EPA Region 5 Records Ctr.
200087

Facility name: HIMCO DUMP

Location: CTY. RD 10 AND NAPANEE EXTENSION, ELKHART IN

EPA Region: V

Person(s) in charge of the facility: CHARLES HIMES (HIMCO PRESIDENT)
705 N. WILDWOOD
ELKHART IN 46514

Name of Reviewer: Glenn Cebry FIT Date:

General description of the facility: Kathleen Kelly FIT

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

SITE WAS AN UNPERMITTED LANDFILL LOCATED IN A MARSHY AREA NORTH OF ELKHART, IN. THE SITE ACCEPTED MUNICIPLE, INDUSTRIAL AND MEDICAL WASTE. PRIVATE WELLS LOCATED SOUTH OF THE SITE WERE SHOWN TO BE CONTAMINATED IN 1974. SITE INSPECTION OF 7-30-84 COMFIRMED RELEASE TO GROUND WATER. SITE WAS CLOSED IN 1976

Scores: S_M = 42.31 S_{gw} = 73.08 S_{sw} = 4.13 S_a = 0)

S_{FE} = 0

S_{DC} = 0

FIGURE 1
HRS COVER SHEET

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Ground Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 45	1	45	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 3	2		6	
Net Precipitation	0 1 2 3	1		3	
Permeability of the Unsaturated Zone	0 1 2 3	1		3	
Physical State	0 1 2 3	1		3	
Total Route Characteristics Score				15	
3 Containment	0 1 2 3	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	9	9	
Distance to Nearest Well/Population Served	0 4 6 8 10 / 12 16 18 20 / 24 30 32 35 40	1	40	40	
Total Targets Score			49	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			41895	57,330	
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} = 73.08		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

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Surface 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	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	1	3	
Total Route Characteristics Score			7	15	
3 Containment	0 1 2 3	1	2	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	6	9	
Distance to a Sensitive Environment	0 1 2 3	2	4	6	
Population Served/Distance to Water Intake Downstream	0 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			10	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			2660	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S_{sw} = 4.13		

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

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Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 45	1	0	45	5.1
Date and Location:					
Sampling Protocol:					
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 Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score			20	
3 Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score			39	
4 Multiply 1 x 2 x 3			0	35,100	
5 Divide line 4 by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

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	S	S^2
Groundwater Route Score (S_{gw})	73.08	5340.69
Surface Water Route Score (S_{sw})	4.13	17.06
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		5357.75
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		73.20
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		42.31

FIGURE 10
WORKSHEET FOR COMPUTING S_M

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Fire and Explosion Work Sheet – No Threat Indicated

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		

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

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NO THREAT INDICATED

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

FIGURE 12
DIRECT CONTACT WORK SHEET

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DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: The purpose of these records is to provide a convenient way to prepare an auditable record of the data and documentation used to apply the Hazard Ranking System to a given facility. As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference that will make the document used for a given data point easier to find. Include the location of the document and consider appending a copy of the relevant page(s) for ease in review.

FACILITY NAME: HIMCO DUMP

LOCATION: ELKHART INDIANA

QA
Sue Russell
February 4, 1986

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum): COBALT - SAMPLE #ME3205 WELL E-2. REF 1 NOTE THAT ELEVATED LEVELS OF ARSENIC, BARIUM, BERYLLIUM, CHROMIUM, COPPER, VANADIUM, CAD LEAD, MANGANESE, MERCURY, NICKEL, SELENIUM, AND ZINC ARE PRESENT IN DOWNGRADIENT WELL, THOUGH AT LESS THAN AN ORDER OF MAGNITUDE GREATER THAN THE UPGRADIENT. REF. 1,

Rationale for attributing the contaminants to the facility: UPGRADIENT WELL (D-1, SAMPLE # ME 3201) ANALYSIS INDICATED COBALT AT < 50 ug/l (PPB). DOWNGRADIENT WELL (E-2, SAMPLE #ME 32 ANALYSIS INDICATED COBALT AT 132 ug/l (PPB). REF 1, 19 MAP IS LAST PAGE OF REF 1. NOTE THAT WELL D-1 SCREENED AT 19 FT AND WELL E-2 SCREENED AT 17 FT. (REF 3 P. 78). Since these contaminants were found at significantly greater concentrations immediately downgradient of the site than upgradient, the observed release is justified. (continued on page 2A) KM

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern: OUTWASH AQUIFER FLOWING SOUTH TO THE ST. JOSEPH RIVER. THE AQUIFER UNDER SITE IS UNCONFINED. REF 3 P 1. THE LOWER AQUIFER IS CONFINED IN AREAS FURTHER NORTH AND SOUTH OF THE SITE. REF 3 P. 20 AND P. 21.

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

ELEVATION SHOWN ON TOPOGRAPHICAL MAP = 760 FT. REF 6
WATER LEVEL - 755 FT REF 3 P. 26
DEPTH TO AQUIFER OF CONCERN - 5 FT
SITE WAS FORMERLY SWAMPLAND FORMED BY GROUND WATER (AS OPPOSED TO SURFACE PONDING) REF 3 P 14

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

S Russell
Feb. 4, 1986

The map in Ref. 1 (p6) shows that the upgradient well (Sample ME 3201) is immediately upgradient of the site and that the contaminated downgradient well (ME 3205) is immediately downgradient of the site. There is no other industry between these 2 wells that could be causing this contamination. This is very strong evidence that Himco Dump contains quantities of hazardous waste and is contaminating the groundwater.

Although exact quantities of waste are unknown (see Hazardous Waste Quantity) the site is a historical dump site, receiving municipal, commercial and industrial waste from the Elkhart area (Ref 3 page 4 last paragraph). This history gives further support to the presence of hazardous waste. Ref 3 pages 99 - 136 [redacted] is a study of ground water quality that agrees that the Himco Dump site is a cause of ground water deterioration.

KJ

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Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal): N/A

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

Net precipitation (subtract the above figures): N/A

Permeability of Unsaturated Zone

Soil type in unsaturated zone: N/A

Permeability associated with soil type: N/A

Physical State

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

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S Russell
2/4/86

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum): NONE

Rationale for attributing the contaminants to the facility: N/A

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent: THE AVERAGE TERRAIN SLOPE IS 1 TO 5% TO THE SOUTH. HOWEVER, THE SITE ITSELF SLOPES GENTLY (~ 2%) TO THE NORTH TOWARD AN UNNAMED TRIBUTARY TO OSBORN CREEK. REF #8 PART 5 SEC VI 14

Name/description of nearest downslope surface water: AN UNNAMED CREEK ALONG THE NORTH BORDER OF THE SITE IS THE NEAREST DOWNSLOPE SURFACE WATER. THIS CREEK FLOWS THROUGH A MARSHY AREA AND INTO OSBORN CREEK. OSBORN CREEK IS A TRIBUTARY OF THE ST JOSEPH RIVER. REF 8 PART 5 SEC VI ALSO SEE REF 6.

Average slope of terrain between facility and above-cited surface water body in percent: 2% REF 8 PART 5 SEC VI OR ALSO SEE REF 6 NOTE THAT THE AVERAGE SLOPE OF FACILITY IS 1 TO 5% TO THE SOUTH. THE ABOVE INFORMATION IS NOT EASILY OBVIOUS ON THE TOPO BECAUSE OF THE QUADRANGLE'S AGE (1969) AND THE LACK OF A SUBSEQUENT PHOTO REVISION REF 6

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

NO. HOWEVER, AS STATED IN THE GENERAL DESCRIPTION THE FACILITY IS A FORMER SWAMPY AREA THAT WAS EXCAVATED AND FILLED IN REF 8 PART 5 SEC VI

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Is the facility completely surrounded by areas of higher elevation?
No. REF 6

1-Year 24-Hour Rainfall in Inches $2\frac{1}{4}$" REF 2 (47FR 31233)
ELKHART IS SITUATED BETWEEN THE 2" AND $2\frac{1}{2}$". 1-YE
24 HOUR RAINFALL RANGE $2" + 2\frac{1}{2}" = 4\frac{1}{2}"$ $4\frac{1}{2}" \div 2" = 2\frac{1}{4}"$

Distance to Nearest Downslope Surface Water SEE ALSO ATTACHED PAGE 7
The distance from the site following the most likely path of water flow to the nearest downslope surface water that is not intermittent is 4876 ft or .92 miles (Ref 6) KJ

Physical State of Waste SOLID REF 9 P. 1
Mr. Himes stated that only solids were accepted at his landfill (Ref 9 p1) Mr. Bruce Carter of Miles Laboratories stated that liquids and solids were sent to Himco but no specific reference of a hazardous liquid was available. (Ref 9 p2) KJ

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated: LANDFILL WITH SAND COVER AND VISIBLE LEACHATE STREAMS, REF 9 P.1 AND P.2., REF 8.

Method with highest score: LANDFILL IS NOT ADEQUATELY COVERED AND LEACHATE STREAMS VISIBLE. SITE PHOTOGRAPHS TAKEN DURING THE E&E SITE INSPECTION (REF. 8) SHOW THAT A SOUND DIVERSION SYSTEM DOES NOT EXIST. THE ABOVE PHOTOS ARE AVAILABLE FOR VIEWING IN THE E&E CHICAGO OFFICE FILES REF 9 P.1 AND P.2. THIS PLACES THE SITE BETWEEN A MATRIX VALUE OF 1 (INADEQUATELY COVERED) AND 3 (NO DIVERSION SYSTEM PRESENT). I ASSIGN THE SITE A VALUE OF 2 TO REFLECT THIS STATUS REF 2 (47FR 31236)

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3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated: N/A

Method with highest score: N/A

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

	TOXICITY	PERSISTANCE	MATRIX VALUE
COBALT	1 (REF 12 P. 509)	3 (REF 2 47FR31229)	12
Barium	3 (ref 12 p398)	3 "	18
Arsenic	3 (ref 12 p388)	3 "	18
Cadmium	3 (ref 12 p456)	3 (")	18

Compound with highest score:

Presence indicated in Reference 1

RHM Barium, arsenic and cadmium all have a matrix score of 18

Hazardous Waste Quantity

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

UNKNOWN - ASSUME 1 REF 15 P. 3 NOTE: SITE COVERS ~40 ACRES. HOWEVER THE ONLY LIST OF WASTE AVAILABLE SHOWS PHARMACEUTICAL OR MEDICAL WASTE WITHOUT SIGNIFICANT QUANTITIES OF HAZARDOUS WASTE.

Basis of estimating and/or computing waste quantity:

SINCE DOCUMENTED INFO ON HAZARDOUS WASTE QUANTITY IS NOT AVAILABLE (I.E. "UNKNOWN") AND THE VOLUME OF THE LANDFILL CANNOT BE USED FOR TOTAL QUANTITY, 1 IS THE ASSUMED VALUE FOR THE UNKNOWN QUANTITY OF WASTE. REF 15 P3 Also, since Contaminants** were found immediately downgradient of the site at levels significantly higher than upgradient, "the waste quantity value is justified at one. DRS

5 TARGETS

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Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:
Sole Source for drinking water. Ref 4, Ref 5. The unthreatened South Well Field does not have the capacity of serving the total population served currently by all 3 well fields. should the Bower and North Main Street Well Fields become contaminated. Ref 4. See Ref 6 for locations of well fields.
KJY

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:
Mr. Goss Residence - drinking water well (Ref 7)
No access to municipal water since he is west of the boundary of the city which is the exent of the distribution (Ref 6, 18
Address: 27991 CR 10 West (Ref 7 & see topo Ref 6)

Distance to above well or building:
Based on calculation made from Ref 6 (topo) and aerial photograph (Ref 22) the distance from Mr Goss' residence to the nearest contaminated monitoring well is 199.7 ft. (Ref 22)
KJY

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: All of the wells in the area are in the outwash aquifer (Ref 16). 2 Elkhart water works wells are located within the 3 mile radius. (Ref 6) water from all 3 well fields serving Elkhart is used throughout the entire distribution system, mixing where they meet in the system (Ref 4, 20, 21). A total of 13,488 accounts are served, 11863 of which are residences. (Ref 21) In addition, 3% of Elkhart residents don't have access to city water. (Ref 21) People outside the distribution use private wells in this outwash (Ref 3 p 1, 20; Ref 16, 4, 20, 21, 6) See population calc. below.

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):
No information is available on the amount of land irrigated by groundwater within a 3 mile radius. (Ref 5) Since however as shown below the population served by groundwater for drinking is well over 10,000, this information ~~[illegible]~~ ~~[illegible]~~ would not change this factor value.
KJY KJY

Total population served by ground water within a 3-mile radius:
11,683 residences served by Elkhart Water Works (Ref 21)
x 3.8 people per residence
44395.4 people in residences served by Elkhart Water.
Even if the ~20% of residences served by the South well field is subtracted a value of 35,516.32 people are still served by the threatened water sources. (Ref 21). Since this number is well over the 10,000 needed for a [illegible] score, a house count of private wells

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated COBALT WAS FOUND IN DOWNGRADIENT GROUND WATER SAMPLES. SEE GROUND WATER ROUTE WASTE CHARACTERISTICS. REF #1
Barium, Arsenic & Cadmium also found downgradient w/ Matrix score of 18 KF

Compound with highest score:

	TOXICITY	PERSISTANCE	MATRIX	VAL
COBALT	1 (REF 12, P. 509)	3 REF 2 (47FR 31229)		12
Barium	3 (Ref 12, P398)	3 "		18
Arsenic	3 (Ref 12, p388)	3 "		18
RAM Cadmium	3 (ref 12, p456)	3 "		18

Hazardous Waste Quantity KF

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):
UNKNOWN. ASSUME 1 REF # 2 (47FR 31236) AND REF 15 P3.

Basis of estimating and/or computing waste quantity:
SEE GROUND WATER HAZARDOUS WASTE QUANTITY SECTION

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance: Please see page 7A of this documentation package

Measuring from the center of the site to the ditch at the northwest corner of the site, through the adjacent wetland to Manning Ditch (which drains the wetland) then measuring Manning Ditch south into Osborne creek which empties into St. Joseph River is a total of ~ 2.60 miles. (Ref 6) The use of the St. Joseph River is recreation (Ref 10, 14, 23)

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Page 7A

Distance to Nearest Surface Water

Specific records of exact locations of buried waste on the Himco Site are not available. As waste was brought in, the marshy land was filled in; then covered. At the center of the site the elevation is built up 15 ft and along the perimeter it is 5 ft higher than the original ground level. (Ref 3 p 5) This would indicate that waste may have been deposited all over the total 40 acres. Many areas of stressed vegetation exist on site (Ref 9 p2., Ref 8 p18-21 Leachate accumulations (Calcium sulfate) were observed scattered throughout the site. (Ref 9p2 Calcium sulfate was also observed ontop of the site at the north end (Ref 9p2). Methane & sulfate odors were also observed thoughout the site. (Ref 9 p2) All these observations support that waste has been buried in several locations all over the site. Since exact waste pockets cannot be identified, distance to surface water will be measured from the center of the site rather than the site perimeter.

Measuring from the center of the site to the ditch at the northwest corner, thru the wetland into Manning ditch south to Osborne Creek to where it empties into the St. Joseph River is 6.875 (6 7/8) inches. This equals 13750 ft or 2.60 miles (Ref 6)

The distance to Osborne Creek where it is not intermittent is 2 7/16 inches. This equals 4876 ft or .92 miles (Ref 6)

Is there tidal influence? NO. REF 6

Distance to a Sensitive Environment

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

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:
A marshy area is located to the immediate northwest of the site. It is approximately 1000ft from the site and roughly square in shape with ~1500ft sides $(1500ft)^2 = 2250000 ft^2 \div 43560 ft^2/acre = 51.65$ acres. Ref 6.
Surface runoff can reach this wetland (even though Ref 6 shows the site and the wetland at the same elevation) since the landfill its was built up ~15ft higher than the original level of the wetland. Ref 3 page 5.

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:
UNKNOWN, BUT THE INDIANA BAT MAY BE PRESENT IN THE GENERAL AREA. REF 11.

Population Served by Surface Water

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

NONE. ALL RESIDENTS IN 3 MILE DOWNSTREAM AREA ARE ON GROUND WATER. REF 4

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2/4/86

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

NONE REF 14

Total population served: 0. NO SURFACE WATER INTAKES EXIST WITHIN 3 MILES DOWNSTREAM OF SITE. REF 6 AND REF 4.

Name/description of nearest of above water bodies: N/A

Distance to above-cited intakes, measured in stream miles. N/A

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AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected: NONE

Date and location of detection of contaminants N/A

Methods used to detect the contaminants: N/A

Rationale for attributing the contaminants to the site: N/A

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2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound: N/A

Most incompatible pair of compounds: N/A

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1 CONTAINMENT

Hazardous substances present: A CERTIFIED DOCUMENT FROM THE STATE OR LOCAL FIRE MARSHAL STATING THAT A SIGNIFICANT FIRE HAZARD OR EXPLOSION THREAT EXISTS AT THIS SITE DOES NOT EXIST. DOCUMENTATION IN THE E&E HRS FACTOR DOES NOT INDICATE THAT SUCH HAZARDS ARE LIKELY TO EXIST AT THIS SITE.

Type of containment, if applicable: N/A

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2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements: N/A

Ignitability

Compound used: N/A

Reactivity

Most reactive compound: N/A

Incompatibility

Most incompatible pair of compounds: N/A

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DIRECT CONTACT

No Direct Contact Threat indicated.

KJY

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

* * *

3 CONTAINMENT

Type of containment, if applicable:

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Compound with highest score:

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HRS DOCUMENTATION LOG SHEET

SITE NAME HIMCO DUMP
CITY ELKHART STATE IN
IDENTIFICATION NUMBER IND980500292

REFERENCE NUMBER	DESCRIPTION OF THE REFERENCE
1	LABRATORY ANNALYSIS OF SAMPLES TAKEN DURING SITE INSPECTION OF JULY 30, 1984. - ROCKY MOUNTAIN ANALYTICAL, JULY 30, 1984 (SAMPLE DATE) SEP 27, 1984 (REPORT DATE) LAB NUMBERS: UPGRADIENT — SAMPLE # ME 3201 CASE # 3104, QC # 5471 DOWNGRADIENT ME 3202 CASE # 3104 QC # 5471
2	FEDERAL REGISTER, JULY 16, 1982.
3	HYDROLOGIC AND CHEMICAL EVALUATION OF THE GROUND WATER RESOURCES OF NORTHWEST ELKHART COUNTY INDIANA, IMBRIGIOTTA AND MARTIN, OCTOBER 1981, U.S. GEOLOGICAL SURVEY, PAGES 1, 5, 14, 15, 20, 21, 25, 27, 29, 30 AND 88, 99-136.
4	TELEPHONE CONVERSATION, GLENN CERUS AND MR. BOB LONG, ELKHART WATER WORKS, 6-26-85 1050, 219-264-4208
5	TELEPHONE CONVERSATION GLENN CERUS AND MR. MAX MICHAEL, ELKHART COUNTY HEALTH DEP'T. 4-24-85, 0840, 219-523-2200
6	OSCEOLA IN QUADRANGLE, 1969, SERIES 7.5 MIN SCALE 1:24000 NO PHOTO REVISION DATE AND ELKHART IN QUADRANGLE 1961 SERIES 7.5 MIN SCALE 1:24000 NO PHOTO REVISION DATE

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HRS DOCUMENTATION LOG SHEET

SITE NAME HIMCO DUMP
CITY ELKHART STATE IN
IDENTIFICATION NUMBER IND 980500292

REFERENCE NUMBER	DESCRIPTION OF THE REFERENCE
7	WATER WELL INSPECTION OF THE HAROLD GOSS RESIDENCE ELKHART HEALTH DEPT. 5/30/73 PLUS SKETCH OF DOWNGRADIENT (SOUTH) AREA
8	SITE INSPECTION, 7/30/84, FRAN ALLANS, ECOLOGY & ENVIRONMENT INC. 2/19/85
9	SITE INSPECTION INTERVIEW NOTES OF 7/30/84 OF MR. HIMES BY MS FRAN ALLANS OF ECOLOGY & ENVIRONMENT INC AT 1430.
10	THE INDIANA WATER RESOURCE—AVAILABILITY USES AND NEEDS; GOVERNOR'S WATER RESOURCE STUDY COMMISSION, STATE OF INDIANA; COPYRIGHT 1980; PAGE 174
11	TELEPHONE CONVERSATION; GLENN CEKUS AND MR. DON STEFFEK, U.S. FISH AND WILDLIFE SERVICE 5/23/85; 1500; 812-334-4265
12	DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, 5TH EDITION, N. IRVING SAX
13	MEMO TO GLENN CEKUS FROM FRAN ALLANS, TEAM LEADER; ECOLOGY & ENVIRONMENT INC. 5/24/85 HIMCO SITE ACCESS.
14	TELEPHONE CONVERSATION, GLENN CEKUS AND MR TOM WILSON ELKHART COUNTY HEALTH DEPT.; 6-20-85; 1001; 219-523-2200

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2/4/86

HRS DOCUMENTATION LOG SHEET

SITE NAME HIMCO DUMP
CITY ELKHART STATE IN
IDENTIFICATION NUMBER IND 980500292

REFERENCE NUMBER	DESCRIPTION OF THE REFERENCE
15	EPA MEMORANDUM - SUPPLEMENTAL INSTRUCTIONS FOR THE HAZARD RANKING SYSTEM. FROM STEVE CALDWELL, DISCOVERY AND INVESTIGATIONS BRANCH, JULY 27, 1982
16	TELEPHONE CONVERSATION, KATHY GETTY AND MR. MAX MICHAEL, ELKHART COUNTY HEALTH DEPARTMENT 6-25-85, 1015, 219-264-4208
17	LETTER FROM MR. W.T. PAYNTER, M.D. STATE HEALTH COMMISSIONER TO THE HON. O.R. BOWEN, GOVERNOR STATE OF INDIANA, DATED APRIL 5, 1977
18	TELEPHONE CONVERSATION, FRAN ALLANS AND MR. MIKE TERLEP, ELKHART WATER WORKS 7-16-84 1000 AM. 219-295-2400
19	Memo to File from Kathleen J. Getty, Ecology & Environment dated 11/12/85. Subject: Himco Dump concerning inorganic analyses methods. (1p)
20	Telephone conversation Log: Kathleen J Getty and Bob Long, Elkhart Water Works, 11/13/85 8:10am 219-264-4208. To discuss distribution system (1p)
21.	Telephone Conversation Log: Kathleen J. Getty and Mr. Mike Terlep, Elkhart Water Office, 11/13/85, 9:30am 219-295-2400. To discuss distribution system. (2p)

S Russell
2/4/86

DOCUMENTATION LOG SHEET

SITE NAME HIMCO DUMP
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REFERENCE NUMBER	DESCRIPTION OF THE REFERENCE
22	Aerial Photograph of Himco Dump showing distance to nearest well (Goss Residence & Monitoring Well sample #ME3205). Also attached explanation of calculation of scale and distances. (2 pages)
23	Telephone Conversation Log: Kathleen J. Getty and Max Michael Elkhart Health Dept. 219 523-2200 11/14/85 9:15 To discuss recreation in the St. Joesph River. 1 page

S Russell
2/4/86