ROUGE STEEL COMPANY

3001 Miller Road
P. O. Box 1699
Dearborn, Michigan 48121-1699

August 30, 1982

Mr. Valdas Adamkus
Regional Administrator
USEPA Region V
230 South Dearborn
Chicago, IL 60604

RECEIVED 9/09/82

Subject: Groundwater Monitoring Results
Ford Allen Park Clay Mine
EPA ID No. (MIT270010093) TSD, PA

Dear Mr. Adamkus:

Transmitted herewith pursuant to the applicable Federal hazardous waste management regulations are the results of groundwater monitoring conducted at the subject facility.

The results being submitted cover the three quarters ending August 1982.

Very truly yours,

Ben C. Trethewey

Ben C. Trethewey, Manager
Mining Properties Department

BCT:dp

Attachment

Circ: A. B. M. Houston

Note: No date stamp

DICI

Groundwater Monitoring Data
Drinking Water Parameters

Plant *Allen Park Clay Mine* Sampling Date *12/1980 & 10/81*

First Quarterly Sampling	Well # *2-D*	Well # *102-D*	Well # *103-D*	Well # *104-D*
Static Water Elevation (Ft)	600.67	603.22	603.52	603.81
Up- or Downgradient (U,D)	U	D	D	D
Arsenic	<.0003	<.0003	<.0003	<.0003
Barium	<0.1	<0.1	<0.1	<0.1
Cadmium	.24	<.01	<.01	<.01
Chromium	<.01	<.01	<.01	<.01
Fluoride	.94	1.42	1.31	1.31
Lead	<.05	<.05	<.05	<.05
Mercury	<.0002	<.0002	<.0002	<.0002
Nitrate	<0.1	<0.1	<0.1	<0.1
Selenium	<.0003	<.0003	<.0003	<.0003
Silver	<.01	<.01	<.01	<.01
Endrin	<.0002	<.0002	<.0002	<.0002
Lindane	<.004	<.004	<.004	<.004
Methoxychlor	<.01	<.01	<.01	<.01
Toxaphene	<.005	<.005	<.005	<.005
2, 4-D	<0.1	<0.1	<0.1	<0.1
2, 4, -5-TP Silvex	<.001	<.001	<.001	<.001
Radium (pCi/l)	<5	<5	<5	<5
Gross Alpha (pCi/l)	<5	<5	<5	<5
Gross Beta (pCi/l)	<5	<5	<5	<5
Coliform Bacteria (Colonies/100 ml)	2/100	4/100	<2/100	4/100

Units are mg/l unless otherwise noted.

Groundwater Monitoring Data
Water Quality Parameters

Plant Allen Park Clay Mine Sampling Date 12/1980 & 10/1981

	Well #2-D	Well #102-D	Well #103-D	Well #104-D
Static Water Elevation (Ft)	600.67	603.22	603.52	603.81
Up- or Downgradient (U,D)	U	D	D	D
Chloride	150	130	25	140
Iron	<.03	<.03	<.03	<.03
Manganese	<.01	<.01	<.01	.06
Phenols	.008	<.005	<.005	<.005
Sodium	110	100	6.0	100
Sulfate	1050	1200	46	1350

Units are mg/l unless otherwise noted.

GROUNDWATER MONITORING DATA
POLLUTION INDICATIVE PARAMETERS

Plant Allen Park Clay Mine Sampling Date 12/80 + 10/81

	Well # 2-D	Well # 102-D	Well # 103-D	Well # 104-D
Static Water Elevation (Ft)	600.67	603.22	603.52	603.81
Up or Downgradient (U,D)	U	D	D	D
pH (units)	7.7	8.4	8.6	8.0
	7.9			
	8.0			
	8.0			
Specific Conductance (µmhos/cm)	2500	2500	300	2550
	2200			
	2400			
	2200			
TDS (mg/l)	7.7	5.6	5.6	6.6
	7.0			
	7.7			
	7.6			
[illegible]	<.005	.008	.029	<.005
	<.005			
	<.005			
	<.005			

Groundwater Monitoring Data
Drinking Water Parameters

Plant Allen Park Clay Mine Sampling Date 5-6-82

2nd Quarterly Sampling

	Well # 2-D	Well # 5-D	Well # 102-D	Well # 103-D
Static Water Elevation (Ft)	599.01	605.12	601.77	603.65
Up- or Downgradient (U,D)	U	U	D	D
Arsenic	<.010	<.010	<.010	<.001
Barium	<.04	.06	<0.04	<.02
Cadmium	.023	.006	.008	.007
Chromium	.05	ND .005	ND .005	.02
Fluoride	.80	1.3	1.3	1.5
Lead	.093	.010	.010	ND .010
Mercury	ND .0002	<.0002	ND .0002	ND .0002
Nitrate	ND .01	.01	ND .01	ND .01
Selenium	<.010	<.010	<.010	<.010
Silver	.010	.003	.008	.005
Endrin ug/l	ND 0.10	ND 0.10	ND 0.10	ND 0.10
Lindane ug/l	ND 0.10	ND 0.10	ND 0.10	ND 0.10
Methoxychlor ug/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50
Toxaphene ug/l	ND 1.0	ND 1.0	ND 1.0	ND 1.0
2, 4-D ug/l	ND 0.10	ND 0.10	ND 0.10	ND .10
2, 4, -5-TP Silvex ug/l	ND .050	ND .050	ND .050	ND .050
Radium (pCi/l)	<5	ND (2)	<5	ND 2
Gross Alpha (pCi/l)	<5	<5	<5	ND 3
Gross Beta (pCi/l)	ND 4	ND 4	<8	ND 4
Coliform Bacteria (Colonies/100 ml)	ND (2)	ND (2)	ND (2)	ND (2)

Units are mg/l unless otherwise noted.

Groundwater Monitoring Data
Drinking Water Parameters

Plant Allen Park Clay Mine Sampling Date 5-6-82

	Well # 104-D	Well #	Well #	Well #
Static Water Elevation (Ft)	604.32			
Up- or Downgradient (U,D)	D			
Arsenic	<.001			
Barium	<.04			
Cadmium	.010			
Chromium	<.005			
Fluoride	1.0			
Lead	ND .010			
Mercury	ND .0002			
Nitrate	ND 0.01			
Selenium	< .010			
Silver	.009			
Endrin ug/l	ND 0.10			
Lindane ug/l	ND 0.10			
Methoxychlor ug/l	ND 0.50			
Toxaphene ug/l	ND 1.0			
2, 4-D ug/l	ND .10			
2, 4, 5-TP Silvex ug/l	ND .050			
Radium (pCi/l)	<5			
Gross Alpha (pCi/l)	ND 3			
Gross Beta (pCi/l)	ND 4			
[illegible]	ND (2)			

Units are mg/l unless otherwise noted.

Groundwater Monitoring Data
Water Quality Parameters

Plant Allen Park Clay Mine Sampling Date 5-6-82

	Well #2-D	Well #5-D	Well #102-D	Well #103-D
Static Water Elevation (Ft)	599.01	605.12	601.77	603.65
Up- or Downgradient (U,D)	U	U	D	D
Chloride	170	140	140	130
Iron	5.1	1.7	0.53	1.0
Manganese	0.13	.023	.023	.023
Phenols	.004	ND .004	ND .004	ND .004
Sodium	120	85	95	8.7
Sulfate	890	190	910	760

Units are mg/l unless otherwise noted.

Groundwater Monitoring Data
Water Quality Parameters

Plant Allen Park Clay Mine Sampling Date 5-6-82

	Well # 104-D	Well #	Well #	Well #
Static Water Elevation (Ft)	604.32			
Up- or Downgradient (U,D)	D			
Chloride	150			
Iron	43			
Manganese	.060			
Phenols	ND .004			
Sodium	100			
Sulfate	1200			

Units are mg/l unless otherwise noted.

GROUNDWATER MONITORING DATA
POLLUTION INDICATIVE PARAMETERS

Plant Allen Park Clay Mine Sampling Date 5-6-82

	2-D Well #	5-D Well #	102-D Well #	103-D Well #
Static Water Elevation (Ft)	599.01	605.12	601.77	603.65
Up- or Downgradient (U,D)	U	U	D	D
pH (Units)	6.91	7.32	7.30	7.02
	6.95	7.28	7.30	7.09
	7.01	7.31	7.30	7.11
	7.09	7.32	7.30	7.12
Specific Conductance (µmhos/cm)	2295	2160	2993	2622
	2085	2109	2997	2604
	2187	2121	2973	2583
	2127	2100	2940	2616
TOC (mg/l)	20	6	9	4
	20	5	12	5
	19	5	11	6
	19	6	13	6
TOX (mg/l)	.012	.006	.011	<.005
	.016	.010	.006	<.005
	.015	.009	.006	<.005
	.014	.008	.007	<.005

GROUNDWATER MONITORING DATA
POLLUTION INDICATIVE PARAMETERS

Plant Allen Park Clay Mine Sampling Date 5-6-82

	104-D Well #	Well #	Well #	Well #
Static Water Elevation (Ft)	604.32			
Up- or Downgradient (U,D)	D			
pH (Units)	6.89			
	6.90			
	6.91			
	6.90			
Specific Conductance (µmhos/cm)	1980			
	1960			
	1980			
	1920			
TOC (mg/l)	7			
	10			
	8			
	8			
TOX (µgm/l)	<.005			
	<.005			
	<.005			
	<.005			

Groundwater Monitoring Data
Drinking Water Parameters

Plant Allen Park Clay Mine Sampling Date 7-14-82

THIRD QUARTERLY SAMPLES	Well # 2-D	Well # 5-D	Well # 102-D	Well # 103-D
Static Water Elevation (Ft)	600.68	605.45	601.68	601.23
Up- or Downgradient (U,D)	U	U	D	D
Arsenic	ND .001	ND .001	ND .001	ND .001
Barium	<.02	ND .02	ND .02	ND .02
Cadmium	.006	ND .003	<.003	.008
Chromium	.011	.016	.006	ND .004
Fluoride	0.8	1.0	1.0	1.0
Lead	.03	<0.01	ND 0.01	ND 0.01
Mercury	ND .0002	.0005	ND .0002	ND .0002
Nitrate	.01	.25	.27	.05
Selenium	ND .01	ND .01	ND .01	ND .01
Silver	.004	ND .003	.004	.003
Endrin µg/l	ND .10	ND .10	ND .10	ND .10
Lindane µg/l	ND .10	ND .10	ND .10	ND .10
Methoxychlor µg/l	ND .50	ND .50	ND .50	ND .50
Toxaphene µg/l	ND 1.0	ND 1.0	ND 1.0	ND 1.0
2, 4-D µg/l	ND .10	ND .10	ND .10	ND .10
2, 4, -5-TP Silvex µg/l	ND .05	ND .05	ND .05	ND .05
Radium (pCi/l)	<5	<5	<5	<5
Gross Alpha (pCi/l)	<5	<5	<5	<5
Gross Beta (pCi/l)	<5	ND (4)	ND (4)	ND (4)
Coliform Bacteria (Colonies/100 ml)	<4 *	<4 *	<4 *	<4 *

Units are mg/l unless otherwise noted.

* NUMEROUS NON-specific bacteria (NSB) were observed to be present. Due to the Number of (NSB) the Aliquot used for Analysis WAS reduced to 25 mls.

Groundwater Monitoring Data
Drinking Water Parameters

Plant Allen Park Clay Mine Sampling Date 7-14-82

	Well # 104-D	Well #	Well #	Well #
Static Water Elevation (Ft)	604.32			
Up- or Downgradient (U,D)	D			
Arsenic	ND 0.01			
Barium	ND 0.02			
Cadmium	ND .003			
Chromium	.012			
Fluoride	0.9			
Lead	ND 0.01			
Mercury	ND .002			
Nitrate	0.23			
Selenium	ND 0.01			
Silver	.004			
Endrin	ND 0.10			
Lindane	ND 0.10			
Methoxychlor	ND 0.50			
Toxaphene	ND 1.0			
2, 4-D	ND 0.10			
2, 4, -5-TP Silvex	ND .050			
Radium (pCi/l)	<5			
Gross Alpha (pCi/l)	ND (3)			
Gross Beta (pCi/l)	ND (4)			
Coliform Bacteria (Colonies 100 ml)	8*			

Units are mg/l unless otherwise noted.

* Numerous NON-specific bacteria (NSb) were observed to be present. Due to the number of (NSb), the Aliquot used for ANAlysis WAS reduced to 25 ml/s.

Groundwater Monitoring Data
Water Quality Parameters

Plant Allen Park Clay Mine Sampling Date 7-14-82

	2-D Well #	5-D Well #	102-D Well #	103-D Well #
Static Water Elevation (Ft)	600.68	605.45	601.68	601.23
Up- or Downgradient (U,D)	U	U	D	D
Chloride	170	150	140	140
Iron	.84	1.2	5.1	.90
Manganese	.023	.016	.041	.018
Phenols	ND .004	ND .004	ND .004	.006
Sodium	110	88	97	85
Sulfate	1000	200	960	790

Units are mg/l unless otherwise noted.

Groundwater Monitoring Data
Water Quality Parameters

Plant Allen Park Clay Mines Sampling Date 7-14-82

	104-D Well #	Well #	Well #	Well #
Static Water Elevation (Ft)	604.32			
Up- or Downgradient (U,D)	D			
Chloride	160			
Iron	9.9			
Manganese	.042			
Phenols	ND .004			
Sodium	88			
Sulfate	1300			

Units are mg/l unless otherwise noted.

GROUNDWATER MONITORING DATA
POLLUTION INDICATIVE PARAMETERS

Plant Allen Park Clay Mine Sampling Date 7-14-82

	2-D Well #	5-D Well #	102-D Well #	103-D Well #
Static Water Elevation (Ft)	600.68	605.45	601.68	601.23
Up- or Downgradient (U,D)	U	U	D	D
pH (Units)	7.75	7.44	7.20	7.70
	7.76	7.50	7.20	7.70
	7.73	7.67	7.20	7.70
	7.76	7.60	7.30	7.70
Specific Conductance (μmhos/cm)	3054	1990	2524	2441
	2983	1918	2664	2468
	2980	1939	2651	2450
	2875	1954	2630	2438
TOC (mg/l)	3	21	21	12
	5	18	15	14
	5	18	17	14
	5	20	19	9
TOX (μgm/l)	.029	.064	.035	.010
	.033	.032	.010	.054
	.046	.024	.010	.010
	.027	.026	.010	.010

GROUNDWATER MONITORING DATA
POLLUTION INDICATIVE PARAMETERS

Plant Allen Park Clay Mine Sampling Date 7-14-82

	104-D Well #	Well #	Well #	Well #
Static Water Elevation (Ft)	604.32			
Up- or Downgradient (U,D)	D			
pH (Units)	7.70			
	7.68			
	7.68			
	7.67			
Specific Conductance (µmhos/cm)	2817			
	2885			
	2885			
	2852			
TOC (mg/l)	6			
	12			
	14			
	12			
TOX (µgm/l)	.010			
	.024			
	.010			
	.048			

Steel Division
Ford Motor Company

3001 Miller Road
Dearborn, Michigan 48121

July 13, 1982

Mr. Valdas Adamkus
Regional Administrator
U.S. EPA Region V
230 South Dearborn
Chicago, Illinois 60604

Subject: Ford Motor Company
Allen Park Clay Mine (MIT270010093)
Groundwater Monitoring Results

Dear Mr. Adamkus:

The second quarterly sampling of the groundwater monitoring wells at the Allen Park Clay Mine has been completed. In accordance with the reporting requirements contained in U.S. EPA RCRA 40 CFR, Part 265, Subpart F, as amended February 23, 1982, the following results were in excess of U.S. EPA Interim Drinking Water Standards: 0.023 mg/l cadmium, and 0.093 mg/l lead in the upgradient Well #2-D. Lead was not detected above the Interim Standards in the previous quarterly sampling and cadmium is significantly below previous results. Future quarterly samplings are necessary to confirm unexplainable results.

Very truly yours,

Ben C. Trethewey, Manager
Mining Properties Department

bcc: J. A. Esper
F. J. Kallin
J. M. Reinke

Groundwater Monitoring Data
Water Quality Parameters

Plant Allen Park Clay Mine Sampling Date 10-26-82

	2-D Well #	5-D Well #	102-D Well #	103-D Well #
Static Water Elevation (Ft)	600.68	604.84	599.15	601.26
Up- or Downgradient (U,D)	U	U	D	D
Chloride	170	140	140	130
Iron	0.45	.88	1.2	6.0
Manganese	.024	.008	.016	.037
Phenols	ND .004	ND .004	ND .004	ND .004
Sodium	240	180	200	160
Sulfate	880	70	810	840

Units are mg/l unless otherwise noted.

Groundwater Monitoring Data
Drinking Water Parameters

Plant Allen Park Clay Mine Sampling Date 10-26-82

	Well # 2-D	Well # 5-D	Well # 102-D	Well # 103-D
Static Water Elevation (Ft)	600.68	604.84	599.15	601.26
Up- or Downgradient (U,D)	U	U	D	D
Arsenic	ND .001	ND .001	ND .001	ND .001
Barium	ND 0.1	ND .05	ND 0.1	ND 0.2
Cadmium	ND .003	ND .003	ND .003	ND .003
Chromium	.016	.019	.008	ND .005
Fluoride	0.9	1.0	1.0	1.0
Lead	.007	** .091	<.007	<.007
Mercury	ND .0002	ND .0002	ND .0002	ND .0002
Nitrate	ND 0.01	ND 0.01	ND 0.01	ND .01
Selenium	ND .01	ND .01	ND .01	ND .01
Silver	.008	ND .005	.005	.007
Endrin ug/l	ND 0.10	ND 0.10	ND 0.10	ND .10
Lindane ug/l	ND 0.10	ND 0.10	ND 0.10	ND .10
Methoxychlor ug/l	ND 0.50	ND 0.50	ND 0.50	ND .50
Toxaphene ug/l	ND (1)	ND (1)	ND (1)	ND (1)
2, 4-D ug/l	ND 0.10	ND 0.10	ND 0.10	ND .10
2, 4, -5-TP Silvex ug/l	ND .050	ND .050	ND .050	ND .050
Radium (pCi/l)	<5	<5	<5	<5
Gross Alpha (pCi/l)	<5	<5	<5	<5
Gross Beta (pCi/l)	<8	<8	<8	<8
Coliform Bacteria (Colonies/100 ml)	<2.2	4 *	<2.2	5.1 *

Units are mg/l unless otherwise noted.

* VALUE EXCEEDS LEVEL IN APPENDIX III
** LEAD VALUE EXCEEDS LEVEL IN APPENDIX III

GROUNDWATER MONITORING DATA
POLLUTION INDICATIVE PARAMETERS

Plant Allen Park Clay Mine Sampling Date 10-26-82

	2-D Well #	5-D Well #	102-D Well #	103-D Well #
Static Water Elevation (Ft)	600.68	604.84	599.15	601.26
Up- or Downgradient (U,D)	U	U	D	D
pH (Units)	8.7	10.2	8.7	8.7
	8.7	10.2	8.7	8.7
	8.7	10.2	8.7	8.7
	8.7	10.2	8.7	8.7
Specific Conductance (µmhos/cm)	2256	1785	2392	2352
	2244	1800	2398	2308
	2252	1791	2358	2294
	2250	1860	2378	2288
TOC (mg/l)	15	21	16	26
	20	20	24	21
	17	9	23	22
	16	33	16	21
TOX (µgm/l)	.01	.021	.015	.01
	.017	.041	ND .01	.01
	.026	.025	.016	.014
	.038	.032	.013	ND .01

Groundwater Monitoring Data
Drinking Water Parameters

Plant Allen Park Clay Mine Sampling Date 10-26-82

	Well # 104-D	Well #	Well #	Well #
Static Water Elevation (Ft)	604.12			
Up- or Downgradient (U,D)	D			
Arsenic	ND .001			
Barium	ND 0.1			
Cadmium	ND .003			
Chromium	.013			
Fluoride	1.0			
Lead	.019			
Mercury	ND .0002			
Nitrate	.25			
Selenium	ND .01			
Silver	.012			
Endrin ug/l	ND .10			
Lindane ug/l	ND .10			
Methoxychlor ug/l	ND .50			
Toxaphene ug/l	ND (1)			
2, 4-D ug/l	ND .10			
2, 4, -5-TP Silvex ug/l	ND .050			
Radium (pCi/l)	<5			
Gross Alpha (pCi/l)	<5			
Gross Beta (pCi/l)	11			
Coliform Bacteria (Colonies/100 ml)	9.2 *			

Units are mg/l unless otherwise noted.

* VALUE EXCEEDS LEVEL IN APPENDIX III

Groundwater Monitoring Data
Water Quality Parameters

Plant Allen Park Clay Mine Sampling Date 10-26-82

	104-D Well #	Well #	Well #	Well #
Static Water Elevation (Ft)	604.12			
Up- or Downgradient (U,D)	D			
Chloride	140			
Iron	52			
Manganese	.10			
Phenols	ND .004			
Sodium	210			
Sulfate	1200			

Units are mg/l unless otherwise noted.

GROUNDWATER MONITORING DATA
POLLUTION INDICATIVE PARAMETERS

Plant Allen Park Clay Mine Sampling Date 10-26-82

	104-D Well #	Well #	Well #	Well #
Static Water Elevation (Ft)	604.12			
Up- or Downgradient (U,D)	D			
pH (Units)	8.3			
	8.2			
	8.2			
	8.2			
Specific Conductance (µmhos/cm)	2898			
	2862			
	2858			
	2871			
TOC (mg/l)	11			
	15			
	10			
	12			
TOX (µgm/l)	.024			
	.018			
	.010			
	.020			

ROUGE STEEL COMPANY

3001 Miller Road
P. O. Box 1699
Dearborn, Michigan 48121-1699

RECEIVED
MAY 18 1982
WASTE MANAGEMENT BRANCH
EPA, REGION V
MAY 17 1982

May 13, 1982

TSD, PA

Valdas Adamkus
Regional Administrator
USEPA Region V
230 South Dearborn
Chicago, Illinois 60604

Subject: Rouge Steel Company
Allen Park Clay Mine (MIT270010093) gmb
Groundwater Monitoring Results

Dear Mr. Adamkus:

In accordance with the reporting requirements contained in USEPA RCRA 40 CFR, Part 265, Subpart F, as amended February 23, 1982, the following groundwater monitoring results were obtained from wells at the subject facility:

Well No.		Result
2D	(Upgradient)	0.24 mg/l Cadmium
2D	(Upgradient)	2 Colonies/100 ml Coliform
102D	(Downgradient)	4 Colonies/100 ml Coliform
104D	(Downgradient)	4 Colonies/100 ml Coliform

The cadmium detected could be a result of sample contamination since earlier samples showed low levels of the metal. The minor positive results for coliform bacteria are also unexplainable. Future quarterly samples should resolve these questionable results.

Very truly yours,

Ben C. Trethewey

Ben C. Trethewey, Manager
Mining Properties Department

cc: J. M. Reinke

RECEIVED
5/21/82

A.3.4

5. The request to review this data questioned the apparent contamination in surface water. As this is still in the background development stages, contamination determination for the inorganic parameters is immature at this time. This is due to the natural occurrence of many of these constituents in unimpacted surface water. More data will need to become available to adequately assess the condition of the surface water associated with this site. A further discussion of the organic data follows.

6. Although the organic scan data indicates that all of the parameters for which analysis was done were not present above their respective detection limits, there is still a concern about this data. The 10-11-89 data for the DNR scan 8 parameters indicates a detection limit of >200 ug/l. The acceptable limit for this scan varies between 10-20 ug/l, depending upon the constituent. The submittal indicates that the elevated limits were due to sample matrix interference. Further explanation is needed to address this situation. As this is a relatively `clean´ water sample, matrix interference is not expected. Additionally, the use of such inflated data will result in skewed data for the background determination, impacting the effectiveness of the statistical test to be applied for detection monitoring purposes. It is recommended that the problem associated with this analysis be determined, and that a sample with more acceptable detection limits be substituted for background development purposes.

7. The quality control information for the organic scans is inadequate, the data for the 11-08-89 DNR Scan 7 is missing completely. At a minimum, the sample replicate and spike data should be available. This is true, even if the qc data does not necessarily represent Ford´s samples. The data from that batch should be made available. This is especially important considering the concerns with the data as outlined in item 6, above.

This concludes the review of the referenced submittal. In summary, many concerns were noted that represent both long and short term impacts. The facility should determine the actual laboratory analytical methods to be used for their samples, and submit a letter requesting an update to their sampling and analysis plan if necessary. Closer attention should be paid to the maximum holding times for all parameters, as many were exceeded. pH and specific conductivity should be field analyzed, and reported as such in the analytical report. Better qc documentation should be supplied for the organic parameters, and the sample matrix interference problem associated with the scan 8 analysis should be determined and rectified. Additionally, a more applicable set of data, with lower detection limits should be provided to replace the scan 8 10-11-89 data.

Please let me know if you have any questions regarding the contents of this memo, or the attachments indicating the areas of concern.

cc: Ms. D. Montgomery ✓
C & E File

Memo Item #1

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
Tel: (313) 253-0440
Fax: (313) 334-8486

Formerly: Burmah Technical Services, Inc.

ANALYTICAL REPORT

RECEIVED
STATIONARY SOURCE
ENVIRON. CONTR. DIV.
'90 JAN 10 P

Dave O'Connor
FORD MOTOR COMPANY-SSECO
Suite 608
15201 Century Drive
Dearborn MI 48120

01-09-90

Sample No.: 65311

Sample Description: 11-08-89 11:15am Grab

PROGRAM: Act 64 Surface Water Monitoring Program

Date Taken: 11-08-89

Date Received: 11-10-89

			Date Analy.	Lab Tech
Alkalinity, Bicarb.(CaC03)	120	mg/L	11-21-89	pbr
Alkalinity, Carb. (CaC03)	<4	mg/L	11-21-89	pbr
Alkalinity, Total (CaC03)	120	mg/L	11-21-89	pbr
BOD - Five Day	4	mg/L	11-15-89	mlg
Chloride	84	mg/L	11-21-89	pbr
COD	30	mg/L	12-13-89	pmc 28 day
Conductivity	1100	umhos/cm	11-28-89	mmk 24 hour
Cyanide, Total	<0.02	mg/L	12-01-89	pmc 14 day
Nitrogen, Ammonia	0.29	mg/L	11-29-89	pbr
Nitrogen, Nitrate	0.14	mg/L	12\6\89	pbr 48 hour
pH	7.49	units	11-30-89	ckp 15 minutes
Phenolics (4-AAP)	0.006	mg/L	12-06-89	pds
Sulfate	410	mg/L	12-15-89	rjk 28 day
Total Organic Carbon	8	mg/L	11-21-89	day
Arsenic	<0.005	mg/L	11-29-89	jsc
Barium	0.08	mg/L	11-21-89	dlc
Cadmium	<0.01	mg/L	11-21-89	dlc
Calcium	140	mg/L	12-13-89	ktk 28 day
Chromium, Total	0.02	mg/L	11-21-89	dlc
Copper	0.02	mg/L	11-21-89	dlc
Iron	1.5	mg/L	11-21-89	dlc
Lead	<0.05	mg/L	11-21-89	dlc
Magnesium	34	mg/L	12-13-89	ktk 28 day
Nickel	0.03	mg/L	11-21-89	dlc
Selenium	<0.005	mg/L	12-06-89	jsc
Silver	<0.02	mg/L	11-21-89	dlc
Sodium	59	mg/L	12-13-89	ktk 28 day
nc	0.08	mg/L	11-21-89	dlc
rcury (cold vapor)	<0.0005	mg/L	11-21-89	jsc

Memo Item #1

Burmah

Burmah Technical Services, Inc.
Analytical Laboratories Division

408 Auburn Avenue
Pontiac, Michigan 48058

313-334-4747

January 8, 1990

Ford Motor Company
SSECO
15201 Century Drive
Suite 608
Dearborn, MI 48120
Attn: Dave O'Connor

PROGRAM: ACT 64 Surface Water

Date Received: 10-12-89

ALD Number: 63990

Client I.D.: 10-11-89
10:05 AM
Grab

	Analyst	Date of Analysis
Alkalinity, as $CaCO_3$	AKM	10-25-89
Chloride	JSG	10-13-89
Sulfate, SO_4	PBR	11-1-89
Nitrate Nitrogen, as N	PBR	10-18-89
Ammonia Nitrogen, as N	AKM	10-18-89
Specific Conductivity	PSC	10-20-89 24 hours
pH	CKP	10-18-89 15 minutes
Cyanide, CN	AKM	10-30-89 14 days
~~B.O.D.5~~	PSC	10-13-89 needs 5 day incubation
Chemical Oxygen Demand	AKM	10-31-89
Total Organic Carbon	KM	12-18-89 28 days
Phenolics, (4AAP)	RJK	10-31-89
Arsenic, As	JSC	10-18-89
Barium, Ba	DLC	10-20-89
Cadmium, Cd	DLC	10-20-89
Calcium, Ca	DLC	11-30-89 28 days
Copper, Cu	DLC	10-20-89
Chromium, Cr	DLC	10-20-89
Iron, Fe	DLC	10-20-89
Lead, Pb	DLC	10-20-89
Magnesium, Mg	DLC	11-30-89 28 days
Mercury, Hg	WJJ	10-19-89
Nickel, Ni	DLC	10-20-89
Selenium, Se	JSC	10-19-89
Silver, Ag	DLC	10-20-89
Sodium, Na,	DLC	11-30-89 28 days
Zinc, Zn	DLC	10-20-89
DNR Scan 7	NKP	10-19-89
DNR Scan 8	NKP	10-19-89

Sur-W2K

Memo Item #1

Burmah

Burmah Technical Services, Inc.
Analytical Laboratories Division

408 Auburn Avenue
Pontiac, Michigan 48055

313-334-4747

Ford Motor Company
SSECO
15201 Century Drive
Suite 608
Dearborn, MI 48120
Attn: Dave O'Connor

January 8, 1990

Amended Report

RECEIVED
STATIONARY SOURCE
ENVIRON. CONTR. DIV.
'90 JAN -9 P

PROGRAM: ACT 64 Surface Water

Date Received: 10-12-89

ALD Number: 63990

Client I.D.:	10-11-89 10:05 AM Grab	Detection Limit
Total Alkalinity, as $CaCO_3$, mg/l	120	4
Carbonate Alkalinity, as $CaCO_3$, mg/l	<4	4 1
Bicarbonate Alkalinity, as $CaCO_3$, mg/l	120	4 1
Chloride, mg/l	87	4 1
Sulfate, SO_4, mg/l	380	1
Nitrate Nitrogen, as N, mg/l	0.09	0.02
Ammonia Nitrogen, as N, mg/l	0.25	0.05
Specific Conductivity, umhos/cm	1100	--
pH	7.64	--
Cyanide, CN, mg/l	<0.02	0.02
B.O.D.$_5$, mg/l	2	4
Chemical Oxygen Demand, mg/l	25	4 1
Total Organic Carbon, mg/l	12	1
Phenolics, (4AAP), mg/l	0.010	0.002
Arsenic, As, mg/l	<0.005	0.005
Barium, Ba, mg/l	0.08	0.05
Cadmium, Cd, mg/l	<0.01	0.01
Calcium, Ca, mg/l	130	0.02
Copper, Cu, mg/l	<0.02	0.02
Chromium, Cr, mg/l	<0.02	0.02
Iron, Fe, mg/l	0.91	0.02
Lead, Pb, mg/l	<0.05	0.05
Magnesium, Mg, mg/l	31	0.02
Mercury, Hg, mg/l	<0.0005	0.0005
Nickel, Ni, mg/l	<0.02	0.02 0.015
Selenium, Se, mg/l	<0.005	0.005
Silver, Ag, mg/l	<0.02	0.02
Sodium, Na, mg/l	51	0.02
Zinc, Zn, mg/l	0.04	0.02

Original Report Dated: 12-28-89
Sur-W1K

Memo T m #3

CLIENT: Ford Motor Company - SSECO

ALD NUMBER: 65311

BATCH QUALITY CONTROL DATA
SURFACE WATER 11-08-89

Parameter	Methodology	Method Blank Observed Value	Low Level Method Standard % Recovery	High Level Method Standard % Recovery	Original Sample Concentration	Replicate Sample Concentration	Spiked Sample % Recovery
Alkalinity	403 (3) 310.1	<4	102	101	120	120	100
B.O.D.5	405.1 (1)	NA	100	108	NA	NA	NA
Chemical Oxygen Demand	410.4 (1) 410.1 or 2	<2	100	100	<2	<2	80
Chloride	407A (3)	<4	NA	97	23	23	98
Conductivity	9050 (2)	<2	101	100	1100	1100	NA
Cyanide	9010 (2)	<0.02	NA	94	NA	NA	NA
Ammonia Nitrogen	350.2 (1)	0.09	134	100	0.2	0.15	110
Nitrate Nitrogen	353.2 (1)	0.03	100	100	0.36	0.34	86
pH	9040 (2)	NA	100	100	1.79	1.79	NA
Phenolics	9065 (2)	<0.002	108	106	0.006	0.006	112
Sulfate	375.4 (1) 9038	<1	118	98	470	470	104
Total Organic Carbon	9060 (2)	<1	104	NA	NA	NA	NA

Please note that the data reported for the original sample concentration, replicates & spikes were analyzed in the same batch, but may not necessarily be that of your sample.

NA - Not applicable.

Methodology:
(1) EPA 600/4-79-020, "Methods for Chemical Analysis of Water & Wastes."
(2) EPA SW 846, "Test Methods for Evaluating Solid Wastes".
(3) "Standard Methods 16th. Edition."

This data was requested by Ford SSECO and is for Quality Control purposes only.

QC/10L

Memo I m #3

CLIENT: Ford Motor Company - SSECO

ALD NUMBER: 65311

BATCH QUALITY CONTROL DATA
SURFACE WATER 11-08-89

Parameter	Methodology	Method Blank Observed Value	Low Level Method Standard % Recovery	High Level Method Standard % Recovery	Original Sample Concentration	Replicate Sample Concentration	Spiked Sample % Recovery
Arsenic	7061	<0.005	86	NA	<0.005	<0.005	80
Barium	6010	<0.05	106	NA	0.08	0.08	100
Cadmium	6010	<0.01	93	NA	<0.01	<0.01	100
Calcium	6010	0.04	109	NA	NA	NA	NA
Chromium	6010	<0.02	104	NA	0.02	0.02	90
Copper	6010	<0.02	99	NA	0.02	0.02	100
Iron	6010	<0.02	113	NA	1.5	1.9	100
Lead	6010	<0.05	92	NA	<0.05	<0.05	(A)
Magnesium	6010	<0.02	108	NA	NA	NA	NA
Mercury	7471 7470	<0.0005	99	NA	<0.0005	<0.0005	96
Nickel	6010	<0.02	96	NA	0.03	0.03	90
Selenium	7741	<0.005	113	NA	<0.005	<0.005	116
Silver	6010	<0.02	111	NA	<0.02	<0.02	110
Sodium	6010	<0.02	97	NA	NA	NA	NA
Zinc	6010	<0.02	101	NA	0.08	0.09	88

Please note that the data reported for the original sample concentration, replicates & spikes were analyzed in the same batch, but may not necessarily be that of your sample.

A) Sample was spiked at an inappropriate level, therefore, no recovery data is available.

NA - Not applicable.

Methodology: EPA SW 846, "Test Methods for Evaluating Solid Wastes".

This data was requested by Ford SSECO and is for Quality Control purposes only.

Memo I# #4

CLIENT: Ford Motor Company - SSECO

ALD NUMBER: 65311

BATCH QUALITY CONTROL DATA
SURFACE WATER 11-08-89

Parameter	Method Blank Observed Value	Low Level Method Standard % Recovery	High Level Method Standard % Recovery	Original Sample Concentration	Replicate Sample Concentration	Spiked Sample % Recovery
DNR SCAN #8 - EPA 8040:						
2-Chlorophenol	<10	98	NA	NA	NA	NA
4-Chloro-3-methylphenol	<10	99	NA	NA	NA	NA
2,4-Dichlorophenol	<10	103	NA	NA	NA	NA
2,4-Dimethylphenol	<10	98	NA	NA	NA	NA
2,4-Dinitrophenol	<15	112	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol	<15	112	NA	NA	NA	NA
2-Nitrophenol	<10	100	NA	NA	NA	NA
4-Nitrophenol	<20	102	NA	NA	NA	NA
Pentachlorophenol	<15	105	NA	NA	NA	NA
Phenol	<10	101	NA	NA	NA	NA
2,4,5-Trichlorophenol	<10	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	<10	104	NA	NA	NA	NA

Please note that the data reported for the original sample concentration, replicates & spikes were analyzed in the same batch, but may not necessarily be that of your sample.

NA - Not applicable.

Methodology: EPA 600/4-82-057 "Methods for Organic Analyses of Municipal and Industrial Wastewaters".
EPA SW-846, "Test Methods for Evaluating Solid Wastes"

QC/12L

Memo Items #1 and 6

Burmah

Burmah Technical Services, Inc.
Analytical Laboratories Division

408 Auburn Avenue
Pontiac, Michigan 48058

313-334-4747

Ford Motor Company

January 8, 1990

SSECO
15201 Century Drive
Suite 608
Dearborn, MI 48120
Attn: Dave O'Connor

PROGRAM: ACT 64 Surface Water

Date Received: 10-12-89

ALD Number: 63990

Client I.D.: 10-11-89
10:05 AM

DNR SCAN #8 concentration, ug/l:		Detection Limit
2-Chlorophenol	<200	200*
4-Chloro-3-methylphenol	<200	200*
2,4-Dichlorophenol	≤480	200*
2,4-Dimethylphenol	≤2000	200*
2,4-Dinitrophenol	<200	200*
2-Methyl-4,6-dinitrophenol	<200	200*
2-Nitrophenol	<200	200*
4-Nitrophenol	≤270	200*
Pentachlorophenol	<200	200*
Phenol	≤1900	200*
2,4,5-Trichlorophenol	<200	200*
2,4,6-Trichlorophenol	<200	200*

*Elevated detection limits were reported due to sample matrix interferences.

Where a number is reported as "≤" (less than or equal to), the number represents the amount of the compound that is/could be present assuming that the entire observed response is the compound of concern.

Sur-W4K

Memo Item #1

CLIENT: Ford Motor Company - SSECO

ALD NUMBER: 63990

BATCH QUALITY CONTROL DATA
SURFACE WATER 11-16-89

Parameter	Method Blank Observed Value	Low Level Method Standard % Recovery	High Level Method Standard % Recovery	Original Sample Concentration	Replicate Sample Concentration	Spiked Sample % Recovery
DNR SCAN 7 - EPA SW 8100:						
Acenaphthene	<10	NA	NA	NA	NA	NA
Acenaphthylene	<10	NA	NA	NA	NA	NA
Anthracene	<10	NA	NA	NA	NA	NA
Benzo(a)anthracene	<10	NA	NA	NA	NA	NA
Benzo(a)pyrene	<10	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	<10	NA	NA	NA	NA	NA
Benzo(ghi)perylene	<10	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	<10	NA	NA	NA	NA	NA
Chrysene	<10	NA	NA	NA	NA	NA
Dibenzo(a,h) Anthracene	<10	NA	NA	NA	NA	NA
Fluoranthene	<10	NA	NA	NA	NA	NA
Fluorene	<10	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	<10	NA	NA	NA	NA	NA
Naphthalene	<10	89	NA	NA	NA	NA
Phenanthrene	<10	NA	NA	NA	NA	NA
Pyrene	<10	NA	NA	NA	NA	NA

Please note that the data reported for the original sample concentration, replicates & spikes were analyzed in the same batch, but may not necessarily be that of your sample.

NA - Not applicable.

Methodology: EPA SW 846, "Test Methods for Evaluating Solid Wastes".

QC/8L

Smith

COPY

Environmental and Safety Engineering Staff
Ford Motor Company

Suite 608
15201 Century Drive
Dearborn, Michigan 48120

February 26, 1993

RECEIVED SEP 14 1993
WMD RCRA
RECORD CENTER

Mr. Jim Sygo, Chief
Waste Management Division
Michigan Department of Natural Resources
P.O. Box 30241
Lansing, Michigan 48909

Subject: **Submittal of Environmental Monitoring Results**
Annual Report - Cell I Leachate
Ford Allen Park Clay Mine Landfill
EPA ID No. MID 980 568 711

Dear Mr. Sygo:

Enclosed, pursuant to Condition IV.B.2.b of our Act 64 Operating License requiring the submittal of an annual leachate summary report, are copies of previously submitted Act 64 Cell I leachate monitoring results for 1992.

Please note that the volume of Cell I leachate discharged for treatment to the Detroit Water and Sewerage Department sanitary sewer in 1992 was 153,648 gallons.

Should you have any questions regarding this submittal, please contact Jeff Hartlund of this Office at 313/322-0700.

Sincerely,

Jerome S. Amber

Jerome S. Amber, P.E., Manager
Wastes and Hazardous Substances
Environmental Quality Office
313/322-4646

Enclosure

c: Mayors of Allen Park, Dearborn and Melvindale (w/o enclosures)
John Ciotti (w/o enclosures)
Cindy Jackson (w/o enclosures)
Elaine Bennett (w/o enclosures)

NATIONAL ENVIRONMENTAL TESTING, INC.

Auburn Hills Division
1700 Harmon Road
Auburn Hills, MI 48326
Tel: (313) 391-2050
Fax: (313) 391-9698

COPY

RECORD COPY
SCHEDULE NO.
RETAIN UNTIL CALL E CODE

ANALYTICAL REPORT

Jeff Hartlund
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

01/14/1993

Job No.: 92.53378
Sample No.: 12477

RECEIVED
ENVIRONMENTAL
QUALITY OFFICE

'93 JAN 19 P 3:56

Quarterly Leachate
Act 64 Monitoring Program

Sample Description: Cell I 12/21

Date Taken: 12/21/1992

Date Received: 12/21/1992

Parameter (TABLE 1)	Result	Unit	Date Analyzed	Lab Tech.	Methodology
Arsenic	0.042	mg/L	01/05/1993	rjk	7060 (1)
Barium	0.20	mg/L	12/29/1992	jbb	6010 (1)
Cadmium	<0.01	mg/L	12/29/1992	jbb	6010 (1)
Chromium	<0.02	mg/L	12/29/1992	jbb	6010 (1)
Copper	0.02	mg/L	12/29/1992	jbb	6010 (1)
Lead	<0.05	mg/L	12/29/1992	jbb	6010 (1)
Mercury	<0.0005	mg/L	12/30/1992	mah	7470 (1)
Nickel	0.06	mg/L	12/29/1992	jbb	6010 (1)
Selenium	<0.005	mg/L	01/05/1993	rjk	7740 (1)
Silver	<0.02	mg/L	12/29/1992	jbb	6010 (1)
Zinc	0.03	mg/L	12/29/1992	jbb	6010 (1)

Bruce E. Brown
Project Manager

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Auburn Hills Division
1700 Harmon Road
Auburn Hills, MI 48326
Tel: (313) 391-2050
Fax: (313) 391-9698

ANALYTICAL REPORT

Jeff Hartlund
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

01/14/1993

Job No.: 92.53378
Sample No.: 124171

Quarterly Leachate
Act 64 Monitoring Program

Sample Description: Cell I 12/21

Date Taken: 12/21/1992

Date Received: 12/21/1992

Parameter (TABLE 2)	Result	Unit	Date Analyzed	Lab Tech.	Methodology
BASE NEUTRAL CMPDS DNR SCAN #7					
Acenaphthene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Acenaphthylene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Anthracene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Benzo(a)anthracene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Benzo(a)pyrene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Benzo(b)fluoranthene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Benzo(k)fluoranthene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Benzo(ghi)perylene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Chrysene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Dibenzo(a,h)anthracene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Fluoranthene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Fluorene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Indeno(1,2,3-cd)pyrene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Naphthalene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Phenanthrene	<10.	ug/L	12/30/1992	jsg	8100 (1)
Pyrene	<10.	ug/L	12/30/1992	jsg	8100 (1)
ACID COMPOUNDS - DNR SCAN #8					
2-Chlorophenol	<10.	ug/L	01/06/1993	mmk	8040 (1)
4-Chloro-3-methylphenol	<15.	ug/L	01/06/1993	mmk	8040 (1)
2,4-Dichlorophenol	<10.	ug/L	01/06/1993	mmk	8040 (1)
2,4-Dimethylphenol	270.	ug/L	01/06/1993	mmk	8040 (1)
2,4-Dinitrophenol	<50.	ug/L	01/06/1993	mmk	8040 (1)
2-Methyl-4,6-dinitrophenol	<10.	ug/L	01/06/1993	mmk	8040 (1)
2-Nitrophenol	<10.	ug/L	01/06/1993	mmk	8040 (1)
4-Nitrophenol	<20.	ug/L	01/06/1993	mmk	8040 (1)
Pentachlorophenol	<15.	ug/L	01/06/1993	mmk	8040 (1)
Phenol	640.	ug/L	01/06/1993	mmk	8040 (1)
2,4,5-Trichlorophenol	<10.	ug/L	01/06/1993	mmk	8040 (1)
2,4,6-Trichlorophenol	<10.	ug/L	01/06/1993	mmk	8040 (1)

Bruce E. Brown
Project Manager

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Auburn Hills Division
1700 Harmon Road
Auburn Hills, MI 48326
Tel: (313) 391-2050
Fax: (313) 391-9698

ANALYTICAL REPORT

Jeff Hartlund
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

01/14/1993

Job No.: 92.53378
Sample No.: 124171

Quarterly Leachate
Act 64 Monitoring Program

Sample Description: Cell I 12/21

Date Taken: 12/21/1992

Date Received: 12/21/1992

Parameter (TABLE 6)	Result	Unit	Date Analyzed	Lab Tech.	Methodology
pH (Field)	9.69	units	12/21/1992	jry	9040 (1) 9050 (1)
Alkalinity, Bicarb.(CaCO3)	100.	mg/L	01/04/1993	das	310.1 (3)
Alkalinity, Carb. (CaCO3)	60.	mg/L	01/04/1993	das	310.1 (3)
Alkalinity, Total (CaCO3)	160.	mg/L	01/04/1993	das	310.1 (3)
BOD - Five Day	26.	mg/L	12/28/1992	dds	405.1 (3)
Chloride	2700.	mg/L	01/04/1993	das	4500-ClC (4)
COD	290.	mg/L	01/06/1993	akm	410.1-2 (3)
Cyanide, Total	0.76	mg/L	01/04/1993	dds	9010 (1)
Phenol (4-AAP)	3.2	mg/L	12/30/1992	cms.	9065 (1)
Sulfate	250.	mg/L	01/04/1993	das	9038 (1)
Total Organic Carbon	42.	mg/L	01/05/1993	glf	9060 (1)
Calcium	150.	mg/L	12/31/1992	jbb	6010 (1)
Iron	0.78	mg/L	12/29/1992	jbb	6010 (1)
Magnesium	22.	mg/L	12/31/1992	jbb	6010 (1)
Sodium	1300.	mg/L	12/31/1992	jbb	6010 (1)

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Auburn Hills Division
1700 Harmon Road
Auburn Hills, MI 48326
Tel: (313) 391-2050
Fax: (313) 391-9698

RECORD COPY

SCHEDULE NO. _____

RETAIN UNTIL Cell II Closure

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

10/16/1992

Job No.: 92.51503
Sample No.: 113648

Quarterly Leachate
Act 64 Monitoring Program

Sample Description: Cell I 09/22

Date Taken: 09/22/1992

Date Received: 09/22/1992

Parameter (TABLE 1)	Result	Unit	Date Analyzed	Lab Tech.	Methodology
Arsenic	0.043	mg/L	10/05/1992	lsv	7060 (1)
Barium	0.17	mg/L	09/30/1992	jbb	6010 (1)
Cadmium	<0.01	mg/L	09/30/1992	jbb	6010 (1)
Chromium	<0.02	mg/L	09/30/1992	jbb	6010 (1)
Copper	0.02	mg/L	09/30/1992	jbb	6010 (1)
Lead	<0.05	mg/L	09/30/1992	jbb	6010 (1)
Mercury	<0.0005	mg/L	09/30/1992	dlc	7470 (1)
Nickel	0.04	mg/L	09/30/1992	jbb	6010 (1)
Selenium	<0.005	mg/L	10/05/1992	lsv	7740 (1)
Silver	<0.02	mg/L	09/30/1992	jbb	6010 (1)
Zinc	<0.02	mg/L	09/30/1992	jbb	6010 (1)

Bruce E. Brown
Project Manager

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Auburn Hills Division
1700 Harmon Road
Auburn Hills, MI 48326
Tel: (313) 391-2050
Fax: (313) 391-9698

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

10/16/1992

Job No.: 92.51503
Sample No.: 113648

Quarterly Leachate
Act 64 Monitoring Program

Sample Description: Cell I 09/22

Date Taken: 09/22/1992

Date Received: 09/22/1992

Parameter (TABLE 2)	Result	Unit	Date Analyzed	Lab Tech.	Methodology
BASE NEUTRAL CMPDS DNR SCAN #7					
Acenaphthene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Acenaphthylene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Anthracene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Benzo(a)anthracene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Benzo(a)pyrene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Benzo(b)fluoranthene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Benzo(k)fluoranthene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Benzo(ghi)perylene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Chrysene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Dibenzo(a,h)anthracene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Fluoranthene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Fluorene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Indeno(1,2,3-cd)pyrene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Naphthalene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Phenanthrene	<10.	ug/L	10/02/1992	jsg	8100 (1)
Pyrene	<10.	ug/L	10/02/1992	jsg	8100 (1)
ACID COMPOUNDS - DNR SCAN #8					
2-Chlorophenol	<10.	ug/L	10/03/1992	mmk	8040 (1)
4-Chloro-3-methylphenol	<15.	ug/L	10/03/1992	mmk	8040 (1)
2,4-Dichlorophenol	<10.	ug/L	10/03/1992	mmk	8040 (1)
2,4-Dimethylphenol	350.	ug/L	10/03/1992	mmk	8040 (1)
2,4-Dinitrophenol	<40.	ug/L	10/03/1992	mmk	8040 (1)
2-Methyl-4,6-dinitrophenol	<10.	ug/L	10/03/1992	mmk	8040 (1)
2-Nitrophenol	<10.	ug/L	10/03/1992	mmk	8040 (1)
4-Nitrophenol	<20.	ug/L	10/03/1992	mmk	8040 (1)
Pentachlorophenol	<15.	ug/L	10/03/1992	mmk	8040 (1)
Phenol	1000.	ug/L	10/03/1992	mmk	8040 (1)
2,4,5-Trichlorophenol	<10.	ug/L	10/03/1992	mmk	8040 (1)
2,4,6-Trichlorophenol	<10.	ug/L	10/03/1992	mmk	8040 (1)

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Auburn Hills Division
1700 Harmon Road
Auburn Hills, MI 48326
Tel: (313) 391-2050
Fax: (313) 391-9698

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

10/16/1992

Job No.: 92.51503
Sample No.: 113648

Quarterly Leachate
Act 64 Monitoring Program

Sample Description: Cell I 09/22

Date Taken: 09/22/1992

Date Received: 09/22/1992

Parameter (TABLE 6)	Result	Unit	Date Analyzed	Lab Tech.	Methodology
pH (Field)	9.11	units	09/22/1992	jry	9040 (1)
Conductivity (Field)	4400.	umhos/cm	09/22/1992	jry	9050 (1)
Alkalinity, Bicarb.(CaCO3)	170.	mg/L	10/01/1992	cms	310.1 (3)
Alkalinity, Carb. (CaCO3)	<4.	mg/L	10/01/1992	cms	310.1 (3)
Alkalinity, Total (CaCO3)	170.	mg/L	10/01/1992	cms	310.1 (3)
BOD - Five Day	55.	mg/L	09/28/1992	cms	405.1 (3)
Chloride	3200.	mg/L	10/02/1992	cms	4500-ClC (4)
COD	380.	mg/L	10/01/1992	das	410.1-2 (3)
Cyanide, Total	1.3	mg/L	10/02/1992	dds	9010 (1)
Phenol (4-AAP)	3.1	mg/L	10/02/1992	cms	9065 (1)
Sulfate	380.	mg/L	10/12/1992	akm	9038 (1)
Total Organic Carbon	53.	mg/L	09/24/1992	glf	9060 (1)
Calcium	140.	mg/L	10/02/1992	jbb	6010 (1)
Iron	0.57	mg/L	09/30/1992	jbb	6010 (1)
Magnesium	16.	mg/L	10/02/1992	jbb	6010 (1)
Sodium	1600.	mg/L	10/02/1992	jbb	6010 (1)

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Auburn Hills Division
1700 Harmon Road
Auburn Hills, MI 48326
Tel: (313) 391-2050
Fax: (313) 391-9698

ANALYTICAL REPORT

RECORD COPY
FILE NO.
SUBFILE Cell II Closure

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

07/31/1992

Job No.: 92.3505
Sample No.: 108891

Quarterly Leachate
Act 64 Monitoring Program

Sample Description: Cell I 06/25

Date Taken: 06/25/1992

Date Received: 06/25/1992

Parameter (TABLE 1)	Result	Unit	Date Analyzed	Lab Tech.	Methodology
Arsenic	0.039	mg/L	07/02/1992	lsv	7060 (1)
Barium	0.19	mg/L	07/02/1992	jbb	6010 (1)
Cadmium	0.02	mg/L	07/02/1992	jbb	6010 (1)
Chromium	<0.02	mg/L	07/02/1992	jbb	6010 (1)
Copper	0.02	mg/L	07/02/1992	jbb	6010 (1)
Lead	0.06	mg/L	07/02/1992	jbb	6010 (1)
Mercury	0.0008	mg/L	07/02/1992	lsv	7470 (1)
Nickel	0.04	mg/L	07/02/1992	jbb	6010 (1)
Selenium	0.022	mg/L	07/08/1992	wjj	7740 (1)
Silver	<0.02	mg/L	07/02/1992	jbb	6010 (1)
Zinc	0.05	mg/L	07/02/1992	jbb	6010 (1)

RECEIVED
ENVIRONMENTAL QUALITY
'92 AUG -3 P1:11

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Auburn Hills Division
1700 Harmon Road
Auburn Hills, MI 48326
Tel: (313) 391-2050
Fax: (313) 391-9698

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

07/31/1992

Job No.: 92.3505
Sample No.: 108891

Quarterly Leachate
Act 64 Monitoring Program

Sample Description: Cell I 06/25

Date Taken: 06/25/1992

Date Received: 06/25/1992

Parameter (TABLE 2)	Result	Unit	Date Analyzed	Lab Tech.	Methodology
BASE NEUTRAL CMPDS DNR SCAN #7					
Acenaphthene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Acenaphthylene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Anthracene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Benzo(a)anthracene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Benzo(a)pyrene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Benzo(b)fluoranthene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Benzo(k)fluoranthene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Benzo(ghi)perylene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Chrysene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Dibenzo(a,h)anthracene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Fluoranthene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Fluorene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Indeno(1,2,3-cd)pyrene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Naphthalene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Phenanthrene	<10.	ug/L	07/08/1992	jsg	8100 (1)
Pyrene	<10.	ug/L	07/08/1992	jsg	8100 (1)
ACID COMPOUNDS - DNR SCAN #8					
2-Chlorophenol	<10.	ug/L	07/23/1992	mmk	8040 (1)
4-Chloro-3-methylphenol	<15.	ug/L	07/23/1992	mmk	8040 (1)
2,4-Dichlorophenol	<10.	ug/L	07/23/1992	mmk	8040 (1)
2,4-Dimethylphenol	140.	ug/L	07/23/1992	mmk	8040 (1)
2,4-Dinitrophenol	<10.	ug/L	07/23/1992	mmk	8040 (1)
2-Methyl-4,6-dinitrophenol	<10.	ug/L	07/23/1992	mmk	8040 (1)
2-Nitrophenol	<10.	ug/L	07/23/1992	mmk	8040 (1)
4-Nitrophenol	<20.	ug/L	07/23/1992	mmk	8040 (1)
Pentachlorophenol	<15.	ug/L	07/23/1992	mmk	8040 (1)
Phenol	480.	ug/L	07/23/1992	mmk	8040 (1)
2,4,5-Trichlorophenol	<10.	ug/L	07/23/1992	mmk	8040 (1)
2,4,6-Trichlorophenol	<10.	ug/L	07/23/1992	mmk	8040 (1)

Bruce E. Brown
Project Manager

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Auburn Hills Division
1700 Harmon Road
Auburn Hills, MI 48326
Tel: (313) 391-2050
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ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

07/31/1992

Job No.: 92.3505
Sample No.: 108891

Quarterly Leachate
Act 64 Monitoring Program

Sample Description: Cell I 06/25

Date Taken: 06/25/1992

Date Received: 06/25/1992

Parameter (TABLE 6)	Result	Unit	Date Analyzed	Lab Tech.	Methodology
pH (Field)	7.11	units	06/25/1992	tjg	9040 (1)
Conductivity (Field)	7000.	umhos/cm	06/25/1992	tjg	9050 (1)
Alkalinity, Bicarb.(CaCO3)	62.	mg/L	07/06/1992	cms	310.1 (3)
Alkalinity, Carb. (CaCO3)	68.	mg/L	07/06/1992	cms	310.1 (3)
Alkalinity, Total (CaCO3)	130.	mg/L	07/06/1992	cms	310.1 (3)
BOD - Five Day	30.	mg/L	07/01/1992	das	405.1 (3)
Chloride	3500.	mg/L	06/30/1992	cms	4500-ClC (4)
COD	430.	mg/L	07/01/1992	cms	410.1-2 (3)
Cyanide, Total	1.2	mg/L	07/07/1992	das	9010 (1)
Phenol (4-AAP)	3.5	mg/L	06/30/1992	akm	9065 (1)
Sulfate	190.	mg/L	07/06/1992	das	9038 (1)
Total Organic Carbon	42.	mg/L	07/02/1992	glf	9060 (1)
Calcium	180.	mg/L	06/30/1992	jbb	6010 (1)
Iron	0.59	mg/L	07/02/1992	jbb	6010 (1)
Magnesium	16.	mg/L	06/30/1992	jbb	6010 (1)
Sodium	1900.	mg/L	06/30/1992	jbb	6010 (1)

Bruce E. Brown
Project Manager

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Auburn Hills Division
1700 Harmon Road
Auburn Hills, MI 48326

Tel: (313) 391-2050
Fax: (313) 391-9698

RECORD COPY

ANALYTICAL REPORT

SCHEDULE NO. _____

RETAIN UNTIL Cell II Closure

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

06/08/1992

Job No.: 92.1434
Sample No.: 104102

Quarterly Leachate
Act 64 Monitoring

Sample Description: Cell I 03/19

Date Taken: 03/19/1992

Date Received: 03/19/1992

Parameter (TABLE 1)	Result	Unit	Date Analyzed	Lab Tech.	Methodology
Arsenic	0.041	mg/L	03/25/1992	lsv	7060 (1)
Barium	0.15	mg/L	03/25/1992	jbb	6010 (1)
Cadmium	0.01	mg/L	03/25/1992	jbb	6010 (1)
Chromium	0.04	mg/L	03/25/1992	jbb	6010 (1)
Copper	0.02	mg/L	03/25/1992	jbb	6010 (1)
Lead	<0.05	mg/L	03/25/1992	jbb	6010 (1)
Mercury	<0.0005	mg/L	03/25/1992	rjk	7470 (1)
Nickel	0.04	mg/L	03/25/1992	jbb	6010 (1)
Selenium	<0.005	mg/L	03/24/1992	lsv	7740 (1)
Silver	<0.02	mg/L	03/25/1992	jbb	6010 (1)
Zinc	0.03	mg/L	03/25/1992	jbb	6010 (1)

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Bruce E. Brown
Project Manager

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Auburn Hills Division
1700 Harmon Road
Auburn Hills, MI 48326

Tel: (313) 391-2050
Fax: (313) 391-9698

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

06/08/1992

Job No.: 92.1434
Sample No.: 104102

Quarterly Leachate
Act 64 Monitoring

Sample Description: Cell I 03/19

Date Taken: 03/19/1992

Date Received: 03/19/1992

Parameter (TABLE 2)	Result	Unit	Date Analyzed	Lab Tech.	Methodology
BASE NEUTRAL CMPDS DNR SCAN #7					
Acenaphthene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Acenaphthylene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Anthracene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Benzo(a)anthracene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Benzo(a)pyrene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Benzo(b)fluoranthene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Benzo(k)fluoranthene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Benzo(ghi)perylene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Chrysene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Dibenzo(a,h)anthracene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Fluoranthene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Fluorene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Indeno(1,2,3-cd)pyrene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Naphthalene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Phenanthrene	<10.	ug/L	04/01/1992	mmk	8100 (1)
Pyrene	<10.	ug/L	04/01/1992	mmk	8100 (1)
ACID COMPOUNDS - DNR SCAN #8					
2-Chlorophenol	<10.	ug/L	04/08/1992	mmk	8040 (1)
4-Chloro-3-methylphenol	130.	ug/L	04/08/1992	mmk	8040 (1)
2,4-Dichlorophenol	41.	ug/L	04/08/1992	mmk	8040 (1)
2,4-Dimethylphenol	340.	ug/L	04/08/1992	mmk	8040 (1)
2,4-Dinitrophenol	29.	ug/L	04/08/1992	mmk	8040 (1)
2-Methyl-4,6-dinitrophenol	<10.	ug/L	04/08/1992	mmk	8040 (1)
2-Nitrophenol	<10.	ug/L	04/08/1992	mmk	8040 (1)
4-Nitrophenol	<20.	ug/L	04/08/1992	mmk	8040 (1)
Pentachlorophenol	110.	ug/L	04/08/1992	mmk	8040 (1)
Phenol	1300.	ug/L	04/08/1992	mmk	8040 (1)
2,4,5-Trichlorophenol	<14. *	ug/L	04/08/1992	mmk	8040 (1)
2,4,6-Trichlorophenol	14.	ug/L	04/08/1992	mmk	8040 (1)

*Coelutes with 2,4,6-Trichlorophenol. Value reported as 2,4,6-Trichlorophenol.

Bruce E. Brown
Project Manager

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Auburn Hills Division
1700 Harmon Road
Auburn Hills, MI 48326

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ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

06/08/1992

Job No.: 92.1434
Sample No.: 104102

Quarterly Leachate
Act 64 Monitoring

Sample Description: Cell I 03/19

Date Taken: 03/19/1992

Date Received: 03/19/1992

Parameter (TABLE 6)	Result	Unit	Date Analyzed	Lab Tech.	Methodology
pH (Field)	9.01	units	03/19/1992	jry	9040 (1)
Conductivity (Field)	9600. *	umhos/cm	04/28/1992	akm	9050 (1)
Alkalinity, Bicarb.(CaCO3)	140.	mg/L	03/24/1992	cms	310.1 (3)
Alkalinity, Carb. (CaCO3)	90.	mg/L	03/24/1992	cms	310.1 (3)
Alkalinity, Total (CaCO3)	230.	mg/L	03/24/1992	cms	310.1 (3)
BOD - Five Day	26.	mg/L	03/20/1992	spr	405.1 (3)
Chloride	2900.	mg/L	03/27/1992	cms	4500-ClC (4)
COD	320.	mg/L	03/26/1992	das	410.1-2 (3)
Cyanide, Total	1.1	mg/L	03/20/1992	das	9010 (1)
Phenol (4-AAP)	3.4	mg/L	03/23/1992	akm	9065 (1)
Sulfate	240.	mg/L	03/23/1992	spr	9038 (1)
Total Organic Carbon	48.	mg/L	04/06/1992	glf	9060 (1)
Calcium	150.	mg/L	04/02/1992	jbb	6010 (1)
Iron	0.63	mg/L	03/25/1992	jbb	6010 (1)
Magnesium	19.	mg/L	04/02/1992	jbb	6010 (1)
Sodium	1400.	mg/L	04/02/1992	jbb	6010 (1)

Bruce E. Brown
Project Manager

OCEAN GROUP

[illegible] | [illegible] | [illegible] → file (Envr. Monitoring) Ground water
rec'd 12-23-92
X.C. → Ben O'Brien (Ford)
MID 980 568 711

Ford

Environmental and Safety Engineering Staff
Ford Motor Company

Suite 608
15201 Century Drive
Dearborn, Michigan 48120

December 20, 1992

RECEIVED SEP 14 1993
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Mr. Jim Sygo, Chief
Waste Management Division
Michigan Department of Natural Resources
P.O. Box 30241
Lansing, Michigan 48909

Subject: Annual Report - Environmental Monitoring
Ford Allen Park Clay Mine Landfill
EPA ID No. MID 980 568 711

Dear Mr. Sygo:

Enclosed, as required by our Michigan Act 64 Operating License is the **Annual Report** for potentiometric monitoring (deep well groundwater) at the subject facility.

Should you have any questions regarding this submittal, please contact Jeff Hartlund of this Office at 313/322-0700.

Sincerely,

Jerome S. Amber

Jerome S. Amber, P.E., Manager
Industrial Waste and Toxic/
Hazardous Substances
Environmental Quality Office
313/322-4646

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DEC 28 1992
Waste Management
Division

Enclosure

c: Mayors of Allen Park, Dearborn and Melvindale
John Ciotti
Cindy Jackson

FORD ALLEN PARK CLAY MINE LANDFILL
ENVIRONMENTAL MONITORING - ANNUAL REPORT

Program: **Potentiometric Monitoring** (Deep Well Groundwater)

Date of Analysis: 17 December 1992

Weather: 12-15-92: Overcast, Mid 50s (degrees F), 0-5 mph winds

Sampler: 12-15-92: Thomas Turnbull (City Management Corporation)
Steven Pogue (McNamee Industrial Services, Inc.)

Method: Wallace & Tiernan Series 1000 Pressure Guage Indicator

Well No.	Date of Measurement	Time	Static Water Elevation
2-D	12-15-92	1435 hrs	595.76
5-D	12-15-92	1430 hrs	600.18
10-D	12-15-92	1330 hrs	593.72
102-D	12-15-92	1340 hrs	598.28
103-D	12-15-92	1350 hrs	597.64
104-D	12-15-92	1405 hrs	597.97
105-D	12-15-92	1420 hrs	600.88

Prepared by:

Environmental Quality Office
Ford Motor Company
17 December 1992

FORD ALLEN PARK CLAY MINE

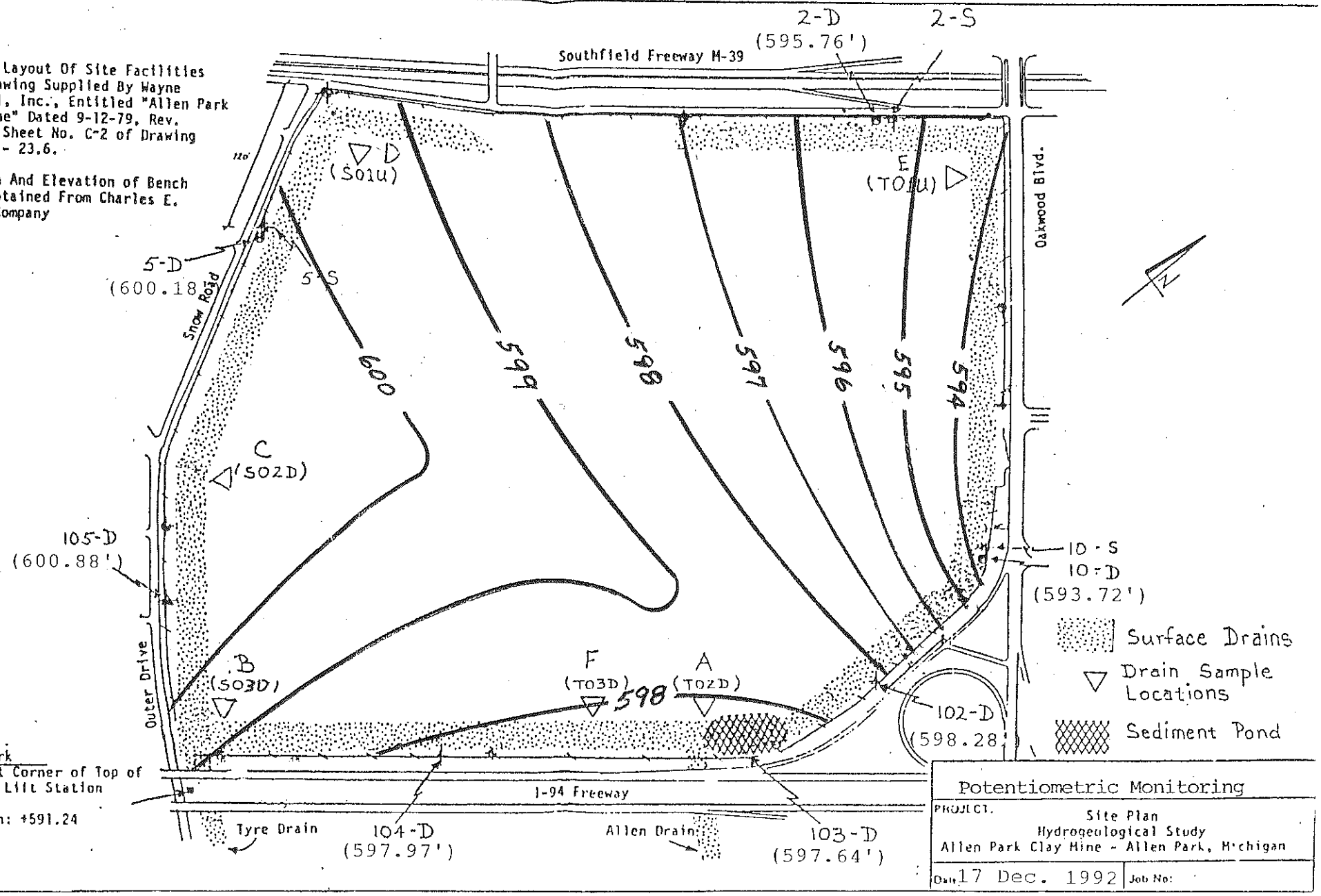
Potentiometric Monitoring

(Artesian Groundwater)

NOTES:

1. General Layout Of Site Facilities From Drawing Supplied By Wayne Disposal, Inc., Entitled "Allen Park Clay Mine" Dated 9-12-79, Rev. 5-1-81, Sheet No. C-2 of Drawing No. 79P - 23.6.

2. Location And Elevation of Bench Marks Obtained From Charles E. Raines Company



Potentiometric Monitoring

PROJECT: Site Plan Hydrogeological Study Allen Park Clay Mine - Allen Park, Michigan

Date: 17 Dec. 1992 | Job No:

orig: De / S. Ruda → Monitoring Data File
xc: Ben cc: USEPA

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JUL 24 1991
MANAGEMENT

Kurt

Environmental and Safety Engineering Staff
Ford Motor Company

Suite 608
15201 Century Drive
Dearborn, Michigan 48120

July 19, 1991

Ms. Mindy Koch, Chief
Waste Management Division
Michigan Department of Natural Resources
P.O. Box 30028
Lansing, Michigan 48909

Subject: **Submittal of Environmental Monitoring Results**
Ford Allen Park Clay Mine Landfill
EPA ID No. MID 980 568 711

Dear Ms. Koch:

Enclosed, as required by our Michigan Act 64 Operating License, are Act 64 lysimeter monitoring results for second quarter 1991.

Should you have any questions regarding this transmittal, please contact David O'Connor of this Office at 313/322-0701.

Sincerely,

Jerome S. Amber

Jerome S. Amber, P.E., Manager
Industrial Waste and Toxic/
Hazardous Substances
Environmental Quality Office
313/322-4646

Enclosure

cc: Mayors of Allen Park, Dearborn and Melvindale
Ardys Bennett
Joe Wisk

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JUL 22 1991
Waste Management
Division

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

07/12/1991

Job No.: 91.3655
Sample No.: 92514

Quarterly Lysimeter
Act 64 Monitoring

Sample Description: Lysimeter 1-B

Date Taken: 06/26/1991

Date Received: 06/27/1991

Parameter	Result	Unit	Date Analyzed	Lab Tech.	Methodology
BASE NEUTRAL COMPOUNDS - DNR Scan #7					
Acenaphthene	<10.	ug/L	07/02/1991	mmk	610 (5)
Acenaphthylene	<10.	ug/L	07/02/1991	mmk	610 (5)
Anthracene	<10.	ug/L	07/02/1991	mmk	610 (5)
Benzo(a)anthracene	<10.	ug/L	07/02/1991	mmk	610 (5)
Benzo(a)pyrene	<10.	ug/L	07/02/1991	mmk	610 (5)
Benzo(b)fluoranthene	<10.	ug/L	07/02/1991	mmk	610 (5)
Benzo(ghi)perylene	<10.	ug/L	07/02/1991	mmk	610 (5)
Benzo(k)fluoranthene	<10.	ug/L	07/02/1991	mmk	610 (5)
Chrysene	<10.	ug/L	07/02/1991	mmk	610 (5)
Dibenzo(a,h)anthracene	<10.	ug/L	07/02/1991	mmk	610 (5)
Fluoranthene	<10.	ug/L	07/02/1991	mmk	610 (5)
Fluorene	<10.	ug/L	07/02/1991	mmk	610 (5)
Indeno(1,2,3-cd)pyrene	<10.	ug/L	07/02/1991	mmk	610 (5)
Naphthalene	<10.	ug/L	07/02/1991	mmk	610 (5)
Phenanthrene	<10.	ug/L	07/02/1991	mmk	610 (5)
Pyrene	<10.	ug/L	07/02/1991	mmk	610 (5)

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

07/12/1991

Job No.: 91.3655
Sample No.: 92513

Quarterly Lysimeter
Act 64 Monitoring

Sample Description: Lysimeter 1-A

Date Taken: 06/26/1991

Date Received: 06/27/1991

Parameter	Result	Unit	Date Analyzed	Lab Tech.	Methodology
BASE NEUTRAL COMPOUNDS -DNR Scan #7					
Acenaphthene	<10.	ug/L	07/02/1991	mmk	610 (5)
Acenaphthylene	<10.	ug/L	07/02/1991	mmk	610 (5)
Anthracene	<10.	ug/L	07/02/1991	mmk	610 (5)
Benzo(a)anthracene	<10.	ug/L	07/02/1991	mmk	610 (5)
Benzo(a)pyrene	<10.	ug/L	07/02/1991	mmk	610 (5)
Benzo(b)fluoranthene	<10.	ug/L	07/02/1991	mmk	610 (5)
Benzo(ghi)perylene	<10.	ug/L	07/02/1991	mmk	610 (5)
Benzo(k)fluoranthene	<10.	ug/L	07/02/1991	mmk	610 (5)
Chrysene	<10.	ug/L	07/02/1991	mmk	610 (5)
Dibenzo(a,h)anthracene	<10.	ug/L	07/02/1991	mmk	610 (5)
Fluoranthene	<10.	ug/L	07/02/1991	mmk	610 (5)
Fluorene	<10.	ug/L	07/02/1991	mmk	610 (5)
Indeno(1,2,3-cd)pyrene	<10.	ug/L	07/02/1991	mmk	610 (5)
Naphthalene	<10.	ug/L	07/02/1991	mmk	610 (5)
Phenanthrene	<10.	ug/L	07/02/1991	mmk	610 (5)
Pyrene	<10.	ug/L	07/02/1991	mmk	610 (5)

Bruce E. Brown
Project Manager

orig: Re/S. Buda → Monitoring Data File
xc: Ben cc: USEPA
Larry + Kurt

RECEIVED
JUL 24 1991
MANAGEMENT

Environmental and Safety Engineering Staff
Ford Motor Company

Suite 608
15201 Century Drive
Dearborn, Michigan 48120

July 19, 1991

Ms. Mindy Koch, Chief
Waste Management Division
Michigan Department of Natural Resources
P.O. Box 30028
Lansing, Michigan 48909

Subject: **Submittal of Environmental Monitoring Results**
Ford Allen Park Clay Mine Landfill
EPA ID No. MID 980 568 711

Dear Ms. Koch:

Enclosed, as required by our Michigan Act 64 Operating License, are Act 64 lysimeter monitoring results for second quarter 1991.

Should you have any questions regarding this transmittal, please contact David O'Connor of this Office at 313/322-0701.

Sincerely,

Jerome S. Amber

Jerome S. Amber, P.E., Manager
Industrial Waste and Toxic/
Hazardous Substances
Environmental Quality Office
313/322-4646

Enclosure

cc: Mayors of Allen Park, Dearborn and Melvindale
Ardys Bennett
Joe Wisk

RECEIVED
JUL 22 1991
Waste Management
Division

Dr/S. Buda → Mon. Data file cc: USEPA
1C: Ben
Kurt

RECEIVED
JUN 19 1991
WASTE MANAGEMENT

Environmental and Safety Engineering Staff
Ford Motor Company

Suite 608
15201 Century Drive
Dearborn, Michigan 48120

June 12, 1991

Ms. Mindy Koch, Chief
Waste Management Division
Michigan Department of Natural Resources
P.O. Box 30028
Lansing, Michigan 48909

Subject: **Submittal of Environmental Monitoring Results**
Ford Allen Park Clay Mine Landfill
EPA ID No. MID 980 568 711

Dear Ms. Koch:

Enclosed, as required by our Michigan Act 64 Operating License, are Detroit Water and Sewerage Department effluent monitoring results for the first half of 1991.

Should you have any questions regarding this transmittal, please contact David O'Connor of this Office at 313/322-0701.

Sincerely,

David A. O'Connor for,

Jerome S. Amber, P.E., Manager
Industrial Waste and
Toxic/Hazardous Substances
Environmental Quality Office
313/322-4646

Enclosures

cc: Mayors of Allen Park, Dearborn and Melvindale
Ardys Bennett
Joe Wisk

RECEIVED
JUN 12 1991
Waste Management
Division

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
Tel: (313) 253-0440
Fax: (313) 334-8486

RECEIVED
ENVIRONMENTAL
QUALITY OFFICE
91 JUN -4 A9:16

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

05/30/1991

Job No.: 91.1510
Sample No.: 87983

DWSD Leachate Monitoring

Semi-Annual

Sample Description: Sanitary Sewer

Date Taken: 03/15/1991

Date Received: 03/15/1991

Parameter	Result	Unit	Date Analyzed	Lab Tech.	Methodology
pH (Field)	10.16	units	03/15/1991	cdg	150.1 (3)
Alkalinity, Total (CaCO3)	750.	mg/L	03/18/1991	akm	310.1 (3)
BOD - Five Day	330.	mg/L	03/15/1991	mab	405.1 (3)
Chloride	1600.	mg/L	03/20/1991	akm	4500-ClB (4)
Cyanide, Total	4.9	mg/L	03/22/1991	rjk	335.2 (3)
Nitrogen, Ammonia	84.	mg/L	03/18/1991	mab	350.2 (3)
Oil & Grease	7.	mg/L	03/22/1991	cms	413.1 (3)
Phenol (4-AAP)	12.	mg/L	03/18/1991	rjk	420.1 (3)
Phosphorus, Total	0.31	mg/L	03/20/1991	cms	365.2 (3)
Solids, Suspended	14.	mg/L	03/19/1991	spr	160.2 (3)
Sulfate	160.	mg/L	03/18/1991	das	375.4 (3)
Total Organic Carbon (TOC)	290.	mg/L	03/27/1991	bar	9060 (1)
Total Organic Halogens	120.	ug/L	03/19/1991	aus	9020 (1)
Arsenic	0.06	mg/L	04/06/1991	wjj	206.3 (3)
Cadmium	<0.01	mg/L	03/20/1991	jbb	200.7 (3)
Chromium	<0.02	mg/L	03/20/1991	jbb	200.7 (3)
Copper	<0.02	mg/L	03/20/1991	jbb	200.7 (3)
Iron	0.81	mg/L	03/20/1991	jbb	200.7 (3)
Lead	<0.05	mg/L	03/20/1991	jbb	200.7 (3)
Mercury	<0.0005	mg/L	03/20/1991	dlc	245.1 (3)
Nickel	0.04	mg/L	03/20/1991	jbb	200.7 (3)
Silver	<0.02	mg/L	03/20/1991	jbb	200.7 (3)
Zinc	<0.02	mg/L	03/20/1991	jbb	200.7 (3)

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

05/30/1991

Job No.: 91.1510
Sample No.: 87983

DWSD Leachate Monitoring

Semi-Annual

Sample Description: Sanitary Sewer

Date Taken: 03/15/1991

Date Received: 03/15/1991

Parameter	Result	Unit	Date Analyzed	Lab Tech.	Methodology
ACID COMPOUNDS					
4-Chloro-3-methylphenol	<40.	ug/L	03/25/1991	wad	625 (5)
2-Chlorophenol	<40.	ug/L	03/25/1991	wad	625 (5)
2,4-Dichlorophenol	<40.	ug/L	03/25/1991	wad	625 (5)
2,4-Dimethylphenol	430.	ug/L	03/25/1991	wad	625 (5)
2,4-Dinitrophenol	<200.	ug/L	03/25/1991	wad	625 (5)
2-Methyl-4,6-dinitrophenol	<200.	ug/L	03/25/1991	wad	625 (5)
2-Nitrophenol	<40.	ug/L	03/25/1991	wad	625 (5)
4-Nitrophenol	<40.	ug/L	03/25/1991	wad	625 (5)
Pentachlorophenol	<40.	ug/L	03/25/1991	wad	625 (5)
Phenol	3300.	ug/L	03/25/1991	wad	625 (5)
2,4,6-Trichlorophenol	<40.	ug/L	03/25/1991	wad	625 (5)

Bruce E. Brown
Project Manager

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

05/30/1991

Job No.: 91.1510
Sample No.: 87983

DWSD Leachate Monitoring

Semi-Annual

Sample Description: Sanitary Sewer

Date Taken: 03/15/1991

Date Received: 03/15/1991

Parameter	Result	Unit	Date Analyzed	Lab Tech.	Methodology
2,4,5-Trichlorophenol	<40.	ug/L			625 & 8270 (5 & 1)

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

05/30/1991

Job No.: 91.1510
Sample No.: 87983

DWSD Leachate Monitoring

Semi-Annual

Sample Description: Sanitary Sewer

Date Taken: 03/15/1991

Date Received: 03/15/1991

Parameter	Result	Unit	Date Analyzed	Lab Tech.	Methodology
PCB'S					
Aroclor-1016	<1.	ug/L	03/25/1991	lrk	608 (5)
Aroclor-1221	<1.	ug/L	03/25/1991	lrk	608 (5)
Aroclor-1232	<1.	ug/L	03/25/1991	lrk	608 (5)
Aroclor-1242	<1.	ug/L	03/25/1991	lrk	608 (5)
Aroclor-1248	<1.	ug/L	03/25/1991	lrk	608 (5)
Aroclor-1254	<1.	ug/L	03/25/1991	lrk	608 (5)
Aroclor-1260	0.26	ug/L	03/25/1991	lrk	608 (5)

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

05/30/1991

Job No.: 91.1510
Sample No.: 87983

OWSD Leachate Monitoring

Semi-Annual

Sample Description: Sanitary Sewer

Date Taken: 03/15/1991

Date Received: 03/15/1991

Parameter	Result	Unit	Date Analyzed	Lab Tech.	Methodology
BASE NEUTRAL COMPOUNDS					
Naphthalene	200.	ug/L	03/25/1991	wad	610 (5)

Bruce E. Brown
Project Manager

90044

NET

Date Completed: 4-26-91

FIELD NOTES & OBSERVATIONS

ACCOUNT: FAPCM FIELD PERSONNEL: Moosli

SITE I.D.: Sanitary FIELD SAMPLE NO: _____ OBSERVERS: _____

COMPOSITE SAMPLE DATA: TIMED INTERVAL: _____ PROPORTIONAL: _____

SAMPLING INITIATED: TIME: _____ DATE: _____ WEATHER: _____

SAMPLING COMPLETED: TIME: _____ DATE: _____ WEATHER: _____

GRAB SAMPLE DATA: DIRECT: _____ OTHER: S.S. Bucket

SAMPLE COLLECTED: TIME: 11:08 DATE: 4-26-91 WEATHER: Sunny 60°

FLOW MEASUREMENT: INSTANTANEOUS: _____; 24-HR. MEASUREMENT: _____

COMMENTS FOR REPORT:

RAW FLOW DATA:

INSTANTANEOUS: TIME: _____ DATE: _____ WEATHER: _____

PIPE DIAMETER: _____ PRIMARY DEVICE: _____ HD. HT.: _____ VEL: _____

ACTUAL MEASUREMENT: PRIMARY DEVICE: _____ HD. HT. AT SET-UP: _____

SET-UP: TIME: _____ DATE: _____ WEATHER: _____

TAKE-DOWN: TIME: _____ DATE: _____ WEATHER: _____

TOTALIZER VALUE: INITIAL: _____ FINAL: _____

SAMPLE BOTTLES COLLECTED:

	GRAB	COMP		GRAB	COMP		GRAB	COMP
F.S. Plain:			VOA			CN	X	
Qt. Plain			TOX			Phenol	X	
Pt.Plain			1/2 Gal.Org.			Sulfide		
120 Plain	2X		F.S. Back-up			Sterile Bottle		
Qt. HNO_3			F.S. H_2SO_4			Hypochlorite		
Pt. HNO_3			Pt. H_2SO_4			Dissolved O_2		
120 HNO_3			120 H_2SO_4					

ON-SITE DATA:

Chlorine Check: P.

Sulfide Check: P.

pH _____

Temp (°F) _____

Tot. Res. Cl _____

Sulfite _____

Free Cl _____

Program: Re-Sample

IN-HOUSE COMMENTS: pH - Flow into 10.12 pH a
Flow out 10.21 pH b

Chain of Custody: Relinquished By: EG Date: 4-26-91

Received By: _____ Date: _____

orig: Sue / Steve → monitoring data file
xc: Ben
cc: USEPA

RECEIVED
MAY 1 5 1991
WASTE MANAGEMENT

Larry A
Kurt

Ford

Environmental and Safety Engineering Staff
Ford Motor Company

Suite 608
15201 Century Drive
Dearborn, Michigan 48120

May 9, 1991

Mr. Alan Howard, Chief
Waste Management Division
Michigan Department of Natural Resources
P.O. Box 30028
Lansing, Michigan 48909

Subject: **Submittal of Environmental Monitoring Results**
Ford Allen Park Clay Mine Landfill
EPA ID No. MID 980 568 711

Dear Mr. Howard:

Enclosed, as required by our Michigan Act 64 Operating License, are Act 64 Cell I lysimeter monitoring and Cell I leachate monitoring results.

Background soil sampling results (NET Sample Nos. 87995 - 88000) submitted to you on May 1, 1991 are invalid. We have learned that the samples were not taken at the correct locations. NET, Inc. is scheduled to re-sample soils at the correct sampling locations later this month.

Should you have any questions regarding this transmittal, please contact David O'Connor of this Office at 313/322-0701.

Sincerely,

Jerome S. Amber

Jerome S. Amber, P.E., Manager
Industrial Waste and
Toxic/Hazardous Substances
Environmental Quality Office
313/322-4646

Enclosures

cc: Mayors of Allen Park, Dearborn and Melvindale
Ardys Bennett
Joe Wisk

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

RECEIVED
ENVIRONMENTAL
QUALITY OFFICE
'91 MAY -8 A11:18

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

05/02/1991

Job No.: 91.1507
Sample No.: 87975

Act 64 Leachate Monitoring

Quarterly

Sample Description: Cell I

Date Taken: 03/15/1991

Date Received: 03/15/1991

Parameter	Result	Unit	Date Analyzed	Lab Tech.	Methodology
pH (Field)	9.19	units	03/15/1991	cdg	150.1 (3)
Conductivity (Field)	9300. (in lab)	umhos/cm	04/29/1991	dds	120.1 (3)
Alkalinity, Bicarb.(CaCO3)	36.	mg/L	03/18/1991	akm	310.1 (3)
Alkalinity, Carb. (CaCO3)	84.	mg/L	03/18/1991	akm	310.1 (3)
Alkalinity, Total (CaCO3)	120.	mg/L	03/18/1991	akm	310.1 (3)
BOD - Five Day	32.	mg/L	03/15/1991	mab	405.1 (3)
Chloride	2600.	mg/L	03/20/1991	akm	4500-ClB (4)
COD	320.	mg/L	03/20/1991	jsg	410.1-2 (3)
Cyanide, Total	2.0	mg/L	03/22/1991	rjk	335.2 (3)
Phenol (4-AAP)	4.4	mg/L	03/18/1991	rjk	420.1 (3)
Sulfate	230.	mg/L	03/18/1991	das	375.4 (3)
Total Organic Carbon (TOC)	66.	mg/L	03/21/1991	bar	9060 (1)
Arsenic	<0.005	mg/L	04/06/1991	wjj	206.3 (3)
Barium	1.8	mg/L	03/20/1991	jbb	200.7 (3)
Cadmium	0.02	mg/L	03/20/1991	jbb	200.7 (3)
Calcium	2700.	mg/L	04/08/1991	dlc	200.7 (3)
Chromium	0.11	mg/L	03/20/1991	jbb	200.7 (3)
Copper	0.23	mg/L	03/20/1991	jbb	200.7 (3)
Iron	19.	mg/L	03/20/1991	jbb	200.7 (3)
Lead	3.6	mg/L	03/20/1991	jbb	200.7 (3)
Magnesium	210.	mg/L	04/08/1991	dlc	200.7 (3)
Mercury	<0.0005	mg/L	03/20/1991	dlc	245.1 (3)
Nickel	0.20	mg/L	03/20/1991	jbb	200.7 (3)
Selenium	0.007	mg/L	03/25/1991	dlc	270.3 (3)
Silver	<0.02	mg/L	03/20/1991	jbb	200.7 (3)
Sodium	1200.	mg/L	04/08/1991	dlc	200.7 (3)
Zinc	3.0	mg/L	03/20/1991	jbb	200.7 (3)

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

05/02/1991

Job No.: 91.1507
Sample No.: 87975

Act 64 Leachate Monitoring

Quarterly

Sample Description: Cell I

Date Taken: 03/15/1991

Date Received: 03/15/1991

Parameter	Result	Unit	Date Analyzed	Lab Tech.	Methodology
BASE NEUTRAL CMPDS - DNr Scan #7					
Acenaphthene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Acenaphthylene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Anthracene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Benzo(a)anthracene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Benzo(a)pyrene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Benzo(b)fluoranthene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Benzo(j)fluoranthene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Benzo(k)fluoranthene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Benzo(ghi)perylene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Chrysene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Dibenz(a,h)acridine	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Dibenz(a,j)acridine	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Dibenzo(a,h)anthracene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
7H-Dibenzo(c,g)carbazole	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Dibenzo(a,e)pyrene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Dibenzo(a,h)pyrene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Dibenzo(a,i)pyrene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Fluoranthene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Fluorene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Indeno(1,2,3-cd)pyrene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
3-Methylcholanthrene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Naphthalene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Phenanthrene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)
Pyrene	<10.	ug/L	04/01/1991	wtr	8100/8310 (1)

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

05/02/1991

Job No.: 91.1507
Sample No.: 87975

Act 64 Leachate Monitoring

Quarterly

Sample Description: Cell I

Date Taken: 03/15/1991

Date Received: 03/15/1991

Parameter	Result	Unit	Date Analyzed	Lab Tech.	Methodology
ACID COMPOUNDS - DNR SCAN #8					
2-Chlorophenol	<10.	ug/L	04/15/1991	mmk	8040(1)
4-Chloro-3-methylphenol	48.	ug/L	04/15/1991	mmk	8040(1)
2,4-Dichlorophenol	<10.	ug/L	04/15/1991	mmk	8040(1)
2,4-Dimethylphenol	<10.	ug/L	04/15/1991	mmk	8040(1)
2,4-Dinitrophenol	<10.	ug/L	04/15/1991	mmk	8040(1)
2-Methyl-4,6-dinitrophenol	<10.	ug/L	04/15/1991	mmk	8040(1)
2-Nitrophenol	<10.	ug/L	04/15/1991	mmk	8040(1)
4-Nitrophenol	28.	ug/L	04/15/1991	mmk	8040(1)
Pentachlorophenol	<15.	ug/L	04/15/1991	mmk	8040(1)
Phenol	<10.	ug/L	04/15/1991	mmk	8040(1)
2,4,5-Trichlorophenol	<10.	ug/L	04/15/1991	mmk	8040(1)
2,4,6-Trichlorophenol	170.	ug/L	04/15/1991	mmk	8040(1)

Bruce E. Brown
Project Manager

NET®

Date Completed: 3-15-91

FIELD NOTES & OBSERVATIONS

ACCOUNT: F.A.P.C.M. FIELD PERSONNEL: Gathner/Goodson

SITE I.D.: Cell I - Leachate FIELD SAMPLE NO: _____ OBSERVERS: _____

COMPOSITE SAMPLE DATA: TIMED INTERVAL: _____ PROPORTIONAL: _____

SAMPLING INITIATED: TIME: _____ DATE: _____ WEATHER: _____

SAMPLING COMPLETED: TIME: _____ DATE: _____ WEATHER: _____

GRAB SAMPLE DATA: DIRECT: ✓ OTHER: _____

SAMPLE COLLECTED: TIME: 11:30am DATE: 3-15-91 WEATHER: Sunny 40°

FLOW MEASUREMENT: INSTANTANEOUS: _____; 24-HR. MEASUREMENT: _____

COMMENTS FOR REPORT:

RAW FLOW DATA:

INSTANTANEOUS: TIME: _____ DATE: _____ WEATHER: _____

PIPE DIAMETER: _____ PRIMARY DEVICE: _____ HD. HT.: _____ VEL: _____

ACTUAL MEASUREMENT: PRIMARY DEVICE: _____ HD. HT. AT SET-UP: _____

SET-UP: TIME: _____ DATE: _____ WEATHER: _____

TAKE-DOWN: TIME: _____ DATE: _____ WEATHER: _____

TOTALIZER VALUE: INITIAL: _____ FINAL: _____

SAMPLE BOTTLES COLLECTED:

	GRAB	COMP		GRAB	COMP		GRAB	COMP
F.S. Plain:			VOA			CN	X	
Qt. Plain	X		TOX			Phenol	X	
Pt.Plain			1/2 Gal.Org.	X		Sulfide		
120 Plain	X		F.S. Back-up	2X		Sterile Bottle		
Qt. HNO_3	X		F.S. H_2SO_4			Hypochlorite		
Pt. HNO_3			Pt. H_2SO_4	X		Dissolved O_2		
120 HNO_3			120 H_2SO_4	X				

ON-SITE DATA:

Chlorine Check: P.

Sulfide Check: P.

pH 9.19

Temp (°F) _____

Tot. Res. Cl _____

Sulfite _____

Free Cl _____

Program: 24hr

IN-HOUSE COMMENTS:

Chain of Custody: Relinquished By: [illegible] Date: 3-15-91

Received By: Rosemary S. Valentine Date: 3/15/91

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

METHODOLOGY

(1) EPA SW846, "Test Methods for Evaluating Solid Wastes".

(2) ASTM, "American Society for Testing Materials".

(3) EPA 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes".

(4) "Standard Methods for the Examination of Water and Wastewater", 17th Edition, 1989.

(5) 40 CFR, Part 136; reprinted in EPA 600/4-82-057, "Methods for Organic Analyses of Municipal and Industrial Wastewaters."

(6) 40 CFR, Part 763;

(7) "Standard Methods for the Examination of Water and Wastewater", 16th Edition, 1985.

(8) Methods of Air Sampling and Analysis, 2nd. Edition.

UNITS OF CONVERSION

ppm (part per million) = mg/Kg, mg/L, ug/g, ug/ml

ppb (part per billion) = ug/Kg, ug/L

% = ppm divided by 10,000

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NET Midwest, Inc.
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Pontiac, MI 48342
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Fax: (313) 334-8486

ANALYTICAL REPORT

RECEIVED
ENVIRONMENTAL
QUALITY OFFICE

'91 MAY -2 P12:53

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

04/30/1991

Job No.: 91.1914
Sample No.: 88901

Act 64 Lysimeter Monitoring Program

Quarterly

Sample Description: Lysimeter 1-A

Date Taken: 04/03/1991

Date Received: 04/05/1991

Parameter	Result	Unit	Date Analyzed	Lab Tech.	Methodology
BASE NEUTRAL COMPOUNDS - DNR Scan					
Acenaphthene	<3.0	ug/L	04/12/1991	jec	8100
Acenaphthylene	<3.0	ug/L	04/12/1991	jec	8100
Anthracene	<3.0	ug/L	04/12/1991	jec	8100
Benzo(a)anthracene	<3.0	ug/L	04/12/1991	jec	8100
Benzo(a)pyrene	<3.0	ug/L	04/12/1991	jec	8100
Benzo(b)fluoranthene	<3.0	ug/L	04/12/1991	jec	8100
Benzo(ghi)perylene	<3.0	ug/L	04/12/1991	jec	8100
Benzo(k)fluoranthene	<3.0	ug/L	04/12/1991	jec	8100
Chrysene	<3.0	ug/L	04/12/1991	jec	8100
Dibenzo(a,h)anthracene	<3.0	ug/L	04/12/1991	jec	8100
Fluoranthene	<3.0	ug/L	04/12/1991	jec	8100
Fluorene	<3.0	ug/L	04/12/1991	jec	8100
Indeno(1,2,3-cd)pyrene	<3.0	ug/L	04/12/1991	jec	8100
Naphthalene	<3.0	ug/L	04/12/1991	jec	8100
Phenanthrene	<3.0	ug/L	04/12/1991	jec	8100
Pyrene	<3.0	ug/L	04/12/1991	jec	8100

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

04/30/1991

Job No.: 91.1914
Sample No.: 88901

Act 64 Lysimeter Monitoring Program

Quarterly

Sample Description: Lysimeter 1-A

Date Taken: 04/03/1991

Date Received: 04/05/1991

Parameter	Result	Unit	Date Analyzed	Lab Tech.	Methodology
ACID COMPOUNDS - DNR SCAN #8					
2-Chlorophenol	<10.	ug/L	04/25/1991	mmk	8040
4-Chloro-3-methylphenol	<15.	ug/L	04/25/1991	mmk	8040
2,4-Dichlorophenol	<10.	ug/L	04/25/1991	mmk	8040
2,4-Dimethylphenol	<10.	ug/L	04/25/1991	mmk	8040
2,4-Dinitrophenol	<10.	ug/L	04/25/1991	mmk	8040
2-Methyl-4,6-dinitrophenol	<10.	ug/L	04/25/1991	mmk	8040
2-Nitrophenol	<10.	ug/L	04/25/1991	mmk	8040
4-Nitrophenol	<20.	ug/L	04/25/1991	mmk	8040
Pentachlorophenol	<15.	ug/L	04/25/1991	mmk	8040
Phenol	<10.	ug/L	04/25/1991	mmk	8040
2,4,5-Trichlorophenol	<10.	ug/L	04/25/1991	mmk	8040
2,4,6-Trichlorophenol	<10.	ug/L	04/25/1991	mmk	8040

Bruce E. Brown
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

04/30/1991

Job No.: 91.1914
Sample No.: 88902

Act 64 Lysimeter Monitoring Program

Quarterly

Sample Description: Lysimeter 1-B

Date Taken: 04/03/1991

Date Received: 04/05/1991

Parameter	Result	Unit	Date Analyzed	Lab Tech.	Methodology
BASE NEUTRAL COMPOUNDS - DNR Scan					
Acenaphthene	<3.0	ug/L	04/12/1991	jec	8010
Acenaphthylene	<3.0	ug/L	04/12/1991	jec	8010
Anthracene	<3.0	ug/L	04/12/1991	jec	8010
Benzo(a)anthracene	<3.0	ug/L	04/12/1991	jec	8010
Benzo(a)pyrene	<3.0	ug/L	04/12/1991	jec	8010
Benzo(b)fluoranthene	<3.0	ug/L	04/12/1991	jec	8010
Benzo(ghi)perylene	<3.0	ug/L	04/12/1991	jec	8010
Benzo(k)fluoranthene	<3.0	ug/L	04/12/1991	jec	8010
Chrysene	<3.0	ug/L	04/12/1991	jec	8010
Dibenzo(a,h)anthracene	<3.0	ug/L	04/12/1991	jec	8010
Fluoranthene	<3.0	ug/L	04/12/1991	jec	8010
Fluorene	<3.0	ug/L	04/12/1991	jec	8010
Indeno(1,2,3-cd)pyrene	<3.0	ug/L	04/12/1991	jec	8010
Naphthalene	<3.0	ug/L	04/12/1991	jec	8010
Phenanthrene	<3.0	ug/L	04/12/1991	jec	8010
Pyrene	<3.0	ug/L	04/12/1991	jec	8010

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

04/30/1991

Job No.: 91.1914
Sample No.: 88902

Act 64 Lysimeter Monitoring Program

Quarterly

Sample Description: Lysimeter 1-B

Date Taken: 04/03/1991

Date Received: 04/05/1991

Parameter	Result	Unit	Date Analyzed	Lab Tech.	Methodology
ACID COMPOUNDS - DNR SCAN #8					
2-Chlorophenol	<10.	ug/L	04/25/1991	mmk	8040
4-Chloro-3-methylphenol	<15.	ug/L	04/25/1991	mmk	8040
2,4-Dichlorophenol	<10.	ug/L	04/25/1991	mmk	8040
2,4-Dimethylphenol	<10.	ug/L	04/25/1991	mmk	8040
2,4-Dinitrophenol	<10.	ug/L	04/25/1991	mmk	8040
2-Methyl-4,6-dinitrophenol	<10.	ug/L	04/25/1991	mmk	8040
2-Nitrophenol	<10.	ug/L	04/25/1991	mmk	8040
4-Nitrophenol	<20.	ug/L	04/25/1991	mmk	8040
Pentachlorophenol	<15.	ug/L	04/25/1991	mmk	8040
Phenol	<10.	ug/L	04/25/1991	mmk	8040
2,4,5-Trichlorophenol	<10.	ug/L	04/25/1991	mmk	8040
2,4,6-Trichlorophenol	<10.	ug/L	04/25/1991	mmk	8040

Bruce E. Brown
Project Manager

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Pontiac Division
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Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

METHODOLOGY

(1) EPA SW846, "Test Methods for Evaluating Solid Wastes".

(2) ASTM, "American Society for Testing Materials".

(3) EPA 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes".

(4) "Standard Methods for the Examination of Water and Wastewater", 17th Edition, 1989.

(5) 40 CFR, Part 136; reprinted in EPA 600/4-82-057, "Methods for Organic Analyses of Municipal and Industrial Wastewaters."

(6) 40 CFR, Part 763;

(7) "Standard Methods for the Examination of Water and Wastewater", 16th Edition, 1985.

(8) Methods of Air Sampling and Analysis, 2nd. Edition.

NATIONAL ENVIRONMENTAL TESTING, INC.

Client: FORD EQO ALLEN-PARK
Job Number: 91.1914
Sample Number: 88901 - 88902
Job Description: Quarterly

BATCH QUALITY CONTROL DATA 04/25/1991

Parameter	Original Sample Concentration	Spike Concentration	Spiked Sample Concentration	Duplicate Spiked Sample Concentration	Spiked Sample % Recovery	Duplicate Spiked Sample % Recovery	Relative Percent Difference
Acenapthylene, ug/l	<3.0	50	42	34	84	68	21
Phenanthrene, ug/l	<3.0	50	23	46	46	92	67
Fluoranthene, ug/l	<3.0	5.0	4.4	4.3	88	86	2.2
Benzo(A) Anthracene, ug/l	<3.0	5.0	3.3	3.2	66	64	3.1
Benzo(B) Fluoranthene, ug/l	<3.0	5.0	3.4	3.3	68	66	3.0
Benzo(a)Pyrene, ug/l	<3.0	5.0	3.3	3.2	66	64	3.1
Dibenzo(ah) Anthracene, ug/l	<3.0	5.0	4.3	4.4	86	88	2.3
Benzo(ghi) Perylene, ug/l	<3.0	5.0	1.3	1.0	26	20	26

Please note that the data reported for the original sample concentration, duplicate and spikes were analyzed in the same batch, but may not necessarily be that of your sample.

NA - Not Applicable

RECEIVED ENVIRONMENTAL QUALITY OFFICE '91 MAY -6 P1:37

Christopher P. Jock
Division Manager

Bruce E. Brown
Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Client: FORD EQO ALLEN PARK
Job Number: 91.1914
Sample Number: 88901 - 88902
Job Description: Quarterly

BATCH QUALITY CONTROL DATA 04/25/1991

Parameter	Procedure Blank Observed Value	Laboratory Control Standard % Recovery	Standard Reference Material % Recovery	Procedure Blank Surrogate % Recovery
Acenapthylene, ug/l	<3.0	68	NA	NA
Phenanthrene, ug/l	<3.0	100	NA	NA
Fluoranthene, ug/l	<3.0	92	NA	NA
Benzo(A)Anthracene, ug/l	<3.0	128	NA	NA
Benzo(B)Fluoranthene, ug/l	<3.0	88	NA	NA
Benzo(a)Pyrene, ug/l	<3.0	80	NA	NA
Dibenzo(ah)anthracene, ug/l	<3.0	80	NA	NA
Benzo(ghi)Perylene, ug/l	<3.0	88	NA	NA

NA - Not Applicable

Christopher P. Jock
Division Manager

Bruce E. Brown
Project Manager

CHAIN-OF-CUSTODY FORM

APPENDIX VI

O.# FORD ALLEN PARK CLAY MINE

GNATURE OF SAMPLER David A. O'Connor

AMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONT-TAINERS	ACT 64 LYSIMETER PARAMETERS				REMARKS
	4-3-91	1030 hrs		X	LYSIMETER 1-A	1	X				EXTRACT
	4-3-91	1040 hrs		X	LYSIMETER 1-B	2	X				SAMPLES NO
											LATER THAN
											4-9-91
											PLEASE
											COMPOSITE
											2 SAMPLES
											FROM
											LYSIMETER 1-B
											INTO ONE
											SAMPLE

LINQUISHED BY (SIGNED)	DATE	TIME	RECEIVED BY (SIGNED)	RELINQUISHED BY (SIGNED)	DATE	TIME	RECEIVED BY (SIGNED)
David A. O'Connor	4-5-91	1025	Terry J. Moore				
LINQUISHED BY (SIGNED)	DATE	TIME	RECEIVED BY (SIGNED)	RELINQUISHED BY (SIGNED)	DATE	TIME	RECEIVED BY (SIGNED)

LINQUISHED BY (SIGNED)	DATE	TIME	RECEIVED FOR LABORATORY BY	DATE	TIME	REMARKS:
			Rosemary C. Lawrence	4/5/91		

Rete ~~Stace~~ / ~~Ge~~ → Monitoring Betty Rie
cc: Ben
Ford Allen Park Clay
MINE MID 980 568 711
Laura Lodisio

Ford

Environmental and Safety Engineering Staff
Ford Motor Company

Suite 608
15201 Century Drive
Dearborn, Michigan 48120

RECEIVED
MAR 20 1991
OFFICE OF RCRA
Waste Management Division
U.S. EPA, REGION V

February 27, 1991

Mr. Alan Howard, Chief
Waste Management Division
Michigan Department of Natural Resources
P.O. Box 30028
Lansing, Michigan 48909

Subject: **Submittal of Environmental Monitoring Results**
Ford Allen Park Clay Mine Landfill
EPA ID No. MID 980 568 711

Dear Mr. Howard:

Enclosed are copies of previously submitted 1990 Cell I leachate monitoring results, in accordance with Condition IV.B.2.b of our Act 64 Operating License. This section of the permit requires us to submit an annual leachate summary report to the MDNR. Please note that the volume of Cell I leachate discharged to the Detroit Water and Sewerage Department sanitary sewer in 1990 was 226,512 gallons. Also enclosed are Act 64 Cell I lysimeter monitoring results, in accordance with Condition I.E.9.c of the license.

Should you have any questions regarding this transmittal, please contact David O'Connor of this Office at 313/322-0701.

Sincerely,

Jerome S. Amber

Jerome S. Amber, P.E., Manager
Industrial Waste and Toxic/
Hazardous Substances
Environmental Quality Office
313/322-4646

Enclosures

cc: Mayors of Allen Park, Dearborn and Melvindale
Ardys Bennett
Joe Wisk

RECEIVED
MAR 01 1991
Waste Management
Division

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
Tel: (313) 253-0440
Fax: (313) 334-8486

Formerly: Burmah Technical Services, Inc.

ANALYTICAL REPORT

RECEI
STATIONAR
ENVIR
'90 APR 1

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

04-18-90

Sample No.: 71199

Page 1

Sample Description: Cell I

Program: Quarterly Act 64 Leachate Monitoring

Date Taken: 03-28-90

Date Received: 03-28-90

Parameter	Results	Units	Date Analy.	Lab Tech
Alkalinity, Bicarb.(CaC03)	<4	mg/L	04-06-90	pds
Alkalinity, Carb. (CaC03)	120.	mg/L	04-06-90	pds
Alkalinity, Total (CaC03)	120.	mg/L	04-06-90	pds
BOD - Five Day	49.	mg/L	03-28-90	mab
Chloride	3800.	mg/L	04-02-90	jsg
COD	250.	mg/L	04-05-90	pmc
Conductivity	7900.	umhos/cm	04-18-90	akm
Cyanide, Total	2.6	mg/L	04-06-90	rjk
Phenolics (4-AAP)	4.9	mg/L	04-09-90	pmc
Sulfate	350.	mg/L	04-04-90	cmz
Total Organic Carbon	120.	mg/L	04-17-90	pb
Arsenic	0.80	mg/L	04-03-90	jbb
Barium	1.8	mg/L	04-09-90	jbb
Cadmium	0.03	mg/L	04-09-90	jbb
Calcium	2400.	mg/L	04-03-90	dlc
Chromium, Total	0.14	mg/L	04-09-90	jbb
Copper	0.22	mg/L	04-09-90	jbb
Iron	18.	mg/L	04-09-90	jbb
Lead	3.8	mg/L	04-09-90	jbb
Magnesium	210.	mg/L	04-03-90	dlc
Mercury	<0.0005	mg/L	03-30-90	jsc
Nickel	0.19	mg/L	04-09-90	jbb
Selenium	0.015	mg/L	04-04-90	jbb
Silver	<0.02	mg/L	04-09-90	jbb

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Midwest, Inc.
Pontiac Division
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Formerly: Burmah Technical Services, Inc.

ANALYTICAL REPORT

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

04-18-90

Sample No.: 71199

Page 2

Sample Description: Cell I

Program: Quarterly Act 64 Leachate Monitoring

Date Taken: 03-28-90

Date Received: 03-28-90

Parameter	Results	Units	Date Analy.	Lab Tech
Sodium	870.	mg/L	04-03-90	dlc
Zinc	3.6	mg/L	04-09-90	jbb

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ANALYTICAL REPORT

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

04-18-90

Sample No.: 71199

Page 3

Sample Description: Cell I

Program: Quarterly Act 64 Leachate Monitoring

Date Taken: 03-28-90

Date Received: 03-28-90

SEMI-VOLATILE COMPOUNDS

Parameter	Results	Units	Date Analy.	Lab Tech
METHOD 610/8100				
Acenaphthene	<10.	ug/L	03-02-90	nkp
Acenaphthylene	<10.	ug/L	03-02-90	nkp
Anthracene	<10.	ug/L	03-02-90	nkp
Benzo(a)anthracene	<10.	ug/L	03-02-90	nkp
Benzo(b)fluoranthene	<10.	ug/L	03-02-90	nkp
Benzo(k)fluoranthene	<10.	ug/L	03-02-90	nkp
Benzo(a)pyrene	<10.	ug/L	03-02-90	nkp
Benzo(ghi)perylene	<10.	ug/L	03-02-90	nkp
Chrysene	<10.	ug/L	03-02-90	nkp
Dibenzo(a,h)anthracene	<10.	ug/L	03-02-90	nkp
Fluoranthene	<10.	ug/L	03-02-90	nkp
Fluorene	<10.	ug/L	03-02-90	nkp
Indeno(1,2,3-cd)pyrene	<10.	ug/L	03-02-90	nkp
Naphthalene	<=22.	ug/L	03-02-90	nkp
Phenanthrene	<=18.	ug/L	03-02-90	nkp
Pyrene	<10.	ug/L	03-02-90	nkp

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Formerly: Burmah Technical Services, Inc.

ANALYTICAL REPORT

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

04-18-90

Sample No.: 71199

Page 4

Sample Description: Cell I

Program: Quarterly Act 64 Leachate Monitoring

Date Taken: 03-28-90

Date Received: 03-28-90

ACID COMPOUNDS

Parameter	Results	Units	Date Analy.	Lab Tech
METHOD 604/8040				
4-Chloro-3-methylphenol	<10.	ug/L	03-02-90	nkp
2-Chlorophenol	<10.	ug/L	03-02-90	nkp
2,4-Dichlorophenol	<=450.	ug/L	03-02-90	nkp
2,4-Dimethylphenol	<=180.	ug/L	03-02-90	nkp
2,4-Dinitrophenol	<15.	ug/L	03-02-90	nkp
4,6-Dinitro-2-methylphenol	<15.	ug/L	03-02-90	nkp
2-Nitrophenol	<10.	ug/L	03-02-90	nkp
4-Nitrophenol	<20.	ug/L	03-02-90	nkp
Pentachlorophenol	<15.	ug/L	03-02-90	nkp
Phenol	<=780.	ug/L	03-02-90	nkp
2,4,6-Trichlorophenol	<10.	ug/L	03-02-90	nkp
FIELD TESTS - ON SITE				
pH	9.86			

Christopher P. Jock
Divisional Manager

Burmah

Date Completed: 3-28-90

FIELD NOTES & OBSERVATIONS

ACCOUNT: FAPCM FIELD PERSONNEL: Smog Echert

SITE I.D.: CELL I LEACH. FIELD SAMPLE NO: 71199 OBSERVERS: _____

COMPOSITE SAMPLE DATA: TIMED INTERVAL: _____ PROPORTIONAL: _____

SAMPLING INITIATED: TIME: _____ DATE: _____ WEATHER: _____

SAMPLING COMPLETED: TIME: _____ DATE: _____ WEATHER: _____

GRAB SAMPLE DATA: DIRECT: _____ OTHER: tef. bailer

SAMPLE COLLECTED: TIME: 10:00AM DATE: 3-28-90 WEATHER: sun 40's

FLOW MEASUREMENT: INSTANTANEOUS: _____ ;24-HR. MEASUREMENT: _____.

COMMENTS FOR REPORT:

RAW FLOW DATA:

INSTANTANEOUS: TIME: _____ DATE: _____ WEATHER: _____

PIPE DIAMETER: _____ PRIMARY DEVICE: _____ HD. HT.: _____ VEL: _____

ACTUAL MEASUREMENT: PRIMARY DEVICE: _____ HD. HT. AT SET-UP: _____

SET-UP: TIME: _____ DATE: _____ WEATHER: _____

TAKE-DOWN: TIME: _____ DATE: _____ WEATHER: _____

TOTALIZER VALUE: INITIAL: _____ FINAL: _____

SAMPLE BOTTLES COLLECTED:

	GRAB	COMP		GRAB	COMP		GRAB	COMP
F.S. Plain:			VOA	2X		CN	X	
Qt. Plain		X	TOX			Phenol	X	
Pt. Plain			1/2 Gal.Org.		X	Sulfide		
120 Plain	X		F.S. Back-Up		X	Whirl Pack		
Qt. HNO_3		X	F.S. H_2SO_4	X		Hypochlorite		
Pt. HNO_3			Pt. H_2SO_4		X	Dissolved O_2.		
120 HNO_3			120 H_2SO_4					

ON-SITE DATA:

Chlorine Check: P/N

Sulfide Check: P/N

pH 9.86

Temp (°F) _____

Tot. Res.Cl _____

Sulfite _____

Free Cl _____

IN-HOUSE COMMENTS:

3-28-90

Chain of Custody:

To Lab: Date: Init: DS

Received: Date: Init:

Carolyn Pabelan 3/28/90

NATIONAL ENVIRONMENTAL TESTING, INC.

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Pontiac Division
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Pontiac, MI 48058
Tel: (313) 253-0440
Fax: (313) 334-8486

Formerly: Burmah Technical Services, Inc.

ANALYTICAL REPORT

RECEIVED
STATIONARY SOURCE
EN

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

07-30-90

Sample No.: 75093

Page 1

Sample Description: Cell I Leachate

Program: Quarterly Act 64 Leachate Monitoring

Date Taken: 06-20-90

Date Received: 06-20-90

Parameter	Results	Units	Date Analy.	Lab Tech
Alkalinity, Bicarb.(CaC03)	36.	mg/L	06-22-90	akm
Alkalinity, Carb. (CaC03)	110.	mg/L	06-22-90	akm
Alkalinity, Total (CaC03)	140.	mg/L	06-22-90	akm
BOD - Five Day	18.	mg/L	07-03-90	dsc
Chloride	2900.	mg/L	07-05-90	akm
COD	1100.	mg/L	07-12-90	pds
Cyanide, Total	1.7	mg/L	07-01-90	akm
Phenolics (4-AAP)	5.5	mg/L	07-03-90	rjk
Sulfate	330.	mg/L	07-11-90	cmz
Total Organic Carbon	68.	mg/L	06-29-90	tm
Arsenic	0.009	mg/L	07-10-90	ktk
Barium	0.18	mg/L	07-10-90	jbb
Cadmium	0.01	mg/L	07-10-90	jbb
Calcium	180.	mg/L	07-11-90	dlc
Chromium, Total	0.02	mg/L	07-10-90	jbb
Copper	<0.02	mg/L	07-10-90	jbb
Iron	0.68	mg/L	07-10-90	jbb
Lead	<0.05	mg/L	07-10-90	jbb
Magnesium	19.	mg/L	07-11-90	dlc
Mercury	<0.0005	mg/L	07-11-90	jbb
Nickel	0.03	mg/L	07-10-90	jbb
Selenium	<0.005	mg/L	07-10-90	ktk
Silver	<0.02	mg/L	07-10-90	jbb
Sodium	1600.	mg/L	07-11-90	dlc
Zinc	0.02	mg/L	07-10-90	jbb

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
Tel: (313) 253-0440
Fax: (313) 334-8486

Formerly: Burmah Technical Services, Inc.

ANALYTICAL REPORT

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

07-30-90

Sample No.: 75093

Page 2

Sample Description: Cell I Leachate

Program: Quarterly Act 64 Leachate Monitoring

Date Taken: 06-20-90

Date Received: 06-20-90

DNR SCAN 7

Parameter	Results	Units	Date Analy.	Lab Tech
METHOD 610/8100			06-25-90	mmk
Acenaphthene	<10.	ug/L	06-25-90	mmk
Acenaphthylene	<10.	ug/L	06-25-90	mmk
Anthracene	<10.	ug/L	06-25-90	mmk
Benzo(a)anthracene	<10.	ug/L	06-25-90	mmk
Benzo(b)fluoranthene	<10.	ug/L	06-25-90	mmk
Benzo(k)fluoranthene	<10.	ug/L	06-25-90	mmk
Benzo(a)pyrene	<10.	ug/L	06-25-90	mmk
Benzo(ghi)perylene	<10.	ug/L	06-25-90	mmk
Chrysene	<10.	ug/L	06-25-90	mmk
Dibenzo(a,h)anthracene	<10.	ug/L	06-25-90	mmk
Fluoranthene	<10.	ug/L	06-25-90	mmk
Fluorene	<10.	ug/L	06-25-90	mmk
Indeno(1,2,3-cd)pyrene	<10.	ug/L	06-25-90	mmk
Naphthalene	<10.	ug/L	06-25-90	mmk
Phenanthrene	<10.	ug/L	06-25-90	mmk
Pyrene	<10.	ug/L	06-25-90	mmk

Bruce E. Brown
Project Manager

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Formerly: Burmah Technical Services, Inc.

ANALYTICAL REPORT

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

07-30-90

Sample No.: 75093

Page 3

Sample Description: Cell I Leachate

Program: Quarterly Act 64 Leachate Monitoring

Date Taken: 06-20-90

Date Received: 06-20-90

DNR SCAN 8

Parameter	Results	Units	Date Analy.	Lab Tech
METHOD 604/8040			06-28-90	mmk
4-Chloro-3-methylphenol	<10.	ug/L	06-28-90	mmk
2-Chlorophenol	<10.	ug/L	06-28-90	mmk
2,4-Dichlorophenol	<=280.	ug/L	06-28-90	mmk
2,4-Dimethylphenol	<10.	ug/L	06-28-90	mmk
2,4-Dinitrophenol	<=1400.	ug/L	06-28-90	mmk
4,6-Dinitro-2-methylphenol	<15.	ug/L	06-28-90	mmk
2-Nitrophenol	<10.	ug/L	06-28-90	mmk
4-Nitrophenol	<20.	ug/L	06-28-90	mmk
Pentachlorophenol	<15.	ug/L	06-28-90	mmk
Phenol	<=760.	ug/L	06-28-90	mmk
2,4,6-Trichlorophenol	<=150.	ug/L	06-28-90	mmk
2,4,5-Trichlorophenol	<=150.	ug/L	6-25-90	mmk
FIELD TESTS - ON SITE				
pH	9.29	units	06-20-90	jr
Conductivity	9000	umhos/cm	06-20-90	jr

Where a number is reported as "≤" (less than or equal to), the number represents the amount of the compound that is/could be present assuming that the entire observed response is the compound of concern.

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
Tel: (313) 253-0440
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ANALYTICAL REPORT

RECEIVED
ENVIRONMENTAL
QUALITY OFFICE
'90 SEP 21 P1:13

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

09-19-90

Sample No.: 77584

Revised Report

Sample Description: Cell I Leachate

Program: Act 64 Leachate Monitoring
Additional Work for #75093

Date Taken: 06-20-90

Date Received: 08-07-90

ACID COMPOUNDS

Parameter	Result	Unit	Date Analy.	Lab Tech
METHOD 625				
4-Chloro-3-methylphenol	<10.	ug/L	08-27-90	rdc
2-Chlorophenol	<10.	ug/L	08-27-90	rdc
2,4-Dichlorophenol	<10.	ug/L	08-27-90	rdc
2,4-Dimethylphenol	<10.	ug/L	08-27-90	rdc
2,4-Dinitrophenol	<50.	ug/L	08-27-90	rdc
4,6-Dinitro-2-methylphenol	<50.	ug/L	08-27-90	rdc
2-Nitrophenol	<10.	ug/L	08-27-90	rdc
4-Nitrophenol	<10.	ug/L	08-27-90	rdc
Pentachlorophenol	<10.	ug/L	08-27-90	rdc
Phenol	<10.	ug/L	08-27-90	rdc
2,4,6-Trichlorophenol	<10.	ug/L	08-27-90	rdc
2,4,5-Trichlorophenol	<10.	ug/L	08-27-90	rdc

Date of Original Report: 09-07-90

Bruce E. Brown
Project Manager

#75093

Date Completed: 6/20/90

FIELD NOTES & OBSERVATIONS

ACCOUNT: FAPCM FIELD PERSONNEL: RALEIGH/ECKERT

SITE I.D.: CELL I LEACHATE FIELD SAMPLE NO: _____ OBSERVERS: _____

COMPOSITE SAMPLE DATA: TIMED INTERVAL: _____ PROPORTIONAL: _____

SAMPLING INITIATED: TIME: _____ DATE: _____ WEATHER: _____

SAMPLING COMPLETED: TIME: _____ DATE: _____ WEATHER: _____

GRAB SAMPLE DATA: DIRECT: _____ OTHER: DEDICATED TEFLON BAILER

SAMPLE COLLECTED: TIME: 1:30 DATE: 6/20/90 WEATHER: CLOUDY, 70's

FLOW MEASUREMENT: INSTANTANEOUS: _____ ;24-HR. MEASUREMENT: _____

COMMENTS FOR REPORT:

RAW FLOW DATA:

INSTANTANEOUS: TIME: _____ DATE: _____ WEATHER: _____

PIPE DIAMETER: _____ PRIMARY DEVICE: _____ HD. HT.: _____ VEL: _____

ACTUAL MEASUREMENT: PRIMARY DEVICE: _____ HD. HT. AT SET-UP: _____

SET-UP: TIME: _____ DATE: _____ WEATHER: _____

TAKE-DOWN: TIME: _____ DATE: _____ WEATHER: _____

TOTALIZER VALUE: INITIAL: _____ FINAL: _____

SAMPLE BOTTLES COLLECTED:

	GRAB	COMP		GRAB	COMP		GRAB	COMP
F.S. Plain:			VOA			CN	X	
Qt. Plain	X		TOX			Phenol	X	
Pt. Plain			1/2 Gal.Org.	X		Sulfide		
120 Plain	X		F.S. Back-Up	2X		Whirl Pack		
Qt. HNO_3	X		F.S. H_2SO_4			Hypochlorite		
Pt. HNO_3			Pt. H_2SO_4	X		Dissolved O_2.		
120 HNO_3			120 H_2SO_4	X				

ON-SITE DATA:

Chlorine Check: P/N

Sulfide Check: P/N

pH 9.29

Temp (°F) _____

Tot. Res.Cl _____

Sulfite _____

Free Cl _____

IN-HOUSE COMMENTS: COND 8970

Chain of Custody: ?

To Lab: Date: 6/19/90 init. JWK

Received: Date: init:

Carolyn Poslean 6/20/90

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
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ANALYTICAL REPORT

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

11-14-90

Sample No. : NOT9460

Sample Description: Cell I Leachate

Act 64 Leachate Monitoring Program

Date Taken: 09-20-90

Date Received: 09-20-90

Parameter	Result	Unit	Date Analy.	Lab Tech
Alkalinity, Bicarb.(CaC03)	<4.	mg/L	10-01-90	mab
Alkalinity, Carb. (CaC03)	80.	mg/L	10-01-90	mab
Alkalinity, Total (CaC03)	120.	mg/L	10-01-90	mab
BOD - Five Day	230.	mg/L	09-28-90	jsg
Chloride	3000.	mg/L	10-01-90	mab
COD	2000.	mg/L	09-25-90	rjk
Cyanide, Total	2.5	mg/L	09-21-90	rjk
Phenolics (4-AAP)	5.2	mg/L	09-24-90	rjk
Sulfate	310.	mg/L	10-02-90	pds
Total Organic Carbon	250.	mg/L	10-01-90	lc
Arsenic	7.3	mg/L	09-28-90	jbb
Barium	11.	mg/L	09-26-90	jbb
Cadmium	0.16	mg/L	09-26-90	jbb
Calcium	9900.	mg/L	10-16-90	jbb
Chromium, Total	1.1	mg/L	09-26-90	jbb
Copper	1.3	mg/L	09-26-90	jbb
Iron	95.	mg/L	09-26-90	jbb
Lead	19.	mg/L	09-26-90	jbb
Magnesium	920.	mg/L	10-16-90	jbb
Mercury	0.0006	mg/L	09-25-90	dlc
Nickel	0.79	mg/L	09-26-90	jbb
Selenium	0.22	mg/L	10-01-90	jbb
Silver	0.16	mg/L	09-26-90	jbb
Sodium	1300.	mg/L	10-16-90	jbb
Zinc	17.	mg/L	09-26-90	jbb

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
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ANALYTICAL REPORT

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

11-14-90

Sample No.: 79460

Sample Description: Cell I Leachate

Act 64 Leachate Monitoring Program

Date Taken: 09-20-90

Date Received: 09-20-90

Parameter	Result	Unit	Date Analy.	Lab Tech
SEMI-VOLATILE COMPOUNDS				
METHOD 610/8100			09-27-90	cmm
Acenaphthene	<10.	ug/L	09-27-90	cmm
Acenaphthylene	<10.	ug/L	09-27-90	cmm
Anthracene	<10.	ug/L	09-27-90	cmm
Benzo(a)anthracene	<10.	ug/L	09-27-90	cmm
Benzo(b)fluoranthene	<10.	ug/L	09-27-90	cmm
Benzo(k)fluoranthene	<10.	ug/L	09-27-90	cmm
Benzo(a)pyrene	<10.	ug/L	09-27-90	cmm
Benzo(ghi)perylene	<10.	ug/L	09-27-90	cmm
Chrysene	<10.	ug/L	09-27-90	cmm
Dibenzo(a,h)anthracene	<10.	ug/L	09-27-90	cmm
Fluoranthene	<10.	ug/L	09-27-90	cmm
Fluorene	<10.	ug/L	09-27-90	cmm
Indeno(1,2,3-cd)pyrene	<10.	ug/L	09-27-90	cmm
Naphthalene	<10.	ug/L	09-27-90	cmm
Phenanthrene	<10.	ug/L	09-27-90	cmm
Pyrene	<10.	ug/L	09-27-90	cmm

Bruce E. Brown
Project Manager

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ANALYTICAL REPORT

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

11-14-90

Sample No.: 79460

Sample Description: Cell I Leachate

Act 64 Leachate Monitoring Program

Date Taken: 09-20-90

Date Received: 09-20-90

Parameter	Result	Unit	Date Analy.	Lab Tech
ACID COMPOUNDS				
METHOD 604/8040			10-03-90	mmk
4-Chloro-3-methylphenol	<50.	ug/L	10-03-90	mmk
2-Chlorophenol	<50.	ug/L	10-03-90	mmk
2,4-Dichlorophenol	<50.	ug/L	10-03-90	mmk
2,4-Dimethylphenol	1400.	ug/L	10-03-90	mmk
2,4-Dinitrophenol	<75.	ug/L	10-03-90	mmk
4,6-Dinitro-2-methylphenol	<75.	ug/L	10-03-90	mmk
2-Nitrophenol	<50.	ug/L	10-03-90	mmk
4-Nitrophenol	<100.	ug/L	10-03-90	mmk
Pentachlorophenol	<75.	ug/L	10-03-90	mmk
Phenol	850.	ug/L	10-03-90	mmk
2,4,6-Trichlorophenol	<50.	ug/L	10-03-90	mmk
2,4,5-Trichlorophenol	<50.	ug/L	10-03-90	mmk
FIELD TESTS - ON SITE				
Conductivity	8500.	umhos/cm	09-20-90	jr

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
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Fax: (313) 334-8486

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ANALYTICAL REPORT

SITE MAP

FORD - ALLEN PARK LF.
ALLEN PARK, MI
MTD 980 568 711

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

02/04/1991

Job No.: 90.1393
Sample No.: 84295

Sample Description: Cell I

Quarterly Act 64 Leachate Monitoring

Date Taken: 12/20/1990

Date Received: 12/21/1990

Parameter	Result	Unit	Date Analy.	Lab Tech
pH (Field)	9.14	units	12/20/1990	cdg
Conductivity (Field)	7200.	umhos/cm	12/20/1990	cdg
Alkalinity, Bicarb.(CaC03)	<4.	mg/L	12/26/1990	das
Alkalinity, Carb. (CaC03)	100.	mg/L	12/26/1990	das
Alkalinity, Total (CaC03)	120.	mg/L	12/26/1990	das
BOD - Five Day	32.	mg/L	12/21/1990	spr
Chloride	2900.	mg/L	12/26/1990	das
COD	180.	mg/L	01/04/1991	gls
Cyanide, Total	1.7	mg/L	12/27/1990	pmc
Phenol (4-AAP)	4.4	mg/L	01/02/1991	mab
Sulfate	260.	mg/L	01/02/1991	akm
Total Organic Carbon (TOC)	86.	mg/L	01/11/1991	aus
Arsenic	0.65	mg/L	12/28/1990	wjj
Barium	4.6	mg/L	12/28/1990	jbb
Cadmium	0.07	mg/L	12/28/1990	jbb
Calcium	17000.	mg/L	01/02/1991	jbb
Chromium	0.29	mg/L	12/28/1990	jbb
Copper	0.66	mg/L	12/28/1990	jbb
Iron	54.	mg/L	12/28/1990	jbb
Lead	11.	mg/L	12/28/1990	jbb
Magnesium	560.	mg/L	01/02/1991	jbb
Mercury	<0.0005	mg/L	12/27/1990	wjj
Nickel	0.48	mg/L	12/28/1990	jbb
Selenium	0.008	mg/L	12/27/1990	wjj
Silver	0.02	mg/L	12/28/1990	jbb
Sodium	2400.	mg/L	01/02/1991	jbb
Zinc	10.	mg/L	12/28/1990	jbb

Bruce E. Brown
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

Date Completed: 9/20/90

ET Midwest, Inc.

FIELD NOTES & OBSERVATIONS

UNT: FAPCM FIELD PERSONNEL: RALEIGH/LARGENT

I.D.: CELL I LEACHATE FIELD SAMPLE NO: _____ OBSERVERS: _____

OMPOSITE SAMPLE DATA: TIMED INTERVAL: _____ PROPORTIONAL: _____

SAMPLING INITIATED: TIME: _____ DATE: _____ WEATHER: _____

SAMPLING COMPLETED: TIME: _____ DATE: _____ WEATHER: _____

GRAB SAMPLE DATA: DIRECT: _____ OTHER: DEDICATED TEFLON BAILER

SAMPLE COLLECTED: TIME: 1:30 DATE: 9/20/90 WEATHER: CLOUDY, 60's

FLOW MEASUREMENT: INSTANTANEOUS: _____ ;24-HR. MEASUREMENT: _____

COMMENTS FOR REPORT:

RAW FLOW DATA:

INSTANTANEOUS: TIME: _____ DATE: _____ WEATHER: _____

PIPE DIAMETER: _____ PRIMARY DEVICE: _____ HD. HT.: _____ VEL: _____

ACTUAL MEASUREMENT: PRIMARY DEVICE: _____ HD. HT. AT SET-UP: _____

SET-UP: TIME: _____ DATE: _____ WEATHER: _____

TAKE-DOWN: TIME: _____ DATE: _____ WEATHER: _____

TOTALIZER VALUE: INITIAL: _____ FINAL: _____

TTLES COLLECTED:

	GRAB	COMP		GRAB	COMP		GRAB	COMP
Plain			VOA			CN	X	
lain	X		TOX			Phenol	X	
lain	X		1/2 Gal. Org.	X		Sulfide		
lain	X		F.S. Back-Up	X		Whirl Pack		
NO_3	X		F.S. H_2SO_4			Hypochlorite		
NO_3			Pt. H_2SO_4	X		Dissolved O_2		
NO_3			120 H_2SO_4					

ON-SITE DATA:
Chlorine Check: P/
Sulfide Check: P/
pH 9.47
Temp (°F) _____
Tot. Res. Cl _____
Sulfite _____
Free Cl _____

HOUSE COMMENTS: COND 8,480

Chain of Custody:
To Lab: Date: 9/20/90 Init: JWR
Received: Date: Init:

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
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398 Auburn Avenue
Pontiac, MI 48342
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Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

02/04/1991

Job No.: 90.1393
Sample No.: 84295

Sample Description: Cell I

Quarterly Act 64 Leachate Monitoring

Date Taken: 12/20/1990 Date Received: 12/21/1990

Parameter	Result	Unit	Date Analy.	Lab Tech
BASE NEUTRAL COMPOUNDS				
Acenaphthene	<10.	ug/L	01/10/1991	njd
Acenaphthylene	<10.	ug/L	01/10/1991	njd
Anthracene	<10.	ug/L	01/10/1991	njd
Benzo(a)anthracene	<10.	ug/L	01/10/1991	njd
Benzo(a)pyrene	<10.	ug/L	01/10/1991	njd
Benzo(b)fluoranthene	<10.	ug/L	01/10/1991	njd
Benzo(ghi)perylene	<10.	ug/L	01/10/1991	njd
Benzo(k)fluoranthene	<10.	ug/L	01/10/1991	njd
Chrysene	<10.	ug/L	01/10/1991	njd
Dibenzo(a,h)anthracene	<10.	ug/L	01/10/1991	njd
Fluoranthene	<10.	ug/L	01/10/1991	njd
Fluorene	<10.	ug/L	01/10/1991	njd
Indeno(1,2,3-cd)pyrene	<10.	ug/L	01/10/1991	njd
Naphthalene	<10.	ug/L	01/10/1991	njd
Phenanthrene	<10.	ug/L	01/10/1991	njd
Pyrene	<10.	ug/L	01/10/1991	njd

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
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Pontiac, MI 48342
Tel: (313) 253-0440
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ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

02/04/1991

Job No.: 90.1393
Sample No.: 84295

Sample Description: Cell I

Quarterly Act 64 Leachate Monitoring

Date Taken: 12/20/1990

Date Received: 12/21/1990

Parameter	Result	Unit	Date Analy.	Lab Tech
ACID COMPOUNDS - 8040				
4-Chloro-3-methylphenol	<10.	ug/L	01/03/1991	mmk
2-Chlorophenol	<10.	ug/L	01/03/1991	mmk
2,4-Dichlorophenol	<10.	ug/L	01/03/1991	mmk
2,4-Dimethylphenol	250.	ug/L	01/03/1991	mmk
4,6-Dinitro-2-methylphenol	<10.	ug/L	01/03/1991	mmk
2,4-Dinitrophenol	<10.	ug/L	01/03/1991	mmk
2-Nitrophenol	<10.	ug/L	01/03/1991	mmk
4-Nitrophenol	<20.	ug/L	01/03/1991	mmk
Pentachlorophenol	120.	ug/L	01/03/1991	mmk
Phenol	320.	ug/L	01/03/1991	mmk
2,4,5-Trichlorophenol	<10.	ug/L	01/03/1991	mmk
2,4,6-Trichlorophenol	<10.	ug/L	01/03/1991	mmk

Bruce E. Brown
Project Manager

NET

Date Completed: 12-20-90

FIELD NOTES & OBSERVATIONS

ACCOUNT: A.P.C.M. FIELD PERSONNEL: Gathin/Gonsh

SITE I.D.: Leachate Coll I FIELD SAMPLE NO: _____ OBSERVERS: _____

COMPOSITE SAMPLE DATA: TIMED INTERVAL: _____ PROPORTIONAL: _____

SAMPLING INITIATED: TIME: _____ DATE: _____ WEATHER: _____

SAMPLING COMPLETED: TIME: _____ DATE: _____ WEATHER: _____

GRAB SAMPLE DATA: DIRECT: _____ OTHER: Teflon Bailer

SAMPLE COLLECTED: TIME: 11:00 am DATE: 12-20-90 WEATHER: Cloudy 40°

FLOW MEASUREMENT: INSTANTANEOUS: _____ ;24-HR. MEASUREMENT: _____

COMMENTS FOR REPORT:

RAW FLOW DATA:

INSTANTANEOUS: TIME: _____ DATE: _____ WEATHER: _____

PIPE DIAMETER: _____ PRIMARY DEVICE: _____ HD. HT.: _____ VEL: _____

ACTUAL MEASUREMENT: PRIMARY DEVICE: _____ HD. HT. AT SET-UP: _____

SET-UP: TIME: _____ DATE: _____ WEATHER: _____

TAKE-DOWN: TIME: _____ DATE: _____ WEATHER: _____

TOTALIZER VALUE: INITIAL: _____ FINAL: _____

PLE BOTTLES COLLECTED:

	GRAB	COMP		GRAB	COMP		GRAB	COMP	
F.S. Plain:			VOA			CN	X		ON-SITE DATA:
Qt. Plain	X		TOX			Phenol	X		Chlorine Check: P/N
Pt. Plain			1/2 Gal.Org.	X		Sulfide			Sulfide Check: P/N
120 Plain	X		F.S. Back-Up	2X		Whirl Pack			pH 7.11
Qt. HNO_3	X		F.S. H_2SO_4			Hypochlorite			Temp (°F) _____
Pt. HNO_3			Pt. H_2SO_4	X		Dissolved O_2.			Tot. Res.Cl _____
120 HNO_3			120 H_2SO_4	X					Sulfite _____
									Free Cl _____

Cond. 17,000.

IN-HOUSE COMMENTS:

Chain of Custody:
To Lab: Date: 12-20-90 init. OR
Received: Date: init:

12/21/90 R-50

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

FORD SSECO - WATER

	Detection Limits, mg/L	Methods
Alkalinity, Bicarbonate	4	403 (2)
Alkalinity, Carbonate	4	403 (2)
Alkalinity , Total	4	310.1 (3)
BOD	4	405.1 (3)
Chloride	4	407A (2)
COD	4	410.4 (3)
Conductivity	--	9050 (1)
Cyanide	0.02	9010 (1)
Nitrogen, Ammonia	0.05	350.1/350.2 (3)
Nitrogen, Nitrate	0.02	353.2 (3)
Oil & Grease	5	9071 (1)
pH	--	9040 (1)
Phenolics	0.002	9065 (1)
Total Phosphorus	0.02	365.2 (3)
Sulfate	0.02	9038 (1)
Suspended Solids	1	1310 (2)
Total Organic Carbon	1	9060 (1)
Arsenic	0.005	7061 (1)
Barium	0.05	6010 (1)
Cadmium	0.01	6010 (1)
Calcium, Tot. & Diss.	0.02	6010 (1)
Chromium, Tot. & Dis.	0.02	6010 (1)
Copper	0.02	6010 (1)
Iron, Tot. & Diss.	0.02	6010 (1)
Lead, Tot. & Diss.	0.05	6010 (1)
Magnesium, Tot. & Diss.	0.02	6010 (1)
Mercury	0.0005	7470 (1)
Nickel	0.02	6010 (1)
Selenium	0.005	7741 (1)
Silver	0.02	6010 (1)
Sodium	0.02	6010 (1)
Zinc	0.02	6010 (1)
DNR Scan 7	10 ug/L	8100 (1)
Naphthalene	10 ug/L	8100 (1)
DNR Scan 8	10-20 ug/L	8040 (1)
Phenol	10 ug/L	8040 (1)

(1) EPA SW 846 "Test Methods for Evaluating Solid Wastes".
(2) Standard Methods 16th Edition.
(3) EPA 600/4-79-020 "Methods for Chemical Analysis of Water & Wastes".

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FORD SSECO - SOIL/SEDIMENT

	Detection Limits, mg/Kg	Methods
Cyanide	1	9010
Arsenic	0.3	7061
Barium	1.2	6010
Cadium	0.5	6010
Chromium	0.8	6010
Copper	0.5	6010
Lead	2.5	6010
Mercury	0.02	7471
Nickel	1.5	6010
Selenium	0.3	7741
Silver	0.5	6010
Zinc	0.5	6010
Naphthalene	10	8100
Phenol	10	8040

EPA SW 846 "Test Methods for Evaluating Solid Wastes".

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

RECEIVED
ENVIRONMENTAL
QUALITY OFFICE

'91 FEB 22 A10:46

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

02/18/1991

Job No.: 91.0312
Sample No.: 85413

Sample Description: Lysimeter 1-A

Date Taken: 01/16/1991

Date Received: 01/18/1991

Parameter	Result	Unit	Date Analy.	Lab Tech
BASE NEUTRAL COMPOUNDS - DNR SCAN #7				
Acenaphthene	<10.	ug/L	01/22/1991	mmk
Acenaphthylene	<10.	ug/L	01/22/1991	mmk
Anthracene	<10.	ug/L	01/22/1991	mmk
Benzo(a)anthracene	<10.	ug/L	01/22/1991	mmk
Benzo(a)pyrene	<10.	ug/L	01/22/1991	mmk
Benzo(b)fluoranthene	<10.	ug/L	01/22/1991	mmk
Benzo(ghi)perylene	<10.	ug/L	01/22/1991	mmk
Benzo(k)fluoranthene	<10.	ug/L	01/22/1991	mmk
Chrysene	<10.	ug/L	01/22/1991	mmk
Dibenzo(a,h)anthracene	<10.	ug/L	01/22/1991	mmk
Fluoranthene	<10.	ug/L	01/22/1991	mmk
Fluorene	<10.	ug/L	01/22/1991	mmk
Indeno(1,2,3-cd)pyrene	<10.	ug/L	01/22/1991	mmk
Naphthalene	<10.	ug/L	01/22/1991	mmk
Phenanthrene	<10.	ug/L	01/22/1991	mmk
Pyrene	<10.	ug/L	01/22/1991	mmk

Act 64 Lysimeter Monitoring Program

Bruce E. Brown

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

02/18/1991

Job No.: 91.0312
Sample No.: 85413

Sample Description: Lysimeter 1-A

Date Taken: 01/16/1991

Date Received: 01/18/1991

Parameter	Result	Unit	Date Analy.	Lab Tech
ACID COMPOUNDS - DNR SCAN #8				
2-Chlorophenol	<10.	ug/L	01/24/1991	lrk
4-Chloro-3-methylphenol	<15.	ug/L	01/24/1991	lrk
2,4-Dichlorophenol	<10.	ug/L	01/24/1991	lrk
2,4-Dimethylphenol	<10.	ug/L	01/24/1991	lrk
2,4-Dinitrophenol	<10.	ug/L	01/24/1991	lrk
2-Methyl-4,6-dinitrophenol	<10.	ug/L	01/24/1991	lrk
2-Nitrophenol	<10.	ug/L	01/24/1991	lrk
4-Nitrophenol	<20.	ug/L	01/24/1991	lrk
Pentachlorophenol	<15.	ug/L	01/24/1991	lrk
Phenol	<10.	ug/L	01/24/1991	lrk
2,4,5-Trichlorophenol	<10.	ug/L	01/24/1991	lrk
2,4,6-Trichlorophenol	<10.	ug/L	01/24/1991	lrk

Act 64 Lysimeter Monitoring Program

Bruce E. Brown

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

02/18/1991

Job No.: 91.0312
Sample No.: 85414

Sample Description: Lysimeter 1-B

Date Taken: 01/16/1991

Date Received: 01/18/1991

Parameter	Result	Unit	Date Analy.	Lab Tech
BASE NEUTRAL COMPOUNDS - DNR SCAN #7				
Acenaphthene	<10.	ug/L	01/22/1991	mmk
Acenaphthylene	<10.	ug/L	01/22/1991	mmk
Anthracene	<10.	ug/L	01/22/1991	mmk
Benzo(a)anthracene	<10.	ug/L	01/22/1991	mmk
Benzo(a)pyrene	<10.	ug/L	01/22/1991	mmk
Benzo(b)fluoranthene	<10.	ug/L	01/22/1991	mmk
Benzo(ghi)perylene	<10.	ug/L	01/22/1991	mmk
Benzo(k)fluoranthene	<10.	ug/L	01/22/1991	mmk
Chrysene	<10.	ug/L	01/22/1991	mmk
Dibenzo(a,h)anthracene	<10.	ug/L	01/22/1991	mmk
Fluoranthene	<10.	ug/L	01/22/1991	mmk
Fluorene	<10.	ug/L	01/22/1991	mmk
Indeno(1,2,3-cd)pyrene	<10.	ug/L	01/22/1991	mmk
Naphthalene	<10.	ug/L	01/22/1991	mmk
Phenanthrene	<10.	ug/L	01/22/1991	mmk
Pyrene	<10.	ug/L	01/22/1991	mmk

Act 64 Lysimeter Monitoring Program

Bruce E. Brown

Bruce E. Brown
Project Manager

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Pontiac Division
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ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

02/18/1991

Job No.: 91.0312
Sample No.: 85414

Sample Description: Lysimeter 1-B

Date Taken: 01/16/1991

Date Received: 01/18/1991

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4-Chloro-3-methylphenol	<15.	ug/L	01/24/1991	lrk
2,4-Dichlorophenol	<10.	ug/L	01/24/1991	lrk
2,4-Dimethylphenol	<10.	ug/L	01/24/1991	lrk
2,4-Dinitrophenol	<10.	ug/L	01/24/1991	lrk
2-Methyl-4,6-dinitrophenol	<10.	ug/L	01/24/1991	lrk
2-Nitrophenol	<10.	ug/L	01/24/1991	lrk
4-Nitrophenol	<20.	ug/L	01/24/1991	lrk
Pentachlorophenol	<15.	ug/L	01/24/1991	lrk
Phenol	<10.	ug/L	01/24/1991	lrk
2,4,5-Trichlorophenol	<10.	ug/L	01/24/1991	lrk
2,4,6-Trichlorophenol	<10.	ug/L	01/24/1991	lrk

Act 64 Lysimeter Monitoring Program

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48342
Tel: (313) 253-0440
Fax: (313) 334-8486

FORD SSECO - WATER

	Detection Limits, mg/L	Methods
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Alkalinity, Carbonate	4	403 (2)
Alkalinity , Total	4	310.1 (3)
BOD	4	405.1 (3)
Chloride	4	407A (2)
COD	4	410.4 (3)
Conductivity	--	9050 (1)
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Nitrogen, Nitrate	0.02	353.2 (3)
Oil & Grease	5	9071 (1)
pH	--	9040 (1)
Phenolics	0.002	9065 (1)
Total Phosphorus	0.02	365.2 (3)
Sulfate	0.02	9038 (1)
Suspended Solids	1	1310 (2)
Total Organic Carbon	1	9060 (1)
Arsenic	0.005	7061 (1)
Barium	0.05	6010 (1)
Cadmium	0.01	6010 (1)
Calcium, Tot. & Diss.	0.02	6010 (1)
Chromium, Tot. & Dis.	0.02	6010 (1)
Copper	0.02	6010 (1)
Iron, Tot. & Diss.	0.02	6010 (1)
Lead, Tot. & Diss.	0.05	6010 (1)
Magnesium, Tot. & Diss.	0.02	6010 (1)
Mercury	0.0005	7470 (1)
Nickel	0.02	6010 (1)
Selenium	0.005	7741 (1)
Silver	0.02	6010 (1)
Sodium	0.02	6010 (1)
Zinc	0.02	6010 (1)
DNR Scan 7	10 ug/L	8100 (1)
Naphthalene	10 ug/L	8100 (1)
DNR Scan 8	10-20 ug/L	8040 (1)
Phenol	10 ug/L	8040 (1)

(1) EPA SW 846 "Test Methods for Evaluating Solid Wastes".
(2) Standard Methods 16th Edition.
(3) EPA 600/4-79-020 "Methods for Chemical Analysis of Water & Wastes".

STATE OF MICHIGAN

Department of Natural Resources

MONTHLY OPERATING REPORT FOR DECEMBER, 1990

cc: LIVONIA

cc: USEPA

MID 980 568 711
Facility EPA ID Number

FORD ALLEN PARK CLAY MINE LANDFILL
Business Name

17005 OAKWOOD BLVD. ALLEN PARK, MI 48101
Street Number City State Zip Code

RECEIVED JAN 14 1991 WASTE MANAGEMENT

1) ☐ Yes ☐ No Were any hazardous waste shipments rejected by the facility?
N/A If yes, list below. Attach additional sheet if necessary.

Manifest Number	Generator ID Number	Transporter ID Number	Reason for Rejection

2.a) ☐ Yes ☒ No Were there any occurrences of explosion, spills or losses to the environment? If yes, attach a list showing dates and clean-up action.

b) ☐ Yes ☒ No Was the contingency plan activated? If yes, attach a written description of the conditions at the time of activation, the action taken, and the results of activating the plan.

3.a) ☐ Yes ☒ No Did the monitoring data indicate excursions from the requirements of the act, the rules, the construction permit, or the operating license?

b) ☐ Yes ☐ No If yes, was the Department of Natural Resources notified? If the department has not been notified pursuant to R299.6409, attach the monitoring information, giving the date, time, location, type and magnitude of the excursion, and other information required by rule.

4. ☐ Yes ☒ No Was there any on-site disposal during the reporting period? If yes, provide the information listed below. Attach additional sheet if necessary.

Waste Code	State of Waste	Quantity	Units	Date Disposed	Disposal Codes

STATE OF MICHIGAN

Department of Natural Resources

5. ☐ Yes ☒ No Were any hazardous wastes received from off site generators during this reporting period?

If yes, provide the following information, if it has not been included on the surcharge fee report.

Type of Disposal	Volume Disposed	Units	Number of Certificates of Disposal

6. ☐ Monthly
☐ Quarterly
☒ Not required

How often are surcharge fee reports submitted?

___/___/___ If required, give date last surcharge report was submitted.

If required, and if due, attach surcharge fee report to this report.

7. ☐ Attach any other information required to be included in the monthly operating report by the construction permits or operating license. Check box to the left if there are any such attachments.

David A. O'Connor
Signature

FACILITY ENVIR. ENGINEER
Title

7 JANUARY 1991
Date

TABLE 1

Process Codes for Disposal of Hazardous Waste

I. Long Term Storage Methods

Method	Code
a. Improved Storage Methods	
Storage (cement injection)	[illegible]
Lagoon(s)	[illegible]
Land Treatment	[illegible]
Other Improved Land Disposal(s)	
b. Above Ground Storage Methods	
Container (drum, barrel, etc.)	[illegible]
Tank	[illegible]
Waste Pile	[illegible]
Surface Impoundment	[illegible]
Other Above Ground Storage	[illegible]

II. Methods Not Long Term Storage

Method	Code
a. Thermal Processes	
Liquid Injection Incinerator	[illegible]
Rotary Kiln Incinerator	[illegible]
Fluidized Bed Incinerator	[illegible]
Multiple Hearth Incinerator	[illegible]
Infrared Furnace Incinerator	T10
Molten Salt Incinerator	T11
Pyrolysis	T12
Wet Air Oxidation	T13
Calcination	[illegible]
Microwave Discharge	T15
Gaseous Kiln	T16
Lime Kiln	T17
Other Thermal Processing (specify)	T18
b. Chemical Treatment	
Absorption Mound	T19
Absorption Field	T20
Chemical Fixation	T21
Chemical Solidification	T22
Chemical Precipitation	T23
Chemical Reduction	T24
Chemical Oxidation	T25
Chlorinated Hydrocarbon Dechlorination	T26
Chlorination	T27
Hydrolysis	T28
Neutralization	T29
Ion Exchange	T30
Reverse Osmosis	T31
Soil Washing	T32
Hydrolysis	T33
Other Chemical Processes (specify)	T34
c. Physical Treatment	
(1) Separation of Components	
Centrifugation	T35
Clarification	T36
Coagulation	T37
Decanting	T38
Encapsulation	T39
Filtration	T40
Flocculation	T41
Flotation	T42
Foaming	T43
Sedimentation	T44
Thickening	T45
Ultrafiltration	T46
Other Separation (specify)	T47
(2) Removal of Specific Components	
Absorption Molecular Sieve	T48
Activated Carbon	T49
Blending	T50
Catalysis	T51
Crystallization	T52
Dialysis	T53
Distillation	T54
Electrodialysis	T55
Electrolysis	T56
High Gradient Magnetic Separation	T57
Leaching	T58
Liquid Ion Exchange	T59
Liquid-Liquid Extraction	T60
Reverse Osmosis	T61
Solvent Recovery	T62
Stripping	T63
Sand Filter	T64
Other Physical Removal (specify)	T65
d. Biological Processes	
Activated Sludge	T66
Aerobic Lagoon	T67
Aerobic Tank	T68
Anaerobic Lagoon	T69
Anaerobic Tank	T70
Composting	T71
Septic Tank	T72
Trickling Filter	T73
Activated Sludge	T74
Stabilization Pond	T75
Other Biological Processes	T76

STATE OF MICHIGAN

Department of Natural Resources

MONTHLY OPERATING REPORT FOR NOVEMBER, 1990

cc: Livonia
cc: USEPA Larry
Tim

MID 980 568 711 — EPA ID Number

FORD ALLEN PARK CLAY MINE LANDFILL — Business Name

17005 OAKWOOD BLVD — Street Number

ALLEN PARK — City

MI — State

48101 — Zip Code

RECEIVED DEC 14 1990 WASTE MANAGEMENT

☐ Yes ☐ No Were any hazardous waste shipments rejected by the facility? If yes, list below. Attach additional sheet if necessary.

→ N/A

Manifest Number	Generator ID Number	Transporter ID Number	Reason for Rejection

2.a) ☐ Yes ☒ No Were there any occurrences of explosion, spills or losses to the environment? If yes, attach a list showing dates and clean-up action.

b) ☐ Yes ☒ No Was the contingency plan activated? If yes, attach a written description of the conditions at the time of activation, the action taken, and the results of activating the plan.

3.a) ☐ Yes ☒ No Did the monitoring data indicate excursions from the requirements of the act, the rules, the construction permit, or the operating license?

b) ☐ Yes ☐ No If yes, was the Department of Natural Resources notified? If the department has not been notified pursuant to R299.6409, attach the monitoring information, giving the date, time, location, type and magnitude of the excursion, and other information required by rule.

4. ☐ Yes ☒ No Was there any on-site disposal during the reporting period? If yes, provide the information listed below. Attach additional sheet if necessary.

Waste Code	State of Waste	Quantity	Units	Date Disposed	Disposal Codes

3/24/81 R-4905

STATE OF MICHIGAN

Department of Natural Resources

5. ☐ Yes ☒ No Were any hazardous wastes received from off site generators during this reporting period?

If yes, provide the following information, if it has not been included on the surcharge fee report.

Type of Disposal	Volume Disposed	Units	Number of Certificates of Disposal

6. ☐ Monthly How often are surcharge fee reports submitted?

☐ Quarterly

☒ Not required

___/___/___ If required, give date last surcharge report was submitted.

If required, and if due, attach surcharge fee report to this report.

7. ☒ Attach any other information required to be included in the monthly operating report by the construction permits or operating license. Check box to the left if there are any such attachments.

David A. O'Connor — Signature

FACILITY MANAGER — Title

5 DECEMBER 1990 — Date

TABLE 1

Process Codes for Disposal of Hazardous Waste

I. Long Term Storage Methods

Method	Code
a. Improved Storage Methods	
Underground Injection	[illegible]
Landfill	[illegible]
Land Treatment	[illegible]
Other Improved Land (Specify)	
b. Above Ground Storage Methods	
Container (drum, barrel, etc.)	[illegible]
Tank	[illegible]
Waste Pile	[illegible]
Surface Impoundment	[illegible]
Other Above Ground Storage	[illegible]

II. Methods Not Long Term Storage

Method	Code
a. Thermal Treatment	
Liquid Injection Incinerator	[illegible]
Rotary Kiln Incinerator	[illegible]
Fluidized Bed Incinerator	[illegible]
Multiple Hearth Incinerator	[illegible]
Infrared Furnace Incinerator	T10
Molten Salt Destructor	T11
Pyrolysis	T12
Wet Air Oxidation	T13
Gasification	[illegible]
Mechanical Incinerator	T15
Gaseous Kiln	T16
Liquid Kiln	T17
Other Thermal Treatment (Specify)	T18
b. Chemical Treatment	
Absorption Mound	T19
Absorption Field	T20
Chemical Fixation	T21
Chemical Oxidation	T22
Chemical Precipitation	T23
Chemical Reduction	T24
Chlorination	T25
Chlorolysis	T26
Cyanide Destruction	T27
Degradation	T28
Detoxification	T29
Hydrolysis	T30
Neutralization	T31
Ozonation	T32
Photolysis	T33
Other Chemical Treatment (Specify)	T34
c. Physical Treatment	
(1) Separation of Components	
Centrifugation	T35
Clarification	T36
Coagulation	T37
Decanting	T38
Encapsulation	T39
Filtration	T40
Flocculation	T41
Flotation	T42
Foaming	T43
Sedimentation	T44
Thickening	T45
Ultrafiltration	T46
Other Separation (Specify)	T47
(2) Removal of Specific Components	
Absorption-Molecular Sieve	T48
Activated Carbon	T49
Blending	T50
Catalysis	T51
Crystallization	T52
Dialysis	T53
Distillation	T54
Electrodialysis	T55
Evaporation	T56
High Gradient Magnetic Separation	T57
Leaching	T58
Liquid Ion Exchange	T59
Liquid-Liquid Extraction	T60
Reverse Osmosis	T61
Solvent Recovery	T62
Stripping	T63
Sand Filter	T64
Other Physical Removal (Specify)	T65
d. Biological Treatment	
Anaerobic Digest	T66
Aerobic Lagoon	T67
Aerobic Tank	T68
Anaerobic Lagoon	T69
Anaerobic Tank	T70
Composting	T71
Septic Tank	T72
Spray Irrigation	T73
Trickling Filter	T74
Activated Sludge	T75
Waste Stabilization Pond	T76
Other Biological Treatment	T77

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
Tel: (313) 253-0440
Fax: (313) 334-8486

Formerly: Burmah Technical Services, Inc.

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

11/20/1990

Job No.: 90.0064
Sample No.: 81074

Act 64 Surface Water
Sample Description: Act 64 Surface Water 10/19

Date Taken: 10/19/1990 Date Received: 10/19/1990

Parameter	Result	Unit	Date Analy.	Lab Tech
ACIDS - DNR SCAN #8 - AQUE				
2-Chlorophenol	<10.	ug/L	11/14/1990	mmk
4-Chloro-3-methylphenol	<10.	ug/L	11/14/1990	mmk
2,4-Dichlorophenol	<10.	ug/L	11/14/1990	mmk
2,4-Dimethylphenol	<10.	ug/L	11/14/1990	mmk
2,4-Dinitrophenol	<15.	ug/L	11/14/1990	mmk
2-Methyl-4,6-dinitrophenol	<15.	ug/L	11/14/1990	mmk
2-Nitrophenol	<10.	ug/L	11/14/1990	mmk
4-Nitrophenol	<20.	ug/L	11/14/1990	mmk
Pentachlorophenol	<15.	ug/L	11/14/1990	mmk
Phenol	<10.	ug/L	11/14/1990	mmk
2,4,5-Trichlorophenol	<10.	ug/L	11/14/1990	mmk
2,4,6-Trichlorophenol	<10.	ug/L	11/14/1990	mmk

Bruce E. Brown
Project Manager

FORD ALLEN PARK CLAY MINE LANDFILL

Field Notes

Program:	Act 64 Surface Water Monitoring Program
NET Midwest Sample No.:	81074
Date of Sampling:	10-19-90
Time of Sampling:	0815 hours
Sampler:	D.A. O'Connor (EQO, Ford Motor Co.)
Weather:	Air temp 50°F; 0.92" rain between 0700 hours 10-17-90 and 0700 hours 10-18-90

Parameter	Result	Date of Analysis	Analyst	Method
pH	7.04 units	10-19-90	D.A. O'Connor	9040
Conductivity	865 μmhos/cm	10-19-90	D.A. O'Connor	9050

Prepared by:

Environmental Quality Office
Ford Motor Company
30 November 1990

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
Tel: (313) 253-0440
Fax: (313) 334-8486

Formerly: Burmah Technical Services, Inc.

ANALYTICAL REPORT

11/20/1990

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

Job No.: 90.0064
Sample No.: 8974

RECEIVED
ENVIRONMENTAL
QUALITY OFFICE
NOV 26 P2:16

Act 64 Surface Water
Sample Description: Act 64 Surface Water 10/19

Date Taken: 10/19/1990

Date Received: 10/19/1990

Parameter	Result	Unit	Date Analy.	Lab Tech
Alkalinity, Bicarb.(CaC03)	140.	mg/L	10/30/1990	mab
Alkalinity, Carb. (CaC03)	<4.	mg/L	10/30/1990	mab
Alkalinity, Total (CaC03)	140.	mg/L	10/30/1990	mab
BOD - Five Day	4.	mg/L	10/22/1990	cms
Chloride	66.	mg/L	10/29/1990	mab
COD	3.	mg/L	10/31/1990	pmc
Conductivity	880.	umhos/cm	10/26/1990	gls
Cyanide, Total	<0.02	mg/L	11/02/1990	rjk
Nitrogen, Ammonia	0.17	mg/L	10/24/1990	jsg
Nitrogen, Nitrate	0.70	mg/L	10/30/1990	gls
Phenol (4-AAP)	0.003	mg/L	10/29/1990	akm
Sulfate	220.	mg/L	10/29/1990	cms
Total Organic Carbon (TOC)	13.	mg/L	10/30/1990	lc
Arsenic	<0.005	mg/L	10/25/1990	lsv
Barium	0.08	mg/L	10/30/1990	jbb
Cadmium	0.01	mg/L	10/30/1990	jbb
Calcium	100.	mg/L	10/29/1990	dlc
Chromium	0.03	mg/L	10/30/1990	jbb
Copper	0.03	mg/L	10/30/1990	jbb
Iron	8.0	mg/L	10/30/1990	jbb
Lead	<0.05	mg/L	10/30/1990	jbb
Magnesium	24.	mg/L	10/29/1990	dlc
Mercury	<0.0005	mg/L	10/24/1990	wjj
Nickel	0.03	mg/L	10/30/1990	jbb
Selenium	<0.005	mg/L	10/29/1990	lsv
Silver	<0.02	mg/L	10/30/1990	jbb
Sodium	44.	mg/L	10/29/1990	dlc
Zinc	0.07	mg/L	10/30/1990	jbb

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
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Fax: (313) 334-8486

Formerly: Burmah Technical Services, Inc.

ANALYTICAL REPORT

Dave O'Connor
FORD EQO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn, MI 48120

11/20/1990

Job No.: 90.0064
Sample No.: 81074

Act 64 Surface Water
Sample Description: Act 64 Surface Water 10/19

Date Taken: 10/19/1990

Date Received: 10/19/1990

Parameter	Result	Unit	Date Analy.	Lab Tech
BASE NEUTRALS/610 - AQUEOU				
Acenaphthene	<10.	ug/L	11/06/1990	jec
Acenaphthylene	<10.	ug/L	11/06/1990	jec
Anthracene	<10.	ug/L	11/06/1990	jec
Benzo(a)anthracene	<10	ug/L	11/06/1990	jec
Benzo(a)pyrene	<10.	ug/L	11/06/1990	jec
Benzo(b)fluoranthene	<10.	ug/L	11/06/1990	jec
Benzo(ghi)perylene	<10.	ug/L	11/06/1990	jec
Benzo(k)fluoranthene	<10.	ug/L	11/06/1990	jec
Chrysene	<10.	ug/L	11/06/1990	jec
Dibenzo(a,h)anthracene	<10.	ug/L	11/06/1990	jec
Fluoranthene	<10.	ug/L	11/06/1990	jec
Fluorene	<10.	ug/L	11/06/1990	jec
Indeno(1,2,3-cd)pyrene	<10.	ug/L	11/06/1990	jec
Naphthalene	<10.	ug/L	11/06/1990	jec
Phenanthrene	<10.	ug/L	11/06/1990	jec
Pyrene	<10.	ug/L	11/06/1990	jec

Bruce E. Brown
Project Manager

orig: S. Dunlap / Ben → Monitoring Data File
xc Ben
Larry A
Mr

Environmental and Safety Engineering Staff
Ford Motor Company

Suite 608
15201 Century Drive
Dearborn, Michigan 48120

RECEIVED
OCT 05 1990
WASTE MANAGEMENT DIV

September 28, 1990

Mr. Alan Howard, Chief
Waste Management Division
Michigan Department of Natural Resources
P.O. Box 30028
Lansing, Michigan 48909

Subject: **Submittal of Environmental Monitoring Reports**
Ford Allen Park Clay Mine Landfill
EPA ID No. MID 980568711

Dear Mr. Howard:

Enclosed is a supplemental report to the first quarter 1990 Act 64 Cell I leachate monitoring report (enclosed with my August 10, 1990 letter to you) for the subject facility, as required by our Michigan Act 64 Operating License. Reporting of 2,4,5-Trichlorophenol was excluded by the laboratory in the last submittal and included in the report herewith dated September 19, 1990. Mass spectroscopy analysis (Method 625) confirmed nondetectable concentrations for all twelve SCAN 8 compounds (sample number 77584).

Included also is a quarterly Act 64 surface water monitoring report with field notes.

Should you have any questions regarding this submittal, please contact David O'Connor of this Office at 313/322-0701.

Sincerely,

David A. O'Connor for,
Jerome S. Amber, P.E.
Principal Staff Engineer
Environmental Quality Office
313/322-4646

Enclosure

cc: Mayors of Allen Park, Dearborn and Melvindale
Ardys Bennett
Joe Wisk

RECEIVED
OCT 01 1990
Waste Management
Division

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
Tel: (313) 253-0440
Fax: (313) 334-8486

ANALYTICAL REPORT

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

09-19-90

RECEIVED
ENVIRONMENTAL
QUALITY OFFICE

Sample No.: 77584

Revised Report '90 SEP 21 P1:13

Sample Description: Cell I Leachate

Program: Act 64 Leachate Monitoring
Additional Work for #75093

Date Taken: 06-20-90

Date Received: 08-07-90

ACID COMPOUNDS

Parameter	Result	Unit	Date Analy.	Lab Tech
METHOD 625				
4-Chloro-3-methylphenol	<10.	ug/L	08-27-90	rdc
2-Chlorophenol	<10.	ug/L	08-27-90	rdc
2,4-Dichlorophenol	<10.	ug/L	08-27-90	rdc
2,4-Dimethylphenol	<10.	ug/L	08-27-90	rdc
2,4-Dinitrophenol	<50.	ug/L	08-27-90	rdc
4,6-Dinitro-2-methylphenol	<50.	ug/L	08-27-90	rdc
2-Nitrophenol	<10.	ug/L	08-27-90	rdc
4-Nitrophenol	<10.	ug/L	08-27-90	rdc
Pentachlorophenol	<10.	ug/L	08-27-90	rdc
Phenol	<10.	ug/L	08-27-90	rdc
2,4,6-Trichlorophenol	<10.	ug/L	08-27-90	rdc
2,4,5-Trichlorophenol	<10.	ug/L	08-27-90	rdc

Date of Original Report: 09-07-90

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
Tel: (313) 253-0440
Fax: (313) 334-8486

Formerly: Burmah Technical Services, Inc.

ANALYTICAL REPORT

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ENVIRONMENTAL
QUALITY OFFICE
90 SEP 28 P12:37

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

09-26-90

Sample No.: 78857

Sample Description: Act 64 Surface Water

Act 64 Surface Water Monitoring Program

Date Taken: 09-07-90 0910

Date Received: 09-07-90

Parameter	Result	Unit	Date Analy.	Lab Tech
Alkalinity, Bicarb.(CaC03)	60.	mg/L	09-10-90	mab
Alkalinity, Carb. (CaC03)	<4.	mg/L	09-10-90	mab
Alkalinity, Total (CaC03)	60.	mg/L	09-10-90	mab
BOD - Five Day	4.	mg/L	09-07-90	cms
Chloride	29.	mg/L	09-10-90	mab
COD	22.	mg/L	09-13-90	rjk
Cyanide, Total	<0.02	mg/L	09-13-90	akm
Nitrogen, Ammonia	0.09	mg/L	09-13-90	jsg
Nitrogen, Nitrate	0.95	mg/L	09-10-90	akm
Phenolics (4-AAP)	<0.002	mg/L	09-12-90	rjk
Sulfate	190.	mg/L	09-14-90	pds
Total Organic Carbon	5.	mg/L	09-12-90	tm
Arsenic	<0.005	mg/L	09-11-90	lv
Barium	0.05	mg/L	09-17-90	jbb
Cadmium	0.01	mg/L	09-17-90	jbb
Calcium	62.	mg/L	09-12-90	jbb
Chromium, Total	0.02	mg/L	09-17-90	jbb
Copper	0.03	mg/L	09-17-90	jbb
Iron	7.8	mg/L	09-17-90	jbb
Lead	<0.05	mg/L	09-17-90	jbb
Magnesium	17.	mg/L	09-12-90	jbb
Mercury	<0.0005	mg/L	09-13-90	jbb
Nickel	<0.02	mg/L	09-17-90	jbb
Selenium	<0.005	mg/L	09-17-90	dlc
Silver	<0.02	mg/L	09-17-90	jbb
Sodium	19.	mg/L	09-12-90	jbb
Zinc	0.10	mg/L	09-17-90	jbb

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
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Formerly: Burmah Technical Services, Inc.

ANALYTICAL REPORT

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

09-26-90

Sample No.: 78857

Sample Description: Act 64 Surface Water

Act 64 Surface Water Monitoring Program

Date Taken: 09-07-90 0910

Date Received: 09-07-90

Parameter	Result	Unit	Date Analy.	Lab Tech
SEMI-VOLATILE COMPOUNDS				
METHOD 610/8100				
Acenaphthene	<10.	ug/L	09-18-90	mmk
Acenaphthylene	<10.	ug/L	09-18-90	mmk
Anthracene	<10.	ug/L	09-18-90	mmk
Benzo(a)anthracene	<10.	ug/L	09-18-90	mmk
Benzo(b)fluoranthene	<10.	ug/L	09-18-90	mmk
Benzo(k)fluoranthene	<10.	ug/L	09-18-90	mmk
Benzo(a)pyrene	<10.	ug/L	09-18-90	mmk
Benzo(ghi)perylene	<10.	ug/L	09-18-90	mmk
Chrysene	<10.	ug/L	09-18-90	mmk
Dibenzo(a,h)anthracene	<10.	ug/L	09-18-90	mmk
Fluoranthene	<10.	ug/L	09-18-90	mmk
Fluorene	<10.	ug/L	09-18-90	mmk
Indeno(1,2,3-cd)pyrene	<10.	ug/L	09-18-90	mmk
Naphthalene	<10.	ug/L	09-18-90	mmk
Phenanthrene	<10.	ug/L	09-18-90	mmk
Pyrene	<10.	ug/L	09-18-90	mmk

Bruce E. Brown
Project Manager

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Pontiac Division
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ANALYTICAL REPORT

Dave O'Connor
FMC SSECO ALLEN PARK
15201 Century Drive
Suite 608
Dearborn MI 48120

09-26-90

Sample No.: 78857

Sample Description: Act 64 Surface Water

Act 64 Surface Water Monitoring Program

Date Taken: 09-07-90 0910

Date Received: 09-07-90

Parameter	Result	Unit	Date Analy.	Lab Tech
ACID COMPOUNDS				
METHOD 604/8040				
4-Chloro-3-methylphenol	<10.	ug/L	09-20-90	mmk
2-Chlorophenol	<10.	ug/L	09-20-90	mmk
2,4-Dichlorophenol	<10.	ug/L	09-20-90	mmk
2,4-Dimethylphenol	<10.	ug/L	09-20-90	mmk
2,4-Dinitrophenol	<15.	ug/L	09-20-90	mmk
4,6-Dinitro-2-methylphenol	<15.	ug/L	09-20-90	mmk
2-Nitrophenol	<10.	ug/L	09-20-90	mmk
4-Nitrophenol	<20.	ug/L	09-20-90	mmk
Pentachlorophenol	<15.	ug/L	09-20-90	mmk
Phenol	<10.	ug/L	09-20-90	mmk
2,4,6-Trichlorophenol	<10.	ug/L	09-20-90	mmk
2,4,5-Trichlorophenol	<10.	ug/L		

Bruce E. Brown
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

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Pontiac Division
398 Auburn Avenue
Pontiac, MI 48058
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FORD SSECO - WATER

	Detection Limits, mg/L	Methods
Alkalinity, Bicarbonate	4	403 (2)
Alkalinity, Carbonate	4	403 (2)
Alkalinity , Total	4	310.1 (3)
BOD	4	405.1 (3)
Chloride	4	407A (2)
COD	4	410.4 (3)
Conductivity	--	9050 (1)
Cyanide	0.02	9010 (1)
Nitrogen, Ammonia	0.05	350.1.2 (3)
Nitrogen, Nitrate	0.02	353.2 (3)
Oil & Grease	5	9071 (1)
pH	--	9040 (1)
Phenolics	0.002	9065 (1)
Total Phosphorus	0.02	365.2 (3)
Sulfate	0.02	9038 (1)
Suspended Solids	1	1310 (2)
Total Organic Carbon	1	9060 (1)
Arsenic	0.005	7061 (1)
Barium	0.05	6010 (1)
Cadmium	0.01	6010 (1)
Calcium, Tot. & Diss.	0.02	6010 (1)
Chromium, Tot. & Dis.	0.02	6010 (1)
Copper	0.02	6010 (1)
Iron, Tot. & Diss.	0.02	6010 (1)
Lead, Tot. & Diss.	0.05	6010 (1)
Magnesium, Tot. & Diss.	0.02	6010 (1)
Mercury	0.0005	7470 (1)
Nickel	0.02	6010 (1)
Selenium	0.005	7741 (1)
Silver	0.02	6010 (1)
Sodium	0.02	6010 (1)
Zinc	0.02	6010 (1)
DNR Scan 7	10 µg/l	8100 (1)
Naphthalene	10 µg/l	8100 (1)
DRN Scan 8	10-20 µg/l	8040 (1)
Phenol	10 µg/l	8040 (1)

(1) EPA SW 846 "Test Methods for Evaluating Solid Wastes".
(2) Standard Methods 16th Edition.
(3) EPA 600/4-79-020 "Methods for Chemical Analysis of Water & Wastes".

September 28, 1990

FIELD NOTES

Program:	Act 64 Surface Water Monitoring Program
NET Midwest Sample No.:	78857
Date of Sampling:	9-7-90
Time of Sampling:	0920 hours
Sampler:	D.A. O'Connor (EQO, Ford Motor Co.)
Weather:	Air temp 70°F; 3.5" rain on 9-6-90

Parameter	Result	Date of Analysis	Analyst	Method
pH	7.65	9-7-90	D.A. O'Connor	9040
Conductivity	530 μmhos/cm	9-7-90	D.A. O'Connor	9050

CLOW
HYDRO RESEARCH SERVICES
Water Management Division
Clow Corporation
408 Auburn Avenue
Pontiac, MI 48058
313 334-1630
313 334-4747

Ford Motor Company
Allen Park Clay Mine
P.O. Box 1699
Dearborn, MI 48121
Attn: Ed Chraszcz

January 29, 1986

Sample Received: 1/17/86

Hydro Number:	2913	2914	2915	2916
Client I.D.:	MW-5 Deep 1/17/86	MW-5 Shallow 1/17/86	MW-2 Deep 1/17/86	MW-2 Shallow 1/17/86
Cyanide, Total, CN, mg/l	<0.02	<0.02	<0.02	*
Phenolics, (4AAP), mg/l	0.006	0.002	0.002	*
Chromium, Hexavalent, Cr, mg/l	<0.05	<0.05	<0.05	<0.05
Cadmium, Cd, mg/l	0.01	<0.01	0.02	0.01
Nickel, Ni, mg/l	<0.02	<0.02	<0.02	<0.02
Lead, Pb, mg/l	0.08	<0.05	<0.05	<0.05
Napthalene, ug/l	<10	<10	<10	<20
WATER ELEVATIONS (STATIC)	597.29	594.72	603.31	586.22

* Insufficient sample to perform analyses.

Susan K. Scott
LABORATORY SUPERVISOR

3 FEB 86 9:22
MINING PROPS.

CLOW
HYDRO RESEARCH SERVICES
Water Management Division
Clow Corporation
408 Auburn Avenue
Pontiac, MI 48058
313 334-1630
313 334-4747

continued

Ford Motor Company
Allen Park Clay Mine
P.O. Box 1699
Dearborn, MI 48121
Attn: Ed Chraszcz

Sample Received: 1/17/86

Hydro Number:	2917	2918	2919
Client I.D.:	MW-102 1/17/86	MW-103 1/17/86	MW-104 1/17/86
Cyanide, Total, CN, mg/l	<0.02	<0.02	<0.02
Chromium, Hexavalent, Cr, mg/l	<0.05	<0.05	<0.05
Phenolics, (4AAP), mg/l	<0.002	<0.002	<0.002
Cadmium, Cd, mg/l	0.01	<0.01	0.09
Nickel, Ni, mg/l	<0.02	<0.02	<0.02
Lead, Pb, mg/l	<0.05	<0.05	<0.05
Nathalene, ug/l	<10	<10	<10
WATER ELEVATIONS (STATIC)	601.48	598.88	601.90

cc: David Miller

CLOW
HYDRO RESEARCH SERVICES
Water Management Division
Clow Corporation
408 Auburn Avenue
Pontiac, MI 48058
313 334-1630
313 334-4747

20 FEB 86 12:35 MINING PROPS.

Ford Motor Company
Suite 608
15201 Century Drive
Dearborn, MI 48120
Attn: Ed Chraszcz

February 19, 1986

Sample Received: 1-27-86

Hydro Number:	3253
Client I.D.:	MW 2 Shallow Allen Park Clay Mine
Napthalene, ug/l	<40*
Cyanide, Total, CN, mg/l	<0.02
Phenol, mg/l by 4 AAP	0.01

cc: Dave Miller
Allen Park Clay

*Elevated detection limit due to limited sample volume.

Susan K. Scott
LABORATORY SUPERVISOR

Allen Park Clay/1

MID 980 568 711

Ford Motor Co. - Clay Mine 711

Parameter	Units	Date Sampled 7-12-84							
	mg/l	MW 2D	MW 3D	[illegible]	[illegible]	MW 10D	[illegible]	[illegible]	[illegible]
COD		25	[illegible]	7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOC		5.1	1.7	3.2	1.2	[illegible]	[illegible]	[illegible]	[illegible]
Nitrate/Nitrite		0.03	0.01	0.01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ammonia N		0.56	0.53	0.71	0.61	0.62	0.40	0.49	<0.01
Phenol	ug/l	<10	<10	<10	<10	<10	<10	12	<10
Cyanide (total)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005
Alkalinity		245	570	123	344	378	222	—	<5.0
Carbonate		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	—	<5.0
Hex. Chromium	ug/l	<2.0	5.0	4.0	4.0	<2.0	<2.0	—	<2.0
Chloride		176	147	151	153	139	154	1660	<1.0
Bicarbonate		245	570	123	344	378	222	—	<5.0
Sulfate		918	203	900	888	729	1180	—	<1.0
Arsenic		<0.0005	<0.0005	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Calcium		229	22.2	185	150	87.6	316	288	<1.0
Cadmium		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chromium		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Copper		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Iron		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mercury		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium		8.6	2.8	5.0	4.5	4.4	4.9	3.1	<0.1
Magnesium		178	174	150	231	235	173	101	<1.0
Manganese		<0.05	<0.05	0.12	<0.05	<0.05	<0.05	0.33	<0.05
Sodium		117	95.	125	95	91.	102	91.	<1.0
Nickel		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Selenium		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005
Zinc		2.5	0.23	1.03	<0.05	<0.05	<0.05	9.2	<0.05
Silver		<0.0005	<0.0005	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Scan 7	ug/l	<1.0	<1.1	<1.0	<1.2	<1.2	lab. acc.	—	<1.0

.rameter	Units	Date Sampled								
	mg/l	[illegible]	N[illegible]	[illegible]						
[illegible]		[illegible]	[illegible]	—						
COD		[illegible]	[illegible]	—						
TOC		20.	26.	—						
Phenol	ug/l	18	24	940						
Cyanide		0.010	0.067	0.076						
Alkalinity		118	182	290						
Carbonate		18.	<5.0	40.						
Hex. Chromium	ug/l	<2.0	5.0	<2.0						
Chloride		284	—	2910						
Bicarbonate		100	182	250						
Sulfate		626	36.5	1100						
Arsenic		0.0034	0.0011	0.038						
Barium		<1.0	<1.0	<1.0						
Calcium		216	153	146						
Cadmium		<0.02	<0.02	<0.02						
Chromium		<0.05	<0.05	<0.05						
Copper		<0.02	<0.02	0.045						
Iron		<0.1	<0.1	0.545						
Mercury		<0.0005	—	<0.0005						
Potassium		34.6	18.6	1180						
Magnesium		60.	42.6	44.						
Manganese		<0.05	2.3	0.19						
Sodium		185	840	1560						
Nickel		<0.05	<0.05	0.075						
Lead		<0.05	<0.05	<0.05						
Selenium		0.001	<0.0005	0.022						
Zinc		<0.05	0.085	<0.05						
Silver		<0.0005	<0.0005	<0.005						
Naphtholene	ug/l	12.	<1.2	INT <140						
Acenaphthene	ug/l	6.0	<1.2	<1.1						
Phenanthrene	ug/l	12.	<1.2	<1.1						
Anthracene	ug/l	2.8	<1.2	<1.1						
Fluoranthene	ug/l	17.	<1.2	1.4						
Pyrene	ug/l	20.	<1.2	2.7						
Benz (A) Anthracene	ug/l	3.8	<1.2	<1.1						
Chrysene	ug/l	6.1	<1.2	<1.1						
Benzo (B) Fluoranthene	ug/l	9.5	<1.2	<1.1						
Benzo (K) Fluoranthene	ug/l	3.0	<1.2	<1.1						
Benzo (A) Pyrene	ug/l	8.9	<1.2	<1.1						
Dibenzo (A,H) Anthracene	ug/l	4.3	<1.2	<1.1						
1,12 Benzoperylene	ug/l	6.4	<1.2	<1.1						
Indeno (1,2,3-CD) Pyrene	ug/l	6.0	<1.2	<1.1						
Fluorene	ug/l	<1.1	<1.2	2.1						
Acenaphthylene	ug/l	<1.1	<1.2	INT <[illegible]						
Other [illegible]	ug/l	<1.1	<1.2	<1.1						

MICHIGAN DEPT OF NATURAL RESOURCES ENVIRONMENTAL LABORATORY

MATRIX = WATER — ANALYSIS REQUEST SHEET — 4/84

LAB LOG# 1162 PROJ CODE HT COST CENTER 60583 PR III RECEIVED AT LAB JON DATE TIME 7/13/84 1400 AM PM

LOCATION SAMPLED FORD ALLEN PARK CLAY MINE COLLECTED BY SLAYTON TRANSFERED TO

SAMPLE REMARKS Wells SEND RESULTS TO (NAME & SECTION) TERRY MCNIEL, TECH. SERV. SECT, HAZ. WASTE DIV

LAB USE ONLY	#	FIELD ID OR DESCRIPTION	SAMPLE INFORMATION	YY/MM/DD	HH:MM
40375		MW 2D	Mon. Well 2 deep	840712	
40376	02	MW 5D	" " 5 "	"	
40377	03	MW 101D	" " 101 "	"	
40378	04	MW 102D	" " 102 "	"	
40379	05	MW 103D	" " 103 "	"	
40380	06	MW 105D	" " 105 "	"	
40381	07	MW 10S	500 m/in MD Bot. " " 10 Shallow	"	
40382	08	FB	Field Blank		
	09				
	10				

ORGANIC

PO1 #1 HALOCARBONS.....1 2 3 4 5 6 7 8 9 10

PO2 #2 AROMATIC HC.....1 2 3 4 5 6 7 8 9 10

OBN #3 CHLORINATED HC..1 2 3 4 5 6 7 8 9 10
#4 PCB & OC PEST...1 2 3 4 5 6 7 8 9 10
#6 PHTHALATES.....1 2 3 4 5 6 7 8 9 10
#7 PNA.....1 2 3 4 5 6 7 8 9 10
.....1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10

OA #8 PHENOLS.....1 2 3 4 5 6 7 8 9 10

OG OIL & GREASE-IR....1 2 3 4 5 6 7 8 9 10
OIL & GREASE-GRAV..1 2 3 4 5 6 7 8 9 10

1 2 3 4 5 6 7 8 9 10
.....1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10
.....1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10
.....1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10
.....1 2 3 4 5 6 7 8 9 10

INORGANIC

MAD FIELD FILTER+PRES..1 2 3 4 5 6 7 8 9 10
MD LAB FILTRATION.....1 2 3 4 5 6 7 8 9 10

CA MG NA K.....1 2 3 4 5 6 7 8 9 10
CD CR CU NI PB ZN.1 2 3 4 5 6 7 8 9 10
HG MERCURY.....1 2 3 4 5 6 7 8 9 10
AS ARSENIC.....1 2 3 4 5 6 7 8 9 10
SE SELENIUM.....1 2 3 4 5 6 7 8 9 10
SB ANTIMONY.....1 2 3 4 5 6 7 8 9 10
OTHERS (CIRCLE)
AG AL BA BE CO FE 1 2 3 4 5 6 7 8 9 10
LI MN MO TI V.....1 2 3 4 5 6 7 8 9 10
FURNACE- CD.....1 2 3 4 5 6 7 8 9 10
" CR CU NI PB.....1 2 3 4 5 6 7 8 9 10

MN PH, CONDUCTANCE....1 2 3 4 5 6 7 8 9 10
CL SO4 TOTAL ALK..1 2 3 4 5 6 7 8 9 10
FLUORIDE.....1 2 3 4 5 6 7 8 9 10
CR+6.....1 2 3 4 5 6 7 8 9 10
HCO3- CO3=.....1 2 3 4 5 6 7 8 9 10
CA MG NA K -DISS. 1 2 3 4 5 6 7 8 9 10

MB BRINE (CIRCLE)
" CL SO4 BR 1 2 3 4 5 6 7 8 9 10
" ALK HCO3- CO3=..1 2 3 4 5 6 7 8 9 10
" CA MG NA K 1 2 3 4 5 6 7 8 9 10

GENERAL CHEMISTRY

DO DISS OXYGEN....1 2 3 4 5 6 7 8 9 10

GN O-PHOS NO2-....1 2 3 4 5 6 7 8 9 10
RES-NF (SS)....1 2 3 4 5 6 7 8 9 10
RES-TF (TDS)...1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10
BOD TOT 5 DAY.1 2 3 4 5 6 7 8 9 10
BOD CARB 5 DAY.1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10

GA COD.....1 2 3 4 5 6 7 8 9 10
TOC.....1 2 3 4 5 6 7 8 9 10
NO3+NO2 NH3...1 2 3 4 5 6 7 8 9 10
KJEL N, TOT P..1 2 3 4 5 6 7 8 9 10
PHENOLICS.....1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10

GB TOTAL CN.....1 2 3 4 5 6 7 8 9 10
FREE CN.....1 2 3 4 5 6 7 8 9 10

BC FECAL COLI.....1 2 3 4 5 6 7 8 9 10
TOTAL COLI.....1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10

CA CHLOROPHYLL....1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10

MICHIG' 'FT OF NATURAL RESOURCES ENVIRONMENTAL LA TORY

MATRIX = WATER — ANALYSIS REQUEST SHEET — 4/84

LAB LOG# 4462 PROJ CODE HT COST CENTER 68583 PR III RECEIVED AT LAB JON DATE TIME 7/13/84 1400 AM PM

LOCATION SAMPLED FORD ALLEN PARK CLAY MINE COLLECTED BY SLAYTON TRANSFERED TO

SAMPLE REMARKS Surface Water, Leachate Sediment SEND RESULTS TO (NAME & SECTION) T. McNiel, HWD, Ottawa Bldg. South

LAB USE ONLY	#	FIELD ID OR DESCRIPTION	SAMPLE INFORMATION	YY/MM/DD	HH:MM
40383	01	SW1	Surf. Water Tyre Drain	840712	
40384	02	SW2	Surf Water NE DITCH	"	
40385	03	Leachate	Cell NO. 1	"	
	04	~~Sediment~~	~~From Sed. Trap pond~~	~~"~~	
	05				
	06				
	07				
	08				
	09				
	10				

ORGANIC

PO1 #1 HALOCARBONS.....1 2 3 4 5 6 7 8 9 10

PO2 #2 AROMATIC HC.....1 2 3 4 5 6 7 8 9 10

DBN #3 CHLORINATED HC..1 2 3 4 5 6 7 8 9 10
#4 PCB & OC PEST...1 2 3 4 5 6 7 8 9 10
#6 PHTHALATES.....1 2 3 4 5 6 7 8 9 10
#7 PNA.....1 2 3 4 5 6 7 8 9 10
.....1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10

OA #8 PHENOLS.....1 2 3 4 5 6 7 8 9 10

OG OIL & GREASE-IR....1 2 3 4 5 6 7 8 9 10
OIL & GREASE-GRAV..1 2 3 4 5 6 7 8 9 10

1 2 3 4 5 6 7 8 9 10
.....1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10
.....1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10
.....1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10
.....1 2 3 4 5 6 7 8 9 10

INORGANIC

MAD FIELD FILTER+PRES..1 2 3 4 5 6 7 8 9 10
MD LAB FILTRATION.....1 2 3 4 5 6 7 8 9 10

~~MA~~ CA MG NA K.....1 2 3 4 5 6 7 8 9 10
CD CR CU NI PB ZN 1 2 3 4 5 6 7 8 9 10
HG MERCURY.....1 2 3 4 5 6 7 8 9 10
AS ARSENIC.....1 2 3 4 5 6 7 8 9 10
SE SELENIUM.....1 2 3 4 5 6 7 8 9 10
SB ANTIMONY.....1 2 3 4 5 6 7 8 9 10
OTHERS (CIRCLE)
AG AL BA BE CO FE 1 2 3 4 5 6 7 8 9 10
LI MN MO TI V.....1 2 3 4 5 6 7 8 9 10
FURNACE- CD.....1 2 3 4 5 6 7 8 9 10
" CR CU NI PB.....1 2 3 4 5 6 7 8 9 10

MN PH, CONDUCTANCE....1 2 3 4 5 6 7 8 9 10
CL SO4 TOTAL ALK..1 2 3 4 5 6 7 8 9 10
FLUORIDE.....1 2 3 4 5 6 7 8 9 10
CR+6.....1 2 3 4 5 6 7 8 9 10
HCO3- CO3=.....1 2 3 4 5 6 7 8 9 10
CA MG NA K -DISS. 1 2 3 4 5 6 7 8 9 10

MB BRINE (CIRCLE)
" CL SO4 BR 1 2 3 4 5 6 7 8 9 10
" ALK HCO3- CO3=..1 2 3 4 5 6 7 8 9 10
" CA MG NA K 1 2 3 4 5 6 7 8 9 10

GENERAL CHEMISTRY

DO DISS OXYGEN....1 2 3 4 5 6 7 8 9 10

GN O-PHOS NO2-....1 2 3 4 5 6 7 8 9 10
RES-NF (SS)....1 2 3 4 5 6 7 8 9 10
RES-TF (TDS)...1 2 3 4 5 6 7 8 9 10
Residue, Turbid 1 2 3 4 5 6 7 8 9 10
BOD TOT 5 DAY.1 2 3 4 5 6 7 8 9 10
BOD CARB 5 DAY.1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10

GA COD.....1 2 3 4 5 6 7 8 9 10
TOC.....1 2 3 4 5 6 7 8 9 10
NO3+NO2 NH3....1 2 3 4 5 6 7 8 9 10
KJEL N, TOT P..1 2 3 4 5 6 7 8 9 10
PHENOLICS.....1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10

GB TOTAL CN.....1 2 3 4 5 6 7 8 9 10
FREE CN.....1 2 3 4 5 6 7 8 9 10

BC FECAL COLI.....1 2 3 4 5 6 7 8 9 10
TOTAL COLI.....1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10

CA CHLOROPHYLL....1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10