samples.

In 1976, ERDA collected nine mud samples and eight water samples from drainage ditches upgradient and downgradient of this site. The mud samples were analyzed for uranium 238, and the water samples for radium 226, uranium 234, 235, 238, and thorium 228, 230, and 232. The results indicated low-level radiation and contamination of soils in the area.

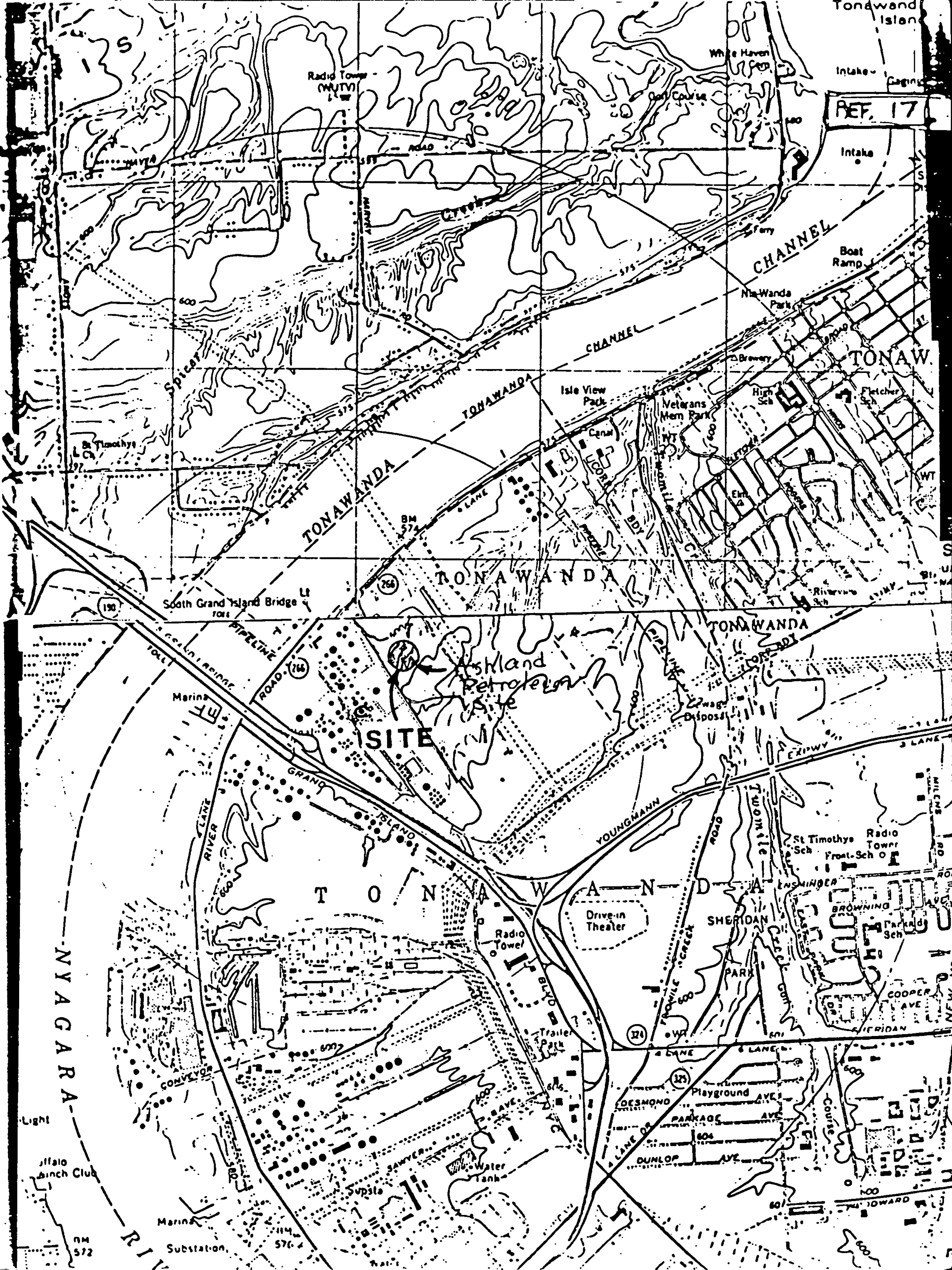
In June 1981, ECDEP collected four water samples from the drainage ditches leading downstream from the site and analyzed them for heavy metals and selected organic compounds and tested for alpha, beta, and gamma radiation. Results supported the ERDA data, confirming the migration of low-level radiation from the site through the drainage areas. The levels of radiation in the drainage ditches are significantly below Nuclear Regulatory Commission standards.

116. ASHLAND PETROLEUM COMPANY (Literature review) NYSDEC 915008-a

General information and chemical-migration potential.--This site, in the northern part of the town of Tonawanda, was a weathering area for tetraethyl lead sludges in 1953. The area used was 10 ft x 30 ft. The site was well contained, and no leachate was present upon surficial inspection. Owner representatives indicated that lead sludge had been excavated and disposed of offsite after the lead had weathered for several years. The site probably poses no hazards, and no monitoring has been proposed. The potential for contaminant migration is indeterminable.

117. ASHLAND PETROLEUM COMPANY (Literature review) NYSDEC 915008-b

General information and chemical-migration potential.--This site, in the northern part of the town of Tonawanda, has been a storage pit for sediments, oil sludges, and chemical-spill recovery. The area is a concrete storage pit 280 ft wide and 220 ft long. No monitoring has been proposed for the site, and the potential for contaminant migration is indeterminable.


REF. 17
Tonawanda Island
Radio Tower (WUTV)
White Haven Cem
Golf Course
Intake
Spicer Creek
CHANNEL
Boat Ramp
Nia-Wanda Park
Brewery
TONAW
Isle View Park
Veterans Mem Park
High Sch
Fletcher Sch
Canal
St Timothys
TONAWANDA
TONAWANDA CHANNEL
BM 574
South Grand Island Bridge
TOLL
PIPELINE
Ashland Petroleum Site
SITE
Marina
GRAND ISLAND
RIVER LANE
YOUNGMANN
EXPWY
St Timothys Sch
Frost Sch
Radio Tower
T O N A W A N D A
ENSMINGER
BROWNING
Drive-in Theater
SHERIDAN
PARK
TWOMILE CREEK
Radio Tower
Trailer Park
CONVEYOR
Playground
DESMOND
PARKAGE AVE
DUNLOP AVE
SAWYER
Water Tank
COOPER AVE
Light
Marina
Substation

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: NYD0063653133

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site): Ashland Petroleum Corp.	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER: 4545 River Rd
03 CITY: Town of Tonawanda	04 STATE: NY; 05 ZIP CODE: 14150; 06 COUNTY: Erie; 07 COUNTY CODE: 029; 08 CONG DIST: 33
09 COORDINATES LATITUDE: ___ LONGITUDE: ___	

10 DIRECTIONS TO SITE (Starting from nearest public road): Head North from Buffalo on Grand Island Blvd., get off River Road Exit. Site is located at 4545 River Rd on the right.

III. RESPONSIBLE PARTIES

01 OWNER (if known): Ashland Petroleum	02 STREET (Business, mailing, residential): 4545 River Rd
03 CITY: T. Tonawanda	04 STATE: NY; 05 ZIP CODE: 14150; 06 TELEPHONE NUMBER: (716) 632-7646
07 OPERATOR (If known and different from owner): Same	08 STREET (Business, mailing, residential):
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: 12 10 82 (MONTH DAY YEAR)
BY (Check all that apply): ☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR ☑ E. LOCAL HEALTH OFFICIAL County (Erie) ☑ F. OTHER: ______ (Specify)
CONTRACTOR NAME(S): Engineering Science & Dames & Moore

02 SITE STATUS (Check one): ☐ A. ACTIVE ☑ B. INACTIVE ☐ C. UNKNOWN
03 YEARS OF OPERATION: 1953 (BEGINNING YEAR) | 1953 (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Tetraethyl lead. ~~spread on 10×30' diked area~~

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
TEL is toxic. Material disposed of in 1953 through spreading TEL within dike to permit volatilization. It is suspected that the TEL sludge was spread outside of the diked area. Possible groundwater and surface water is suspected

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: Cathy J. Bosma	02 OF (Agency Organization): Engineering-Science (ES)	03 TELEPHONE NUMBER: (716) 591-7575
04 PERSON RESPONSIBLE FOR ASSESSMENT: Cathy J. Bosma	05 AGENCY: ; 06 ORGANIZATION: Same; 07 TELEPHONE NUMBER: ( )	08 DATE: 1/13/86 (MONTH DAY YEAR)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ 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 _____

Gal. 420-630

~~NO. OF DRUMS~~

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	420-630	gals	TEL sludge - spread within dike to volatilize organics (This was done in 1953)
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
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
	None - TEL sludge		—	Unknown	—

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)

P. Buechi (NYSDEC) Memo, 1982

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: NV | 02 SITE NUMBER: D006365133

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

No record

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

No record

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

No record

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

No record

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

Low potential - area is within fenced property

01 ☒ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: < 1 (ACRES)
04 NARRATIVE DESCRIPTION

Due to residual lead in surface

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

Low potential - intakes 72.5 miles from site

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

No record

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

No record

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D006365133

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No record

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

No record

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

Not likely - area is industrial / commercial

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

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

No Record

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

SPDES permit on file - monitor for lead
Not able to identify source.

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

Not likely - area is fenced and patrolled

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

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

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

NYSDEC Records, 1982
Erie County DEP, 1982
NYS Atlas of Community Water System Sources, 1982

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

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NYD006365133

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Ashland Petroleum Corp	4545 River Road

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Town of Tonawanda	NY	14150	Erie	029	32

09 COORDINATES LATITUDE	LONGITUDE
___ ___ ___.___	____ ___ ___.___

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	02 SITE STATUS	03 YEARS OF OPERATION
12, 10, 85 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	1953 (BEGINNING YEAR) 1953 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm)
☐ C. MUNICIPAL Erie Co ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☒ G. OTHER ES and DRVM (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Cathy J. Bosma	Civil Engineer	Engineering-Science	(703) 591-7575
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Larry Keefe	Geologist	Dames & Moore	(315)638-257
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
J. Donald Scalise		4545 River Road	(716)632-764
Jay Hill		P.O Box 391, Ashland, KY	(606) 329-43
Jack Patten	Plant Manager	4545 River Road	(716) 632-76
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	2:00 pm	Drizzle, Overcast

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Cathy J. Bosma	Engineering-Science (ES)	(703)591-757

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Cathy J. Bosma	Same			1, 13, 86 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D006365133

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ 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)

GAL ~~TONS~~ 420-630

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	420-630	gal.	TEL ladened sludge placed in dike in 1953 to promote volatilization of organics
SOL	SOLVENTS			
PSD	PESTICIDES			
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
OLW	Tetraethyl lead	78-00-2	SI	unknown	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	None		FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

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

ES and D&M Site Visit and Interview, 12-10-85.
P. Buechi Memo, 1982.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D006365313

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

No record of testing

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

SPDES permit in file - insufficient to identify site as source.

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

unlikely - inorganic lead decomposed to inorganic lead

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

Hazard unlikely as a result of weathering.

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

~~Stat~~ Site is within a diked area, plant has a fence with a security checkpoint.

01 ☒ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: < 1 (Acres) 04 NARRATIVE DESCRIPTION

Residual lead on ~~Roof~~ surface.

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

Low potential - SPDES permit on file for plant discharge.

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

No record

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

No record

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D006365133

HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None noticed

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

None noticed

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

Unlikely - industrial area

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

Contained in impoundment

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

None noticed

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

No record - SPDES permit on file - monitoring for lead

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

N/A

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

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

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

ES & DEM Site visit

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NYD006365313

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	None			
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE	SPDES			For entire property

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☑ A. SURFACE IMPOUNDMENT	420-630	gal
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ 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) Volatilization

05 OTHER
☑ A. BUILDINGS ON SITE

06 AREA OF SITE
< 1/2 (Acres)

07 COMMENTS
Site is the area inside the Tank 54 dike. The dike has a ~~cover~~ soil liner and approximately 7-8' high. Apparently the tank was cleaned by removing the rust scale (which contains TEL) and spreading it in 6 inch layers within the dike. The TEL is believed to have volatized. No sampling is available. The sludge was removed and spread for volatilization in 1953. Remains were disposed in an unknown offsite landfill

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.
Dike Height = 7-8' high

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☑ NO

02 COMMENTS
Site within property. Property is fenced & guarded ~24 hrs/day.
Site itself is diked.

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

FS and D&M Site Interview 12-10-85.
EPA Preliminary Evaluation of Chemical Migration to Groundwater and the Niagara River from selected waste-disposal sites.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D006365313 3

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. 2.5 (mi)
B. _____ (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 _____

03 DISTANCE TO NEAREST DRINKING WATER WELL _____ (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
7-80 (ft)	Unknown	775 (ft)	~~[illegible]~~ 530 gpm (gpd)	☐ YES ☐ NO Unknown

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

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

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
Magna River	☐	0.5 (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. 4988 NO. OF PERSONS	B. 14340 NO. OF PERSONS	C. 52059 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION _____ (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE _____

04 DISTANCE TO NEAREST OFF-SITE BUILDING _____ (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)

Industrial and commercial area - population consist primarily of workers. Closest residences ~1.5 miles North East.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D006365133

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☒ A. $10^{-0} - 10^{-6}$ 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	
~75-80 (ft)	unknown (ft)	unknown	

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)	0 %	closed impoundment	2 %

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: A. _____ (mi)

OTHER: B. 0.3 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

_____ (mi)

ENDANGERED SPECIES: _____

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 (mi)	B. 1.5 (mi)	C. 73 (mi)	D. 73 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Site is located within the Ashland Petroleum refinery alleged to be within the confines of burned fire-control around Tank #24.

Area is generally heavy industrial / commercial with open areas between properties. General hazardous waste disposal site identified in the immediate area.

Nearest residential area is approximately 1.5 miles NE of site.

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

USGS, 1982
NYSDEC, Reg 9, 1984
CFR 40, Part 300, 1983
ES&DM Site Visit, 1985

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NYDC0636531

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03. ESTIMATED DA RESULTS AVAI
GROUNDWATER		None	
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER		None	

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNu - Air	Air readings were taken in April 1986. upwind and downwind of the site. No observed releases were detected.

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 of site was updated during site investigation

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

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

ES and D&M Site Inspection 12-10-85 and Apr. 1986

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NYD006365313

II. CURRENT OWNER(S) | **PARENT COMPANY** (If applicable)

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
Ashland Petroleum Company			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**
4545 River Road			
05 CITY / 06 STATE / 07 ZIP CODE		**12 CITY / 13 STATE / 14 ZIP CODE**	
T. Tonawanda, NY 14150			

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**
05 CITY / 06 STATE / 07 ZIP CODE		**12 CITY / 13 STATE / 14 ZIP CODE**	

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**
05 CITY / 06 STATE / 07 ZIP CODE		**12 CITY / 13 STATE / 14 ZIP CODE**	

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**
05 CITY / 06 STATE / 07 ZIP CODE		**12 CITY / 13 STATE / 14 ZIP CODE**	

III. PREVIOUS OWNER(S) (List most recent first) | **IV. REALTY OWNER(S)** (If applicable; list most recent first)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Same			
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**	

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)

ES and D&M Site Inspection 12-10-85

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NYD000636531

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Ashland Petroleum Company	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
4545 River Road	

05 CITY	06 STATE	07 ZIP CODE
T. Tonawanda	NY	14150

08 YEARS OF OPERATION	09 NAME OF OWNER
Prior to Jan 1960 1952 - Date	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

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

PREVIOUS OPERATORS' PARENT COMPANIES (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

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, sampling analysis, reports)

ES and D&M Site Visit 12-4-85

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NYD063653

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Ashland Petroleum Company	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
4545 River Road	1

05 CITY	06 STATE	07 ZIP CODE
T. Tonawanda	NY	14150

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Sunoco			
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)

ES and DEM Site Visit 12-4-85

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D[illegible]3653133

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not Applicable

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MI	D006365133

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE 1955 — 03 AGENCY Ashland Petroleum
04 DESCRIPTION

TEL ladened sludge removed from dike and disposed of in an unknown off-site landfill.

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

ES and D&M Site Visit, 12-10-86

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	NYD002153132

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☑ NO

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

Not for specific site

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

Documentation from Albany NYSDEC - Div. of Regulatory Affairs, A80, 1985

SECTION VI
ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

ASSESSMENT OF DATA ADEQUACY

A summary assessment of the adequacy of existing data for completion of the HRS score is presented in Table VI-1. Insufficient information is presently available to complete an HRS score for this site.

PHASE II WORK PLAN

Objectives

The objectives of the Phase II activities are:

- To collect additional field data necessary to identify the occurrence and extent of contamination and to determine if any imminent health hazard exists.
- To perform a conceptual evaluation of remedial alternatives and estimate budgetary costs for the most likely alternative.
- To prepare a site investigation report including final HRS score.

TABLE VI-1

ASSESSMENT OF DATA ADEQUACY

HRS Data Requirement	Comments on Data
Observed Release	
Groundwater	Inadequate to score an observed release
Surface Water	Inadequate to score an observed release
Air	Adequate for HRS score
Route Characteristics	
Groundwater	Adequate for HRS score
Surface Water	Adequate for HRS score
Air	Adequate for HRS score
Containment	Adequate for HRS score
Waste Characteristics	Adequate for HRS score
Targets	Adequate for HRS score
Observed Incident	Adequate for HRS score
Accessibility	Adequate for HRS score

The additional field data required to complete this investigation are described as follows:

Groundwater - A groundwater monitoring system is not recommended. The migration of lead through the clay overburden into the groundwater is highly unlikely. The occassional dewatering of the diked area would have removed any hydraulic gradient as well as decreased the concentration of lead on the surface.

Subsurface Soils - A total of 8 subsurface soil samples should be collected at 2 foot intervals at four locations and analyzed for hazard substance list (HSL) metals. Likewise, background subsurface soil samples consisting of 2 samples will be collected at 2 foot intervals at one location. The background location should be away from suspected disposal site. In addition, sieve and hydrometer analyses will be performed on representative samples.

Air - An air monitoring survey with an HNu meter is recommended to test the air quality during the on-site work.

TASK DESCRIPTION

The proposed Phase II tasks are described in Table VI-2.

COST ESTIMATE

The estimated man-hours required for the Phase II project are presented in Table VI-3 and the estimated project costs are presented by task in Table VI-4.

HEALTH AND SAFETY PLAN

The Health and Safety Plan will be submitted as a separate document.

QUALITY ASSURANCE PLAN

The Quality Assurance Plan will be submitted as a separate document.

TABLE VI-2

PHASE II WORK PLAN - TASK DESCRIPTION

	Task	Description of Task
II-A	Update Work Plan	Review the information in the Phase I report, conduct a site visit, and revise the Phase II work plan.
II-B	Conduct Geophysical Studies	No further studies required.
II-C	Conduct Boring/Install Monitoring Wells	No further studies required.
II-D	Construct Test Pits/Auger Holes	Four (4) auger holes recommended for soil sampling within the diked area of Tank 24. One (1) auger hole for soil sampling of background soils.
II-E	Perform Sampling & Analysis	
	Soil samples from auger	Eight (8) soil samples collected at 2 foot intervals at four locations within the diked area. Perform one grain size analysis and permeability test per subsurface lithology change. Two (2) soil samples collected at 2 foot intervals at one location. This location should be away from suspected disposal site and should be used as a background.
	Soil samples from surface soils	No further studies necessary.
	Soil samples from auger holes/test pits	Analyze each sample for HSL metals.
	Sediment samples from surface water	No further studies necessary.
	Groundwater samples	No further studies necessary.
	Surface water samples	No further studies necessary.

TABLE VI-2, Continued

PHASE II WORK PLAN - TASK DESCRIPTION

Task		Description of Task
	Air samples	Using the HNu, determine the presence of organics.
	Waste samples	No further sampling necessary.
II-F	Calculate Final HRS	Based on the field data collected in Tasks II-B - II-E, complete the HRS form.
II-G	Conduct Site Assessment	Prepare final report containing Phase I report, additional field data, final HRS and HRS documentation records, and site assessments. The site assessment will consist of a conceptual evaluation of alternatives and a preliminary cost estimate of the most probable alternative.
II-H	Project Management	Project coordination, administration and reporting.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
PHASE II INVESTIGATION
COST ESTIMATE

SITE ID #: 915006A
SITE NAME: ASHLAND PETROLEUM
CONSULTANT: ENGINEERING SCIENCE

TABLE VI-3

TASK DESCRIPTION	ESTIMATED HOURS OF DIRECT TECHNICAL LABOR (DTL) L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	TOTAL HOURS	TOTAL COST
II-A UPDATE WORKPLAN	4	8	4	8	4	40	24	24	16	36	168	2323.20
II-B CONDUCT GEOPHYSICAL STUDIES											0	0.00
II-C CONDUCT BORING/INSTALL MONITORING WELLS											0	0.00
II-D CONSTRUCT TEST PITS/ AUGER HOLES	2	4				18		18			42	655.40
II-E SAMPLING AND ANALYSIS											0	0.00
Soil samples from borings											0	0.00
Soil samples from surface soils											0	0.00
Soil samples from auger holes/test pits		2				9		9			20	294.30
Sediment samples from surface water											0	0.00
Groundwater samples											0	0.00
Surface water samples											0	0.00
Air samples											0	0.00
Waste samples											0	0.00
II-F CALCULATE FINAL HRS SCORE	8	16	4	2	8	54	40	18	8	8	166	2642.80
II-G CONDUCT SITE ASSESSMENT	2	24	2		6	12	24	6	24	60	160	2136.40
II-H PROJECT MANAGEMENT	2	12	2	10	12						38	814.20
TOTAL HOURS	18	66	12	20	30	133	88	75	48	104		
HOURLY RATE $	33.40	25.20	22.00	19.70	17.00	15.10	13.30	12.00	9.60	8.60		
DIRECT LABOR COSTS $	601.20	1663.20	264.00	394.00	510.00	2008.30	1170.40	900.00	460.80	894.40		

4/7/86

TOTAL DTL COSTS	8866.30
INDIRECT LABOR COSTS	10462.23
TOTAL LABOR COSTS	19328.53
PROFIT (15%)	2899.28
TOTAL PRICE	22227.81

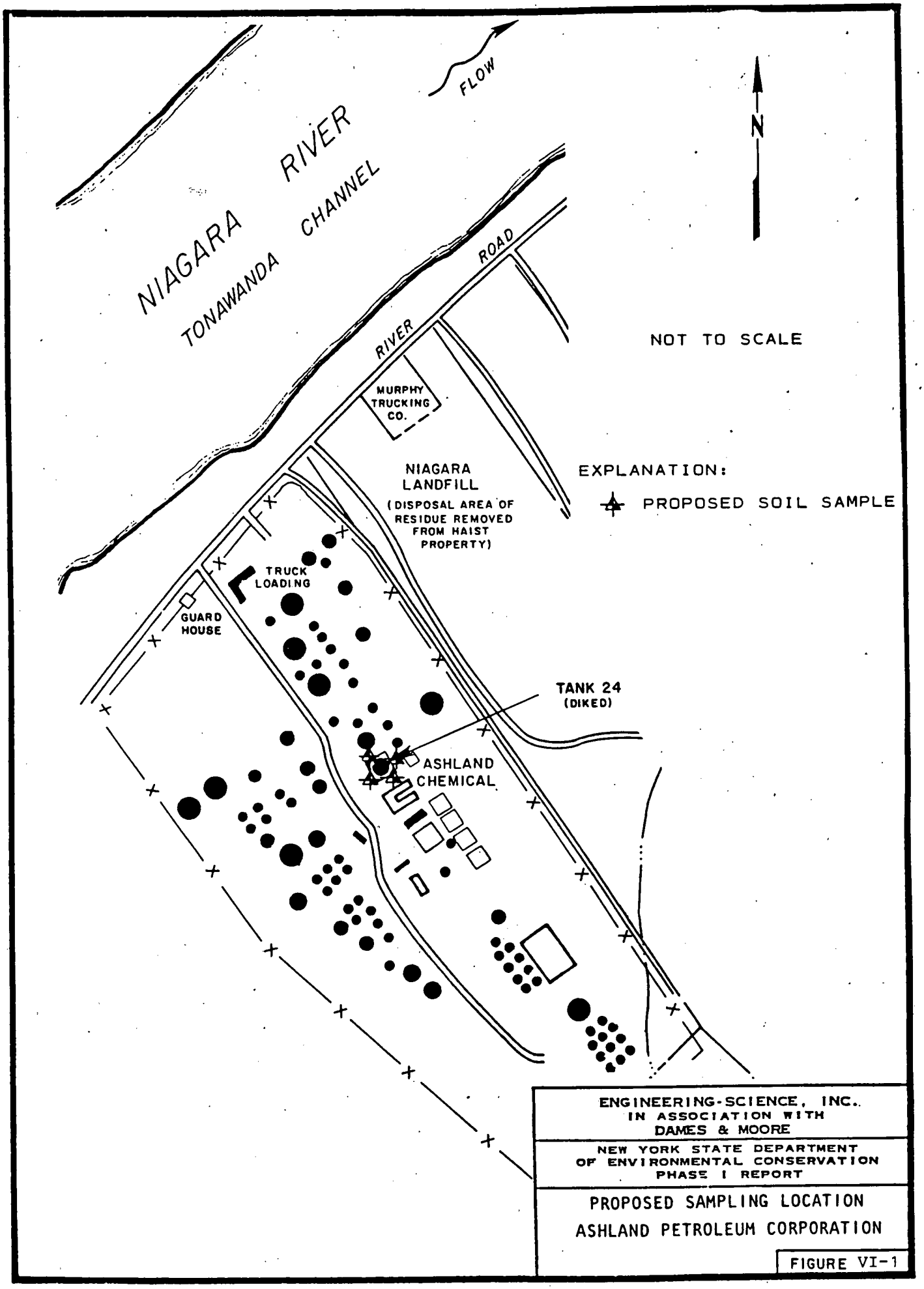
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
PHASE II INVESTIGATION
COST ESTIMATE

SITE ID #: 915008A
SITE NAME: ASHLAND PETROLEUM
CONSULTANT: ENGINEERING SCIENCE

TABLE VI-4

TASK DESCRIPTION	DIRECT LABOR HOURS	DIRECT LABOR COST($)	SUBCONTR. COSTS $	SUPP.& EQUIP. $	MISC. $	TRAVEL & PER DIEM $	TOTALS $
II-A UPDATE WORKPLAN	168	2323.20		237	210	260	3030.20
II-B CONDUCT GEOPHYSICAL STUDIES	0	0.00					0.00
II-C CONDUCT BORING/INSTALL MONITORING WELLS	0	0.00					0.00
II-D CONSTRUCT TEST PITS/ AUGER HOLES	42	659.50		420	80	300	1459.50
II-E SAMPLING AND ANALYSIS	0	0.00	2400	60	30	137	2627.00
Soil samples from borings	0	0.00					0.00
Soil samples from surface soils	0	0.00					0.00
Soil samples from test pits/ auger holes	20	290.00					290.00
Sediment samples from surface water	0	0.00					0.00
Groundwater samples	0	0.00					0.00
Surface water samples	0	0.00					0.00
Air samples	0	0.00					0.00
Waste samples	0	0.00					0.00
II-F CALCULATE FINAL HRS SCORE	166	2643.00		50	80		2773.00
II-G CONDUCT SITE ASSESSMENT	160	2136.40		750	1000	165	4051.40
II-H PROJECT MANAGEMENT	38	814.20		400	40		1254.20
SUBTOTAL	594	8866.30	2400.00	1917.00	1440.00	862.00	
INDIRECT LABOR (118% DTL)		10462.23					
PROFIT (%)		15	5	5	5	0	
PROFIT ($)		2899.28	120.00	95.85	72.00		
TOTAL COSTS ($)		22227.81	2520.00	2012.85	1512.00	862.00	29134.66

4/7/86


NIAGARA RIVER
TONAWANDA CHANNEL
FLOW
N
NOT TO SCALE
RIVER ROAD
MURPHY TRUCKING CO.
NIAGARA LANDFILL
(DISPOSAL AREA OF RESIDUE REMOVED FROM HAIST PROPERTY)
EXPLANATION:
PROPOSED SOIL SAMPLE
TRUCK LOADING
GUARD HOUSE
TANK 24
(DIKED)
ASHLAND CHEMICAL
ENGINEERING-SCIENCE, INC.
IN ASSOCIATION WITH
DAMES & MOORE
NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
PHASE I REPORT
PROPOSED SAMPLING LOCATION
ASHLAND PETROLEUM CORPORATION
FIGURE VI-1

APPENDIX A

REFERENCES

SOURCES CONTACTED DOCUMENTATION

SOURCES CONTACTED SUMMARY SHEET
ASHLAND PETROLEUM

Person Contacted/ Location	Telephone	Date	Information Collected
Glenn Hardcastle USEPA Headquarters, Superfund Office 401 M Street, SW Washington, DC 20469	202-382-5617	12/19/85	Reviewed list of sites to determine if additional information was available.
John Anderson USEPA-Region II EPA Information Office 345 3rd St. Suite 530 Niagara Falls, NY 14305	716-285-8842	01-06-86	General information from site files.
Charley Hudson NYSDEC - Div. of Envir. Enforcement Empire State Plaza Corning Tower Albany, NY 12237	518-474-2121	12-30-85	Draft Reports
Kevin Walters NYSDEC-Div. of Envir. Enforcement 50 Wolf Road Albany, NY 12233	518-457-4346	12-30-85	Reviewed list of sites to determine legal actions taken.
Walt Demick NYSDEC-Div. of Solid & Haz. Waste 50 Wolf Road Albany, NY 12233	518-457-0639		General information from site files.
Bob Hannaford NYSDEC-Div. of Water SPDES Files 50 Wolf Road Albany, NY 12233	518-457-6716		Reviewed SPDES files for permit numbers and conditions.

SOURCES CONTACTED SUMMARY SHEET (Continued)
ASHLAND PETROLEUM

Person Contacted/ Location	Telephone	Date	Information Collected
Val Washington NYS-Dept. of Law, Attorney General's Office Empire State Plaza Justice Building Albany, NY 12233	518-473-3105		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.
Jeff T. Lacey Peter Burke Glenn Bailey NYSDEC-Div. of Environmental Enforcement 600 Delaware Ave. Buffalo, NY 14202	716-847-4582	12-27-85	Reviewed list of sites to determine legal actions taken.
Peter Buechi Ahmad Tayyebi Bob Mitrey Larry Clare NYS-Region 9 Division of Solid & Hazardous Waste 600 Delaware Ave. Buffalo, NY 14202	716-847-4585	11-14-85	Collected information from site files.
Lou Violanti NYS-Regional Dept. of Health 584 Delaware Ave. Buffalo, NY 14202	716-847-4500	11-15-85	Sent site information to Peter Buechi.
Henry Sondonato Robert Armbrust Dick Dybowski Larry Stiller Jackie DiPronio NYSDEC-Region 9 Div. of Air 600 Delaware Ave. Buffalo, NY 14202	716-847-4565	11-15-85	Air emissions permits for sites.

SOURCES CONTACTED SUMMARY SHEET (Continued)
ASHLAND PETROLEUM

Person Contacted/ Location	Telephone	Date	Information Collected
Mike Wilkenson Jim Sneider NYSDEC-Region 9 Div. of Fisheries and Wildlife 600 Delaware Ave. Buffalo, NY 14202	716-847-4600	11-14-85	Endangered species information.
Marion Pfohl Spencer Schofield Erie and Niagara County Regional Planning Board 3103 Sheraton Dr. Amherst, NY 14226	716-837-2035	12-20-85	Census data, general site information.
Tony Voell Don Campbell Erie County - Div. of Environmental Control 95 Franklin Street Buffalo, NY	716-846-6271 716-846-6271	11-14-85 11-21-85	Collected information from Erie Co. site files.
Ron Koczaja Erie County - Health Department 95 Franklin Street Buffalo, NY	716-846-7677	11-25-85	General information.
J. Donald Scalise J. J. Hill Jack Patton Ashland Petroleum 4545 River Road Tonawanda, NY	716-632-7646 606-329-4389 716-632-7646	12-10-85	Site visit: ownership history and disposal methods.

GENERAL REFERENCES*

18. Ashland Petroleum SPDES Permit, 1/18/85

19. Buechi, Peter J., NYSDEC-Region 9, letter (Dec. 1985) and Erie County Memorandum (June 1981).

20. DuPont, Disposal of Sludge from leaded gasoline storage tanks.

21. Geologic Map of New York, 1970.

22. LaSala, Groundwater Resources of the Erie-Niagara Basin, New York, 1968.

23. NYS Department of Environmental Conservation, Ambient Water Quality Standards and Guidance Values, July 24, 1985.

*Does not include "HRS References" which are provided directly after the HRS Documentation Records in Section V.

New York State Department of Environmental Conservation
Division of Regulatory Affairs - Region 9
600 Delaware Avenue
Buffalo, NY 14202-1073
(716)847-4551

REF. 18

Henry G. Williams
Commissioner

03

January 18, 1985

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. James H. Davis, Vice President
Ashland Petroleum Company
P.O. Box 391
Ashland, Kentucky 41101

Dear Mr. Davis:

Modification to Permit
SPDES Permit No. NY0001678
Buffalo Refinery
Town of Tonawanda, Erie County
File No. 90-84-1238

As part of this Department's review of dischargers to the Niagara River and after consideration of Mr. Gerald O. Henderson's January 18, 1984 and August 10, 1982 letters, the above State Pollutant Discharge Elimination System (SPDES) Permit is modified in accordance with 6NYCRR621.12 and 621.13. The enclosed revised permit includes the following principal changes.

1) Per your firm's request and with the confirmation by the Regional Water Unit of the discontinuation of discharges, outfalls 001, 002, and 003 are deleted.

2) Consistent with Department requirements for major second round SPDES Permits your permit incorporates the provision for a Best Management Practices (BMP) Plan. The extent that your SPCC plan can be used to meet BMP plan requirements can be discussed with Mr. Angelo Sarkees of the Regional Water Unit (716/847-4590).

3) Since benzene and xylene were stored/sold and toluene continues to be handled at the facility, an Action Level monitoring/reporting requirement for BTX is added. We concur with Mr. Henderson that based on the results of one year of monitoring your firm may wish to seek deletion of this requirement.

4) Daily limit of lead is added at a level agreeable to your firm.

Also note that the application requirement associated with the use of corrosion/scale inhibitors or biocidal type compounds is applicable whether referenced in the permit or not. It is routinely included in the permit as a reminder to permittees of their responsibility.

If you have any questions concerning this modification, please do not hesitate to contact me. Although I understand that these changes were acceptable to your firm, please be advised that you do have the right to submit written objections and to request a hearing within 10 calendar days. Thank you.

Respectfully,

Paul D. Eismann
Alternate Regional
Permit Administrator

PDE/ds
Enc.

cc: Mr. R. Hannaford
Mr. R. Speed/Mr. J. Snider/Mr. A. Sarkees
Mr. R. Baker
Erie Co. Department of Environment & Planning
Erie & Niagara County Regional Planning Board
Mr. G. Henderson (Director-Ashland Technical Dept.)

Final EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

(18)

During the Period Beginning EDM

and lasting until EDP + 5 years (July 1, 1986)

the discharges from the permitted facility shall be limited and monitored by the permittee as specified below:

Outfall Number & Effluent Parameter	Discharge Limitations Daily Avg.	Daily Max.	Units	Minimum Monitoring Requirements Measurement Frequency	Samp Type
004 Storm water runoff along North property line					
Flow		Monitoring Only	GPD	Monthly	Estimat
Oil & Grease		15	mg/l	Monthly	Grab*
pH (range)	6.0-9.0		SU	Monthly	Grab
Lead		0.4	mg/l	Quarterly	Grab

* The monthly sampling occurrence shall consist of one, two, or three grab samples collected and separately analyzed per event. The samples will be obtained at 15 minute intervals with the primary sample collected during the first 15 minutes of discharge. If more than one grab sample is collected and analyzed, the reported result will be the arithmetic average of the separate analysis.

Note: Direct discharge of either process or sanitary wastewaters is not allowed by this permit.

The permit application must list all corrosion/scale inhibitors or biocidal type compounds used by the permittee. If use of new boiler/cooling water additives is intended, application must be made prior to use.

91- 11/78 [redacted]

[redacted] EW Y[redacted] ATE [redacted] RTMEN[redacted] ENV[redacted] ENTA[redacted] SERV[redacted]

SPDES – DISCHARGE MONITORING REPORT

SEE REVERSE SIDE OF PART 4 FOR INSTRUCTIONS

REGION	COUNTY	DATE PRODUCED	PAGE
			1 of 2

FACILITY I.D.	REPORT PERIOD	THRU
90001626	02-01-	04-30-

PARAMETER/UNITS	OUT FALL	MONITORING LOCATION		MINIMUM	AVERAGE	MAXIMUM	# EX.	TYPE	FREQUENCY
...ATE	001	EFFLUENT VALUE 01000580020101	LIMIT	CALCULATED	REG. INTER.	LIMITS		ESTIMATED	...LY
			REPORTED VALUE	14.400 ~~000~~	18 ~~.000 000~~	21.600 ~~.000~~	0		
...ATE	004	EFFLUENT VALUE 02000580060401	LIMIT	CALCULATED	REG. INTER.	LIMITS		ESTIMATED	...LY
			REPORTED VALUE	~~Flow is~~ not monitored					
...PERATURE	001	DOWNSTREAM 03000100020109	LIMIT	*********	*********	90.0000		GRAB	WEEKLY
			REPORTED VALUE	********* *********	********* *********	40.0	0		
...ATE	002	EFFLUENT VALUE 04000560020201	LIMIT	*********	0.3000	*********		ESTIMATED	...LY
			REPORTED VALUE	********* *********	≤ 250 ~~GPM~~	********* *********	0		
	001	EFFLUENT VALUE 05000400120101	LIMIT	6.7000	*********	9.0000		GRAB	...LY
			REPORTED VALUE	7.52	********* *********	8.16	0		
	002	EFFLUENT VALUE 06000400120201	LIMIT	6.7000	*********	9.0000		GRAB	...LY
			REPORTED VALUE	7.58	********* *********	8.49	0		
	003	EFFLUENT VALUE 07000400120301	LIMIT	6.7000	*********	9.0000		GRAB	...LY
			REPORTED VALUE	8.11	********* *********	8.40	0		
	004	EFFLUENT VALUE 08000400120401	LIMIT	6.7000	*********	9.0000		GRAB	...LY
			REPORTED VALUE	8.0	********* *********	8.4	0		
... GREASE	002	EFFLUENT VALUE 09000550010201	LIMIT	*********	*********	15.0000		GRAB	...LY
			REPORTED VALUE	********* *********	********* *********	4.3	0		
... GREASE	004	EFFLUENT VALUE 10000550010401	LIMIT	*********	*********	15.0000		GRAB	...LY
			REPORTED VALUE	********* *********	********* *********	1.9	0		

I hereby affirm under penalty of perjury that information provided on this form is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

TYPEWRITTEN NAME AND TITLE

Dwight R. Wilson, Refinery Superintendent

☐ 1 PERMITTEE
☒ 2 AGENT

SIGNATURE Dwight R. Wilson

DATE 5/1/80

ASHLAND PETROLEUM CO
ASHLAND PETROLEUM – BUFFALO REFINERY
4955 RIVER RD ATTN J W SCALISE NY0001074
TONAWANDA NY 14150

PART 1–ENCON COPY (6)

1 Ashland 915 10 mg/l
001 From other report to Mar 5, 1982
Lead 5.94 mg/l

[redacted] EW Y [redacted] TATE [redacted] RTME [redacted] ENVI [redacted] ENTA [redacted] SERV [redacted]

SPDES – DISCHARGE MONITORING REPORT

SEE REVERSE SIDE OF PART 4 FOR INSTRUCTIONS

COUNTY: [illegible] | DATE PRODUCED: [illegible] | PAGE 2 of 2

FACILITY I.D.: [illegible] | REPORT PERIOD 02-01-80 THRU 04-30-80

PARAMETER/UNITS	OUT FALL	MONITORING LOCATION		MINIMUM	AVERAGE	MAXIMUM	# EX.	TYPE	FREQUENCY
T-L- RGANIC-CARB [illegible]	001	EFFL ENT VALUE 110068001010	LIMIT	**********	*********	[illegible].0000		[illegible]	WEEKLY
			REPORTED VALUE	**********	*********	12.0	1		
			LIMIT						
			REPORTED VALUE						
			LIMIT						
			REPORTED VALUE						
			LIMIT						
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			REPORTED VALUE						
			LIMIT						
			REPORTED VALUE						

I hereby affirm under penalty of perjury that information provided on this form is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

TYPEWRITTEN NAME AND TITLE

Dwight R. Wilson, Refinery Superintendent

☐ 1 PERMITTEE
☒ 2 AGENT

SIGNATURE [signature]

DATE 5/1/80

ASHLAND PETROLEUM CO
ASHLAND PETROLEUM - BUFFALO REFINERY
[illegible] RIVER RD ATTN J J CALISE [illegible] Y0001070
TONAWANDA NY 14150 [illegible]

PART 1–ENCON COPY

10

REF 19

New York State Department of Environmental Conservation
600 Delaware Avenue, Buffalo, N.Y. 14202-1073

Henry G. Williams
Commissioner

December 11, 1985

Ms. Cathy J. Bosma
Engineering Science
Two Flint Hill
10521 Rosehaven Street
Fairfax, Virginia 22030-2899

Dear Ms. Bosma:

Ashland Petroleum
Site #915008a

Enclosed find the inspection memo from the Erie County Department of Environment and Planning we spoke about during our conversation on December 10, 1985.

Yours truly,

Peter J. Buechi, P.E.
Associate Sanitary Engineer

PJB:jps

Enc.

(19)

(S) file

COUNTY OF ERIE
DEPARTMENT OF ENVIRONMENT & PLANNING
DIVISION OF ENVIRONMENTAL CONTROL

MEMORANDUM

FROM Don Campbell, P.E. DATE June 1, 1981

TO Lawrence G. Clare, P.E.

SUBJECT Ashland Oil Corp. - Inspection of Sites.

Inspection Date: May 29, 1981

Site Code 915061- Disposal of spent lime, clay, wood, concrete, metal, phosphoric acid catalyst and equilibrium catalyst. Has 360 permit. Expires 7-8-82.

Site investigation conclusions: The deposition of the above materials in proximity to the wetland and tributary of 2-mile creek has been reviewed by D.E.C. and a permit was issued. The tributary exhibited a whitish color and appears to be contaminated. The origin of this stream is run-off from the Ashland property refinery and did not appear to be contaminated. The pipe continues under Niagara Landfill property and terminated at Lefler Road. The water at this point was noted to exhibit the milky white color.

The active area was muddy and wet spots were evident, but no leachate was observed. Erosion and run-off was evident in the southerly portion near the tributary. The equilibrium catalyst deposition area was only partially covered (Area D2).

A suggested sampling point (marked ⊠) on the field sketch should be considered. Upstream sampling at the point of origin on the Ashland (Refinery) property might prove helpful in correlating the data. The water did smell of sulfur, but beyond that no specific sampling parameters could be suggested since the pipe passes under the Landfill.

Site 915008-a- Former weathering area for tetraethyl lead sludge (last used in 1953) and marked in field sketch as "c".

This small area 30 x 10 ft. inside of the diked FCC charge tank. No signs of leachate or any need to sample appears warranted.

Site 915008 b- Concrete storage pit for Heavy Oil. No 360 permit required per D.E.C. (R. Mitrey) May 17, 1981.

This pit 280 x 220 ft is concrete lined sides and bottom. No leachate was observed. No plans for sampling appear warranted. This material is reclaimed after periodic skimming and water removal.

1.2.2 Weathering - This method is safe, effective and economical. Laboratory tests show that organic lead compounds in sludge, when exposed to the elements, will decompose to inorganic lead compounds. Laboratory and field tests indicate that when the procedures as outlined in the prescribed method are followed, there has been no air, soil or water contamination problem. The reason for this is indicated to be:

(1) The total quantity of organic lead in a sludge weathering bed is small. Concentrations rarely exceed the normal range of 0.1 to 0.4 pounds of organic lead per ton of sludge.

(2) The amount of organic lead exposed to the atmosphere at the surface of the weathering bed is very small. Lead-in-air tests taken directly above or immediately downwind of the weathering bed indicate that lead-in-air concentrations are low. This indicates the atmosphere in the area is safe from an occupational health hazard as soon as the sludge is spread.

(3) Organic lead compounds are dissolved and held in the gasoline hydrocarbon fraction of the sludge and therefore do not migrate into the soil or ground water.

1.3 WEATHERING PROCEDURE

1.3.1 Location of disposal area:

(1) The site selected for sludge disposal should be in an area where it can be fenced off from the public. It should be located away from buildings and be far enough from the tank being cleaned so that the possibility of gasoline vapors affecting the tank cleaning operations is eliminated.

Scales said disposal within confines of the tank.

(2) The disposal area should be located so that personnel working in, on, or around the tank will not get into the spread out sludge.

Not near the tank then

(3) It can be a bare ground, grass or concrete surface.

Sludge from tanks which have contained leaded gasoline is dangerous to handle even after it has been removed from the tank. The sludge should be disposed of by burial at a location where it will not be uncovered later. If disposal cannot be accomplished in this manner due to space limitations or other factors, alternate methods may be employed.

One such method is to expose the sludge to atmospheric conditions, in a safe manner, so as to reduce the organic lead content in the sludge to a safe level. The following procedure represents one which has been followed successfully at a number of locations.

PROCEDURE FOR "WEATHERING" SLUDGE

1. Location of disposal area:

   a. The site selected for sludge disposal should be in a remote part of the property and within property limits where it can be fenced off from the public. It should be located away from buildings. If the sludge is spread near the tank being cleaned, it should be outside the surrounding firewall, so that the possibility of gasoline vapors affecting the tank cleaning operations will be eliminated.

   b. The disposal area should be located so that personnel working in, on, or around the tank will not get into the spread-out sludge.

   c. It can be a bare ground, grass or concrete surface.

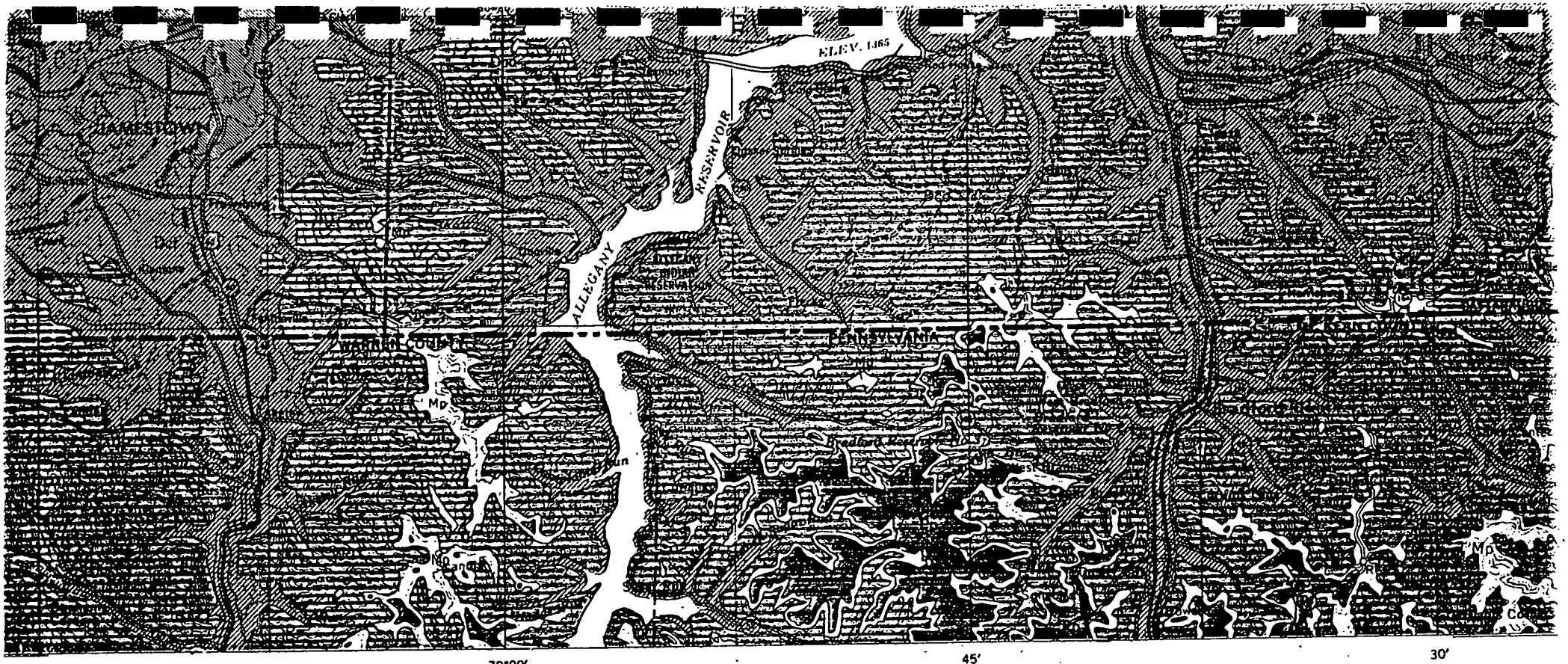
   d. It must be fairly smooth and well drained so that water will not stand on it.

   e. The total area, whether in one or several patches, must be sufficiently large to permit spreading the sludge in a layer not over 3" thick. The total area required will, of course, be determined by the amount of sludge in the tank.

   f. It should be so located that air can circulate freely over the surface of the sludge. Exposure to the sun is desirable but not mandatory.

2. Remove sludge from the tank in the usual manner following the safety recommendations approved by API.

3. The sludge can be moved from the tank to the spreading area in available plant equipment. Wheelbarrows, buckets or other small containers may be used for moving it a short distance. Dump trucks, lugger buckets, etc., may be used for longer distances. The containers used should be metal. After use, they should be washed thoroughly with water.



GEOLOGIC MAP OF NEW YORK

1970

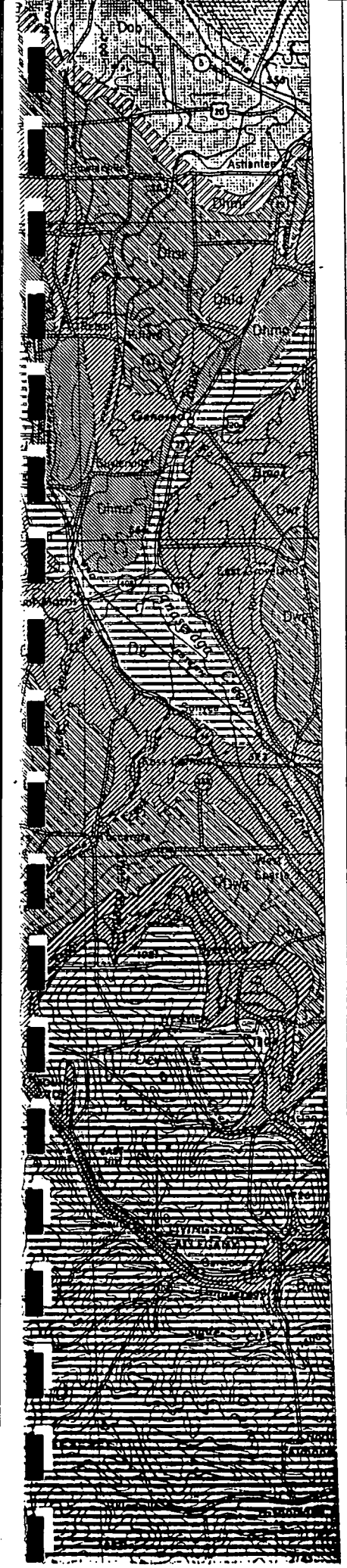
Niagara Sheet

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



45'

30'

PALEOZOIC

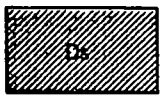
Upper Ordovician

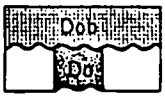
Lower Silurian

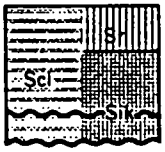
Upper Silurian

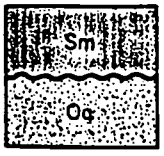
Lower Devonian

Middle Devonian









WEST PALLS GROUP
400-950 ft. (120-290 m.)

Dwf Angola and Rhinestreet Shales.

Dwn Nunda Formation—sandstone, shale.

Dwg West Hill and Gardeau Formations—shale, siltstone; Roricks Glen Shale; upper Beers Hill Shale; Grimes Siltstone.

Dwr lower Beers Hill Shale; Dunn Hill, Millport, and Moreland Shales.

SONYEA GROUP
50-200 ft. (15-60 m.)

Ds Cashaqua and Middlesex Shales.

GENESEE GROUP
10-150 ft. (3-45 m.)

Dg West River Shale; Genundewa Limestone; Penn Yan and Geneseo Shales; North Evans Limestone.

HAMILTON GROUP
200-500 ft. (60-150 m.)

Dhmo Moscow Formation—Windom and Kashong Shales, Menteth Limestone Members.

Dhld Ludlowville Formation—Deep Run Shale, Tichenor Limestone, Wanakah and Ledyard Shales, Centerfield Limestone Members.

Dhsk Skaneateles Formation—Levanna Shale, Stafford Limestone Members.

Dhmr Marcellus Formation—Oatka Creek Shale Member.

ONONDAGA AND BOIS BLANC LIMESTONES
150 ft. (45 m.)

Dob In New York: Onondaga Limestone—Seneca, Morehouse (cherty), and Clarence Limestone Members, Edgecliff cherty Limestone Member, local coral bioherms; Bois Blanc Limestone—sandy, thin, discontinuous.
In Ontario: Dundee Limestone; Lucas Formation—dolostone, limestone (Anderdon); Amherstburg Formation—limestone, dolostone, sandstone (Sylvania); Bois Blanc Formation—dolostone, limestone, sandstone (Springvale).

Do Oriskany Sandstone.

AKRON DOLOSTONE AND SALINA GROUP
400-700 ft. (120-210 m.)

Sab Akron Dolostone; Bertie Formation—dolostone, shale.

Scv Camillus, Syracuse, and Vernon Formations—shale, dolostone, salt, and gypsum.

LOCKPORT GROUP
150-200 ft. (45-60 m.)

Sl Guelph, Oak Orchard, Eramosa, and Goat Island Dolostones; Gasport Limestone—local bioherms.

CLINTON GROUP
100-150 ft. (30-45 m.)

Scl Decew Dolostone; Rochester Shale; Irondequoit and Merriton Limestones.

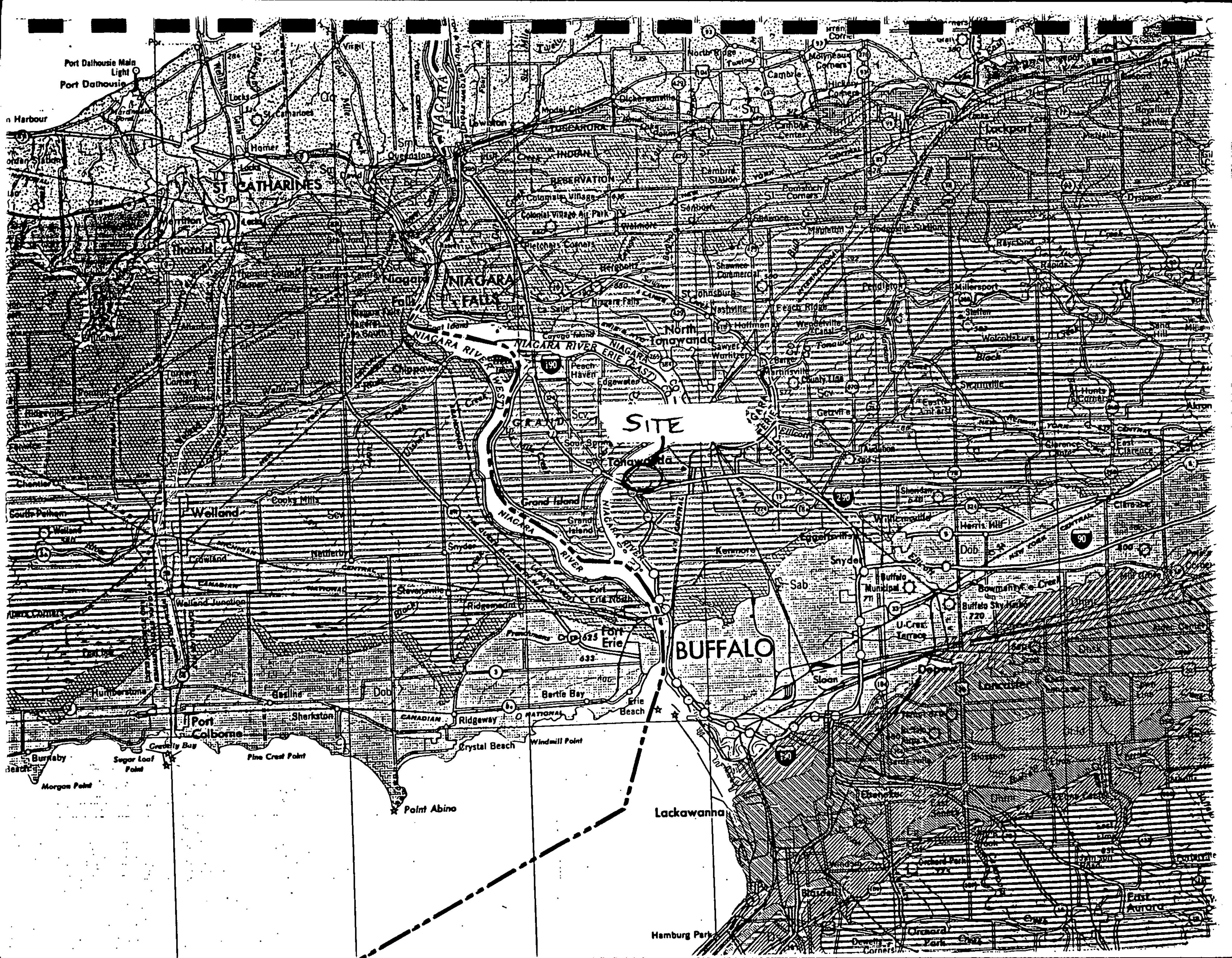
Sr Decew Dolostone; Rochester Shale.

Sik Irondequoit Limestone; Rockway Dolostone; Hickory Corners Limestone; Neahga Shale; Kodak Sandstone.

MEDINA GROUP AND QUEENSTON FORMATION
800 ft. (250 m.)

Sm Thorold Sandstone; Grimsby Formation—sandstone, shale; Power Glen and Cabot Head Shales; Whirlpool Sandstone.

Oq Queenston Shale.


SITE
BUFFALO
NIAGARA FALLS
Niagara Falls
ST CATHARINES
Port Dalhousie Main Light
Port Dalhousie
Thorold
Welland
Port Colborne
Fort Erie
Tonawanda
North Tonawanda
Grand Island
NIAGARA RIVER (EAST)
NIAGARA RIVER (WEST)
Lockport
Lewiston
Queenston
Chippawa
Kenmore
Snyder
Lackawanna
Hamburg Park
Point Abino
Crystal Beach
Windmill Point
Pine Crest Point
Sugar Loaf Point
Morgan Point
Burnaby
Humberstone
Sherkston
Ridgeway
Bertie Bay
Erie Beach
Welland Junction
Cooks Mills
TUSCARORA INDIAN RESERVATION
Colonial Village Air Park
Buffalo Municipal
Buffalo Sky-Harbor
Sloan
Depew
Lancaster
East Aurora
Orchard Park
Williamsville
Sanborn
Pendleton
Millersport
Akron
Clarence
Getzville
Cambria
Lackawanna

REF. 22

GROUND-WATER RESOURCES OF THE ERIE-NIAGARA BASIN, NEW YORK

Prepared for the
Erie-Niagara Basin Regional Water Resources
Planning Board

by

A. M. La Sala, Jr.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

in cooperation with

THE NEW YORK STATE CONSERVATION DEPARTMENT
DIVISION OF WATER RESOURCES

STATE OF NEW YORK
CONSERVATION DEPARTMENT
WATER RESOURCES COMMISSION

Basin Planning Report ENB-3

1968

GEOLOGY AND TOPOGRAPHY

The Erie-Niagara basin is underlain by layers of sedimentary bedrock which are largely covered with unconsolidated deposits. Descriptions of the various bedrock units are given in figure 2. The bedrock consists mainly of shale, limestone, and dolomite; the Camillus Shale contains a large amount of interbedded gypsum. All the bedrock units were built up by fine-grained sediments deposited in ancient seas during the Silurian and Devonian Periods and, therefore, are bedded or layered. The dip of the rocks (inclination of the bedding planes) is gently southward at from 20 to 60 feet per mile, but the average dip is between 30 and 40 feet per mile. The dip is so gentle that it is hardly perceptible in outcrops.

The unconsolidated deposits are mostly glacial deposits formed during Pleistocene time about 10,000-15,000 years ago when an ice sheet covered the area. The glacial deposits consist of: (1) till, which is a nonsorted mixture of clay, silt, sand, and stones deposited directly from the ice sheet; (2) lake deposits, which are bedded clay, silt, and sand that settled out in lakes fed by the melting ice; and (3) sand and gravel deposits, which were laid down in glacial streams. The glacial sand and gravel deposits are of both the ice-contact and outwash types, as will be explained later in the report. The glacial deposits generally are less than 50 feet thick in the northern part of the basin. They are considerably thicker in some valleys in the southern part and reach a maximum known thickness of 600 feet near Chaffee. Other unconsolidated deposits are alluvium formed by streams in Recent times and swamp deposits formed by accumulation of decayed plant matter in poorly drained areas.

Relief of the present land surface is due to preglacial erosion of the bedrock and subsequent topographic modification by glaciation. In contrast to the southward dip of the rocks, the land surface rises to the south largely because preglacial erosion was more vigorous in the northern part of the basin. The shale in the southern part of the basin is somewhat more resistant to erosion than the rocks in the northern part of the basin but not significantly so. Figure 3 shows the relationship of the topography and rock structure and delineates the two topographic provinces of the basin: the Erie-Ontario Lowlands and the Appalachian Uplands. The rocks crop out in belts which trend generally east-west. The bedrock geologic map, plate 2, shows that the outcrop belts bend around to the southwest near Lake Erie. They assume this direction mainly because relatively intense erosion in the Erie-Ontario Lowland near Lake Erie has exposed the rock at lower elevations than farther east. The Lockport Dolomite and the Onondaga Limestone, because they are relatively resistant to erosion, form low ridges in the northern part of the basin. Tonawanda, Murder, and Ellicott Creeks descend the escarpment of the Onondaga at falls and cataracts.

In the hilly southern half of the basin (the Appalachian Uplands), preglacial valleys, deepened by glacial erosion, are cut into the shale. The valleys are partly filled with glacial deposits so that some of the present streams flow 200 to 600 feet above the bedrock floors of the valleys as shown in figure 3.

Table 6.--Records of selected wells in the Erie-Niagara basin (Continued)

Well number	County	Owner	Year completed	Type of well	Depth of well (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing material	Altitude above sea level (feet)	Water level: Below land surface (feet)	Water level: Date	Method of lift	Estimated pumpage or flow (gallons per day)	Use	Remarks
258-815-1	Genesee	F. Peck	--	Drl	31	6	--	Shale	920	8.1	6-26-63	Sw	50	D	Anal; iron; temp 49.0; yield 12 gpm (r).
258-822-1	do.	E. Lewis	1964	Drl	41.6	6	41.6	Sand	870	9.1	8-19-64	Sw	400	Ag	Anal; H_2S; yield 11 gpm (r).
258-827-1	do.	E. Powenski	1952	Drl	36.5	6	e34	Limestone	835	31.3	8-19-64	Jet	250	D	H_2S; yield 7 gpm (r).
258-833-1	Erie	B. Fields	1960	Drl	62.6	6	e13	do.	775	p22.7	8-18-64	Sub	300	D	Anal.
258-837-1	do.	R. Bowman	1956	Drl	76.2	6	e22	do.	740	19.4	8-18-64	Jet	300	D	Do.
258-843-1	do.	W. Voss	--	Drl	62	8	--	Camillus Shale	615	Flow	--	--	5,000	A	Anal; H_2S; temp 50.8, 8-14-64; flows about 5 gpm at LS.
258-853-1	do.	Linde Div., Union Carbide Corp.	1944	Drl	r375	8	87	Camillus Shale and Lockport Dolomite	600	r,p115	1944	Tur	--	U	H_2S; drilled to 130-ft depth in 1943 and deepened in 1944; "black" water entering from Lockport Dolomite after deepening made well unusable; yield 3,000 gpm (r); pumping test, 1,090 gpm, dd 53 ft.
-2	do.	do.	1944	Drl	r375	8	86	do.	600	r,p82	1944	Tur	--	U	H_2S; drilled to 157-ft depth in 1943 and deepened in 1944; water obtained at 90 ft from a gypsiferous zone in Camillus Shale and "black" water at 312 ft from the Lockport Dolomite which was first penetrated at 288 ft; yield from upper water-bearing zone 90 gpm, dd 22 ft; lower zone was not tested.
258-855-1	do.	Dunlop Tire & Rubber Co.	1943	Drl	r137	12	69	Camillus Shale	590	p36	10-27-52	Tur	--	I	H_2S; pumping rate 1,000 gpm (r); pumping test 500 gpm, swl 36 ft, dd 17 ft; this well and well 258-855-2 yield a combined total of 600,000 gpd.
-2	do.	do.	1943	Drl	r139.7	--	71	do.	590	p54.3	7-16-64	Tur	--	I	H_2S; pumping rate about 1,000 gpm (r); pumping test 1,000 gpm, swl 36 ft, dd 26 ft; this well and well 258-855-1 yield a combined total of 600,000 gpd.
-3	do.	do.	1952	Drl	r120	--	--	do.	592	p39	10-27-52	Tur	--	I	H_2S; pumping test 1,500 gpm, swl 39 ft, dd 38 ft.
259-809-1	Genesee	O-AT-KA Milk Products Cooperative, Inc.	1963	Drl	r60	20, 16	--	Sand and gravel	890	r15	4-27-62	Tur	1,000,000	I	Anal; screen, 13 1/8-inch diameter, 10 ft of 60-slot, 10 ft of 125-slot, from 40-60 ft; pumping rate about 1,200 gpm (r); pumping test 600 gpm, swl 15 ft, dd 1.5 ft (r).
-2	do.	City of Batavia	1963	Drl	r69	16	--	do.	890	14.0	5- 8-63	Tur	--	PS	Anal; H_2S; screen, 16-inch telescope, 125-slot, 52.9-69 ft; pumping rate 1,000 gpm.
-3	do.	do.	1962	Drl	54.1	8	--	do.	890	11.7	5- 6-63	--	--	T	Depth 61 ft (r); screen, 6-inch diameter, 100-slot, from 51-61 ft; pumping test 235 gpm, swl 18.3 ft, dd 0.5 ft (r); OW.
-4	do.	O-AT-KA Milk Products Cooperative, Inc.	1963	Drl	52.2	8	--	do.	890	p13.0	5- 7-63	--	--	T	
-5	do.	City of Batavia	1962	Drl	60.2	8	--	do.	890	13.7	5- 8-63	--	400,000	T	Depth 70 ft (r); screen, 6-inch diameter, 100-slot, from 60-70 ft; pumping test (r), 235-259 gpm, swl 18.5 ft, dd 0.5 ft after 24 hours discharge.
-6	do.	do.	1963	Drl	r75	16	--	do.	895	r14.2	5-27-63	Tur	--	PS	Screen, 16-inch diameter; test pumped at 1,000 gpm.
-7	do.	do.	1963	Drl	r60	8	--	do.	890	r13.7	2-15-62	--	400,000	X, T	H_2S (r); pumping test 200 gpm, swl 13.7 ft, dd 4.4 ft after 24 hours discharge.
259-817-1	do.	D. Beals	1960	Drl	r33	--	--	do.	865	r3	1960	Sw	100	D	Anal; H_2S; yield 4 gpm (r).
259-818-1	do.	Bitterman Bros., Inc.	--	Drl	18.3	12, 6	--	do.	--	6.6	9-17-63	Sw	--	C, D	
259-820-1	do.	A. Winters	1960	Drl	22.6	6	--	Limestone	880	7.4	9-17-63	Sw	500	C, D	
259-822-1	do.	J. Daley	1956	Drl	70	6	--	Sand	900	27.1	8-19-64	Jet	200	D	Anal; H_2S.

REF. 23

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-0001

Henry G. Williams
Commissioner

July 24, 1985

MEMORANDUM

TO: Bureau Directors, Regional Water Engineers, Section Chiefs

SUBJECT: Division of Water Technical and Operational Guidance Series (85-W-38)

Ambient Water Quality Standards and Guidance Values
(Originator: John Zambrano)

I. Purpose

The purpose of this document is to provide a compilation of water quality standards and guidance values for toxic and non-conventional pollutants to be used in the Department's regulatory programs, including the SPDES permit program.

II. Discussion

This substantial revision of TOGS 85-W-38 is the result of the promulgation of amendments to 6 NYCRR Part 701-702, effective on August 2, 1985, governing the development and use of surface water quality standards and guidance values. This revision uses a new format in the tabulation and does not include the methodologies for the development of standards and guidance values. The user is referred to the regulations for a description of the methodologies.

III. Guidance

The Quality Evaluation Section will use the attached list in developing SPDES permit water quality-based effluent limits. The Criteria and Standards Section will maintain and revise the list on a regular basis.

for Daniel M. Barolo, P.E.
Director
Division of Water

Attachments
cc: Dr. Banks
Mr. Pagano
Mr. Mt. Pleasant
Regional Engineers for Environmental Quality
Ms. Chrimes

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: 915008a

NAME OF SITE : Ashland Petroleum Corp.
STREET ADDRESS: 4545 River Road

TOWN/CITY:	COUNTY:	ZIP:
Tonawanda	Erie	14217

SITE TYPE: Open Dump-X Structure- Lagoon- Landfill- Treatment Pond-
ESTIMATED SIZE: 1 (Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME....: Ashland Petroleum Corp.
CURRENT OWNER ADDRESS.: 2630 Elmwood Ave., Kenmore, NY 14217
OWNER(S) DURING USE...: Ashland Petroleum Corp.
OPERATOR DURING USE...: Same
OPERATOR ADDRESS.....: Same as above
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From To 1953

SITE DESCRIPTION:
This site was used as a weathering area for tetraethyl lead sludge that resulted from the cleaning of FCC Tank 24. The site was reportedly used only once in 1953. After the lead sludge had weathered, it was reportedly excavated from the site and disposed off site.

HAZARDOUS WASTE DISPOSED: Confirmed-X Suspected -

TYPE	QUANTITY (units)
Tetraethyl lead sludge	420-630 gallons

SITE CODE: 915008a

ANALYTICAL DATA AVAILABLE:

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

CONTRAVENTION OF STANDARDS:

Groundwater- Drinking Water- Surface Water- Air-

LEGAL ACTION:

TYPE..: None State- Federal-
STATUS: In Progress- Completed-

REMEDIAL ACTION:

Proposed- Under Design- In Progress- Completed-X
NATURE OF ACTION: Lead sludge was reportedly excavated.

GEOTECHNICAL INFORMATION:
SOIL TYPE: Clays $K=10^{-7}$ cm/sec
GROUNDWATER DEPTH: >80 ft.

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Extent of environmental problems is unknown, although significant problems appear unlikely.

ASSESSMENT OF HEALTH PROBLEMS:

Insufficient information

PERSON(S) COMPLETING THIS FORM:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NAME.: Peter Buechi
TITLE: Assoc. Sanitary Engr.

NAME.: Roberto A. Olazagasti
TITLE: Solid Waste Management Spec.

DATE.: 01/24/85

NEW YORK STATE DEPARTMENT OF HEALTH

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

NAME.:
TITLE:

DATE.: 01/24/85