LAKE SHORE, INC. QUALITY CONTROL LABORATORY

COKE AND COAL CHEMICAL DIVISION

US EPA RECORDS CENTER REGION 5
522920

Sample Discharge Serial*	Inside Dike	Overflow Pipes	300' E. of pipes					
Date Obtained	9-2-75							
Freq./Time,hr. **	once/weekly							
Temperature, °F								
	mg/l*	mg/l*	mg/l*	mg/l*	mg/l*	mg/l*	mg/l*	mg/l*
Color (True), units								
Acidity (as $CaCO_3$), M.O.								
Chemical Oxygen Demand	6	9	25					
Oil and Grease	2	0	2					
Chloride	10	15	11					
Cyanide	< 0.01	< 0.01	< 0.01					
Sulfate	29	27	23					
Sulfide								
Phenols, ug/l	2	1	0					
Total Organic Carbon								
Chromium (Hexavalent) ppb	< 5	< 5	< 5					
Iron (Dissolved)	0.6	0.2	< 0.1					
Zinc								
Nickel								
Tin								
Turcidity, NTU	29	3	3					
Lead	< 0.04	< 0.04	< 0.04					
Copper								
Cadmium								
Mercury, ug/l	< 0.4	< 0.4	< 0.4					
Arsenic								
Fluoride	0.34	0.43	0.20					
pH, units	8.7	7.2	8.6					
Alkalinity (as $CaCO_3$)								
Chemical Oxygen Demand								
Total Solids	247	140	162					
Total Dissolved Solids	196	132	155					
Total Suspended Solids								
Total Volatile Solids								
Ammonia-N	2.5	< 0.1	< 0.1					
Kjeldahl-N								
Nitrate-N								
Phosphorus	0.08	< 0.01	< 0.01					
Hardness (as $CaCO_3$)								
Dissolved Oxygen	6.9	8.4	8.7					
Threshold Odor	5.9	5.0	4.5					
Barium	< 0.1	< 0.1	< 0.1					
Flow, mgpd.								

*All units in mg/l except where indicated
**Hours between increments/Total Sampling Hours

UNITED STATES STEEL CORPORATION
GARY WORKS WATER QUALITY CONTROL LABORATORY
COKE AND COAL CHEMICAL DIVISION

Sample Discharge Serial#	Inside Dike	Overflow Pipes	300°E. of pipes					
Date Obtained	8-19-75							
Freq./Time,hr. **	Once/Weekly							
Temperature, °F								
	mg/l*	mg/l*	mg/l*	mg/l*	mg/l*	mg/l*	mg/l*	mg/l*
Color (True), units								
Acidity (as $CaCO_3$), M.O.								
Chemical Oxygen Demand	19	6	22					
Oil and Grease	1	1	0					
Chloride	9	17	12					
Cyanide	< 0.01	0.02	< 0.01					
Sulfate	20	30	24					
Sulfide								
Phenols, ug/l	0	0	0					
Total Organic Carbon								
Chromium (Hexavalent) ppb	< 5	< 5	< 5					
Iron (Dissolved)	0.7	0.1	< 0.1					
Zinc								
Nickel								
Tin								
Turbidity, NTU	83	1	7					
Lead	< 0.04	< 0.04	< 0.04					
Copper								
Cadmium								
Mercury, ug/l	< 0.4	< 0.4	< 0.4					
Arsenic								
Fluoride	0.21	< 0.64	< 0.34					
pH, units	8.0	10.5	9.0					
Alkalinity (as $CaCO_3$)								
Biochemical Oxygen Demand								
Total Solids	338	179	222					
Total Dissolved Solids	252	152	175					
Total Suspended Solids								
Total Volatile Solids								
Ammonia-N	2.4	0.2	< 0.1					
Kjeldahl-N								
Nitrate-N								
Phosphorus	0.19	< 0.01	0.01					
Hardness (as $CaCO_3$)								
Dissolved Oxygen	4.9	7.9	8.6					
Threshold Odor	19.6	6.5	8.5					
Barium	< 0.1	< 0.1	< 0.1					
Flow, mgpd.								

*All units in mg/l except where indicated
**Hours between increments/Total Sampling Hours

UNITED STATES STEEL CORPORATION
GARY WORKS WATER QUALITY CONTROL LABORATORY
COKE AND COAL CHEMICAL DIVISION

Discharge Serial#	Inside Dike	Overflow Pipes	300 E. of Pipes					
Obtained	8-26-75							
Freq./Time,hr. **	Once/Weekly							
Temperature, °F								
	mg/l*	mg/l*	mg/l*	mg/l*	mg/l*	mg/l*	mg/l*	mg/l*
Color (True), units								
Acidity (as $CaCO_3$), M.O.								
Chemical Oxygen Demand	38	6	13					
Oil and Grease	503	1	1					
Chloride	9	16	9					
Cyanide	0.01	0.01	< 0.01					
Sulfate	20	30	18					
Sulfide								
Phenols, ug/l	6	0	0					
Total Organic Carbon								
Chromium, Hexavalent ppb	< 5	< 5	< 5					
Iron, dissolved	0.4	0.1	< 0.1					
Zinc								
Nickel								
Tin								
Turbidity, NTU	53	2	2					
Lead	0.16	< 0.04	< 0.04					
Copper								
Cadmium								
Mercury, ug/l	< 0.4	< 0.4	< 0.4					
Arsenic								
Fluoride	0.29	0.76	0.19					
pH, units	8.2	10.8	8.4					
Alkalinity (as $CaCO_3$)								
Biochemical Oxygen Demand								
Total Solids	341	136	172					
Total Dissolved Solids	225	126	164					
Total Suspended Solids								
Total Volatile Solids								
Ammonia-N	3.5	0.2	< 0.1					
Kjeldahl-N								
Nitrate-N								
Phosphorus	0.15	< 0.01	< 0.01					
Hardness (as $CaCO_3$)								
Dissolved oxygen	5.9	7.5	8.3					
Threshold Odor	20.6	18.8	8.1					
Barium	< 0.1	< 0.1	< 0.1					
Flow, mgpd.								

*All units in mg/l except where indicated
**Hours between increments/Total Sampling Hours

Sample ID No.'s	Phenols mg/l (2)	T.O.C. mg/l (1)	pH s.u. (13)	Specific Conductance umhos/cm	Solids-Dissolved (TDS) mg/l (3)	Water Level	Arsenic µg/l	Barium µg/l	Cadmium µg/l	Chromium Total	Lead	Mercury
MB HWD 201	.36.	15.9	9.7	1280	1,000	17.86' ← upgradient	37	50	<2.	<10.	<10.	<0.1
MB HWD 202	6.0	5.2	7.9	1380	1,100	30.58'	0.5	150	<2.	<10.	<10.	<0.1
MB HWD 203	8.0	2.6	6.6	390	270	31.51'	0.5	80	<2.	<10.	<10.	<0.1
MB HWD 204	12.	2.6	6.8	640	440	33.23'	0.7	70	<2.	<10.	<10.	<0.1
MB HWD 501	<5.	3.2	6.8	840	660	4.12' ← upgradient	5.8	160	<2.	<10.	<10.	<0.1
MB HWD 502	31	4.6	10.6	1520	1200	10' wells around No. 1 E.G.L. Mill	4.7	140	<2.	<10.	<10.	<0.1
MB HWD 503	2000	29	11.2	2400	1200	11.98'	11	140	<2.	<10.	<10.	<0.1
MB HWD 504	33	3.8	11.1	1400	680	10.58'	1.7	90	<2.	<10.	<10.	<0.1
MB HWT 201	<5.	12.8	8.1	660	500	10.26' ← upgradient	37.	70.	<2.	<10.	<10.	<0.1
MB HWT 202	90.	5.4	11.0	8,200	5,400	19.41' wells around HWT-2	<0.2	380	<2.	<10.	10.	<0.1
MB HWT 203	730	8.7	11.1	11,800	7,300	21.3'	0.3	3200	<2.	<10.	10.	0.1
MB HWT 204	440	7.9	11.4	10,100	6,000	20.25'	0.3	4500	<2.	<10.	10.	<0.1
MB HWT 205	<5.	4.6	7.4	5,000	4,600	21.23'	1.3	260	<2.	<10.	10.	<0.1
MB HWT 206	10.	5.4	6.7	6800	6,000	22.12'	2.3	330	<2.	<10.	10.	<0.1
MB HWT 207	12.	4.0	7.3	5100	5,100	17.68'	0.3	350	<2.	<10.	10.	<0.1
MB HWT 1301	<5.	2.9	10.0	900	650	17.71' ← upgradient	3.3	100	<2.	<10.	<10.	<0.1
MB HWT 1302	20	2.3	5.8	8,900	8,700	21.37' wells around HWT-13	6.9	380	<2.	<10.	10.	0.1
MB HWT 1303	<5.	3.2	7.0	3,800	3,800	21.7'	8.2	220	<2.	<10.	<10.	0.12
MB HWT 1304	<5.	4.6	6.3	5,800	5,200	21.33'	39.	360	<2.	<10.	10.	<0.1
MB HWT 1304 D	<5.	3.2	6.2	5900	5,400	21.33'	28.	350	<2.	<10.	10.	<0.1
MB HWT 1401	320.	6.0	12.4	6.8	1,160.	8.01' ← upgradient	11.	160.	<2.	<10.	<10.	<0.1
MB HWT 1402	230.	<5.	11.0	6.9	900	6.9' wells around HWT-14	13.	180.	<2.	<10.	<10.	<0.1
MB HWT 1403	240.	<5.	11.7	6.6	880.	6.47'	2.9	80.	<2.	<10.	<10.	<0.1
MB HWT 1404	490	<5.	4.0	6.8	1,300.	5.33'	26	140.	<2.	<10.	<10.	0.1
BLANK	NS	<5.	<1.0	NS	NS	NS – No Sample	<0.2	<30	<2.	<10.	<10.	<0.1

Sample ID No.'s	Nickel	Selenium	Silver	Zinc	Cyanide	Phenols	Oil & Grease	Total Solids	Total Suspended Solids	Total Dissolved Solids	Chloride	Sulfate
MB HWD 201	1.2	<10.	<10.	60	100	360	6.	6.				
MB HWD 202	19	10.	<10.	820	510	37.	56.					
MB HWD 203	7.5	<10.	<10.	90	28	64.						
MB HWD 204	0.8	<10	<10.	410.	170.	62.	64.					
MB HWD 501	0.2	<10.	<10.	<50.	<20.	170.	309					
MB HWD 502	10	<10.	20.	50.	<20.	56.	76.					
MB HWD 503	2.8	<10.	<10.	<50.	<20.	490	22	14				
MB HWD 504	1.8	<10.	<10.	6200	43	2,600						
MB HWT 201	<0.2	<10.	<10	340	20	82	3,700					
MB HWT 202	2	20	10	660	30	81.	2,700					
MB HWT 203	1.2	30	10.	170.	20.	160	1,200					
MB HWT 204	2.1	20.	10.	240	390	85	2,000.					
MB HWT 205	0.5	30	10.	7,900	780.	53	1,300.					
MB HWT 206	2.9	20	10.	60.	420.	29.	62.					
MB HWT 207	0.3	<10.	<10.	<50.	<20.	1,600	110	3,000.				
MB HWT 1301	0.9	30	<10.	160,000	170	78.	680.					
MB HWT 1302	1.1	10	<10.	540	2,100	94.	1,500.					
MB HWT 1303	0.4	20	<10.	91,000	2,100	93	1,600.					
MB HWT 1304	0.4	20	<10.	92,000	7,600.	250.	17.	13.				
MB HWT 1304 D	<0.1	<0.2	<10.	2,700.	480	16.	22.					
MB HWT 1401	1.2	<10.	<10.	430	150.	10.	15.					
MB HWT 1402	1.6	<10.	10.	5,200.	370	80	92					
MB HWT 1403	<0.2	<10.	<10.	<50.	<20.	<0.1	NS					
MB HWT 1404	<0.2	<10.	<10.									
BLANK												

5 clusters of wells

* Summary sheet for sampling done by the Division of Land Pollution Control, Indiana State Board of Health June 21-23, 1983

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWT-2-01 — Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-19-81	3-1-82	6-9-82	10-15-82
Static Water Level	6.73'	7.83'	7.52'	6.56'

Chemical Constituents	S.D.W.A. Limits	1	2	3	4
Arsenic	.05mg/1	.024	.042	.016	.024
Barium	1.0mg/1	<.1	<.10	<.10	<.10
Cadmium	.01mg/1	<.1	<.01	<.01	<.01
Chromium	.05mg/1	<.01	<.01	<.01	<.01
Fluoride	2.4mg/1	.72	.81	.98	1.32
Lead	.05mg/1	<.05	<.05	<.05	<.05
Mercury	.002mg/1	<.0002	<.0002	<.0002	<.0002
Nitrate (N)	10.0mg/1	<.01	<.01	.07	<.01
Selenium	.01mg/1	<.001	<.001	<.001	<.001
Silver	.05mg/1	<.01	<.01	<.01	<.01
Endrin	.2ug/1	<.018	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.01	<.01	<.01
Methoxychlor	100ug/1	<.20	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	<.02	<.02	<.02	<.02
2,4,5-TP Silvex	10ug/1	<.02	<.02	<.02	<.02
Radium 226 *	5pCi/1	.4+/-.2	.2+/-1	<2.0	<2.0
Radium 228 *	5pCi/1	<3			
Gross Alpha	15pCi/1	4+/-1.2	2+/-.8	<2.0	8+/-1.2
Gross Beta	50pCi/1	24+/-5	14+/-3	<2.0	31+/-4
Total Coliform	<1/100ml	<1	<1	<1	<1

* NOTE: Begining with the second qua Total Radium is reported.

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWT-2-02 — Report Date Nov. 30

Quarter	1	2	3	4
Sample Date	11-19-81	3-2-82	6-9-82	10-15-82
Static Water Level	5.15'	9.2'	5.19'	6.98'

Chemical Constituents	S.D.W.A. Limits	1	2	3	4
Arsenic	.05mg/1	.004	<.001	<.001	<.001
Barium	1.0mg/1	.25	.98	.52	.42
Cadmium	.01mg/1	<.01	<.01	<.01	.016
Chromium	.05mg/1	<.01	<.01	<.01	<.01
Fluoride	2.4mg/1	.73	.56	.58	.81
Lead	.05mg/1	<.05	.16	.08	.09
Mercury	.002mg/1	<.0002	<.0002	<.0002	<.0002
Nitrate (N)	10.0mg/1	.60	1.06	.56	.77
Selenium	.01mg/1	<.001	.002	.004	.004
Silver	.05mg/1	<.01	.04	.02	.02
Endrin	.2ug/1	<.018	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.40	<.20	<.20
Methoxychlor	100ug/1	<.20	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	.09	<.02	<.02	<.02
2,4,5-TP Silvex	10ug/1	<.02	<.40	<.20	<.20
Radium 226 *	5pCi/1	1.5+/-.3	.2+/-1.1	<2.0	<2.0
Radium 228 *	5pCi/1	<.3			
Gross Alpha	15pCi/1	8+/-2	<1.0	<2.0	2+/-1.0
Gross Beta	50pCi/1	320+/-52	56+/-4	437+/-5	107+/-5
Total Coliform	<1/100ml	<1	<1	<1	<1

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWT-2-03 — Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-19-81	3-2-82	6-9-82	10-15-82
Static Water Level	6.04'	6.7'	5.37'	6.87'

Chemical Constituents	S.D.W.A. Limits	1	2	3	4
Arsenic	.05mg/1	<.001	<.001	<.001	<.001
Barium	1.0mg/1	1.3	1.85	2.89	2.63
Cadmium	.01mg/1	<.01	<.01	<.01	.02
Chromium	.05mg/1	<.01	<.01	<.01	.01
Fluoride	2.4mg/1	.82	.99	.77	1.05
Lead	.05mg/1	<.05	.12	.09	.11
Mercury	.002mg/1	<.0002	<.0002	<.0002	<.0002
Nitrate (N)	10.0mg/1	.79	3.58	7.81	5.73
Selenium	.01mg/1	<.001	<.001	.003	.003
Silver	.05mg/1	<.01	.04	.02	.04
Endrin	.2ug/1	<.018	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.40	<.20	<.20
Methoxychlor	100ug/1	<.20	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	.06	<.02	<.02	<.02
2,4,5-TP Silvex	10ug/1	<.02	<.40	<.20	<.20
Radium 226 *	5pCi/1	.2+/-.2	.3+/-1.1	.6+/-1.5	<2
Radium 228 *	5pCi/1	<3			
Gross Alpha	15pCi/1	11+/-2	<1.0	<2.0	17+/-1
Gross Beta	50pCi/1	560+/-60	53+/-4	467+/-5	517+/-5
Total Coliform	<1/100ml	<1	<1	<1	<1

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWT-13-01 — Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-20-81	3-3-82	6-8-82	10-18-82
Static Water Level	6.78'	6.53'	6.53'	6.53'

Chemical Constituents	S.D.W.A. Limits	1	2	3	4
Arsenic	.05mg/1	.002	.003	.002	.003
Barium	1.0mg/1	<.10	<.10	<.10	<.10
Cadmium	.01mg/1	<.01	.02	<.01	<.01
Chromium	.05mg/1	<.01	<.01	<.01	<.01
Fluoride	2.4mg/1	1.03	2.03	1.60	1.7
Lead	.05mg/1	<.05	<.05	<.05	<.05
Mercury	.002mg/1	<.0002	.0005	<.0002	<.0002
Nitrate (N)	10.0mg/1	.32	.53	.67	.23
Selenium	.01mg/1	<.001	.001	<.001	<.001
Silver	.05mg/1	<.01	<.01	<.01	<.01
Endrin	.2ug/1	<.018	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.01	<.01	<.01
Methoxychlor	100ug/1	<.20	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	<.02	<.02	<.02	<.02
2,4,5-TP Silvex	10ug/1	<.02	<.02	<.02	<.02
Radium 226 *	5pCi/1	.5+/-.1	.05+/-.8	<2.0	<2.0
Radium 228 *	5pCi/1	<3			
Gross Alpha	15pCi/1	<.4	<1.0	<2.0	<2.0
Gross Beta	50pCi/1	17+/-2	7+/-3	9+/-3	<2.0
Total Coliform	<1/100ml	<1	<1	<1	<1

* NOTE: Begining with the second qua Total Radium is reported.

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWT-13-02 — Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-20-81	3-3-82	6-8-82	10-18-81
Static Water Level	3.02'	3.35'	3.43'	2.98'

Chemical Constituents	S.D.W.A. Limits	1	2	3	4
Arsenic	.05mg/1	<.001	.005	.001	.001
Barium	1.0mg/1	.14	.22	.14	.11
Cadmium	.01mg/1	<.01	.02	<.01	<.01
Chromium	.05mg/1	<.01	<.01	<.01	.01
Fluoride	2.4mg/1	.66	.28	.32	.47
Lead	.05mg/1	<.05	<.05	<.05	<.05
Mercury	.002mg/1	<.0002	.0004	<.0002	<.0002
Nitrate (N)	10.0mg/1	1.27	1.56	.94	.24
Selenium	.01mg/1	<.001	.001	.003	.001
Silver	.05mg/1	<.01	.02	<.01	.02
Endrin	.2ug/1	<.018	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.40	<.20	<.05
Methoxychlor	100ug/1	<.20	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	<.02	<.90	<.02	<.02
2,4,5-TP Silvex	10ug/1	<.02	<.02	<.02	<.02
Radium 226 *	5pCi/1	<.5	.2+/-1	<2.0	<2.0
Radium 228 *	5pCi/1	<3			
Gross Alpha	15pCi/1	<.9	<1.0	<2.0	11+/-1
Gross Beta	50pCi/1	57+/-6	48+/-3	33+/-3	19+/-4
Total Coliform	<1/100ml	<1	<1	<1	<1

* NOTE: Begining with the second qua Total Radium is reported.

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWT-13-03 — Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-20-81	3-3-82	6-8-82	10-18-82
Static Water Level	2.84'	2.75'	3.59'	3.75'

Chemical Constituents	S.D.W.A. Limits	1	2	3	4
Arsenic	.05mg/1	.003	.001	.002	.002
Barium	1.0mg/1	.15	.29	.17	.24
Cadmium	.01mg/1	<.01	<.01	<.01	<.01
Chromium	.05mg/1	<.01	<.01	<.01	.01
Fluoride	2.4mg/1	1.85	.33	.39	.42
Lead	.05mg/1	<.05	<.05	<.05	<.05
Mercury	.002mg/1	<.0002	<.0002	<.0002	<.0002
Nitrate (N)	10.0mg/1	11.4	.56	.50	.02
Selenium	.01mg/1	.004	<.001	.002	.001
Silver	.05mg/1	<.01	<.02	<.01	.02
Endrin	.2ug/1	<.018	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.01	<.01	<.01
Methoxychlor	100ug/1	<.20	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	<.02	<.02	<.02	<.02
2,4,5-TP Silvex	10ug/1	.03	<.02	<.02	<.02
Radium 226 *	5pCi/1	<.5	.15+/-1	.4+/-1.7	<2
Radium 228 *	5pCi/1	<3			
Gross Alpha	15pCi/1	<.8	3+/-.7	3.5+/-.9	<2
Gross Beta	50pCi/1	55+/-6	52+/3	56+/-3	11+/-4
Total Coliform	<1/100ml	<1	<1	<1	<1

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWT-13-04 — Report Date Nov.

Quarter	1	2	3	4
Sample Date	11-20-81	3-3-82	6-8-82	10-
Static Water Level	2.63'	2.96'	3.29'	

Chemical Constituents	S.D.W.A. Limits	1	2	3	4
Arsenic	.05mg/1	<.001	.001	.006	
Barium	1.0mg/1	.17	.31	.19	
Cadmium	.01mg/1	<.01	<.01	<.01	
Chromium	.05mg/1	<.01	<.01	<.01	
Fluoride	2.4mg/1	1.5	.32	.23	
Lead	.05mg/1	<.05	<.05	<.05	
Mercury	.002mg/1	<.0002	<.0002	<.0002	
Nitrate (N)	10.0mg/1	27.9	18.0	18.5	
Selenium	.01mg/1	.004	.007	.004	
Silver	.05mg/1	<.01	.02	.02	
Endrin	.2ug/1	<.018	<.018	<.018	
Lindane	4ug/1	<.004	<.01	<.01	
Methoxychlor	100ug/1	<.20	<.20	<.20	
Toxaphene	5ug/1	<.80	<.80	<.80	
2,4-D	100ug/1	.23	<.40	<.02	
2,4,5-TP Silvex	10ug/1	<.02	<.02	<.02	
Radium 226 *	5pCi/1	<.5	.2+/-1	<2.0	
Radium 228 *	5pCi/1	<3			
Gross Alpha	15pCi/1	<.7	<1.0	<2.0	11
Gross Beta	50pCi/1	43+/-5	41+/-3	22+/-3	
Total Coliform	<1/100ml	<1	<1	<1	

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWD-5-01 — Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-17-81	3-2-82	6-10-82	10-19-82
Static Water Level	6.69'	6.44'	6.94'	6.27'

Chemical Constituents	S.D.W.A. Limits	1	2	3	4
Arsenic	.05mg/1	.004	.001	.003	.003
Barium	1.0mg/1	.10	.11	<.10	.1
Cadmium	.01mg/1	<.01	<.01	<.01	<.01
Chromium	.05mg/1	<.01	<.01	<.01	<.01
Fluoride	2.4mg/1	1.3	1.37	1.16	1.16
Lead	.05mg/1	<.05	<.05	<.05	<.05
Mercury	.002mg/1	<.0002	.0003	<.0002	<.0002
Nitrate (N)	10.0mg/1	.01	.06	.04	<.01
Selenium	.01mg/1	<.001	<.001	<.001	<.001
Silver	.05mg/1	<.01	<.01	<.01	<.01
Endrin	.2ug/1	<.018	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.01	<.01	<.01
Methoxychlor	100ug/1	<.20	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	<.02	<.90	<.50	<.20
2,4,5-TP Silvex	10ug/1	.05	<.02	<.02	<.02
Radium 226 *	5pCi/1	<.5	.03+/-.8	<2.0	<2.0
Radium 228 *	5pCi/1	<2			
Gross Alpha	15pCi/1	.9+/-.9	3+/-.7	<2.0	<1.0
Gross Beta	50pCi/1	18+/-3	39+/-3	9+/-2.8	<2.0
Total Coliform	<1/100ml	<1	<1	3	<1

* NOTE: Begining with the second quarter Total Radium is reported.

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWD-5-02 — Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-17-81	3-2-82	6-10-82	10-19-82
Static Water Level	6.21'	5.38'	6.05'	5.88'

Chemical Constituents	S.D.W.A. Limits	1	2	3	4
Arsenic	.05mg/1	.004	.003	.002	.004
Barium	1.0mg/1	<.10	.13	<.10	.1
Cadmium	.01mg/1	<.01	<.01	<.01	<.01
Chromium	.05mg/1	<.01	<.01	<.01	<.01
Fluoride	2.4mg/1	1.1	1.05	1.17	1.29
Lead	.05mg/1	<.05	<.05	<.05	<.05
Mercury	.002mg/1	<.0002	<.0002	<.0002	<.0002
Nitrate (N)	10.0mg/1	2.63	3.4	2.08	2.47
Selenium	.01mg/1	<.001	<.001	<.001	.001
Silver	.05mg/1	<.01	<.01	<.01	.02
Endrin	.2ug/1	<.018	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.01	<.01	<.01
Methoxychlor	100ug/1	<.20	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	.04	<.02	<.02	<.02
2,4,5-TP Silvex	10ug/1	<.02	<.02	<.02	<.02
Radium 226 *	5pCi/1	.2+/-.1	.15+/-.9	<2.0	<2.0
Radium 228 *	5pCi/1	<2			
Gross Alpha	15pCi/1	<1	1.4+/-.7	1.3+/-.8	<2.0
Gross Beta	50pCi/1	74+/-7	36+/-4	70+/-3	47+/-4
Total Coliform	<1/100ml	<1	<1	<1	<1

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWD-5-03 — Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-18-81	3-2-82	6-10-82	10-19-82
Static Water Level	5.60'	5.15'	6.06'	5.48'

Chemical Constituents	S.D.W.A. Limits	1	2	3	4
Arsenic	.05mg/1	.006	.015	.005	.001
Barium	1.0mg/1	<.10	<.10	.14	.11
Cadmium	.01mg/1	<.01	<.01	<.01	<.01
Chromium	.05mg/1	<.01	<.01	<.01	<.01
Fluoride	2.4mg/1	2.03	1.95	1.61	2.15
Lead	.05mg/1	<.05	<.05	<.05	<.05
Mercury	.002mg/1	<.0002	<.0002	<.0002	<.0002
Nitrate (N)	10.0mg/1	28.1	2.98	31.6	34.3
Selenium	.01mg/1	<.001	<.001	.004	.001
Silver	.05mg/1	<.01	<.01	<.01	<.01
Endrin	.2ug/1	.056	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.01	<.01	<.01
Methoxychlor	100ug/1	<.20	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	<.02	<.02	<.02	<.02
2,4,5-TP Silvex	10ug/1	<.02	<.02	<.02	<.02
Radium 226 *	5pCi/1	<.5	.03+/-.7	.4+/-1.8	<2
Radium 228 *	5pCi/1	<2			
Gross Alpha	15pCi/1	<1	8+/-.7	1.3+/-.8	<2
Gross Beta	50pCi/1	89+/-9	16+/-3	161+/-4	105+/-5
Total Coliform	<1/100ml	<1	<1	<1	<1

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWD-5-04 — Report Date Nov. 30, 1

Quarter	1	2	3	4
Sample Date	11-18-81	3-2-82	6-10-82	10-19-82
Static Water Level	4.74'	4.07'	4.82'	4.74'

Chemical Constituents	S.D.W.A. Limits	1	2	3	4
Arsenic	.05mg/1	<.001	<.001	.001	.002
Barium	1.0mg/1	<.10	<.10	<.10	<.10
Cadmium	.01mg/1	<.01	.01	<.01	<.01
Chromium	.05mg/1	<.01	<.01	<.01	<.01
Fluoride	2.4mg/1	1.18	1.03	1.04	1.38
Lead	.05mg/1	<.05	.08	<.05	<.05
Mercury	.002mg/1	<.0002	<.0002	<.0002	<.0002
Nitrate (N)	10.0mg/1	3.81	4.14	1.16	3.08
Selenium	.01mg/1	<.001	<.001	.001	.001
Silver	.05mg/1	<.01	<.01	<.01	<.01
Endrin	.2ug/1	.05	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.01	<.01	<.01
Methoxychlor	100ug/1	<.20	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	.93	.90	<.20	<.02
2,4,5-TP Silvex	10ug/1	<.02	<.02	<.02	<.02
Radium 226 *	5pCi/1	<.5	.1+/-.9	<2.0	<2.0
Radium 228 *	5pCi/1	<3			
Gross Alpha	15pCi/1	<1	<1	<2.0	<2.0
Gross Beta	50pCi/1	37+/-5	21+/-3	88+/-3	43+/-4
Total Coliform	<1/100ml				

UNITED STATES STEEL CORPORATION GARY WORKS
First Year Well Monitoring Data
Well No. HWD-2-01 Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	12-17-81	3-1-82	6-7-82	10-14-82
Static Water Level	8.90'	8.77'	9.19'	8.10'

Chemical Constituents	S.D.W.A. Limits	* NOTE: Begining with the second qua Total Radium is reported.			
Arsenic	.05mg/1	.03	.094	.025	.031
Barium	1.0mg/1	<.10	.12	<.10	.1
Cadmium	.01mg/1	<.01	<.01	<.01	<.01
Chromium	.05mg/1	<.01	<.01	<.01	<.01
Fluoride	2.4mg/1	1.22	1.5	1.55	1.53
Lead	.05mg/1	<.05	.08	<.05	<.05
Mercury	.002mg/1	<.0002	.0007	<.0002	<.0002
Nitrate (N)	10.0mg/1	.35	.70	.78	.06
Selenium	.01mg/1	<.001	<.001	.001	<.001
Silver	.05mg/1	<.01	<.01	<.01	<.01
Endrin	.2ug/1	<.018	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.01	<.01	<.07
Methoxychlor	100ug/1	.72	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	<.02	<.02	<.02	<.02
2.4.5-TP Silvex	10ug/1	<.02	<.80	<.80	<.30
Radium 226 *	5pCi/1	.2+/-.1	.05+/-.8	<2.0	<2
Radium 228 *	5pCi/1	<1			
Gross Alpha	15pCi/1	1.4+/-1.3	2.7+/-.7	<2.0	3.0+/-1
Gross Beta	50pCi/1	32+/-5	33+/-5	28+/-5	18+/-4
Total Coliform	<1/100ml	<1	<1	<1	<1

UNITED STATES STEEL CORPORATION GARY WORKS
First Year Well Monitoring Data
Well No. HWD-2-02 Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-17-81	3-1-82	6-7-82	10-14-82
Static Water Level	9.39'	9.25'	9.21'	8.75'

Chemical Constituents	S.D.W.A. Limits				
Arsenic	.05mg/1	<.001	.002	.005	.001
Barium	1.0mg/1	.16	.14	.12	.12
Cadmium	.01mg/1	<.01	<.01	<.01	<.01
Chromium	.05mg/1	<.01	<.01	<.01	.02
Fluoride	2.4mg/1	1.37	1.39	1.02	1.38
Lead	.05mg/1	<.05	<.05	<.05	<.05
Mercury	.002mg/1	<.0002	<.0002	<.0002	<.0002
Nitrate (N)	10.0mg/1	2.24	16.6	14.4	11.1
Selenium	.01mg/1	<.001	.002	.009	.001
Silver	.05mg/1	<.01	<.01	<.01	<.01
Endrin	.2ug/1	<.018	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.01	<.01	<.07
Methoxychlor	100ug/1	.21	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	<.02	<.02	<.02	<.02
2.4.5-TP Silvex	10ug/1	<.02	<.02	<.02	<.02
Radium 226 *	5pCi/1	.2+/-.1	.2+/-1	<2.0	<3.0
Radium 228 *	5pCi/1	<1			
Gross Alpha	15pCi/1	4.2+/-2.2	3+/-.8	2.7+/-.9	3+/-1.1
Gross Beta	50pCi/1	27+/-5	43+/-3	37+/-3	36+/-4
Total Coliform	<1/100ml	<1	<1	<1	<1

UNITED STATES STEEL CORPORATION GARY WORKS
First Year Well Monitoring Data
Well No. HWD-2-03 Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-17-81	3-1-82	6-7-82	10-14-82
Static Water Level	10.20'	9.03'	8.70'	9.11'

Chemical Constituents	S.D.W.A. Limits				
Arsenic	.05mg/1	.002	.002	.001	.002
Barium	1.0mg/1	<.10	.12	<.10	.1
Cadmium	.01mg/1	<.01	<.01	<.01	<.01
Chromium	.05mg/1	<.01	<.01	<.01	<.01
Fluoride	2.4mg/1	1.55	1.72	1.64	1.94
Lead	.05mg/1	<.05	<.05	<.05	<.05
Mercury	.002mg/1	<.0002	<.0002	<.0002	<.0002
Nitrate (N)	10.0mg/1	1.03	1.81	5.05	3.6
Selenium	.01mg/1	<.001	.001	.001	.001
Silver	.05mg/1	<.01	<.01	<.01	<.01
Endrin	.2ug/1	<.018	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.01	<.01	<.07
Methoxychlor	100ug/1	<.20	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	<.02	<.02	<.02	<.02
2.4.5-TP Silvex	10ug/1	<.02	<.02	<.02	<.30
Radium 226 *	5pCi/1	.4+/-.1	.02+/-.8	<2.0	<2.0
Radium 228 *	5pCi/1	<2			
Gross Alpha	15pCi/1	4.2+/-1.3	1.7+/-.8	<2.0	3+/-1
Gross Beta	50pCi/1	41+/-5	26+/-3	21+/-3	23+/-4
Total Coliform	<1/100ml	<1	<1	<1	<1

UNITED STATES STEEL CORPORATION GARY WORKS
First Year Well Monitoring Data
Well No. HWT-14-02 Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-18-81	3-3-82	6-10-82	10-18-82
Static Water Level	6.12'	6.54'	6.82'	6.29'

Chemical Constituents	S.D.W.A. Limits	* NOTE: Begining with the second que Total Radium is reported.			
Arsenic	.05mg/1	.009	.008	.006	.007
Barium	1.0mg/1	.19	.12	<.10	.11
Cadmium	.01mg/1	<.01	<.01	<.01	<.01
Chromium	.05mg/1	<.01	<.01	<.01	<.01
Fluoride	2.4mg/1	.32	.81	.92	1.16
Lead	.05mg/1	<.05	<.05	<.05	<.05
Mercury	.002mg/1	<.0002	.0007	<.0002	<.0002
Nitrate (N)	10.0mg/1	<.01	.30	.25	<.01
Selenium	.01mg/1	<.001	.001	<.001	<.001
Silver	.05mg/1	<.01	<.01	<.01	<.01
Endrin	.2ug/1	<.018	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.01	<.01	<.01
Methoxychlor	100ug/1	<.20	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	<.02	<.40	<.20	<.20
2.4.5-TP Silvex	10ug/1	.03	<.01	<.01	<.02
Radium 226 *	5pCi/1	.4+/-.2	.13+/-1	<2.0	<2
Radium 228 *	5pCi/1	<2			
Gross Alpha	15pCi/1	3.5+/-1	<1.0	<2.0	<2
Gross Beta	50pCi/1	9+/-2	11+/-3	11+/-3	<2
Total Coliform	<1/100ml	<1	1	37	<1

Begining with the second quarter,
Total Radium is reported.

UNITED STATES STEEL CORPORATION GARY WORKS
First Year Well Monitoring Data
Well No. HWT-14-03 Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-19-81	3-3-82	6-10-82	10-18-82
Static Water Level	6.36'	6.27'	7.11'	8.52'

Chemical Constituents	S.D.W.A. Limits				
Arsenic	.05mg/1	.011	.017	.013	.01
Barium	1.0mg/1	.10	<.10	<.10	<.10
Cadmium	.01mg/1	<.01	<.01	<.01	<.01
Chromium	.05mg/1	<.01	<.01	<.01	<.01
Fluoride	2.4mg/1	.34	.97	.63	1.15
Lead	.05mg/1	<.05	<.05	<.05	<.05
Mercury	.002mg/1	<.0002	.0003	<.0002	<.0002
Nitrate (N)	10.0mg/1	<.01	<.01	.17	<.01
Selenium	.01mg/1	<.001	<.001	<.001	<.001
Silver	.05mg/1	<.01	<.01	<.01	<.01
Endrin	.2ug/1	<.018	<.018	<.018	<.018
Lindane	4ug/1	<.004	<.01	<.01	<.01
Methoxychlor	100ug/1	<.20	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80	<.80
2,4-D	100ug/1	.14	<.40	<.40	<.20
2.4.5-TP Silvex	10ug/1	<.02	<.02	<.02	<.03
Radium 226 *	5pCi/1	.4+/-.2	.15+/-1	<2.0	<2
Radium 228 *	5pCi/1	2+/-2			
Gross Alpha	15pCi/1	4.4+/-1	1.8+/-.8	<2.0	12+/-1
Gross Beta	50pCi/1	<2	18+/-3	24+/-3	6+/-3.6
Total Coliform	<1/100ml	<1	<1	<1	<1

Begining with the second quarter,
Total Radium is reported.

UNITED STATES STEEL CORPORATION GARY WORKS
First Year Well Monitoring Data
Well No. HWT-14-04 Report Date N

Quarter	1	2	3
Sample Date	11-19-81	3-3-82	6-10-82
Static Water Level	6.75'	7.25'	7.13'

Chemical Constituents	S.D.W.A. Limits			
Arsenic	.05mg/1	.011	.010	.012
Barium	1.0mg/1	.23	.12	.19
Cadmium	.01mg/1	<.01	<.01	<.01
Chromium	.05mg/1	<.01	<.01	<.01
Fluoride	2.4mg/1	.37	.32	.19
Lead	.05mg/1	<.05	<.05	<.03
Mercury	.002mg/1	<.0002	.0004	<.0002
Nitrate (N)	10.0mg/1	<.01	.31	.18
Selenium	.01mg/1	<.001	<.001	<.001
Silver	.05mg/1	<.01	<.01	<.01
Endrin	.2ug/1	.022	<.018	<.018
Lindane	4ug/1	<.004	<.01	<.01
Methoxychlor	100ug/1	<.20	<.20	<.20
Toxaphene	5ug/1	<.80	<.80	<.80
2,4-D	100ug/1	<.02	<.40	<.20
2.4.5-TP Silvex	10ug/1	<.02	<.02	<.02
Radium 226 *	5pCi/1	.5+/-.2	.02+/-.8	.4+/-1.7
Radium 228 *	5pCi/1	<2		
Gross Alpha	15pCi/1	6+/-2	1.8+/-.8	<2.0
Gross Beta	50pCi/1	6+/-2	9+/-3	3+/-2.6
Total Coliform	<1/100ml	<1	<1	1

Begining with the second quarter,
Total Radium is reported.

Nitrate only
hit in wells downgradient

HWT 14-01
upgradient

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWD-2-02
Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-17-81	3-1-82	6-7-82	10-14-82
Static Water Level	8.59'	9.25'	9.21'	9.75'

Chemical Constituents	S.D.W.A. Limits				
Arsenic	.05mg/l	<.001	.002	.005	.003
Barium	1.0mg/l	.16	.14	.13	.13
Cadmium	.01mg/l	<.01	<.01	<.01	<.01
Chromium	.05mg/l	<.01	<.01	<.01	.02
Fluoride	2.4mg/l	1.37	1.39	1.02	1.56
Lead	.05mg/l	<.05	<.05	<.05	<.05
Mercury	.002mg/l	<.0002	<.0002	<.0002	<.0002
Nitrate (N)	10.0mg/l	2.24	16.6	14.4	11.2
Selenium	.01mg/l	<.001	.002	.009	.002
Silver	.05mg/l	<.01	<.01	<.01	<.01
Endrin	.2ug/l	<.018	<.018	<.016	<.018
Lindane	4ug/l	<.004	<.01	<.01	<.07
Methoxychlor	100ug/l	<.20	<.20	<.20	<.20
Toxaphene	5ug/l	<.80	<.80	<.80	<.80
2,4-D	100ug/l	<.02	<.02	<.02	<.02
2,4,5-TP Silvex	10ug/l	<.02	<.02	<.02	<.02
Radium 226 *	5pCi/l	.24+/-.1	.2+/-1	<2.0	<2.0
Radium 228 *	5pCi/l	<1			
Gross Alpha	15pCi/l	4.1+/-2.2	5+/-.8	2.7+/-.9	5+/-1.1
Gross Beta	50pCi/l	27+/-5	43+/-3	37+/-3	36+/-4
Total Coliform	<1/100ml	<1	<1	<1	<1

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWD-2-03
Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-17-81	3-1-82	6-7-82	10-14-82
Static Water Level	10.20'	9.03'	8.70'	9.11'

Chemical Constituents	S.D.W.A. Limits				
Arsenic	.05mg/l	.002	.002	.001	.002
Barium	1.0mg/l	<.10	.12	<.10	.1
Cadmium	.01mg/l	<.01	<.01	<.01	<.01
Chromium	.05mg/l	<.01	<.01	<.01	<.01
Fluoride	2.4mg/l	1.65	1.72	1.64	1.96
Lead	.05mg/l	<.05	<.05	<.05	<.05
Mercury	.002mg/l	<.0002	<.0002	<.0002	<.0002
Nitrate (N)	10.0mg/l	1.03	1.81	5.05	3.8
Selenium	.01mg/l	<.001	.001	.001	.001
Silver	.05mg/l	<.01	<.01	<.01	<.01
Endrin	.2ug/l	<.018	<.018	<.018	<.018
Lindane	4ug/l	<.004	<.01	<.01	<.07
Methoxychlor	100ug/l	<.20	<.20	<.20	<.20
Toxaphene	5ug/l	<.80	<.80	<.80	<.80
2,4-D	100ug/l	<.02	<.02	<.02	<.02
2,4,5-TP Silvex	10ug/l	<.02	<.02	<.02	<.30
Radium 226 *	5pCi/l	.4+/-.1	.024+/-.8	<2.0	<2.0
Radium 228 *	5pCi/l	<1			
Gross Alpha	15pCi/l	4.2+/-1.3	1.7+/-.8	<2.0	3+/-1
Gross Beta	50pCi/l	41+/-5	26+/-3	21+/-3	23+/-4
Total Coliform	<1/100ml	<1	<1	<1	<1

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWD-2-04
Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-19-81	3-2-82	6-9-82	10-15-82
Static Water Level	8.20'	7.4'	7.16'	10.28'

Chemical Constituents	S.D.W.A. Limits				
Arsenic	.05mg/l	.001	.001	.001	.001
Barium	1.0mg/l	3.49	3.58	5.71	4.29
Cadmium	.01mg/l	<.01	<.01	<.01	<.01
Chromium	.05mg/l	<.01	<.01	<.01	.01
Fluoride	2.4mg/l	.34	.63	.42	1.01
Lead	.05mg/l	<.05	<.05	.10	.11
Mercury	.002mg/l	<.0002	<.0002	<.0002	<.0002
Nitrate (N)	10.0mg/l	2.4	1.92	127	104
Selenium	.01mg/l	<.001	<.001	.002	.002
Silver	.05mg/l	<.01	<.01	<.01	<.01
Endrin	.2ug/l	<.018	<.018	<.016	<.018
Lindane	4ug/l	<.004	<.01	<.01	<.01
Methoxychlor	100ug/l	<.20	<.20	<.20	<.20
Toxaphene	5ug/l	<.80	<.80	<.80	<.80
2,4-D	100ug/l	<.02	<.02	<.02	<.02
2,4,5-TP Silvex	10ug/l	<.02	<.02	<.02	<.01
Radium 226 *	5pCi/l	3.6+/-.8	1+/-1.8	2+/-1.8	4+/-2.4
Radium 228 *	5pCi/l	5+/-2			
Gross Alpha	15pCi/l	5.8+/-2	1.7+/-.8	<2.0	13+/-3.1
Gross Beta	50pCi/l	350+/-60	116+/-5	936+/-5	669+/-5
Total Coliform	<1/100ml	<1	<1	<1	<1

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWT-2-05
Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-19-81	3-2-82	6-9-82	10-15-82
Static Water Level	1.74'	4.65'	4.32'	4.24'

Chemical Constituents	S.D.W.A. Limits				
Arsenic	.05mg/l	<.001	<.001	<.001	<.001
Barium	1.0mg/l	.2	.16	.14	.1
Cadmium	.01mg/l	<.01	<.01	<.01	.018
Chromium	.05mg/l	<.01	<.01	<.01	.01
Fluoride	2.4mg/l	2.7	1.8	1.88	2.03
Lead	.05mg/l	<.05	.06	<.05	<.05
Mercury	.002mg/l	<.0002	<.0002	<.0002	<.0002
Nitrate (N)	10.0mg/l	<.01	10.21	26.3	28.1
Selenium	.01mg/l	<.001	<.001	.001	.002
Silver	.05mg/l	<.01	.02	.03	.03
Endrin	.2ug/l	<.016	<.018	<.018	<.018
Lindane	4ug/l	<.004	<.01	<.01	<.01
Methoxychlor	100ug/l	<.20	<.20	<.20	<.20
Toxaphene	5ug/l	<.80	<.80	<.80	<.80
2,4-D	100ug/l	<.02	<.02	<.02	<.02
2,4,5-TP Silvex	10ug/l	<.02	<.02	<.02	<1
Radium 226 *	5pCi/l	<.5	.02+/-.8	.6+/-1.6	
Radium 228 *	5pCi/l	<1			
Gross Alpha	15pCi/l	<1.0	<1.0	<2.0	<2
Gross Beta	50pCi/l	35+/-3	12+/-3	30+/-3	<1
Total Coliform	<1/100ml	<1	<1	<1	<1

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWT-2-06
Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-19-81	3-2-82	6-9-82	10-15-82
Static Water Level	3.19'	3.61'	3.44'	3.36'

Chemical Constituents	S.D.W.A. Limits				
Arsenic	.05mg/l	<.001	.003	.001	.001
Barium	1.0mg/l	.27	.23	.24	.21
Cadmium	.01mg/l	<.01	<.01	<.01	.016
Chromium	.05mg/l	<.01	<.01	.02	.01
Fluoride	2.4mg/l	3.2	2.65	3.18	3.3
Lead	.05mg/l	<.05	.05	<.05	.1
Mercury	.002mg/l	<.0002	.0006	<.0002	<.0002
Nitrate (N)	10.0mg/l	<.01	<.01	.12	.23
Selenium	.01mg/l	<.001	<.001	<.001	<.001
Silver	.05mg/l	<.01	.03	<.01	<.03
Endrin	.2ug/l	<.016	<.018	<.018	<.018
Lindane	4ug/l	.025	<.01	<.01	<.01
Methoxychlor	100ug/l	<.20	<.20	<.20	<.20
Toxaphene	5ug/l	<.80	<.80	<.80	<.80
2,4-D	100ug/l	<.02	<.02	<.01	<.02
2,4,5-TP Silvex	10ug/l	<.02	<.02	<.02	<2.0
Radium 226 *	5pCi/l	<.5	.15+/-1	<2.0	
Radium 228 *	5pCi/l	<1			
Gross Alpha	15pCi/l	<1.4	<1.0	<2.0	8+/-1.1
Gross Beta	50pCi/l	26+/-3	32+/-3	10+/-3	29+/-4
Total Coliform	<1/100ml	<1	<1	<1	<1

UNITED STATES STEEL CORPORATION — GARY WORKS
First Year Well Monitoring Data
Well No. HWT-2-07
Report Date Nov. 30,

Quarter	1	2	3	4
Sample Date	11-19-81	3-2-82	6-9-82	10-15-82
Static Water Level	6.19'	8.44'	7.69'	6.77'

Chemical Constituents	S.D.W.A. Limits				
Arsenic	.05mg/l	<.001	<.001	<.001	.001
Barium	1.0mg/l	.10	.22	<.10	.16
Cadmium	.01mg/l	<.01	<.01	.01	<.01
Chromium	.05mg/l	<.01	<.01	<.01	<.01
Fluoride	2.4mg/l	3.3	4.0	3.95	3.5
Lead	.05mg/l	<.05	.07	<.05	<.05
Mercury	.002mg/l	<.0002	<.0002	<.0002	<.0002
Nitrate (N)	10.0mg/l	.69	3.08	30.2	30.8
Selenium	.01mg/l	<.001	.002	.001	.002
Silver	.05mg/l	<.01	.02	<.01	.03
Endrin	.2ug/l	<.016	<.016	<.018	<.018
Lindane	4ug/l	<.004	<.01	<.01	<.01
Methoxychlor	100ug/l	.28	<.20	<.20	<.20
Toxaphene	5ug/l	<.80	<.80	<.80	<.80
2,4-D	100ug/l	<.02	<.40	<.20	<.20
2,4,5-TP Silvex	10ug/l	<.02	<.02	<.02	<.02
Radium 226 *	5pCi/l	.34+/-.2	.024+/-.8	<2.0	<2.0
Radium 228 *	5pCi/l	<1			
Gross Alpha	15pCi/l	<1.4	14+/-.8	<2.0	4+/-1.1
Gross Beta	50pCi/l	22+/-3	24/-3	44/-2.8	22+/-4
Total Coliform	<1/100ml	<1	<1	<1	<1

U.S. STEEL
MAY 14-15, 1981

STATION NO:	FIELD: FLOW MGD	TEMP AVE	D.O.	pH AVE	LABORATORY ANALYSES: AMMONIA-N ⊛	B.O.D.5	CADMIUM	CHLORIDES ⊛	CHROME-H µg/L	CHROME-T µg/L	CN ⊛	Phenol µg/L ⊛	IRON-TOT	LEAD TN µg/L	MANGANESE	NICKEL	NO_2 & NO_3	OIL & GR AVE 5 SAMP	pH	PHOSPORUS-P	S. SOLIDS	T. SOLIDS	SULPHATE ⊛	ZINC µg/L	FLUORIDE ⊛	FECAL COLIFORM
RAW WATER #1 PUMP STA.					<0.1			11.			<.005	<5.					0.3		7.9		41.		27.		0.2	
RAW WATER #4 PUMP STA.					<0.1			17.			<.005	<5.					0.3		8.0		14.		26.		0.2	
RAW WATER LAKESIDE PUMP STA.					<0.1			10.	<10.		<.005	<5.					0.3		8.0		<1.0		23.		0.2	
GW-1 (002)	42.9	14.5		7.6	0.7			17.			<.005	46.					0.3	6.0	7.8		2.		29.		0.2	
NET LBS/DAY					250.			0			0	16.5											1073		0	
GW-5 (017)	NO	FLOW																								
GW-7A (020)	80.5	19		7.6	<0.1			12.			<.005	18.					0.3	7.1	7.6		16.		26.		0.2	
NET LBS/DAY					0	0		611.			0	12.											0		0	
GW-10A (028)	27.6	17		N/S	<0.1			20.			<.005	<5.					0.4	8.3	8.0		10.		40.		1.6	
NET LBS/DAY					0			2011			0	0											2942		322	
GW-11A (030)	86.3	16		N/S	0.1			16.			<.005	<5.					0.4	2.4	7.9		16.		41.		1.9	
NET LBS/DAY					0			2347			0	0											6513		998	
GT-17 (034)	25.5	16		N/S	<0.1			120.	<10.	<10.	<.005	22.					0.6	4.7	7.9				65.	30.	0.3	

NET [illegible]

S. STEEL
AY 14-15, 1981

STATION NO:	FLOW	TEMP	D.O.	pH	AMMONIA-N	B.O.D.5	CADMIUM	CHLORIDES	CHROME-H	CHROME-T	~~C.O.D.~~ Cu	~~COPPER~~ Phenol	IRON-TOT	LEAD	MANGANESE	NICKEL	NO_2 & NO_3	OIL & GR	pH	PHOSPORUS-P	S. SOLIDS	T. SOLIDS	SULPHATE	ZINC	FLUORIDE	FECAL COLI
W-1 (002)					250.			0			0	16.5											1073		0	
W-5 (017)		No	Flow		–			–			–	–											–		–	
W-7A (020)					0			0.71			0	12.											0		0	
W-10A (028)					0			2071			0	0											2992		322	
W-11A (030)					0			2347			0	0											1573		748	
ST-17 (034)					0			23,393			0	4.7											3932		21	
TOTALS					250			28,483			0	33.2											14,570		1141.	
						120.	10.	10.	.005	22.						0.6	4.7	79								

UNITED STATES STEEL CORPORATION
GARY WORKS WATER QUALITY CONTROL LABORATORY
COKE AND COAL CHEMICAL DIVISION

State Board of Health Duplicates

NPDES Permit Number	002	005	007	010	015	017	018	019
Gary Outfall	GW1	GW1A	GW2	GW3	GW4	GW5	GW6	GW7
Date Sampled	5-14-81							
Sample Freq.	24hr Composites							
Temperature, °F								
pH, units (Laboratory)	7.9							
Color (True), units								
B.O.D.								
C.O.D.								
Residual Chlorine								
Fecal Coliform, n/100 ml.								
Phenol UGL	26	<1	74	27	<1	NO	<1	<1
Cyanide	0.01	<0.01	0.02	0.01	0.01	SAMPLE	0.01	<0.01
Ammonia-N	0.8	0.5	6.7	2.8	0.2		0.7	0.2
TKN								
Oil and Grease Average	5	5	6	7	4		3	3
Suspended Solids	24							
Sulfate	32							
Sulfite								
Sulfide								
Fluoride	0.24							
Phosphorus								
Boron								
Chloride	19.8							
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Nickel								
Zinc								
Aluminum								
Barium								
Cobalt								
Iron								
Magnesium								
Molybdenum								
Manganese								
Tin								
Titanium								
Oil & Grease 8A-4P	7	6	9	7	8		6	8
Oil & Grease 4P-12A	2	3	3	6	1		1	<1
Oil & Grease 12A-8A	6	5	6	9	2		3	<1
Flow, mgd.								

*All units in mg/l except where indicated 005 Phenol & NH_3 Not Preserved
*Hours between increments/Total Sampling Hours

UNITED STATES STEEL CORPORATION
GARY WORKS WATER QUALITY CONTROL LABORATORY
COKE AND COAL CHEMICAL DIVISION

State Board of Health Duplicates

NPDES Permit Number	020	021	028	030	032	033	034	035
Gary Outfall	GW7A	GW9	GW10A	GW11A	GW13	ST14	ST17	GWL1
Date Sampled	5-14-81							
Sample Freq	24hr Composites							
Temperature, °F								
pH, units (Laboratory)	2.0		8.3	8.0			7.7	
Color (True), units								
B.O.D.								
C.O.D.								
Residual Chlorine								
Fecal Coliform, n/100 ml.								
Phenol UGL	2	NO	<1	<1			<1	
Cyanide	<0.01	SAMPLE	0.01	<0.01			<0.01	
Ammonia-N	0.1		0.1	0.1			0.1	
TKN								
Oil and Grease Average	4		1	2	<1	1	3	3
Suspended Solids	22		18	19			10	
Sulfate	(1) Contaminated		41	43			65	
Sulfite								
Sulfide								
Fluoride	0.24		1.95	1.05			0.32	
Phosphorus								
Boron								
Chloride	(1) Contaminated		23.3	20.0			139.7	
Antimony								
Cadmium								
Chromium							<0.05	
Copper								
Lead								
Nickel								
Zinc							<0.05	
Aluminum								
Barium								
Cobalt								
Iron								
Magnesium								
Molybdenum								
Manganese								
Tin							<0.1	
Titanium								
Oil & Grease 9A-12P	5		<1	2	1	1	2	2
Oil & Grease 12P-12A	2		2	3	<1	1	3	6
Oil & Grease 12A-8A	6		<1	<1	<1	<1	3	<1
Flow, mgpd.								

*All units in mg/l except where indicated (1) ACIDIFIED SAMPLE
**Hours between increments/Total Sampling Hours

UNITED STATES STEEL CORPORATION
GARY WORKS WATER QUALITY CONTROL LABORATORY
COKE AND COAL CHEMICAL DIVISION

State Board of Health Duplicates

NPDES Permit Number	036	037	039					
Gary Outfall	GWLIA	STL5	STL6	#1 Pumphse.	#4 Pumphse.	Lakeside Pumphse.		
Date Sampled	5-14-81							
Sample Freq.	24 hr composites →			Grab	Grab	Grab		
Temperature, °F								
pH, units (Laboratory)			8.1	8.2	8.2	8.2		
Color (True), units								
B.O.D.								
C.O.D.								
Residual Chlorine								
Fecal Coliform, n/100 ml.								
Phenol				<1	<1	<1		
Cyanide				<0.01	<0.01	<0.01		
Ammonia-N				<0.1	<0.1	<0.1		
TKN								
Oil and Grease Average	3	1	4					
Suspended Solids			28					
Sulfate				30	29	25		
Sulfite								
Sulfide								
Fluoride				0.22	0.21	0.16		
Phosphorus								
Boron								
Chloride				14.0	22.0	11.6		
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Nickel								
Zinc								
Aluminum								
Barium								
Cobalt								
Iron								
Magnesium								
Molybdenum								
Manganese								
Tin								
Titanium								
Oil & Grease 8A-4P	1	1	4					
Oil & Grease 4P-12A	5	2	3					
Oil & Grease 12A-8A	<1	<1	6					
Flow, mgpd.								

*All units in mg/l except where indicated
**Hours between increments/Total Sampling Hours

INDIANA STATE BOARD OF HEALTH
WATER POLLUTION CONTROL DIVISION

TABLE NO. 1
OUTFALL NO. 002 (GW-1)
DATE OF SAMPLING: May 14/15, 1981

MUNICIPALITY: U.S. Steel
LOCATION: Gary, Indiana

PERMIT NO. IN 0000281
RECEIVING STREAM: Gr. Calumet River

Parameters *	NPDES Limits		ISBH Lab.		Municipal Lab.	
	Daily Avg	Daily Max	Raw	Final	Raw	Final
Flow MGD	Measure			42.9		
BOD_5						
Suspended Solids	25	50		2		24
pH		6.0/9.0		7.6		7.9
Phenol UGL		measure		46		26
Sulfate		measure		29		32
Cyanide		measure		<0.005		0.01
Flouride				0.2		0.24
Ammonia - N				0.7		0.8
Cadmium						
Chlorides				17		19.8
Cr (Hex)						
Cr (Total)						
COD						
Copper						
Fluoride						
Total Iron						
Lead						
Maganese						
Nickel						
$NO_2 + NO_3$ - N				0.3		
Oil - Grease		10		6.0		5
Zinc						
Temperature °C				14.5		

* Units included if other than mg/l.

SBH65-069
11/79
State Form 38755

TABLE NO. 1
OUTFALL NO. 005 (GW)
DATE OF SAMPLING: MAY 14/15, 1981

FACILITY: U.S. STEEL
LOCATION: GARY IND

PERMIT NO. IN 0000281
RECEIVING STREAM: GR. CALUMET RIVER

Parameters *	NPDES Limits		ISBH Lab.		Facility Lab.	
Flow MGD	MEASURE			2.0		—
BOD_5						
Suspended Solids						
pH		6.0/9.0		7.8.		
PHENOL UGL ~~Fecal Coli MPN/100 ml~~		MEASURE		5 ~~.005~~		<1
Residual Cl						
~~Phosphorus - P~~ CYANIDE		MEASURE		<.005		<0.01
Total Solids						
Ammonia - N		MEASURE		0.2		0.5
Cadmium						
Chlorides						
Cr (Hex)						
Cr (Total)						
COD						
Copper						
Fluoride						
Total Iron						
Lead						
Manganese						
Nickel						
$NO_2 + NO_3 - N$	—			0.5		
Oil-Grease		NONE/10		5.1		5
Zinc						
TEMPERATURE °C	~~MEAS ONLY~~ —			37		—

SBH65-039
1/79
State Form 3965

Units included if other than mg/l.

TABLE NO. 1
OUTFALL NO. 007 (GUC)
DATE OF SAMPLING: MAY 14/15, 1981

FACILITY: U.S. STEEL
LOCATION: GARY IND

PERMIT NO. IN 0000281
RECEIVING STREAM: GR CALUMET RIVER.

Parameters *	NPDES Limits		ISBH Lab.		Facility Lab.	
Flow MGD	MEASURE			12.8		—
BOD_5						
Suspended Solids						
pH	6.0/9.0			8.0		—
~~Fecal Coli MPN/100 ml~~ PHENOL UGL	MEASURE			x110		74
Residual Cl						
~~Phosphorus - P~~ CYANIDE	MEASURE			<.005		0.02
Total Solids						
Ammonia - N	MEASURE			5.9		6.7
Cadmium						
Chlorides						
Cr (Hex)						
Cr (Total)						
COD						
Copper						
Fluoride						
Total Iron						
Lead						
Manganese						
Nickel						
$NO_2 + NO_3 - N$	—			0.4		—
Oil-Grease	NONE	10		7.4		6
Zinc						
TEMPERATURE °C	MEASURE			24		—

SBH65-039
1/79
State Form 3965

Units included if other than mg/l.

TABLE NO. 1
OUTFALL NO. 000 (GW-3)
DATE OF SAMPLING: MAY 14/15, 1981

FACILITY: U.S. STEEL
LOCATION: GARY IND

PERMIT NO. IN 0000281
RECEIVING STREAM: GR. CALUMET RIVER.

Parameters *	NPDES Limits		ISBH Lab.	Facility Lab.
Flow MGD	MEASURE		3.4	—
BOD_5				
Suspended Solids				
pH	6.0	9.0	7.6	—
~~Fecal Coli MPN/100 ml~~ PHENOL ug/L	MEASURE		45	27
Residual Cl				
~~Phosphorus - P~~ CYANIDE	MEASURE		<.005	0.01
Total Solids				
Ammonia - N	MEASURE		2.6	2.8
Cadmium				
Chlorides				
Cr (Hex)				
Cr (Total)				
COD				
Copper				
Fluoride				
Total Iron				
Lead				
Manganese				
Nickel				
$NO_2 + NO_3 - N$	—		0.4	—
Oil-Grease	NONE	10.0	4.6	7
Zinc				
TEMPERATURE °C	MEASURE		20	—

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Units included if other than mg/l.

DIVISION OF WATER POLLUTION CONTROL

TABLE NO. 1

OUTFALL NO. 015 (GW)

DATE OF SAMPLING: MAY 14/15, 1981

FACILITY: U.S. STEEL

LOCATION: GARY IND

PERMIT NO. IN 0000281

RECEIVING STREAM: GR CALUMET RIVER

Parameters *	NPDES Limits		ISBH Lab.		Facility Lab.	
Flow MGD	MEASURE		0.9		—	
BOD_5						
Suspended Solids						
pH	6.0/9.0		8.5		—	
~~Fecal Coli MPN/100 ml~~ PHENOL UGL	MEASURE		.05		<1	
Residual Cl						
~~Phosphorus - P~~ CYANIDE	MEASURE		<.005		0.01	
Total Solids						
Ammonia - N	MEASURE		<0.1		0.2	
Cadmium						
Chlorides						
Cr (Hex)						
Cr (Total)						
COD						
Copper						
Fluoride						
Total Iron						
Lead						
Manganese						
Nickel						
$NO_2 + NO_3 - N$	—		0.4		—	
Oil-Grease	NONE	/ 10.0	2.9		4	
Zinc						
TEMPERATURE °C	MEASURE		16		—	

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Units included if other than mg/l.

DIVISION OF WATER POLLUTION CONTROL

TABLE NO. 1

OUTFALL NO. 017 (GW)

DATE OF SAMPLING: MAY 14/15, 1981

FACILITY: U.S. STEEL

LOCATION: GARY, IND

PERMIT NO. IN 0000281

RECEIVING STREAM: GR. CALUMET RIVER

Parameters *	NPDES Limits		ISBH Lab.		Facility Lab.	
Flow MGD	MEASURE	NO FLOW - NO SAMPLE				
BOD_5						
Suspended Solids	500	750				
pH	6.0	/ 9.0				
~~Fecal Coli MPN/100 ml~~ PHENOL	NONE					
~~Residual Cl~~ SULFATE	NONE					
~~Phosphorus - P~~ CYANIDE	NONE					
Total Solids						
Ammonia - N	NONE					
Cadmium						
Chlorides	NONE					
Cr (Hex)						
Cr (Total)						
COD						
Copper						
Fluoride	NONE					
Total Iron						
Lead						
Manganese						
Nickel						
$NO_2 + NO_3 - N$						
Oil-Grease	NONE	10				
Zinc	NONE					
TEMPERATURE	MEASURE					

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Units included if other than mg/1.

DIVISION OF WATER POLLUTION CONTROL

TABLE NO. 1

OUTFALL NO. 018 (GW-6)

DATE OF SAMPLING: MAY 14/15, 1981

FACILITY: U.S. STEEL

LOCATION: GARY, IND

PERMIT NO. IN 0000281

RECEIVING STREAM: GR. CALUMET RIVER

Parameters *	NPDES Limits		ISBH Lab.	Facility Lab.
Flow MGD	MEASURE		37.7	—
BOD_5				
Suspended Solids				
pH	6.0	9.0	7.7	—
~~Fecal Coli MPN/100 ml~~ PHENOL UG/L	MEASURE		<.005	<1
Residual Cl				
~~Phosphorus - P~~ CYANIDE	MEASURE		<.005	0.01
Total Solids				
Ammonia - N	MEASURE		0.5	0.7
Cadmium				
Chlorides				
Cr (Hex)				
Cr (Total)				
COD				
Copper				
Fluoride				
Total Iron				
Lead				
Manganese				
Nickel				
$NO_2 + NO_3 - N$	—		0.4	—
Oil-Grease	NONE	10.0	2.0	3
Zinc				
TEMPERATURE °C	MEASURE		18	—

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Units included if other than mg/l.

TABLE NO. 1
OUTFALL NO. 019 (GW-7)
DATE OF SAMPLING: MAY 14/15, 1981

FACILITY: U.S. STEEL
LOCATION: GARY IND

PERMIT NO. IN 0000281
RECEIVING STREAM: GR. CALUMET RIVER

Parameters *	NPDES Limits		ISBH Lab.	Facility Lab.
Flow MGD	MEASURE		39.2	—
BOD_5				
Suspended Solids				
pH	6.0/9.0		8.0	—
~~Fecal Coli MPN/100 ml~~ PHENOL UGL	MEASURE		11	<1
Residual Cl				
~~Phosphorus - P~~ CYANIDE	MEASURE		<.005	<0.01
Total Solids				
Ammonia - N	MEASURE		<0.1	0.2
Cadmium				
Chlorides				
Cr (Hex)				
Cr (Total)				
COD				
Copper				
Fluoride				
Total Iron				
Lead				
Manganese				
Nickel				
$NO_2 + NO_3 - N$	—		0.3	—
Oil-Grease	NONE	10.0	2.3	3
Zinc				
TEMPERATURE	MEASURE		18	—

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Units included if other than mg/l.

TABLE NO. 1
OUTFALL NO. 020 (GU-7A)
DATE OF SAMPLING: MAY 14/15, 1981

FACILITY: U.S. STEEL
LOCATION: GARY, IND

PERMIT NO. IN 00000281
RECEIVING STREAM: GR. CALUMET RIVER

Parameters *	NPDES Limits		ISBH Lab.	Facility Lab.
Flow MGD	MEASURE		80.5	—
BOD_5				
Suspended Solids	25	50	16	22
pH	6.0	9.0	7.6	—
~~Fecal Coli MPN/100 ml~~ PHENOL UGL	NONE		18	2
~~Residual Cl~~ SULFATES	NONE		26	— CONTAMINATED
~~Phosphorus - P~~ CYANIDE	NONE		<.005	<0.01
Total Solids				
Ammonia - N	NONE		<0.1	0.1
Cadmium				
Chlorides	NONE		12	— CONTAMINATED
Cr (Hex)				
Cr (Total)				
COD				
Copper				
Fluoride	NONE		0.2	0.24
Total Iron				
Lead				
Manganese				
Nickel				
$NO_2 + NO_3 - N$			0.3	—
Oil-Grease	NONE	10	7.1	4
Zinc				
TEMPERATURE °C	MEASURE		19	—

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Units included if other than mg/l.

OUTFALL NO. 028 (GLCON)
DATE OF SAMPLING: MAY 14/15, 1981

FACILITY: U.S. STEEL
LOCATION: GARY IND

PERMIT NO. IN 0000281
RECEIVING STREAM: GR. CALUMET RIVER

Parameters *	NPDES Limits		ISBH Lab.	Facility Lab.
Flow MGD	MEASURE		27.6	—
BOD_5				
Suspended Solids	30	60	10	18
pH	6.0/9.0		8.0	8.3
~~Fecal Coli MPN/100 ml~~ PHENOL UGL	NONE		5	<1
~~Residual Cl~~ SULPHATE	NONE		40	41
~~Phosphorus - P~~ CYANIDE	NONE		<.005	0.01
Total Solids				
Ammonia - N	NONE		<0.1	0.1
Cadmium				
Chlorides	NONE		20	23.3
Cr (Hex)				
Cr (Total)				
COD				
Copper				
Fluoride	NONE		1.6	1.95
Total Iron				
Lead				
Manganese				
Nickel				
$NO_2 + NO_3 - N$			0.4	—
Oil-Grease	NONE	10	8.3	1
Zinc				
TEMPERATURE °C	MEASURE		17	—

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Units included if other than mg/l.

TABLE NO. 1
OUTFALL NO. 030 (GW[illegible])
DATE OF SAMPLING: May 14/15, 1981

FACILITY: U.S. STEEL
LOCATION: GARY IND

PERMIT NO. IN 0000281
RECEIVING STREAM: GR CALUMET RIVER

Parameters *	NPDES Limits		ISBH Lab.	Facility Lab.
Flow MGD	MEASURE		56.3	—
BOD_5				
Suspended Solids	30	60.	16	19
pH	6.0/9.0		7.9	8.0
~~Fecal Coli MPN/100 ml~~ PHENOL UGL	NONE		5	1
~~Residual Cl~~ SULPHATE	NONE		41	43
~~Phosphorus - P~~ CYANIDE	NONE		<.005	<0.01
Total Solids				
Ammonia - N	NONE		<0.1	0.1
Cadmium				
Chlorides	NONE		16.	20
Cr (Hex)				
Cr (Total)				
COD				
Copper				
Fluoride	NONE		1.9	1.05
Total Iron				
Lead				
Manganese				
Nickel				
$NO_2 + NO_3 - N$			0.4	—
Oil-Grease	NONE	10	2.4	2
Zinc				
TEMPERATURE °C	MEASURE		16	—

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Units included if other than mg/l.

TABLE NO. 1
OUTFALL NO. 034 CGW
DATE OF SAMPLING: MAY 14/15, 1981

FACILITY: U.S. STEEL
LOCATION: GARY, IND
PERMIT NO. IN 0000281
RECEIVING STREAM: GR. CALUMET RIVER

Parameters *	NPDES Limits		ISBH Lab.	Facility Lab.
Flow MGD	MEASURE		25.5	—
BOD_5				
Suspended Solids	30	60		10
pH	6.0/	9.0	7.9	7.7
~~Fecal Coli MPN/100 ml~~ PHENOL UGL	NONE		22	<1
~~Residual Cl~~ SULPHATE	NONE		65	65
~~Phosphorus - P~~ CYANIDE	NONE		<.005	<0.01
Total Solids				
Ammonia - N	NONE		<0.1	0.1
Cadmium				
Chlorides	NONE		120	139.7
Cr (Hex)	0.1	0.3	<.01	<.05
Cr (Total)	—		<.01	—
COD				
Copper				
Fluoride	NONE		0.3	0.32
Total Iron				
~~Lead~~ TIN	NONE	1.0	<.20	<0.1
Manganese				
Nickel				
$NO_2 + NO_3 - N$			0.6	—
Oil-Grease	NONE	15	4.7	3
Zinc	0.1	0.3	.030	<.05
TEMPERATURE °C	MEASURE		16	—

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Units included if other than mg/l.

Table No. 2

Indiana State Board of Health
Division of Water Pollution Control

Net Loadings Pounds Per Day
May 14 and 15, 1982

Facility: U.S. Steel
Location: Gary, Indiana

Permit No.: IN 00000281
Receiving Stream: Great Calumet River

Outfall	Parameters					
	Ammonia-N	Chlorides	Cyanide	Phenol UGL	Sulfate	Fluorides
002	250	0	0	16.5	1,073	0
017			No Flow			
020	0	671	0	12	0	0
028	0	2,071	0	0	2,992	322
030	0	2,347	0	0	6,573	798
034	0	23,393	0	4.7	8,932	21
Total	250	28,482	0	33.2	19,570	1,141

Table No. 3
Indiana State Board of Health
Division of Water Pollution Control
Yearly Summary Company Self Monitoring
January 1, 1980 to December 31, 1980

Facility: U.S. Steel Corporation
Location: Gary, Indiana

Permit No.: IN 00000281
Receiving Stream: Grand Calumet River

Note: All units in MGL unless specified

Outfall No.	Flow MGD	pH min./max.	Temp. °F	S.Solids	O & G	Ammonia as N	Cyanide Total	Phenol	Chloride	Sulfate	Fluoride	Zinc	Chromium Total	Tin
001	0.04	7.0/7.5												
002	41.7	6.3/8.8	61	11.9	4.65	0.46	0.12	0.21	15.6	28.4	0 .21			
003	0.05	7.0/7.6												
004	0.05	7.5/7.6												
005	4.9	7.1/8.8	82		2.9	0.53	0.28	0.59						
007	13.6	7.1/8.8	70	8.8	3.4	2.8	0.18	0.45	15.4	36.2	0.17			
010	3.61	7.2/8.4	67	11	5.3	2.1	0.23	0.34	21.8	32.7	0.39			
015	1.05	7.3/9.0	59	7.8	2.6	0.71	0.12	0.47	22.4	36.1	0.37			
017	2.87	6.5/9.0	82	10.5	2.9	44.9	0.72	0.22	0.11	762	18.4	0.51		
018	40.3	7.3/8.4	59	9.8	2.6	0.43	0.20	0.28	13.3	26.9	0.19			
019	51.3	7.5/8.6	61	8.2	2.7	0.21	0.11	0.29	12.6	26.6	0.18			
020	83.4	6.2/8.4	62	9.6	3.1	0.41	0.19	0.43	17	31.1	0.28			
021				Sporadic Flow Storm										
028	26.9	6.3/9.0	61	12.8	4.3	0.20	0.13	0.28	18.9	33.5	0.85			
030	53.1	7.3/8.9	60	12.3	3.9	0.17	0.12	0.34	17	34.1	0.63			
032	5.9	6.4/8.5	56		3.3									
033	2.8	7.4/8.4	71		2.7									
034	20.7	6.2/9.5	62	12	4.4	0.45	0.16	0.93	0.12	75.6	0.36	0.57	0.63	0.11
035	73.5	7.7/8.5	56		2.9									
036	17.1	7.5/8.8	59		2.6									
037	8.7	7.6/8.6	58		3.1									
039	93.3	7.1/8.7	54	12.3	5									

Recap.
U. S. Steel-Gary for 1974
Effluent for Year in Pounds/Day

		Flow mgd	Temp °C	pH	Phenol	Oil	Sus. Solids	NH_3-N	Chlorides	Cyanide	Iron total	Cr
Grand Calumet River Outfalls	GW-1	34.6	21	7.9	5	629	5,149	288.6	-	7.33	-	-
	GW-2	14.8	21.1	8.0	6.6	241	1,911	251.8	-	3.75	-	-
	GW-2A	Down	-	-	-	-	-	-	-	-	-	-
	GW-3	3.19	24.4	7.8	.75	111.1	415.5	28.5	-	1.58	-	-
	GW-4	1.68	15.3	8.0	.004	22.3	243	8.1	-	0	-	-
	GW-5	65.3	22.3	7.2	141.8	638.9	8,755	3,392	-	3,440	-	-
	GW-6	37.2	16.1	7.8	2.8	515	4,302	69	-	35.7	-	-
	GW-7	35.2	15.3	8.0	-	283.8	3,651	-	-	-	-	-
	GW-7A	100.9	18.6	7.5	-	1,753	9,087	-	-	-	-	-
	GW-9	6.03	16.6	716	-	106.6	635	-	-	-	-	-
	GW-10A	39.2	17.5	8.2	-	1,438	5,951	-	-	-	-	-
	GW-11A	83.6	16	8.0	-	1,807	11,931	-	-	-	-	-
	GW-13	6.4	14.3	7.8	-	162	1,825	-	-	-	-	-
	GW-14	113	20.1	6.8	-	15.4	338	-	-	-	-	-
	5T-17	22	18.4	7.4	-	642.6	2,903	-	-	-	-	16
	Totals Yearly	164,757.4	93841.5	7.7	51,288.2	2,400,751	20,840,222	1,473,870	-	1,273,251	-	5,840
	Penn RR Bridge	29,014,215			29,674.5		14,527	410,187		23,177.5		
Lake Outfalls	GWL-1	63.6	16.1	8.1	-	575	4,662	-	-	-	-	-
	GWL-1A	59.1	16.8	8.1	-	479.6	4,220	-	-	-	-	-
	5TL-2	Down	-	-	-	-	-	-	-	-	-	-
	5TL-5	5.01	15.8	8.1	-	64.4	541.8	-	-	-	-	-
	5TL-6	119.1	12.4	8.0	-	2,640	15,562	-	-	-	-	-
	Totals Yearly	90,086	22,316	8.1	-	1,372,035	9,119,817	-	-	-	-	-
	Grand Total Yearly	254,843.4 x106	116,157.5	7.9	57,288.2	3,772,786	29,960,039	1,473,870	-	1,273,251	-	5,840

BTU's/yn - 1,109,679,800,000 BTU's

UNITED STATES STEEL CORPORATION GARY WORKS
ANALYSIS AND LOADINGS OF INDUSTRIAL WASTE WATER TO GARY SANITARY DISTRICT

MAY 1977

DATE	FLOW GPD	PHENOLICS PPB	PHENOLICS LB/DAY	CYANIDES PPM	CYANIDES LB/DAY	SUS. SOLIDS PPM	SUS. SOLIDS LB/DAY	AMMONIA - N PPM	AMMONIA - N LB/DAY	PH
1	81800	125000	65	64.06	43.7	52	35	2000.0	1362.8	9.1
2	163400	=0	=0	=.00	=.0	=0	=0	1200.0	1633.3	9.6
3	169500	286600	402	40.77	57.2	45	63	1900.0	2666.6	9.4
4	187100	=0	=0	=.00	=.0	=0	=0	1600.0	2493.7	9.3
5	270500	27590	62	30.78	69.4	61	137	1350.0	3041.9	9.4
6	240000	=0	=0	=.00	=.0	=0	=0	1700.0	3398.6	9.5
7	300400	=0	=0	=.00	=.0	=0	=0	1550.0	3878.8	9.4
8	270000	72310	163	4.37	9.8	54	121	1550.0	3486.1	9.4
9	112500	=0	=0	=.00	=.0	=0	=0	1500.0	1405.7	9.4
10	185700	35940	56	36.20	56.0	354	548	1725.0	2668.4	9.6
11	219300	=0	=0	=.00	=.0	=0	=0	1775.0	3242.5	9.4
12	255000	170770	363	49.10	104.3	62	132	2900.0	6160.0	9.4
13	240000	=0	=0	=.00	=.0	=0	=0	1125.0	2249.1	9.4
14	263900	=0	=0	=.00	=.0	=0	=0	1150.0	2528.0	9.5
15	287800	293330	703	52.00	124.7	75	180	4500.0	*788.2	9.1
16	183000	=0	=0	=.00	=.0	=0	=0	3200.0	4876.0	9.2
17	215700	103080	185	5.80	10.4	77	138	1600.0	2874.8	9.1
18	270300	=0	=0	=.00	=.0	=0	=0	2300.0	5176.7	9.2
19	228000	194000	368	58.70	111.5	108	205	2200.0	4178.3	9.3
20	97700	=0	=0	=.00	=.0	=0	=0	1550.0	1505.6	9.4
21	0	=0	=0	=.00	=.0	=0	=0	1750.0	0.0	9.3
22	200	193100	0	74.90	.1	110	0	2050.0	3.4	9.2
23	17000	=0	=0	=.00	=.0	=0	=0	1198.0	169.6	9.3
24	17000	299200	42	93.60	13.3	158	22	1600.0	226.6	9.4
25	100100	=0	=0	=.00	=.0	=0	=0	2350.0	1959.5	9.4
26	175900	254100	372	82.00	120.2	103	151	2300.0	3370.1	9.4
27	114300	=0	=0	=.00	=.0	=0	=0	2200.0	2094.7	9.4
28	8000	=0	=0	=.00	=.0	=0	=0	2100.0	139.9	9.4
29	6000	275700	14	35.80	1.8	83	4	2750.0	137.4	9.4
30	62200	=0	=0	=.00	=.0	=0	=0	1525.0	790.1	9.4
31	204400	72730	124	37.40	63.7	60	102	1600.0	2724.2	9.5
AVG	159539	171675	210	47.53	56.1	100	131	1938.6	2620.5	9.4

* = 10788.2

NOTE: =0 MEANS NOT DETERMINED
ANALYZED BY: COKE AND CHEMICALS DIVISION LABORATORY

from 82 [illegible]

Amount	EPA #	T/S/D	
8,672 tons/yr.	K087	D83	Phenol, nepthalene
3.62 tons/yr.	U043	D80	Ethene - chloro
8,362.06 tons/yr	K062	D80	Spent pickle liquor
2,000 tons/yr.	K061	D80	Emission Control dust/sludge
1.2 tons/yr.	D002	D80	corrosive
100 lbs/yr.	D001	T03 D80	Ignitable
400 lbs/yr.	D002	T03 D80	corrosive
100 lbs/yr.	K054	T03 D80	chrome blue
58,500 tons/yr.	K062	T02 D80	Spent Pickle Liq.
6,838 tons/yr.	K062	S02 T01 T02	"
18 tons/yr.	D002	T01 T02	corrosive
36 tons/yr.	D002	S02 T01 T02	corrosive
10,737.8 tons/yr.	K062	T01 T02	spent pickle liq.

Disposal & treatment facilities

A Q-I Pitch Cooling & Storage
HWD-1 Drawing No. 45 - East LF
B Tar Sludge Impoundment
HWD-2 East LF Drawing No. 45
C HW LF
stockton LF HWD-5 Drawing No. 46
D Waste Acid treatment Plant
HWT-1
E. Barrel Storage 10" No 1 Bar Mill Building (Note: Drum handling and disposal covered under seperate procedure)

HWD-9 Deep Well

3 designated HW Disposal sites HWD-1-2-5

* Annually a max. of 6000 H drums may be Generated by Gary works

* Should have internal manifest system under RCRA for movement of drums containing H chem.

tabard

3 designated HWLF

HWD-1 East LF

1. Off-spec Pitch

HWD-2 Tar Sludge East LF.

1. Flushing liquor Tar Decanters - Tar sludge
2. Primary Cooler Tar Decanter
3. Tar Mixing Tank (injection) - Sludge

HWD-5 Stockton LF.

1. Central Stores Cleaning Tank - sludge & spent sol.
2. No. 2 Q-BOP cleaning Tank - " "
3. Caustic Flakes - spillage from filling Caustic Cleaning Tank
4. Machine Shop - Roll Grinder sludge
5. Caustic Holding Tank - sludge
6. North Waste Pickle liq. Pit & pump station - Sludge
7. ~~[illegible]~~
8. South " " " " " "
9. TTP Sludge Drying Beds
10. TTP API Seperator No. 6 - Zn sludge
11. TTP - Centrifuge & API Seperator Sludge
12. ST-17 sludge Drying Beds - Sludge
13. Waste Acid Treatment Plant - Spent cartridge Filters
14. Oxygen Repair Shop - Cleaning Tank - Spent Sol.
15. E & W. Pipe shops - pipe cleaning wastes
16. Electric Furnace Dust & sludge.
17. Truck Garage Cleaning Tank - spent solvents & sludge.