Universal Oil Products

NJD002005106

THIS DOCUMENT "***CORRESPONDENCE FROM BCM AND PRIORITY POLLUTANT SUMMARY (JUNE 25, 1980)*** " IS CURRENTLY CLASSIFIED NON-CONFIDENTIAL BY EPA.

Seth Ausubel
Remedial Project Manager

7/16/02
Date

Betz • Converse • Murdoch Inc. BCM

Consulting Engineers, Planners and Architects

June 25, 1980

PRIVELEGED & CONFIDENTIAL

Mr. Ronald H. DeMaria
Lum, Biunno, and Tompkins
Counselors-at-Law
550 Broad Street
Newark, New Jersey 07102

Subject: UOP Priority Pollutant Characterization
BCM Project No. 00-5102-03

Dear Mr. DeMaria:

Enclosed, please find the final summary of priority pollutant results for UOP Incorporated, Chemical Division, East Rutherford, New Jersey. As previously noted in earlier correspondence, this data represents the concentration of priority pollutants that was detected in the soil and static water table samples taken at the UOP Chemical Plant during the period of March 31 through April 19, 1980.

Analysis of the organic constituents were performed by gas chromatography/mass spectroscopy (GC/MS) as specified in the December 3, 1979 Federal Register entitled Guidelines Establishing Test Procedures for the Analysis of Pollutants; Proposed Regulations

Inorganic constituents were analyzed according to the recommended and accepted analytical methods contained in the June 14, 1979 Federal Register entitled Draft Consolidated Permit Application Forms and Proposed National Pollutant Discharge Elimination System Regulations.

Only the compounds that were detected at a particular sample point have been presented. Asbestos was the only compound on the priority list that was not analyzed for per the discussion of Brent Cowan (BCM) and Paul Anderson (UOP) with Richard Katz (NJDEP) on March 31, 1980. The remainder of the 129 priority pollutants were not detected and thus not listed. It should be noted that the contaminant concentrations in the soil samples are reported on a wet basis.

Examination of the analytical data will show several values reported with a numerical value followed by a parenthesis containing another analytical value or a designation of ND. The term ND is a notation for "NOT DETECTED". Samples that were analyzed in duplicate were reported with the initial concentration followed by the repeated concentration value placed in parenthesis.

It has been a pleasure to work with UOP Incorporated on this project and we sincerely hope that we can be of service in the near future.

Should there be any questions concerning the data submitted, please contact us at your earliest convenience.

Very truly yours,

Brent Cowan

Brent Cowan
Project Engineer III

BC/ydd
Enclosure

cc: Robert Haldeman (UOP)
Andy Szurgot (UOP)
R. Rathmell (BCM)
Tony Bove (BCM)
Tony DeFalco (BCM)

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TABLE 1

PRIORITY POLLUTANT SUMMARY

Sample Point	3	3	3	3
Sample Depth	0'-1'	1'-2'	2'-4'	Static Water
BCM Lab No.	4432	4434	4433	4769
ORGANICS	ppm (microgram/gram)	ppm (microgram/gram)	ppm (microgram/gram)	ppb (microgram/liter)
Acrolein	-	-	-	100
Benzene	-	-	-	30
Chlorobenzene	-	-	-	19
1,1 - Dichloroethane	-	-	-	1
Ethylbenzene	-	-	-	2
Methylene Chloride	-	-	-	15
Toluene	61	-	-	900 ✓
Phenol	22.2	-	-	67.2
Bis(2-ethylhexyl) phthalate	138	8788	5757	23.2
Di-n-butyl phthalate	-	165	101	-
METALS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/liter)
Antimony	<0.125	<0.125	<0.125	<0.125
Arsenic	1.26	1.65		

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TABLE 1 (Cont.)

METALS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/liter)
Beryllium	0.046	0.07	0.062	<0.01
Cadmium	0.12	0.019	18.8	<0.005
Chromium	3.17	2.73	2.22	<0.02
Copper	10.95	3.35	2.88	<0.03
Lead	9.07	6.63	4.62	<0.10
Mercury	0.172	0.04	0.017	0.003
Nickel	6.8	4.53	3.35	<0.10
Selenium	<0.001	0.019	0.002	<0.001
Silver	0.09	0.12	0.07	<0.02
Thallium	<0.14	<0.14	<0.14	<0.14
Zinc	17.53	10.20	186	<0.004
Cyanide	0.068	<0.005	0.068	0.005

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TABLE 2

PRIORITY POLLUTANT SUMMARY

Sample Point	6	6	6	6
Sample Depth	0'-1'	1'-2'	2'-4'	Static Water
BCM Lab No.	4488	4489	4490	4770
ORGANICS	ppm (microgram/gram)	ppm (microgram/gram)	ppm (microgram/gram)	ppb (microgram/liter)
Acrolein	-	56	-	-
Benzene	-	-	-	7
Chloroform	-	-	-	1
Trans-1,2-Dichloro-ethene	-	310	-	380
Methylene Chloride	7.8	110	-	15
Toluene	-	-	-	14
Trichloroethylene	-	8.9	-	210
Benzo (b) Fluoranthene	-	-	10.38	-
Bis (2-ethylhexl) phthalate	2.45	8.58	-	56
Butyl Benzyl phthalate	1.96	-	-	-
Chrysene	-	-	18.8	-
Di-n-butylphthalate	1.96	-	-	-
Dioctylphthalate	1.96	-	-	-

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TABLE 2 (Cont.)

ORGANICS (Cont.)	(microgram/gram)	(microgram/gram)	ppm (microgram/gram)	(microgram/liter)
Fluoranthene	-	-	19.8	-
Phenanthrene	0.98	-	14.3	-
Pyrene	-	-	17.8	-
METALS	(mg/kg)	(mg/kg)	(mg/kg)	ppb (mg/Liter)
Antimony	<0.125	<0.125	<0.125	<0.125
Arsenic	2.62	162	0.93	0.87
Beryllium	0.054	0.046	0.046	<0.01
Cadmium	0.197	0.128	0.448	0.019
Chromium	6.48	6.96	6.29	<0.02
Copper	33.2	16.6	39.24	<0.03
Lead	130	56.3	127	<0.10
Mercury	0.39	0.015	0.158	0.00014
Nickel	7.70	21.62	8.90	0.30
Selenium	0.018	0.034	0.147	<0.001
Silver	0.25	0.13	0.25	<0.02
Thallium	<0.14	<0.14	<0.14	<0.14
Zinc	63	41.2	72.2	0.007
Cyanide	0.68	0.14	0.14	[illegible]

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TABLE 3

PRIORITY POLLUTANT SUMMARY

Sample Point	11	11	11	11	11
Sample Depth	0'-1'	1'-2'	2'4'	18'-20'	Static Water
BCM Lab No.	4495	4496	4497	4498	4771
ORGANICS	(microgram/gram)	(microgram/gram)	(microgram/gram)	ppm (microgram/gram)	ppb (microgram/liter)
Acrolein	-	21	-	-	1000 ✓
Acrylonitrile	-	-	-	-	17
Benzene	2.9	3.9	7.3	-	14,000 ✓
Bromodichloromethane	-	-	-	-	5
Chlorobenzene	-	-	-	-	310 ✓
Chloroform	-	-	9.2	-	160 ✓
Dibromochloromethane	-	-	-	-	20
1,2-Dicholoroethane	-	-	-	7.1	480 ✓
1,1-Dichloroethene	-	-	1.7	-	130
Trans-1,2-Dichloroethene	1.3	2.1	1.5	1.2	100,000
1,2-Dichloropropane	-	-	-	-	160
Ethylbenzene	9.5	7.9	15	-	900
Methylene Chloride	-	-	240	6.5	200
1,1,2,2-Tetrachloroethane	2.8	79	53	32	3000 ✓
Tetrachlorethene	-	-	-	-	180 ✓
1,1,1-Trichloroethane	-	-	-	-	2

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Sample site 11

TABLE 3 (Cont.)

ORGANICS (Cont.)	microgram/gram)	(microgram/gram)	(microgram/gram)	(microgram/gram)	ppb (microgram/liter)
1,1,2-Trichloroethane	-	-	-	-	230
Toluene	-	-		-	8000 ✓
Trichloroethylene	-	-	-	-	300 ✓
Phenol	2.3	1.9	1.4	-	-
Bis(2-ethylhexyl) phthalate	813	14.4/87.7	121.6	12.8	44
Bis(2-chloroethyl) ether	-	-	-	-	248
1,3-Dichlorobenzene	-	-	-	-	120
1,4-Dichlorobenzene	-	-	-	-	1280 ✓
1,2-Dichlorobenzene	-	-	-	-	1600 ✓
Diethylphthalate	-	-	-	-	352 ✓
Dimethylphthalate	-	-	-	15.9	-
1,2,4-Trichlorobenzene	-	-	-	-	240 ✓

METALS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/liter)
Antimony	<0.125	<0.125	<0.125	<0.125	<0.125
Arsenic	0.862	1.44	1.59	1.20	0.085
Beryllium	<0.01	<0.01	0.094	0.102	0.01
Cadmium	0.315	0.79	0.197	<0.005	<0.005
Chromium	7.62	5.68	7.34	3.30	<0.02
Copper	23.4	17.7	7.84	6.41	0.03
Lead	22.04	46.0	66.5	3.32	<0.10
Mercury	0.40	0.045	0.201	0.002	

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TABLE 3 (Cont.)

METALS (Cont.)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/liter)
Nickel	22.46	7.81	10.64	8.57	<0.03
Selenium	<0.001	0.002	0.047	0.022	0.001
Silver	1.47	0.10	0.23	0.10	<0.02
Thallium	<0.14	<0.14	<0.14	<0.14	0.14
Zinc	39.52	54.6	37.91	16.27	<0.004
Cyanide	39.2	187	308.0	0.135	0.02

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TABLE 4

PRIORITY POLLUTANT SUMMARY

Sample Point	14	14	14	14
Sample Depth	0'-1'	1'-2'	4'-6'	Static Water
BCM Lab No.	4568	4569	4570	4772
ORGANICS	(microgram/gram)	(microgram/gram)	(microgram/gram)	(microgram/liter)
Acrolein	7.7	-	8.3	100 ✓
Benzene	-	-	-	10
Chloroform	-	-	-	10
Trans-1,2-Dichloroethene	-	-	-	10
Ethylbenzene	-	-	-	1
Methylene Chloride	-	-	-	70 ✓
Toluene	6.2	2.7	-	25
Bis(2-ethylhexyl)phthalate	4.3(ND)	4.9(ND)	4.3(ND)	17.6
Di-n-butylphthalate	51.1(ND)	13.8(ND)	6.3(ND)	-
Phenanthrene	1.7(1.7)	2.5(3.9)	-	-
METALS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/liter)
Antimony	<0.125	<0.125	[illegible]	

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TABLE 4 (Cont.)

METALS (Cont.)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/liter)
Arsenic	0.009	0.006	0.012	0.122
Beryllium	0.050	0.062	0.078	<0.01
Cadmium	0.018	<0.005	0.434	<0.005
Chromium	3.32	2.58	15.8	<0.02
Copper	13.5	4.80	27.8	<0.03
Lead	12.6	6.98	66.23	<0.10
Mercury	20.0	14.0	0.314	0.0001
Nickel	10.46	8.34	8.07	<0.03
Selenium	0.007	0.003	0.013	<0.001
Silver	0.21	0.15	0.02	<0.02
Thallium	<0.14	<0.140	<0.14	<0.14
Zinc	27.2	16.70	119	0.023
Cyanide	5.0	0.68	0.135	<0.005

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TABLE 5

PRIORITY POLLUTANT SUMMARY

Sample Point	17	17	17	17	17
Sample Depth	0'-1'	2'-4'	4'-6'	6'-8'	8'-10'
BCM Lab No.	4435	4436	4437	4438	4439
ORGANICS	(microgram/gram)	(microgram/gram)	(microgram/gram)	(microgram/gram)	(microgram/gram)
Benzene	-	-	1	-	-
Chlorobenzene	-	-	1.6	-	-
Ethylbenzene	-	-	0.7	-	-
Toluene	-	-	21	-	-
Phenol			4.6	-	-
Bis(2-ethlhexyl) phthalate	75.4	48.7	46.2	-	-
METALS	(mg/kg)	(mg/kg)	(mg/kg)	mg/kg)	(mg/kg)
Antimony	<0.125	<0.125	<0.125	<0.125	<0.125
Arsenic	1.32	1.09	1.56	0.60	1.71
Beryllium	0.031	0.012	<0.01	<0.01	0.08
Cadmium	0.121	0.149	0.114	<0.005	0.019
Chromium	0.190	0.296	333	317	535
Copper	0.459	0.331	9.33	3.22	4.99
Lead	<0.10	0.35	2.80	[illegible]	[illegible]

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TABLE 5 (Cont'd)

METALS (Cont.)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Mercury	0.173	0.008	0.008	0.394	0.017
Nickel	<0.10	2.9	7.0	5.2	6.5
Selenium	<0.001	0.001	0.009	0.002	0.106
Silver	0.12	0.05	0.08	0.13	0.09
Thallium	<0.14	<0.14	<0.14	<0.14	<0.14
Zinc	2.63	3.70	7.70	11.54	14.3
Cyanide	7.03	11.30	19.86	1.08	0.135

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TABLE 6

PRIORITY POLLUTANT SUMMARY

Sample Point	18	18	18	18
Sample Depth	0'-1'	1'-2'	2'-6'	Static Water
BCM Lab No.	4491	4492	4493	4773
ORGANICS	(microgram/gram)	(microgram/gram)	(microgram/gram)	(microgram/liter)
Acrolein	-	-	-	1000
Acrylonitrile	-	-	-	9
Benzene	1.1	0.46	0.25	90
Chlorobenzene	-	-	0.36	18
1,2-Dichloroethane	-	-	-	13
Trans-1,2 Dichloroethene	-	-	-	800
Ethylbenzene	-	-	-	15
Tetrachloroethene	-	-	-	23
Toluene	1.6	-	0.51	140
Trichloroethylene	-	-	-	45
Phenol	42.3	-	-	-
Bis(2-Ethylhexyl) phthalate	11.6	15(18)	39.8	28
Butyl Benzyl Phthalate	-	13(ND)	-	-
Di-n-Butylphthalate	37.7	10(ND)	-	-
Diethylphthalate	-	10(11.5)	-	-
Dioctylphthalate	-	2(ND)	-	-

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TABLE 6 (Cont.)

Sample Point	18	18	18	18
Sample Depth	0-1'	1'-2'	2'-4'	4'-6'
BCM Lab No.	4491	4492	4493	4494
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	<0.125	<0.125	<0.125	<0.125
Arsenic	2.496	0.627	1.266	0.809
Beryllium	<0.01	<0.01	<0.01	0.107
Cadmium	0.382	0.440	0.45	<0.005
Chromium	2750	0.26	0.30	32.8
Copper	61.5	0.24	0.32	3.81
Lead	39.9	0.59	<0.10	2.10
Mercury	0.116	0.48	0.22	0.081
Nickel	41.94	0.70	<0.10	3.13
Selenium	0.001	0.068	0.004	0.098
Silver	0.27	0.15	0.12	0.09
Thallium	<0.14	<0.14	<0.14	<0.14
Zinc	77.0	0.344	0.37	6.16
Cyanide	15.88	28.11	52.70	1.35

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TABLE 7

PRIORITY POLLUTANT SUMMARY

Sample Point	20	20	20
Sample Depth	0"-6"	6"-12"	12"-18"
BCM Lab No.	4573	4574	4575
ORGANICS	(microgram/gram)	(microgram/gram)	(microgram/gram)
Methylene Chloride	6.3	7.2	11
1,1,2,2-Tetrachloroethane	1.3	-	-
Bis(2-Ethylhexyl)Phthalate	10.2(15.5)	4(ND)	4.7(ND)
Di-n-Butylphthalate	7.3(ND)	7.6(3.2)	7.7(ND)
METALS	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	<0.125	<0.125	<0.125
Arsenic	2.405	2.133	2.375
Beryllium	0.050	0.062	0.078
Cadmium	0.795	0.30	<0.005
Chromium	525	156	8.1
Copper	57	22.9	11.02
Lead	34.2	32.46	9.22
Mercury	24.6	27.6	0.314
Nickel	10.46	8.34	8.07

TABLE 7 (Cont.)

METALS (Cont.)	(mg/kg)	(mg/kg)	(mg/kg)
Selenium	0.025	0.088	0.002
Silver	0.33	0.287	0.184
Thallium	<0.14	<0.14	<0.14
Zinc	151	35.73	33.78
Cyanide	5	0.68	0.135

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TABLE 8

PRIORITY POLLUTANT SUMMARY

Sample Point	Southern Prod. Well	City Water	Distilled Water Blank
BCM Lab No.	4431	4567	4571
ORGANICS	(microgram/liter)	(microgram/liter)	(microgram/liter)
Bromodichloromethane	-	23	-
Chloroform	-	27	-
Dibromochloromethane	-	4	-
1,2-Dichloroethane	-	2	-
1,2-Dichloropropane	13	-	-
Methylene Chloride	30	40	-
1,1,1-Trichloroethane	-	1	-
Trichloroethylene	11	-	-
Bis(2-ethylhexyl) phthalate	-	8	160
Butyl Benzyl phthalate	-	-	28
Di-n-butyl phthalate	-	1040	4

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TABLE 8 (Cont.)

METALS	(mg/Liter)
Antimony	<0.125
Arsenic	0.002
Beryllium	<0.01
Cadmium	<0.005
Chromium	<0.02
Copper	<0.03
Lead	<0.10
Mercury	0.00007
Nickel	<0.03
Selenium	<0.001
Silver	<0.02
Thallium	<0.14
Zinc	<0.004
Cyanide	<0.014

POTABLE WATER PARAMETERS	
Phenol (mg/l)	0.04

TABLE 8 (Cont.)

POTABLE WATER PARAMETERS (Cont.)

Sulfate (mg/l)	180
Fluoride (mg/l)	0.14
pH	7.4
Nitrate (mg/l)	3.0
Iron (mg/l)	<0.04
Manganese (mg/l)	<0.014
Color(Pt/C_0 Units)	10
Turbidity (NTU)	2.8
Alkalinity (mg/l as $CaCO_3$)	169
Chloride (mg/l)	267
Dissolved Solids (mg/l)	1000
Total Hardness (mg/l as $CaCO_3$)	580
Surfactants (mg/l)	0.08
Sodium (mg/l)	134
Odor	None Detected