US EPA RECORDS CENTER REGION 5
435317

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
Superfund Division
Emergency Response Branch
Brownfields / Early Action Section
FAX Number (312) 886-6741

To: Mark Jurowski FAX Number

From: Jon Pel

Date: 2/18/04 Number of Pages
(Including Cover Page)

Comments: GDC info - in parts!

→ - Draft SIP June 1992

→ - Draft HRS Score - 1984

- E+E FSIP - 1991 (w/ PA Scoresheets) ←
(only relevant pages - those w/ some description/entries)

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

FSIP
CH
12/30/91

MEMORANDUM

TO: Colleen Hart, U.S. EPA

FROM: Kerry Reyes, FIT KR

DATE: October 9, 1991

SUBJECT: Gary Development Co., Inc., Landfill Site, Gary, Indiana
[redacted]/F05-9104-064/FIN0085PA

Ecology and Environment, Inc., Field Investigation Team (FIT) conducted an off-site reconnaissance inspection of the Gary Development Co., Inc., Landfill site on June 12, 1991. There is a potential for surface water contamination of the Grand Calumet River through a ditch that flows along the west side of the site and into the river. Past sampling of this ditch has revealed it to be contaminated with heavy metals. There is also a potential for groundwater contamination because wastes at the site are buried to a depth of 30 feet, which is the same as depth to water on-site. Past sampling of on-site monitoring wells indicated that groundwater was contaminated, although the source of this contamination is not certain because the site is in an industrial area.

FIT recommends that the Gary Development Co., Inc., Landfill site be given a medium priority for inspection, based on the threats to surface water and groundwater in the vicinity of the site.

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PA Scoresheets

GARY Development Landfill

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STATE	SITE NUMBER
In	d077005916

SITE LOCATION

SITE NAME: Legal, common or descriptive name of site
Gary Development Co, Inc Landfill

STREET ADDRESS, ROUTE or SPECIFIC LOCATION IDENTIFER
479 Cline ave (Cline and I-90)

CITY	STATE	ZIP CODE	TELEPHONE
Gary	In	46406	(219) 944-7858

COORDINATES: LATITUDE and LONGITUDE	TOWNSHIP, RANGE, and SECTION
41° 36' 15" 87° 25' 30"	T37N R9W Sect 35

OWNER/OPERATOR IDENTIFICATION

OWNER	OPERATOR
Lawrence H. Hagen	Same as owner
OWNER ADDRESS: 479 Cline ave	OPERATOR ADDRESS
CITY: Gary HOME	CITY
STATE: In; ZIP CODE: 46406; TELEPHONE: (312) 758-7211	STATE; ZIP CODE; TELEPHONE ( )

TYPE OF OWNERSHIP

- ■ PRIVATE
- ☐ FEDERAL: Agency name _____
- ☐ STATE
- ☐ COUNTY
- ☐ MUNICIPAL
- ☐ OTHER: _____
- ☐ NOT SPECIFIED

OWNER/OPERATOR NOTIFICATION ON FILE

- ☐ NONE
- ■ CERCLA 103 C, UNCONTROLLED WASTE SITE DATE: 06-05-81
- ☐ RCRA 3001 DATE: _____

SITE STATUS	YEARS OF OPERATION	APPROXIMATE SIZE OF SITE
■ ACTIVE	BEGINNING YEAR: 1975	144 Acres
☐ INACTIVE	ENDING YEAR: Active	
☐ UNKNOWN	☐ UNKNOWN	

SITE EVALUATION

AGENCY / ORGANIZATION: Ecology & Environment, Inc / U.S. EPA
INVESTIGATOR: Kerry Reyes
CONTACT: Colleen Hart, US EPA
ADDRESS: 111 W. Jackson Chicago, Il. 60645
TELEPHONE: (312) 886-3009
DATE: 9/12/91

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GENERAL INFORMATION

07-09-91

Site Description and Operational History:

The Gary Development Co, Inc (GDC) facility is an active sanitary landfill that is operating under Indiana State Board of Health Permit Number 45.2. The facility was constructed in an abandoned, water filled sand quarry that lies adjacent to the Grand Calumet River in Northeastern Indiana. (ref #2) The current operator of the site, Lawrence H. Hogen, (vice president) obtained a sanitary landfill construction permit. The state agency required the dewattering of the quarry, the lining of the sidewalls and barrier walls with clay, the installation of a leachate collection system, and the emplacement of four perimeter monitoring wells. The construction was completed and passed state inspection before the owner began accepting solid waste for disposal in Sept, 1974. It should be noted that after the permit was issued the state began to question the adequacy of the aforementioned systems at the facility. (ref #2)

(continue on next page)

Probable Contaminants of Concern: The IEPA did a RA. of the site in 1983.

Previous investigations, analytical data: The ISBH files, inspection reports at the division of land pollution control, and U.S. EPA Erris file info. were used to help characterize wastes. (ref 1,2)

TYPE	AMT	UNITS	COMMENTS
Sludge	71,000	cubic yds	oil sludge, lime, paint, and activated biological sludges
oily wastes	22,000	cubic yds	recovery tank bottoms phthalates (10 µg/l) *
Solvents			trichloroethene (68 µg/l) *
pesticides	120	cubic yds	Herbicides
other org			2-butanone (510 µg/l) *
inorganics	1655	cubic yds	asbestos, fly ash, solids.
heavy metals	95,300	cubic yds	aluminum dross, milling dust and slag, fly ash, lead (61 µg/l) * nickel (266 µg/l) * arsenic (10 µg/l) * cadmium (4.9 µg/l) * (ref #2)

* Detected in on-site monitoring wells

Date: 07-09-91

06 1990

GENERAL INFORMATION

Site Description and Operational History:

The construction of the above systems at this site has created an artificially induced low water table under this site. The water table is depressed about (30) feet. This depression may be causing the surrounding groundwater to seep into the site through the clay liner. This possible seepage along with leachate from disposed waste and precipitation run off are collected and discharged from the site. Therefore, the leachate collection system maintains the depressed water table. The source or sources of any contaminated groundwater found at or near this site, becomes a complex problem because there are 12 alleged or known hazardous waste sites within a two mile radius. The liquid waste from the leachate collection system was discharged to the Grand Calumet River for a number of years without an NPDES permit. This practice was stopped by the operator as a result of a 1983 consent decree settlement with the state. Since that settlement, the operator has been mixing the liquid leachate with lime and fly ash to form a rock like cover material. The lime mix forms a hydrated calcium carbonate that traps the leachate impurities. Gary Development has petitioned for and recieved approval from the State Board of Health to accept a number of industrial wastes, some of which are considered hazardous and contain varying amounts of hazardous compounds.

ref #2

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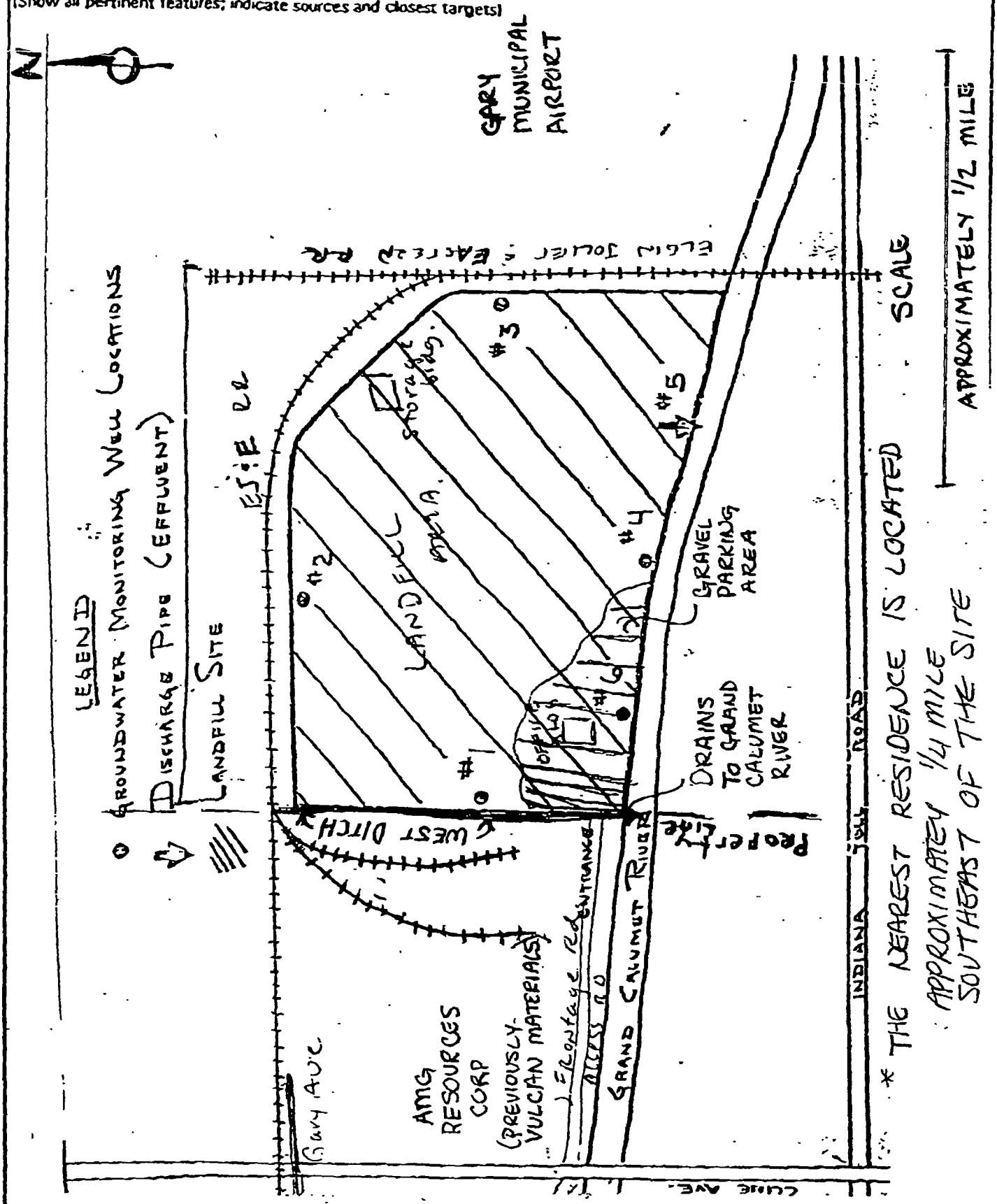
NOV 06 1990

Date: 9-9-91

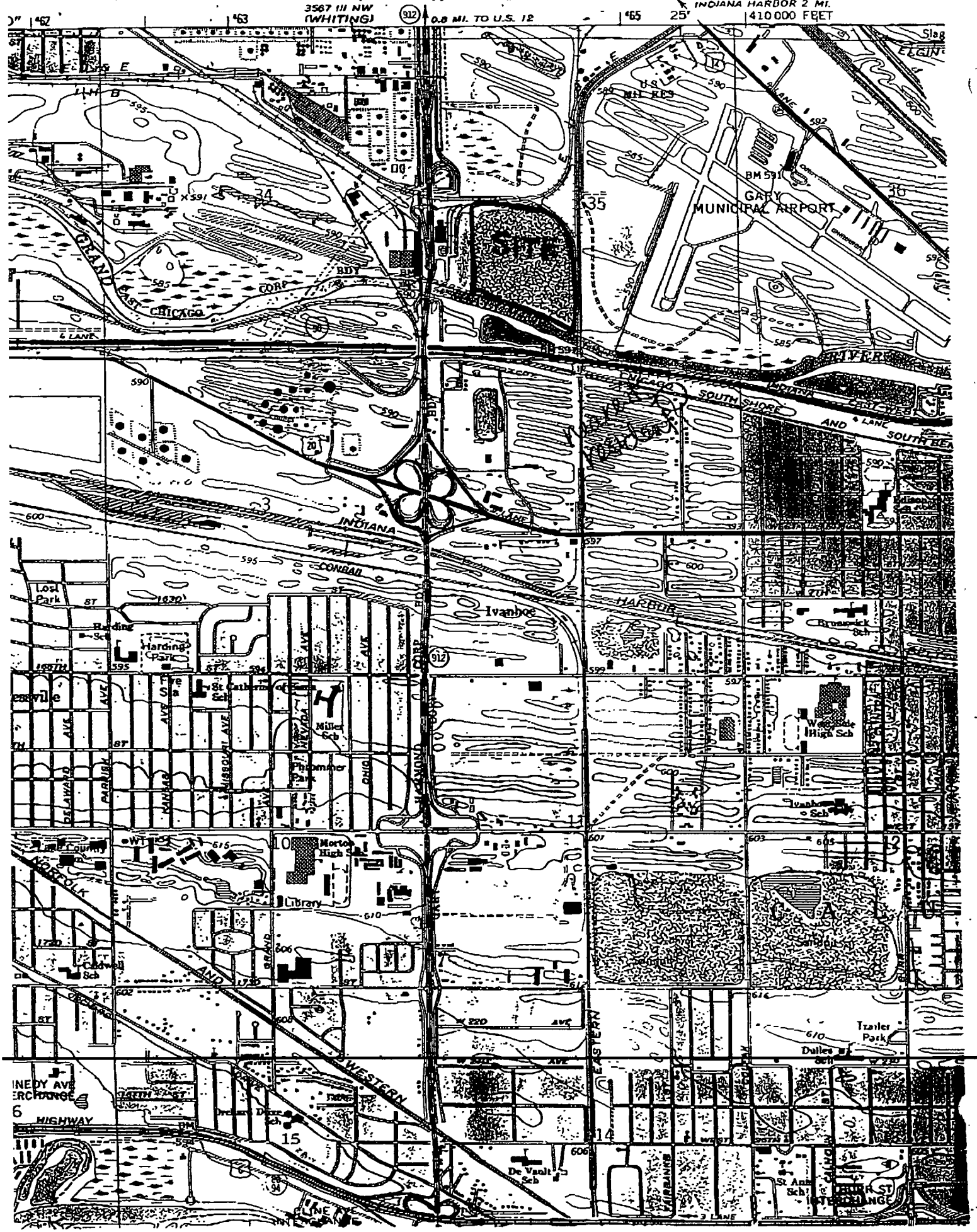
GENERAL INFORMATION (continued)

Site Sketch:

(Show all pertinent features; indicate sources and closest targets)



DEPARTMENT OF NATURAL RESOURCES
INDIANAPOLIS, INDIANA



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GENERAL INFORMATION (continued)

Source Descriptions: Approximately 90% of the site is Landfill and 10% is made up of a parking lot, office bldg, and storage bldg. The property is approx. 160 acres, and the landfill is approx. 144 acres. Leachate from the west ditch which flows along the west border of the landfill, flows into the Grand Calumet River.

ref #2

Waste Characteristics (WC) Calculations:
(See PA Table 1, page 5) The Landfill is approx. 1/2 mile long on each side, it ranges from about 30'-50' in height. Therefore WC can be calculated

2640' x 2640' x 50' = 348,480,000 ft³

This falls between 675 million ft³ and 675 million ft³. Therefore WC = 32.

ref: OSR

WC = 32.

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GROUND WATER PATHWAY
GROUND WATER USE DESCRIPTION

07-09-91

Describe Ground Water Use Within 4-miles of the Site:
(Provide generalized stratigraphy; information on aquifers, municipal, and or private wells)

The site is situated within the Calumet Lacustrine plain; it is made up of 40'-175' of glacio-lacustrine sand and gravel. This sand and gravel overlies a layer of Silurian dolomitic limestone of the Wabash formation which forms the upper aquifer. The lower aquifer is formed by 300'-685' of Ordovician dolomitic limestone, sandstone, and shale. Because of poor water quality in the lower aquifer, the upper aquifer is used for groundwater (drinking water) The aquifers are separated by a confining layer. Near the surface is about 50' of Wisconsin glacio-lacustrine sand and gravel which consists of fine to medium silty sand interbedded with beach gravel, silt, and clay. The water table is approx. 10'-12' below the surface and groundwater flow is towards the Grand Calumet River which is directly South of the site

Approximately 1,240 persons are on groundwater within 4 miles of the site; 124 of these reside within 3 miles of the site The remainder of the population with in 4 miles are on surface water drawn from Lake Michigan (CONT'D).

Show calculations of ground water drinking water populations:

0-2 miles	No wells
2-3 miles	- 30 wells in Black Oak that lie within "people's Water" servicing area (ref #10.) - 6 wells are located on 20th ave, just North of 21st st. - 6 wells scattered in the area (ref #10)
TOTAL 2-3 MI	42 WELLS x 2.96 PERSONS/HOUSE (ref #6) = 124 PEOP
3-4 miles.	- 343 wells in Black Oak, not serviced by. Hammond, Gary, or people's water. (ref #15) - 6 wells scattered in area (ref #10) - 12 wells between Cline & ESOERR on 29th St. (ref #10) - 6 wells in Griffith (ref #15) - 20 wells in Highland (ref #18)
TOTAL 3-4 MI	387 WELLS X 2.96 (ref #6) = 1146 PEOPLE

SOURCES 2,5,6,7,8,9,10,11,13,15,18,19 TOTAL = 1271 PEOPLE

Without the leachate collection system, migration hazardous wastes via groundwater is possible cause precipitation is heavy, the subsurface is y sandy, and the water table in the area is sh.

Groundwater contamination is alleged by BIT monitoring well tests, but attribution is ficult because the site is surrounded other hazardous waste sites.

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This chart provides guidelines to assist you in hypothesizing the presence of a suspected release and identifying primary targets. It is expected that not all of the information will be available during the PA. Also, these criteria are not all-inclusive; list any other criteria you use to hypothesize a suspected release or to identify primary targets. This chart will record your professional judgment in evaluating these factors.

The "Suspected Release" section of the chart guides you through evaluation of some site, source, and pathway conditions to help hypothesize whether a release from the site is likely. If a release is suspected, use the "Primary Targets" section to guide you through evaluation of some conditions that will help identify targets likely to be exposed to hazardous substances. You may use this section of the chart more than once, depending on the number of targets you feel may be considered "primary." In the "Primary Targets" section on this sheet, record the responses for the well that you feel has the highest probability of being exposed to hazardous substances.

Check the boxes to indicate a "yes", "no", or "unknown" answer to each question. If you check the "Suspected Release" box as "yes", make sure that you assign a Likelihood of Release value of 550 for the pathway.

GROUND WATER PATHWAY

SUSPECTED RELEASE

Yes	No	Unknown	
■	□	□	Are sources poorly contained?
■	□	□	Is the source a type likely to contribute to ground water contamination (e.g., wet lagoon)?
■	□	□	Is waste quantity particularly large?
■	□	□	Is precipitation heavy and infiltration rate high?
□	■	□	Is the site located in an area of karst terrain?
■	□	□	Is the subsurface highly permeable or conductive?
■	□	□	Is drinking water drawn from a shallow aquifer?
■	□	□	Are suspected contaminants highly mobile in ground water?
■	□	□	Does any circumstantial evidence of ground water or drinking water contamination exist? ref #1
□	■		Other criteria? _____
■	□		**SUSPECTED RELEASE?**

PRIMARY TARGETS

Yes	No	Unknown	
□	■	□	Is any drinking-water well nearby?
□	■	□	Is any nearby drinking-water well closed?
□	■	□	Has foul-tasting or foul-smelling water been reported by any nearby drinking-water users?
□	■	□	Do any nearby wells have a large drawdown or high production rate?
□	■	□	Are drinking-water wells located between the site and other wells that are suspected to be exposed to hazardous substances?
■	□	□	Does any circumstantial evidence of ground water or drinking water contamination exist?
□	■	□	Does any drinking-water well warrant sampling?
□	■		Other criteria? _____
□	■		**PRIMARY TARGET(S) IDENTIFIED?**

Summarize the rationale for suspected release (attach an additional page if necessary): Although clay barriers were installed, the ESBH questioned their adequacy of barriers and collection systems. Their construction created an artificially low water table (30') which is maintained by the leachate collection system. Once the facility is closed, the on site water table will recover from the negative influence at this time ground water contamination possibilities will have to be reassessed. (ref #2)

Summarize the rationale for Primary Targets (attach an additional page if necessary): The closest drinking water well is >2.5 miles from the site. The majority of the population is served by surface water intakes in Lake Michigan. Therefore, no primary targets exist.

Pathway Characteristics		
Do you suspect a release (see Ground Water Pathway Criteria List, page 7)?	Yes ✓	No ___
Is the site located in karst terrain?	Yes ___	No ✓
Depth to aquifer:	<10-15 ft	
Distance to the nearest drinking-water well:	>2 miles	

LIKELIHOOD OF RELEASE	A Suspected Release	B No Suspected Release	References
1. SUSPECTED RELEASE: If you suspect a release to ground water (see page 7), assign a score of 550, and use only column A for this pathway.	550		
2. NO SUSPECTED RELEASE: If you do not suspect a release to ground water, and the site is in karst terrain or the depth to aquifer is 70 feet or less, assign a score of 500; otherwise, assign a score of 340. Use only column B for this pathway.			
LR =	550		

TARGETS	A	B	References
3. PRIMARY TARGET POPULATION: Determine the number of people served by drinking water from wells that you suspect have been exposed to hazardous substances from the site (see Ground Water Pathway Criteria List, page 7). ___0___ people x 10 =	0		
4. SECONDARY TARGET POPULATION: Determine the number of people served by drinking water from wells that you do NOT suspect have been exposed to hazardous substances from the site, and assign the total population score from PA Table 2. Are any wells part of a blended system? Yes ___ No X If yes, attach a page to show apportionment calculations.	15		3,10,5
5. NEAREST WELL: If you have identified any Primary Targets for ground water, assign a score of 50; otherwise, assign the highest Nearest Well score from PA Table 2. If no drinking-water wells exist within 4 miles, assign a score of zero.	3		3,10,5
6. WELLHEAD PROTECTION AREA (WHPA): Assign a score of 20 if any portion of a designated WHPA is within ½ mile of the site; assign 5 if from ½ to 4 miles.	0		
7. RESOURCES: A score of 5 is assigned.	5	5	
T =	23		

WASTE CHARACTERISTICS	A	B
8. A. If you have identified any Primary Targets for ground water, assign the waste characteristics score calculated on page 4, or a score of 32, whichever is GREATER; do not evaluate part B of this factor.		
B. If you have NOT identified any Primary Targets for ground water, assign the waste characteristics score calculated on page 4.	32	
WC =	32	

GROUND WATER PATHWAY SCORE: $\frac{LR \times T \times WC}{82{,}500}$ = 5

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Site Name:
Date:

PA TABLE 2: VALUES FOR SECONDARY GROUND WATER TARGET POPULATIONS

PA Table 2a: Non-Karst Aquifers

Distance from Site	Population	Nearest Well (choose Nearest)	Population Served by Wells Within Distance Category: 1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	Population Value
0 to ¼ mile	0	20	1	2	5	16	52	163	521	1,633	5,214	16,325	
> ¼ to ½ mile	0	18	1	1	3	10	32	101	323	1,012	3,233	10,121	
> ½ to 1 mile	0	9	1	1	2	5	17	52	167	522	1,668	5,224	
> 1 to 2 miles	0	5	1	1	1	3	9	29	94	294	939	2,939	
> 2 to 3 miles	124	3	1	1	1	2	7	21	68	212	678	2,122	2
> 3 to 4 miles	146	2	1	1	1	1	4	13	42	131	417	1,306	13

Nearest Well = 3

Score = 15

PA Table 2b: Karst Aquifers

Distance from Site	Population	Nearest Well (use 20 for karst)	Population Served by Wells Within Distance Category: 1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	Population Value
0 to ¼ mile		20	1	2	5	16	52	163	521	1,633	5,214	16,325	
> ¼ to ½ mile		20	1	1	3	10	32	101	323	1,012	3,233	10,121	
> ½ to 1 mile		20	1	1	3	8	26	82	261	816	2,607	8,162	
> 1 to 2 miles		20	1	1	3	8	26	82	261	816	2,607	8,162	
> 2 to 3 miles		20	1	1	3	8	26	82	261	816	2,607	8,162	
> 3 to 4 miles		20	1	1	3	8	26	82	261	816	2,607	8,162	

Nearest Well =

Score =

7-12-91

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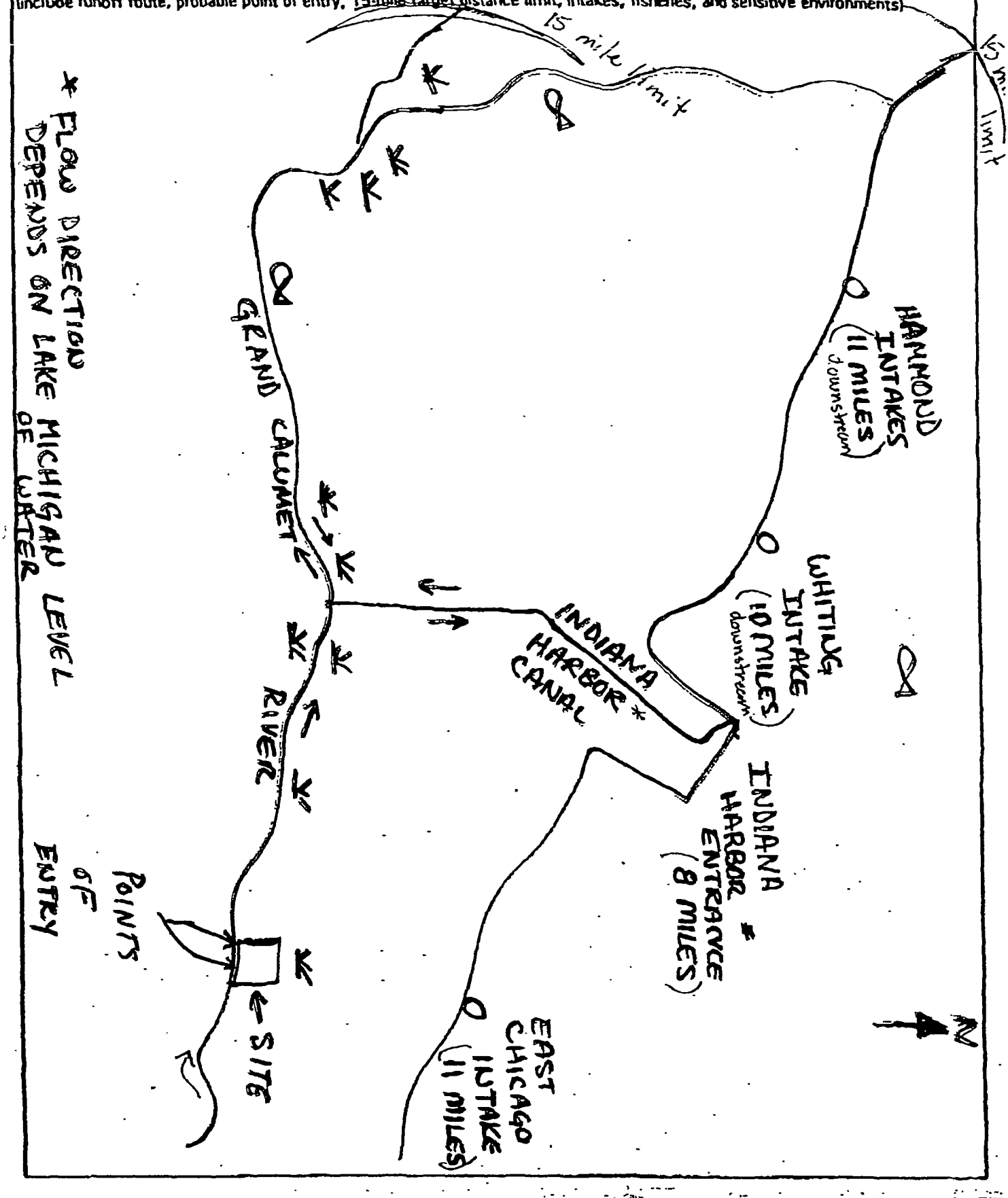
SURFACE WATER PATHWAY MIGRATION ROUTE SKETCH

Provide a Sketch of the Surface Water Migration Route:

(include runoff route, probable point of entry, 15-mile target distance limit, intakes, fisheries, and sensitive environments)



This chart provides guidelines to assist you in hypothesizing the presence of a suspected release and identifying primary targets. It is expected that not all of this information will be available during the PA. Also, these criteria are not all-inclusive; list any other criteria you use to hypothesize a suspected release or to identify primary targets. This chart will record your professional judgment in evaluating these factors.

The "Suspected Release" section of the chart guides you through evaluation of some site, source, and pathway conditions to help hypothesize whether a release from the site is likely. If a release is suspected, use the "Primary Targets" section to guide you through evaluation of some conditions that will help identify targets likely to be exposed to hazardous substances. You may use this section of the chart more than once, depending on the number of targets you feel may be considered "primary." In the "Primary Targets" section on this sheet, record the responses for the target that you feel has the highest probability of being exposed to hazardous substances.

Check the boxes to indicate a "yes", "no", or "unknown" answer to each question. If you check the "Suspected Release" box as "yes", make sure that you assign a Likelihood of Release value of SSO for the pathway.

SURFACE WATER PATHWAY

SUSPECTED RELEASE

Yes	No	Unknown	
■	□	□	Is surface water nearby?
■	□	□	Is waste quantity particularly large?
□	■	□	Is the drainage area large?
■	□	□	Is precipitation heavy or infiltration rate low?
■	□	□	Are sources poorly contained or prone to runoff or flooding?
■	□	□	Is a runoff route well defined (e.g., ditch or channel leading to surface water)?
□	■	□	Is vegetation stressed along the probable runoff path?
■	□		Are suspected contaminants highly persistent in surface water?
□	■	□	Are sediments/water unnaturally discolored?
□	■	□	Is wildlife unnaturally absent?
□	■	□	Has deposition of waste into surface water been observed?
■		□	Is ground water discharge to surface water likely?
■	□	□	Is there any circumstantial evidence of surface water contamination?
□	■		Other criteria? _____
■	□		**SUSPECTED RELEASE?**

PRIMARY TARGETS

Yes	No	Unknown	
■	□	□	Is any target nearby? If yes:
			□ Drinking-water intake
			■ Fishery
			■ Sensitive environment
□	□	■	Has an intake, fishery, or recreational area been closed?
□	□	■	Is there any circumstantial evidence of surface water contamination at or downstream of a target?
■	□	□	Does any target warrant sampling? If yes:
			□ Drinking-water intake
			■ Fishery
			■ Sensitive environment
□	■		Other criteria? _____
□	■		**PRIMARY INTAKE(S) IDENTIFIED?**
■	□		**PRIMARY FISHERY IDENTIFIED?**
■	□		**PRIMARY SENSITIVE ENVIRONMENT(S) IDENTIFIED?**

Summarize the rationale for suspected release (attach an additional page if necessary): The West flows along western border of Landfill flows into Grand Calumet River. The site is also adjacent to the Grand Calumet River.

Summarize the rationale for Primary Targets (attach an additional page if necessary): The Grand Calumet River is considered a fishery. (ref #: 4) Some intakes are located in Lake Michigan (ref #5) According to the wetland inventory Maps, (ref # 23, 24,) there are at least 20 miles of wetland frontage within 5 miles of the site all located adjacent to the Grand Calumet River and Lake Michigan. There are no primary drinking water targets since the nearest intake is approximately 8 miles away from the site.

LIKELIHOOD OF RELEASE AND DRINKING WATER THREAT SCORESHEET

Pathway Characteristics	
Do you suspect a release (see Surface Water Pathway Criteria List, page 11)?	Yes ✓ No ___
Distance to surface water:	≥100 ft
Flood Frequency:	___ yrs
What is the downstream distance to the nearest drinking-water intake? 10 miles	
nearest fishery? ≥100 ft miles nearest sensitive environment? 1/4 miles	

LIKELIHOOD OF RELEASE

	A Suspected Release	B No Suspected Release	References
1. SUSPECTED RELEASE: If you suspect a release to surface water (see page 11), assign a score of 550, and use only column A for this pathway.	550		✓
2. NO SUSPECTED RELEASE: If you do not suspect a release to surface water, and the distance to surface water is 2,500 feet or less, assign a score of 500; otherwise, assign a score from the table below. Use only column B for this pathway.			
LR =	550		

Floodplain	Score
Site in annual or 10-yr floodplain	500
Site in 100-yr floodplain	400
Site in 500-yr floodplain	300
Site outside 500-yr floodplain	100

DRINKING WATER THREAT TARGETS

3. Determine the water body types, flows (if applicable), and number of people served by all drinking-water intakes within the 15-mile target distance limit. If there are no drinking-water intakes within the target distance limit, assign a total Targets score of 5 at the bottom of this page (Resources only) and proceed to page 14.

Intake Name	Water Body Type	Flow	People Served
East Chgo	Lake MI	— cfs	39786
Whiting	Lake MI	— cfs	5,600
Hammond	Lake MI	— cfs	294549

11, 14, East chgo?

4. PRIMARY TARGET POPULATION: If you suspect any drinking-water intake listed above has been exposed to hazardous substances from the site (see Surface Water Pathway Criteria List, page 11), list the intake name(s) and calculate the factor score based on the number of people served.

0 people x 10 = 0 —

5. SECONDARY TARGET POPULATION: Determine the Secondary Target Population score from PA Table 3 based on the populations using drinking-water from intakes that you do NOT suspect have been exposed to hazardous substances from the site.

Are any intakes part of a blended system? Yes X No ___
If yes, attach a page to show apportionment calculations.

5 — 11, 14

6. NEAREST INTAKE: If you have identified any Primary Targets for the drinking water threat (Factor 4), assign a score of 50; otherwise, assign the Nearest Intake score from PA Table 3. If no drinking-water intake exists within the 15-mile target distance limit, assign a score of zero.

0 —

7. RESOURCES: A score of 5 is assigned.

5 5

T = 10

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SURFACE WATER PATHWAY (concluded)

WASTE CHARACTERISTICS, THREAT, AND PATHWAY SCORE SUMMARY

WASTE CHARACTERISTICS

	A Suspected Release	B No Suspected Release
14. A. If you have identified ANY Primary Targets for surface water (pages 12, 14, or 15), assign the waste characteristics score calculated on page 4, or a score of 32, whichever is GREATER; do not evaluate part B of this factor.	32	
B. If you have NOT identified any Primary Targets for surface water, assign the waste characteristics score calculated on page 4.		
WC =	32	

SURFACE WATER PATHWAY THREAT SCORES

Threat	Likelihood of Release (LR) Score (from page 12)	Targets (T) Score	Pathway Waste Characteristics (WC) Score (determined above)	Threat Score LR x T x WC / 82,500
Drinking Water	550	10	32	2
Human Food Chain	550	300	32	64
Environmental	550	300	32	64

SURFACE WATER PATHWAY SCORE (Drinking Water Threat + Human Food Chain Threat + Environmental Threat): 100

Date: 07-09-91

This chart provides guidelines to assist you in hypothesizing the presence of a resident population. It is expected that not all of this information will be available during the PA. Also, these criteria are not all-inclusive; list any other criteria you use to hypothesize resident populations. This chart will record your professional judgment in evaluating this factor.

Use the resident population section to guide you through evaluation of some site and source conditions that will help identify targets likely to be exposed to hazardous substances. You may use this section of the chart more than once, depending on the number of nearby people you feel may be considered part of a resident population. Record the responses for the resident population target that you feel has the highest probability of being exposed to hazardous substances.

Check the boxes to indicate a "yes", "no", or "unknown" answer to each question.

SOIL EXPOSURE PATHWAY

SUSPECTED CONTAMINATION	RESIDENT POPULATION			
	Yes	No	Unknown	
Surficial contamination is assumed.	☐	■	☐	Are there residences, schools, or day care facilities on or within 200 feet of areas of suspected contamination?
	☐	■	☐	Are residences, schools, or day care facilities located on adjacent land previously owned or leased by the site owner/operator?
	☐	■	☐	Is there an overland migration route that might spread hazardous substances near residences, schools, or day care facilities?
	☐	■	☐	Are there any reports of adverse health effects from onsite or adjacent residents or students, exclusive of apparent drinking water or air contamination problems?
	☐	■	☐	Does any offsite property warrant sampling?
	☐	■		Other criteria? _____
	☐	■		**RESIDENT POPULATION IDENTIFIED?**

Summarize the rationale for resident population (attach an additional page if necessary):

The site is located in a commercial / Industrial area. There are no residences, schools, or daycares, nearby. The site is partially fenced and not easily accessible. The nearest residence is located approximately 1/4 mile southeast of the site.

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SOIL EXPOSURE PATHWAY SCORESHEET

01-09-91

Pathway Characteristics	
Do any people live on or within 200 ft of areas of suspected contamination?	Yes ___ No X
Do any people attend school or day care on or within 200 ft of areas of suspected contamination?	Yes ___ No X
Is the facility active? Yes X No ___ If yes, estimate the number of workers: 10	

	A Suspected Contamination	B No Suspected Contamination	References
LIKELIHOOD OF EXPOSURE			
1. SUSPECTED CONTAMINATION: Surficial contamination is assumed: A score of 550 is assigned. LE =	550		—
RESIDENT POPULATION THREAT TARGETS			
2. RESIDENT POPULATION: Determine the number of people occupying residences or attending school or day care on or within 200 feet of areas of suspected contamination (see Soil Exposure Pathway Criteria List, page 18). 0 people x 10 =	0		—
3. RESIDENT INDIVIDUAL: If you have identified any Resident Population (Factor 2), assign a score of 50; otherwise, assign a score of 0.	0		—
4. WORKERS: Assign a score from the following table based on the total number of workers at the facility and nearby facilities with suspected contamination:	5		OSR
5. TERRESTRIAL SENSITIVE ENVIRONMENTS: Assign a value from PA Table 7 for each terrestrial sensitive environment that is located on an area of suspected contamination: Sum =	0		—
6. RESOURCES: A score of 5 is assigned.	5		
T =	10		
WASTE CHARACTERISTICS			
7. Assign the waste characteristics score calculated on page 4. WC =	32		

Number of Workers	Score
0	0
1 to 100	5
101 to 1,000	10
>1,000	15

Terrestrial Sensitive Environment Type	Value

RESIDENT POPULATION THREAT SCORE: $\frac{LE \times T \times WC}{82,500}$ = 2

NEARBY POPULATION THREAT SCORE: 2
Assign a score of 2

SOIL EXPOSURE PATHWAY SCORE: 4
Resident Population Threat + Nearby Population Threat

This chart provides guidelines to assist you in hypothesizing the presence of a suspected release. It is expected that not all of this information will be available during the PA. Also, these criteria are not all-inclusive; list any other criteria you use to hypothesize a suspected release. This chart will record your professional judgment in evaluating this factor.

The "Suspected Release" section of the chart guides you through evaluation of some conditions to help hypothesize whether a release from the site is likely. For the Air Pathway, if a release is suspected, "Primary Targets" are any residents, workers, students, or sensitive environments within ¼ mile of the site.

Check the boxes to indicate a "yes", "no", or "unknown" answer to each question. If you check the "Suspected Release" box as "yes", make sure that you assign a Likelihood of Release value of 550 for the pathway.

AIR PATHWAY

Yes	No	Unknown	SUSPECTED RELEASE	PRIMARY TARGETS
☐	☒	☐	Have odors been reported?	*If you suspect a release to air, evaluate all populations and sensitive environments within ¼ mile including those cited as Primary Targets.*
☐	☒	☐	Has a release of hazardous substances to the air been directly observed?	
☐	☒	☐	Are there any reports of adverse health effects (e.g., headaches, nausea, dizziness) potentially resulting from migration of hazardous substances through the air?	
☐	☒	☐	Is there any circumstantial evidence of an air release?	
☐	☒		Other criteria? _____	
☐	☒		**SUSPECTED RELEASE?**	

Summarize the rationale for suspected release (attach an additional page if necessary):

Although there was no engineered cap on the landfill, it was partially vegetated and covered with flyash and sludge. This flyash and sludge cover is adequate for containment of Hazardous waste that may migrate via the airpathway.

07-03-01

SITE SCORE CALCULATION

	S	S^2
GROUND WATER PATHWAY SCORE (S_{gw}):	5	25
SURFACE WATER PATHWAY SCORE (S_{sw}):	100	10,000
SOIL EXPOSURE PATHWAY SCORE (S_{se}):	4	16
AIR PATHWAY SCORE (S_a):	22	484
SITE SCORE: $\sqrt{\frac{S_{gw}^2+S_{sw}^2+S_{se}^2+S_a^2}{4}}$ =		51.3

RECOMMENDATION

FIT recommends that Gary Development Co, Inc be given a medium priority for inspection because of the threat to surface water and ground water contamination.

SUMMARY

	YES	NO
1. Is there a high possibility of a threat to nearby drinking water wells by migration of hazardous substances in ground water?	☐	☒
A. If yes, identify the wells recommended for sampling during the SI.		
B. If yes, how many people are served by these threatened wells?		
2. Are any of the following suspected to have been exposed to hazardous substances through surface water migration from the site?		
A. Drinking water intake		☒
B. Fishery	☒	☐
C. Sensitive environment: wetland, critical habitat, others	☒	☐
D. If yes, identify the targets recommended for sampling during the SI. Grand Calumet River, nearby wetlands and soils on-site especially near areas of erosion and west bank.		
3. Do people reside or attend school or day care on or within 200 ft of any area of suspected contamination?	☐	☒
4. Are there public health concerns at this site that are not addressed by PA scoring considerations? If yes, explain:	☐	☒

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Gary Development Co, Inc Landfill PAGE 3 OF 8

U.S. EPA ID: Ind 077005916 TDD: R05-8307-04 PAN: FIN0085PPA

DATE: 06-12-91

TIME: 1320

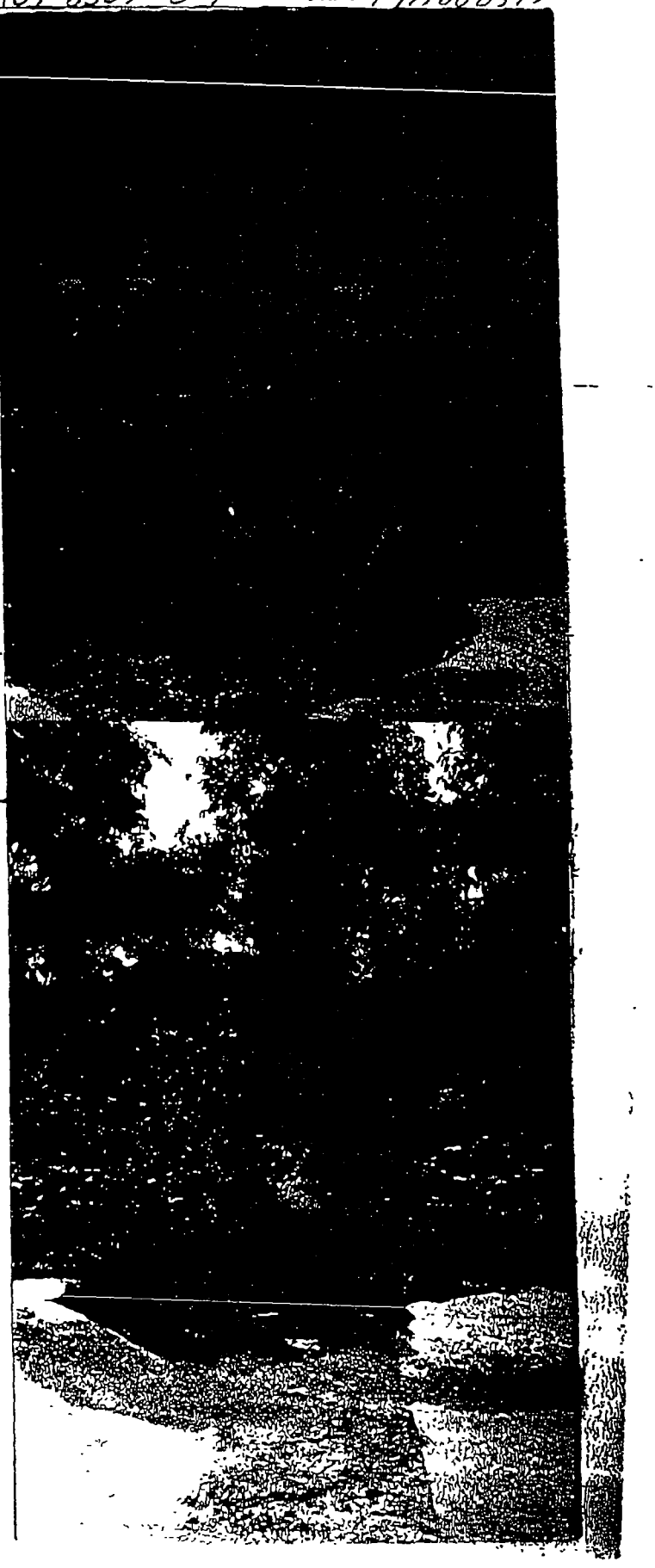
DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Sunny, 80°

PHOTOGRAPHED BY: Valerie Farrell

SAMPLE ID (if applicable): NA

DESCRIPTION: Drainage Ditch on N side of frontage Road



DATE: 06-12-91

TIME: 1320

DIRECTION OF PHOTOGRAPH: S

WEATHER CONDITIONS: Sunny, 80°

PHOTOGRAPHED BY: Valerie Farrell

SAMPLE ID (if applicable): NA

DESCRIPTION: Drainage ditch on South side of frontage road; flows into Calumet River

SITE NAME: Gary Development [illegible]

U.S. EPA ID: Ind 077005916 TDD: R05-8307-04 PAN: FIN 0085PAA

DATE: > 06-12-96

TIME: > 1318

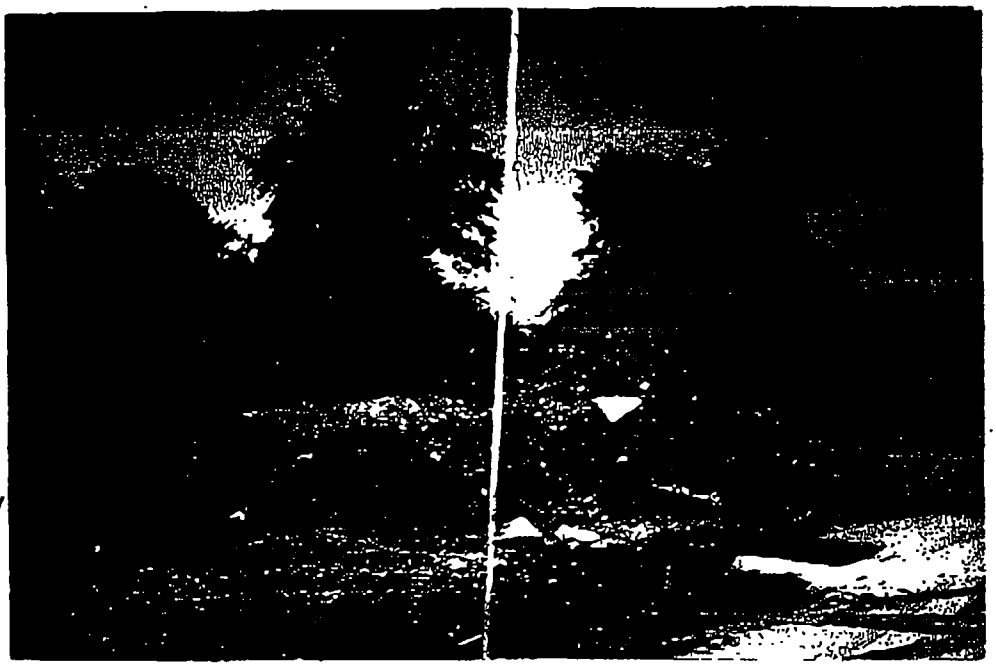
DIRECTION OF PHOTOGRAPH: > NNW

WEATHER CONDITIONS: > Sunny

> 80°

PHOTOGRAPHED BY: > Valene Farrell

SAMPLE ID (if applicable): > NA



DESCRIPTION: > Drainage ditch, dirt pile, and landfill

> in background.

DATE: > 06-12-91

TIME: > 1320

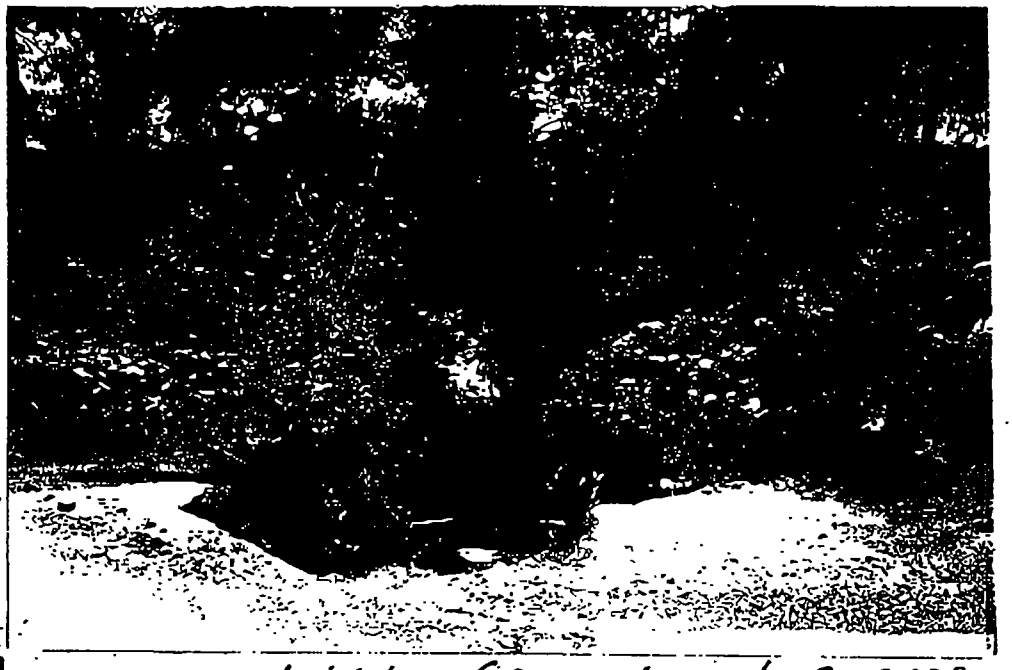
DIRECTION OF PHOTOGRAPH: > S

WEATHER CONDITIONS: > Sunny

> 80°

PHOTOGRAPHED BY: > V. Farrell

SAMPLE ID (if applicable): > NA



DESCRIPTION: > Drainage ditch (S. side of access

> road and Grand Calumet River.

In background

REFERENCE DOCUMENTATION SHEET

Ref.#	DESCRIPTION OF REFERENCE
1	U.S EPA, 2070-12 Form Gary Development Co. Inc, Site Inspection April 6, 1983
2	U.S. EPA 2070-13 form, Jan 6, 1984 Gary Development Landfill, Site Inspection, Dec 27, 1983, prepared by Paul Hess of Ecology and Environment
3	Gary Hobart Water Corp; Distribution Sys of Gary Hobart Water Corp, provided by Mike Rigby June 23, 1991, Asst Supervisor, New Business and Engineering Records, Gary Hobart Water Corp, to Chris Zion of E&E FIT
4	Jaguette, Ruth Ann, April 2, 1985 of E and E, phone conversation with Jerome Fifer, City Engineer Gary Board of Works; re: surface water use in ~~ga~~ Gary area

REFERENCE DOCUMENTATION SHEET

Ref. #	DESCRIPTION OF REFERENCE
5	USGS, 1968, Photorevised 1980, Whiting, Ind. Quadrangle, 7.5 minute series; 1:24000
6	U.S. Department of Commerce Bureau of Census, 1980, Characteristics of the population, General population characteristics, Indiana,
7	USGS, 1968, photorevised 1980, Highland, Indiana Quadrangle, 7.5 minute series; 1:24000
8	USGS, 1968, photorevised 1980, Calumet City, Indiana Quadrangle, 7.5 minute series; 1:24000

REFERENCE DOCUMENTATION SHEET

Ref.#	DESCRIPTION OF REFERENCE
9	USGS, 1965, photorevised 1973, Lake Calumet, Indiana Quadrangle, 7.5 minute series; 1:24000
10	Musgrave, Barb, June 26, 1991, Peoples Water Co, Hammond, Indiana Contacted by Chris Zien of Ecology and Environment. re: people served and people on ground-water in Black Oak.
11	Bonatentura, Tony, June 24, 1991 Hammond Water works, phone Conversation w/ Chris Zien of E&E re: distribution from Hammond Intakes.
12	Ortegon, Nina, June 24, 1991 Hammond Water Works, phone Conversation with Chris Zien of Ecology and Environment re: intakes and pumping rates.

REFERENCE DOCUMENTATION SHEET

Ref. #	DESCRIPTION OF REFERENCE
13	Seydel, Kalec, April 8, 1991, Hammond Water Filtration Dept, phone Conversation w/ Todd Ramaly re: populations served by Hammond water filtration Dept.
14	Blahunka, Steve, June 1991, Whiting Filtration Plant, phone Conversation with Mary Tierney of Ecology and Environment re: Whiting intakes.
15	Jezuit, Richard, on June 12, 1991, Gary-Hobart Water Corp, phone Conversation w/ Chris Zien of Ecology and Environment
16	Modrowski, Art, July 2, 1991 East Chicago Water Dept, Contacted by Chris Zien of Ecology & Environment re: East Chicago Intakes.

REFERENCE DOCUMENTATION SHEET

Ref. #	DESCRIPTION OF REFERENCE
17	Tunlin, Robert.
18	Fistrovich, Dorothy, June 27, 1991 Highland Water Corp, phone Conversation with Chris Zien of Ecology and Environment.
19	Williams, Sara, June 25, 1991, Griffith Water Dept, phone conversation with Chris Zien of Ecology and Environment.
20	U.S.G.S, 1968, photorevised 1980, Gary Indiana Quadrangle 7.5 minute series; 1:24000

REFERENCE DOCUMENTATION SHEET

Ref.#	DESCRIPTION OF REFERENCE
21	Hazardous Waste Assessment @ Conservation Chemical; Havens and Emerson Consulting Environmental Engineers, August 1983, page 6.
22	Environmental Regulatory Review - Grand Calumet River and Indian Harbor Canal; Great Lakes National Program Office U.S. EPA October 1980, page 2-10
23	U.S. Department of the Interior Fish and Wildlife Service, 1981 National Wetland Inventory Maps, Hammond, Ind. 1:24,000
24	U.S. Department of the Interior Fish and Wildlife Service, 1981 National Wetland Inventory Maps Calumet City, Indiana 1:24,000