Donohue
ENGINEERS
ARCHITECTS
SCIENTISTS

EPA Region 5 Records Ctr.
200018

March 27, 1992

Mr. Robert Lance (5HSRL-6J)
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604

Re: EPA Region V ARCS Contract No. 68-W8-0093
Work Assignment No. 17-5L4J
SEC Donohue Project No. 20026.030

Himco RI Test Pit TL5 Leachate Report

Dear Mr. Lance:

Enclosed is the report on leachate from test pit TL5 as requested by you on March 26, 1992.

If you have any questions, please call me.

Very truly yours,

SEC DONOHUE INC.

M. Geraminegad

Mehdi Geraminegad, P.E.
Site Manager

MG:llw

Enc: At Noted

A/O/L/HF6

111 North Canal Street, Suite 305, Chicago, Illinois 60606 ■ 312.902.7100 ■ Fax 312.902.7099

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TABLE 1

SUMMARY OF DETECTED VOCS
TL5 LEACHATE
HIMCO SITE
1992

Chemical	Red Phase Concentration (mg/kg)	Yellow Phase Concentration (mg/kg)
Methylene Chloride	ND	260(BJ)
Acetone	ND	300(BJ)
2-Butanone	ND	4100(BJ)
4-Methyl-2-pentanone	17000(J)	410(J)
2-Hexanone	29000(J)	570(J)
Toluene	480000(J)	850(BJ)
Ethyl Benzene	6400(J)	ND
Xylenes(Total)	44000(J)	77(J)

Qualifiers

ND - Below detection limit
B - Analyte found in associated blank as well as in the sample
J - Indicates an estimated value

A/R/HIMCO/AO1

TABLE 2

SUMMARY OF DETECTED BNA
TL5 LEACHATE
HIMCO SITE
1992

Chemical	Red Phase Concentration (mg/kg)	Yellow Phase Concentration (mg/kg)
Phenol	560 (ug/L)	ND
Benzyl alcohol	ND	11(J)
Benzoic acid	ND	9
Naphthalene	45(J)	ND
bis(2-Ethylhexyl)phthalate	180(J)	ND

Qualifiers

ND - Below detection limit
J - Indicates an estimated value

A/R/HIMCO/AO1

TABLE 3

SUMMARY OF DETECTED INORGANIC ANALYTES
TL5 LEACHATE
HIMCO SITE
1992

Analyte	Concentration (MG/L)
Aluminum	356
Antimony	ND
Arsenic	ND
Barium	4.7(B)
Beryllium	1.5(BNJ)
Cadmium	ND
Calcium	552
Chromium	10(BNJ)
Cobalt	ND
Copper	3(BJ)
Iron	254
Lead	ND
Magnesium	108(J)
Manganese	ND
Mercury	ND
Nickel	ND
Potassium	ND
Selenium	ND
Silver	ND
Sodium	ND
Thallium	ND
Vanadium	ND
Zinc	18.4
Cyanide	48.4

Qualifiers

ND - Below detection limit
B - Analyte found in associated blank as well as in the sample
J - Indicates an estimated value
N - Spike sample not within control limits. The value is usable.

TABLE 4

SUMMARY OF WATER QUALITY PARAMETERS
TL5 LEACHATE
HIMCO SITE
1992

Chemical Name	Concentration (MG/L)
Alkalinity	1152(J)
Bromide	ND
COD	29800(J)
Chloride	46.2(J)
Nitrogen, Ammonia (NH3)	181(J)
Sulfate, SO4	2610
TDS	ND
TKN	24.4(J)
Total Phosphorus	ND
TSS	360(J)

Qualifiers

ND - Below detection limit
B - Analyte found in associated blank as well as in the sample
J - Indicates an estimated value

A/R/HIMCO/AO1

ATTACHMENT 2

TL5 FIELD TRENCH LOG

TRENCH LOG FORM

Donohue

CLIENT: U.S. EPA
PROJECT: Himco Dump
PROJECT NO.: 20026.023
DATE: 09-13-91
GRID COORD.: START - N____ E____ N____ E____
END - N____ E____ N____ E____
CONTROL MONUMENT GRID COORD.: N____ E____ N____ E____
ELEVATION, TOP OF TRENCH:

SHEET 1 OF 1
EXCAVATOR: Mathes
LOG BY: K. Elias
TRENCH NO.: TL-5
TRENCH LENGTH: 15 FT TO 12 FT deep
TRENCH WIDTH: 7'

STRATA CHANGE OF WATER LEVEL	DEPTH	TRENCH LENGTH (FT) 1 2 3 4 5 6 7 8 9 0	DRUM QUANTITY	REMARK NO.
		brown silty topsoil, roots, gravel tree	WA	
	1			
		rubbel bent drum empty	30ppm	
	2	wood sheetings, plastic debris	=AVG	
		DRUM		
	3	black, black material, asphalt mixture w/ sand base layer	max=	
		stay like	100ppm	
	4	water seeping in slowly at one spot smashed		
		DRUM		
	5	sandy - brown & black		
	6	leachate filling in - red/brown thick		
	8	water/leachate sand - tan		
	10			
	12	GRAY TAN SD		
	25			

REMARKS: Leachate collected in level B. Thick red brown (product) leachate, oil sheen, shina.

ATTACHMENT 3

ANALYTICAL DATA

Preliminary Report
HIMCO
Volatile Compound - Leachate Well

Field Sample Number	EPA Sample Number	Sample Date	Chemical Name	Sample Concent.	Units	Qual.	Depth to top of Sample	Depth to bottom of Sample
HD-TL01-01	EJM92	13-SEP-91	Vinyl Chloride	47.	UG/L	J		
HD-TL02-01	EJM91	13-SEP-91	Vinyl Chloride	16.	UG/L			
HD-TL02-01	EJM91	13-SEP-91	Chloroethane	3.	UG/L	J		
HD-TL01-01	EJM92	13-SEP-91	Methylene Chloride	550.	UG/L			
HD-TL05-01	EJM95-12	13-SEP-91	Methylene Chloride	260	MG/KG ?	BJ		
HD-TL02-01	EJM91	13-SEP-91	Methylene Chloride	18.	UG/L			
HD-TL01-01	EJM92	13-SEP-91	Acetone	1300.	UG/L			
HD-TL05-01	EJM95-12	13-SEP-91	Acetone	300	MG/KG ?	BJ		
HD-TL02-01	EJM91	13-SEP-91	Acetone	85.	UG/L			
HD-TL01-01	EJM92	13-SEP-91	Carbon Disulfide	130.	UG/L			
HD-TL02-01	EJM91	13-SEP-91	Carbon Disulfide	4.	UG/L	J		
HD-TL01-01	EJM92	13-SEP-91	1,1-Dichloroethane	220.	UG/L			
HD-TL02-01	EJM91	13-SEP-91	1,1-Dichloroethane	64.	UG/L			
HD-FDTL04-01	EJM87	12-SEP-91	1,1-Dichloroethane	5.	UG/L	J		
HD-TL04-01	EJM86	12-SEP-91	1,1-Dichloroethane	5.	UG/L	J		
HD-TL01-01	EJM92	13-SEP-91	1,2-Dichloroethene(total)	410.	UG/L			
HD-TL02-01	EJM91	13-SEP-91	1,2-Dichloroethene(total)	66.	UG/L			
HD-TL01-01	EJM92	13-SEP-91	Chloroform	76.	UG/L	J		
HD-TL05-01	EJM95-12	13-SEP-91	2-Butanone	4100	MG/KG ?	BJ		
HD-TL01-01	EJM92	13-SEP-91	2-Butanone	420.	UG/L			
HD-TL02-01	EJM91	13-SEP-91	2-Butanone	13.	UG/L			
HD-TL01-01	EJM92	13-SEP-91	1,1,1-Trichloroethane	520.	UG/L			
HD-TL04-01	EJM86	12-SEP-91	1,1,1-Trichloroethane	10.	UG/L			
HD-TL01-01	EJM92	13-SEP-91	Trichloroethene	550.	UG/L	J		
HD-TL04-01	EJM86	12-SEP-91	Trichloroethene	180.	UG/L			
HD-TL02-01	EJM91	13-SEP-91	Trichloroethene	11.	UG/L			
HD-FDTL04-01	EJM87	12-SEP-91	Trichloroethene	3.	UG/L	J		
HD-TL01-01	EJM92	13-SEP-91	Benzene	97.	UG/L	J		
HD-TL02-01	EJM91	13-SEP-91	Benzene	32.	UG/L	J		
HD-TL05-01	EJM95-11	13-SEP-91	4-Methyl-2-pentanone	17000	MG/KG ?	J		
HD-TL05-01	EJM95-12	13-SEP-91	4-Methyl-2-pentanone	410	MG/KG ?	J		

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Preliminary Report
HIMCO
Volatile Compound - Leachate Well

Field Sample Number	EPA Sample Number	Sample Date	Chemical Name	Sample Concent.	Units	Qual.	Depth to top of Sample	Depth to bottom of Sample
HD-TL01-01	EJM92	13-SEP-91	4-Methyl-2-pentanone	110.	UG/L			
HD-TL02-01	EJM91	13-SEP-91	4-Methyl-2-pentanone	9.	UG/L	J		
HD-TL05-01	EJM95-11	13-SEP-91	2-Hexanone	29000	MG/KG	J		
HD-TL05-01	EJM95-12	13-SEP-91	2-Hexanone	570	MG/KG	J		
HD-TL01-01	EJM92	13-SEP-91	Tetrachloroethene	48.	UG/L	J		
HD-TL05-01	EJM95-11	13-SEP-91	Toluene	480000	MG/KG	J		
HD-TL01-01	EJM92	13-SEP-91	Toluene	1100.	UG/L			
HD-TL05-01	EJM95-12	13-SEP-91	Toluene	850	MG/KG	BJ		
HD-TL02-01	EJM91	13-SEP-91	Toluene	63.	UG/L			
HD-TL05-01	EJM95-11	13-SEP-91	Ethyl Benzene	6400	MG/KG	J		
HD-TL01-01	EJM92	13-SEP-91	Ethyl Benzene	640.	UG/L			
HD-TL02-01	EJM91	13-SEP-91	Ethyl Benzene	150.	UG/L			
HD-TL02-01	EJM91	13-SEP-91	Styrene	3.	UG/L	J		
HD-TL05-01	EJM95-11	13-SEP-91	Xylenes (Total)	44000	MG/KG	J		
HD-TL02-01	EJM91	13-SEP-91	Xylenes (Total)	330.	UG/L			
HD-TL01-01	EJM92	13-SEP-91	Xylenes (Total)	200.	UG/L			
HD-TL05-01	EJM95-12	13-SEP-91	Xylenes (Total)	77	MG/KG	J		

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Preliminary Report
HIMCO
Semi-Volatile Compound - Leachate Well

Field Sample Number	EPA Sample Number	Sample Date	Chemical Name	Sample Concent.	Units	Qual.	Depth to top of Sample	Depth to bottom of Sample
HD-TL01-01	6705E-04	13-SEP-91	Phenol	6600	ug/L			
HD-TL01-01	EJM92	13-SEP-91	Phenol	5300.	UG/L	J		
HD-TL05-01	6705E-06	13-SEP-91	Phenol	560	ug/L			
HD-TL02-01	6705E-03	13-SEP-91	Phenol	270	ug/L			
HD-TL02-01	EJM91	13-SEP-91	Phenol	67.	UG/L	J		
HD-FDTL04-01	6705E-02	12-SEP-91	Phenol	7.2	ug/L			
HD-TL04-01	6705E-01	12-SEP-91	Phenol	6.4	ug/L			
HD-TL05-01	EJM95-12	13-SEP-91	Benzyl alcohol	11	MG/KG	J		
HD-TL01-01	EJM92	13-SEP-91	2-Methylphenol	440.	UG/L	J		
HD-TL02-01	EJM91	13-SEP-91	2-Methylphenol	10.	UG/L	J		
HD-TL01-01	EJM92	13-SEP-91	4-Methylphenol	4200.	UG/L	J		
HD-TL02-01	EJM91	13-SEP-91	4-Methylphenol	140.	UG/L	J		
HD-TL01-01	EJM92	13-SEP-91	2,4-Dimethylphenol	84.	UG/L	J		
HD-TL02-01	EJM91	13-SEP-91	2,4-Dimethylphenol	10.	UG/L	J		
HD-TL05-01	EJM95-12	13-SEP-91	Benzoic acid	9	MG/KG	J		
HD-TL05-01	EJM95-11	13-SEP-91	Naphthalene	45	MG/KG ppm	J		
HD-TL04-01	EJM86	12-SEP-91	Naphthalene	4.	UG/L	J		
HD-FDTL04-01	EJM87	12-SEP-91	Naphthalene	2.	UG/L	J		
HD-FDTL04-01	EJM87	12-SEP-91	Acenaphthylene	1.	UG/L	J		
HD-TL04-01	EJM86	12-SEP-91	Acenaphthylene	1.	UG/L	J		
HD-TL02-01	EJM91	13-SEP-91	Diethylphthalate	49.	UG/L	J		
HD-TL04-01	EJM86	12-SEP-91	Phenanthrene	2.	UG/L	J		
HD-TL04-01	EJM86	12-SEP-91	Fluoranthene	7.	UG/L	J		
HD-FDTL04-01	EJM87	12-SEP-91	Fluoranthene	5.	UG/L	J		
HD-TL04-01	EJM86	12-SEP-91	Pyrene	8.	UG/L	J		
HD-FDTL04-01	EJM87	12-SEP-91	Pyrene	4.	UG/L	J		
HD-TL04-01	EJM86	12-SEP-91	Chrysene	5.	UG/L	J		
HD-FDTL04-01	EJM87	12-SEP-91	Chrysene	3.	UG/L	J		
HD-TL05-01	EJM95-11	13-SEP-91	bis(2-Ethylhexyl)phthalate	180	MG/KG	J		
HD-TL02-01	EJM91	13-SEP-91	bis(2-Ethylhexyl)phthalate	22.	UG/L	J		
HD-FDTL04-01	EJM87	12-SEP-91	Benzo(b)fluoranthene	6.	UG/L	J		

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Preliminary Report
HIMCO
Semi-Volatile Compound - Leachate Well

Field Sample Number	EPA Sample Number	Sample Date	Chemical Name	Sample Concent.	Units	Qual.	Depth to top of Sample	Depth to bottom of Sample
HD-TL04-01	EJM86	12-SEP-91	Benzo(b)fluoranthene	6.	UG/L	J		
HD-TL04-01	EJM86	12-SEP-91	Benzo(k)fluoranthene	3.	UG/L	J		
HD-FDTL04-01	EJM87	12-SEP-91	Benzo(k)fluoranthene	1.	UG/L	J		
HD-TL04-01	EJM86	12-SEP-91	Benzo(a)pyrene	5.	UG/L	J		
HD-FDTL04-01	EJM87	12-SEP-91	Benzo(a)pyrene	3.	UG/L	J		
HD-FDTL04-01	EJM87	12-SEP-91	Indeno(1,2,3-cd)pyrene	2.	UG/L	J		
HD-TL04-01	EJM86	12-SEP-91	Indeno(1,2,3-cd)pyrene	2.	UG/L	J		
HD-FDTL04-01	EJM87	12-SEP-91	Benzo(g,h,i)perylene	2.	UG/L	J		
HD-TL04-01	EJM86	12-SEP-91	Benzo(g,h,i)perylene	2.	UG/L	J		

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Preliminary Report
HIMCO
Metal - Leachate Well

Field Sample Number	EPA Sample Number	Sample Date	Chemical Name	Sample Concent.	Units	Qual.	Depth to top of Sample	Depth to bottom of Sample
HD-FDTL04-01	MEHD87	12-SEP-91	Aluminum	8470	UG/L	J		
HD-TL04-01	MEHD86	12-SEP-91	Aluminum	6830	UG/L	J		
HD-TL05-01	MEHD95	13-SEP-91	Aluminum	356	MG/L			
HD-TL02-01	MEHD91	13-SEP-91	Aluminum	301	MG/L			
HD-TL01-01	MEHD92	13-SEP-91	Aluminum	78.1	MG/L	B		
HD-TL04-01	MEHD86	12-SEP-91	Antimony	72.6	UG/L	J		
HD-FDTL04-01	MEHD87	12-SEP-91	Antimony	63.7	UG/L	J		
HD-TL02-01	MEHD91	13-SEP-91	Antimony	10.5	MG/L	BNJ		
HD-TL04-01	MEHD86	12-SEP-91	Arsenic	19.0	UG/L			
HD-FDTL04-01	MEHD87	12-SEP-91	Arsenic	14.0	UG/L			
HD-FDTL04-01	MEHD87	12-SEP-91	Barium	530	UG/L			
HD-TL04-01	MEHD86	12-SEP-91	Barium	443	UG/L			
HD-TL05-01	MEHD95	13-SEP-91	Barium	4.7	MG/L	B		
HD-TL02-01	MEHD91	13-SEP-91	Barium	3.7	MG/L	B		
HD-TL01-01	MEHD92	13-SEP-91	Barium	2.1	MG/L	B		
HD-TL02-01	MEHD91	13-SEP-91	Beryllium	5.7	MG/L	NJ*		
HD-TL01-01	MEHD92	13-SEP-91	Beryllium	1.6	MG/L	BNJ*		
HD-TL05-01	MEHD95	13-SEP-91	Beryllium	1.5	MG/L	BNJ*		
HD-TL04-01	MEHD86	12-SEP-91	Cadmium	4.4	UG/L	B		
HD-FDTL04-01	MEHD87	12-SEP-91	Cadmium	3.1	UG/L	B		
HD-TL01-01	MEHD92	13-SEP-91	Cadmium	2.5	MG/L	B		
HD-TL04-01	MEHD86	12-SEP-91	Calcium	288000	UG/L			
HD-FDTL04-01	MEHD87	12-SEP-91	Calcium	274000	UG/L			
HD-TL02-01	MEHD91	13-SEP-91	Calcium	2140	MG/L			
HD-TL01-01	MEHD92	13-SEP-91	Calcium	1660	MG/L			
HD-TL05-01	MEHD95	13-SEP-91	Calcium	552	MG/L			
HD-FDTL04-01	MEHD87	12-SEP-91	Chromium	32.9	UG/L			
HD-TL04-01	MEHD86	12-SEP-91	Chromium	30.5	UG/L			
HD-TL05-01	MEHD95	13-SEP-91	Chromium	10.0	MG/L	BNJ		
HD-TL01-01	MEHD92	13-SEP-91	Chromium	4.5	MG/L	BNJ		
HD-TL02-01	MEHD91	13-SEP-91	Chromium	4.5	MG/L	BNJ		

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Preliminary Report
HIMCO
Metal - Leachate Well

Field Sample Number	EPA Sample Number	Sample Date	Chemical Name	Sample Concent.	Units	Qual.	Depth to top of Sample	Depth to bottom of Sample
HD-TL04-01	MEHD86	12-SEP-91	Cobalt	13.5	UG/L	B		
HD-FDTL04-01	MEHD87	12-SEP-91	Cobalt	11.9	UG/L	B		
HD-TL01-01	MEHD92	13-SEP-91	Cobalt	3.3	MG/L	BJ		
HD-TL04-01	MEHD86	12-SEP-91	Copper	626	UG/L	J		
HD-FDTL04-01	MEHD87	12-SEP-91	Copper	355	UG/L	J		
HD-TL01-01	MEHD92	13-SEP-91	Copper	11.7	MG/L	BJ		
HD-TL02-01	MEHD91	13-SEP-91	Copper	8.8	MG/L	BJ		
HD-TL05-01	MEHD95	13-SEP-91	Copper	3.0	MG/L	BJ		
HD-FDTL04-01	MEHD87	12-SEP-91	Iron	17500	UG/L			
HD-TL04-01	MEHD86	12-SEP-91	Iron	16000	UG/L			
HD-TL02-01	MEHD91	13-SEP-91	Iron	272	MG/L			
HD-TL05-01	MEHD95	13-SEP-91	Iron	254	MG/L			
HD-TL01-01	MEHD92	13-SEP-91	Iron	71.2	MG/L			
HD-FDTL04-01	MEHD87	12-SEP-91	Lead	505	UG/L	J		
HD-TL04-01	MEHD86	12-SEP-91	Lead	376	UG/L	J		
HD-TL02-01	MEHD91	13-SEP-91	Lead	28.3	MG/L	NJ*		
HD-TL04-01	MEHD86	12-SEP-91	Magnesium	60300	UG/L			
HD-FDTL04-01	MEHD87	12-SEP-91	Magnesium	58300	UG/L			
HD-TL02-01	MEHD91	13-SEP-91	Magnesium	205	MG/L	J*		
HD-TL05-01	MEHD95	13-SEP-91	Magnesium	108	MG/L	J*		
HD-TL01-01	MEHD92	13-SEP-91	Magnesium	89.4	MG/L	J*		
HD-TL04-01	MEHD86	12-SEP-91	Manganese	3150	UG/L			
HD-FDTL04-01	MEHD87	12-SEP-91	Manganese	2990	UG/L			
HD-TL02-01	MEHD91	13-SEP-91	Manganese	9.6	MG/L	B		
HD-TL04-01	MEHD86	12-SEP-91	Mercury	1.3	UG/L	J		
HD-FDTL04-01	MEHD87	12-SEP-91	Mercury	0.87	UG/L	J		
HD-TL01-01	MEHD92	13-SEP-91	Mercury	0.42	MG/L	NJ		
HD-TL02-01	MEHD91	13-SEP-91	Mercury	0.42	MG/L	NJ		
HD-TL04-01	MEHD86	12-SEP-91	Nickel	55.0	UG/L			
HD-FDTL04-01	MEHD87	12-SEP-91	Nickel	46.8	UG/L			
HD-TL04-01	MEHD86	12-SEP-91	Potassium	27200	UG/L			

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Preliminary Report
HIMCO
Metal - Leachate Well

Field Sample Number	EPA Sample Number	Sample Date	Chemical Name	Sample Concent.	Units	Qual.	Depth to top of Sample	Depth to bottom of Sample
HD-FDTL04-01	MEHD87	12-SEP-91	Potassium	26800	UG/L			
HD-TL04-01	MEHD86	12-SEP-91	Soduim	83400	UG/L			
HD-FDTL04-01	MEHD87	12-SEP-91	Soduim	81500	UG/L			
HD-TL02-01	MEHD91	13-SEP-91	Soduim	415	MG/L			
HD-TL04-01	MEHD86	12-SEP-91	Vanadium	32.1	UG/L	B		
HD-FDTL04-01	MEHD87	12-SEP-91	Vanadium	29.9	UG/L	B		
HD-TL02-01	MEHD91	13-SEP-91	Vanadium	4.5	MG/L	BNJ		
HD-TL01-01	MEHD92	13-SEP-91	Vanadium	3.0	MG/L	BNJ		
HD-TL04-01	MEHD86	12-SEP-91	Zinc	713	UG/L	J		
HD-FDTL04-01	MEHD87	12-SEP-91	Zinc	440	UG/L	J		
HD-TL02-01	MEHD91	13-SEP-91	Zinc	18.4	MG/L			
HD-TL05-01	MEHD95	13-SEP-91	Zinc	10.7	MG/L	B		
HD-TL01-01	MEHD92	13-SEP-91	Zinc	6.7	MG/L	B		
HD-FDTL04-01	MEHD87	12-SEP-91	Cyanide	108	UG/L			
HD-TL04-01	MEHD86	12-SEP-91	Cyanide	88.5	UG/L			
HD-TL05-01	MEHD95	13-SEP-91	Cyanide	48.4	MG/L			

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Preliminary Report
HIMCO
Pesticide/PCB - Leachate Well

Field Sample Number	EPA Sample Number	Sample Date	Chemical Name	Sample Concent.	Units	Qual.	Depth to top of Sample	Depth to bottom of Sample
HD-TL01-01	EJM92DL	13-SEP-91	alpha-BHC	0.017	UG/L	DJ		
HD-TL01-01	EJM92DL	13-SEP-91	beta-BHC	0.097	UG/L	DJP		
HD-TL02-01	EJM91DL	13-SEP-91	beta-BHC	0.068	UG/L	DJP		
HD-TL01-01	EJM92DL	13-SEP-91	Heptachlor	0.12	UG/L	DJP		
HD-TL02-01	EJM91DL	13-SEP-91	Heptachlor	0.023	UG/L	DJP		
HD-TL01-01	EJM92DL	13-SEP-91	Aldrin	0.13	UG/L	DJP		
HD-TL02-01	EJM91DL	13-SEP-91	Aldrin	0.12	UG/L	DJP		
HD-TL02-01	EJM91DL	13-SEP-91	Dieldrin	0.073	UG/L	DJP		
HD-TL01-01	EJM92DL	13-SEP-91	Endosulfan II	0.17	UG/L	DJ		
HD-TL02-01	EJM91DL	13-SEP-91	Endosulfan II	0.048	UG/L	DJP		
HD-TL01-01	EJM92DL	13-SEP-91	4,4-DDT	0.29	UG/L	DJP		
HD-TL01-01	EJM92DL	13-SEP-91	alpha-Chlordane	0.22	UG/L	DJP		
HD-TL01-01	EJM92DL	13-SEP-91	gamma-Chlordane	0.029	UG/L	DJP		
HD-TL02-01	EJM91DL	13-SEP-91	gamma-Chlordane	0.028	UG/L	DJP		

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Preliminary Report
HIMCO
Water Quality - Leachate Well

Field Sample Number	EPA Sample Number	Sample Date	Chemical Name	Sample Concent.	Units	Qual.	Depth to top of Sample	Depth to bottom of Sample
HD-TL02-01	6688E-11	12-SEP-91	Alkalinity	1800	mg/L	J		
HD-TL01-01	6688E-16	13-SEP-91	Alkalinity	1420	mg/L	J		
HD-TL05-01	6688E-26	13-SEP-91	Alkalinity	1152	mg/L	J		
HD-FDTL04-01	6688E-06	12-SEP-91	Alkalinity	824	mg/L	J		
HD-TL04-01	6688E-01	12-SEP-91	Alkalinity	816	mg/L	J		
HD-TL02-01	6688E-34	13-SEP-91	Bromide, Dissolved	3.3	mg/L			
HD-FDTL04-01	6688E-22	12-SEP-91	Bromide, Dissolved	1.6	mg/L			
HD-TL04-01	6688E-10	12-SEP-91	Bromide, Dissolved	1.6	mg/L			
HD-TL01-01	6688E-46	13-SEP-91	Bromide, Dissolved	0.48	mg/L			
HD-TL05-01	6688E-26	13-SEP-91	COD	29800	mg/L	J		
HD-TL01-01	6688E-16	13-SEP-91	COD	640	mg/L	J		
HD-TL02-01	6688E-11	12-SEP-91	COD	256	mg/L	J		
HD-TL04-01	6688E-01	12-SEP-91	COD	80.0	mg/L	J		
HD-FDTL04-01	6688E-06	12-SEP-91	COD	48.0	mg/L	J		
HD-TL01-01	6688E-16	13-SEP-91	Chloride, Cl	70.4	mg/L	J		
HD-TL02-01	6688E-11	12-SEP-91	Chloride, Cl	59.4	mg/L	J		
HD-TL05-01	6688E-26	13-SEP-91	Chloride, Cl	46.2	mg/L	J		
HD-FDTL04-01	6688E-06	12-SEP-91	Chloride, Cl	17.6	mg/L	J		
HD-TL04-01	6688E-01	12-SEP-91	Chloride, Cl	17.6	mg/L	J		
HD-TL05-01	6688E-26	13-SEP-91	Nitrogen, Ammonia (NH3)	181	mg/L	J		
HD-TL02-01	6688E-11	12-SEP-91	Nitrogen, Ammonia (NH3)	80.9	mg/L	J		
HD-TL01-01	6688E-16	13-SEP-91	Nitrogen, Ammonia (NH3)	31.5	mg/L	J		
HD-FDTL04-01	6688E-06	12-SEP-91	Nitrogen, Ammonia (NH3)	16.6	mg/L	J		
HD-TL04-01	6688E-01	12-SEP-91	Nitrogen, Ammonia (NH3)	15.2	mg/L	J		
HD-TL05-01	6688E-26	13-SEP-91	Sulfate, SO4	2610	mg/L	J		
HD-TL02-01	6688E-11	12-SEP-91	Sulfate, SO4	1905	mg/L	J		
HD-TL01-01	6688E-16	13-SEP-91	Sulfate, SO4	1515	mg/L	J		
HD-FDTL04-01	6688E-06	12-SEP-91	Sulfate, SO4	630	mg/L	J		
HD-TL04-01	6688E-01	12-SEP-91	Sulfate, SO4	489	mg/L	J		
HD-TL01-01	6688E-16	13-SEP-91	TDS (Total Dissolved Solids)	4330	mg/L	J		
HD-TL02-01	6688E-11	12-SEP-91	TDS (Total Dissolved Solids)	4230	mg/L	J		

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Preliminary Report
HOMCO
Water Quality - Leachate Well

Field Sample Number	EPA Sample Number	Sample Date	Chemical Name	Sample Concent.	Units	Qual.	Depth to top of Sample	Depth to bottom of Sample
HD-FDTL04-01	6688E-06	12-SEP-91	TDS (Total Dissolved Solids)	1550	mg/L	J		
HD-TL04-01	6688E-01	12-SEP-91	TDS (Total Dissolved Solids)	1470	mg/L	J		
HD-TL01-01	6688E-16	13-SEP-91	TKN (Total Kjeldahl Nitrogen)	34.2	mg/L	J		
HD-TL05-01	6688E-26	13-SEP-91	TKN (Total Kjeldahl Nitrogen)	24.4	mg/L	J		
HD-TL04-01	6688E-01	12-SEP-91	TKN (Total Kjeldahl Nitrogen)	17.5	mg/L	J		
HD-FDTL04-01	6688E-06	12-SEP-91	TKN (Total Kjeldahl Nitrogen)	15.8	mg/L	J		
HD-TL02-01	6688E-11	12-SEP-91	TKN (Total Kjeldahl Nitrogen)	6.08	mg/L	J		
HD-TL02-01	6688E-11	12-SEP-91	TP (Total Phosphorus)	9.25	mg/L	J		
HD-TL01-01	6688E-16	13-SEP-91	TP (Total Phosphorus)	8.86	mg/L	J		
HD-TL02-01	6688E-11	12-SEP-91	TSS (Total Suspended Solids)	3340	mg/L	J		
HD-TL04-01	6688E-01	12-SEP-91	TSS (Total Suspended Solids)	514	mg/L	J		
HD-TL01-01	6688E-16	13-SEP-91	TSS (Total Suspended Solids)	450	mg/L	J		
HD-TL05-01	6688E-26	13-SEP-91	TSS (Total Suspended Solids)	360	mg/L	J		
HD-FDTL04-01	6688E-06	12-SEP-91	TSS (Total Suspended Solids)	246	mg/L	J		

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The Himco Dump site is a closed landfill located at County Road 10 and the Nappanee Street extension in the Town of Elkhart, Elkhart County, Indiana. The site covers approximately 50 acres that was in operation between 1960 and 1976. Prior to development of the landfill, the area was marsh and grassland. There was no liner, leachate, or gas recovery system constructed for the landfill. Approximately two-thirds of the waste present in the dump was calcium sulfate. Other wastes accepted at the landfill included demolition/construction debris, industrial and hospital wastes, and, to a minor degree, household refuse.

In 1974, nearby residents of the Himco Dump complained to the Indiana State Board of Health (ISBH) about color, taste, and odor problems in their shallow wells. The State sampled these wells and analyzed for the following parameters: COD, chloride, dissolved solids, metals, and sulfates. Analysis of these wells showed high levels of manganese and iron. Himco was advised by ISBH to replace six shallow wells for residences immediately south of the landfill on County Road 10. The old wells were finished at depths of approximately 22 feet; the new wells were finished at depths ranging from 152 to 172 feet below ground surface.

In 1975, Mr. Himes signed a consent agreement with the ISBH Stream Pollution Control Board to close the dump by September of 1976. The final cover consisted of calcium sulfate overlain by sand.

In 1980, the United States Geological Survey (USGS) conducted a hydrogeological study of northwestern Elkhart County, Indiana. As part of the report, the USGS determined the horizontal and vertical extent of the leachate plume from the Himco Dump using concentrations of bromide in the groundwater. The bromide concentrations in groundwater have been monitored from 1979 to the present.

In 1984, a field investigation team (FIT), under the auspicies of the U.S. EPA, conducted a site inspection at Himco Dump. Laboratory analysis of wells sampled by the FIT members showed that the groundwater was impacted by metals and volatile organic compounds. At the time of the site inspection, leachate seeps were observed by the FIT members. The results of the FIT analyses of USGS wells is included in Appendix E.

The existing data base indicates that the primary potential contaminants associated with the Himco Dump site are heavy metals, and semivolatile and volatile organic compounds.

During the planning process, preliminary response objectives and remedial action alternatives have been identified, and a preliminary list of applicable or relevant and appropriate requirements (ARARs) has been completed.

Based on review of existing data and with reference to a Site Conceptual Model, RI/FS data quality objectives have been defined comprising decision types, data uses, data needs, and data analytical levels.

The primary objectives of the Himco Dump RI/FS are to:

- Characterize the nature and extent of contamination in site soils, sediment, surface water, and groundwater.
- Determine the potential for contaminant transport via air, groundwater, and sediment/surface water pathways.
- Conduct a baseline public health evaluation and an ecological endangerment assessment as appropriate for the site.
- Identify and develop standards and criteria for contaminant cleanup.
- Evaluate a range of feasible, permanent solutions for on-site remediation in accordance with the Superfund Amendments and Reauthorization Act.

The RI will be implemented by evaluating existing data and conducting a multi-phased field investigation, if necessary. The scope of any Phase II field investigation will be dependent on whether a source exists and releases to groundwater, surface water, sediment, or air have occurred.

The scope of the field investigation will include:

- Site survey and topographic mapping.
- Electromagnetic survey for fill boundary determination.
- Magnetic survey to identify presence of buried drums.
- Excavation of test pits.
- Determination of presence/absence of wetlands.
- Wetland soil sampling and analysis.
- Monitoring well installation, sampling, and analysis.
- Soil boring sampling and analysis.
- Existing monitoring well sampling and analysis.
- Private well sampling and analysis.
- Leachate sampling and analysis.
- Landfill waste sampling and geotechnical analysis.
- Landfill cap surface soil sampling and analysis.
- Landfill waste mass gas sampling and analysis.
- Residential gas sampling.
- Sediment and surface water sampling and analysis.
- Installation of staff gauges.