Olin CHEMICALS
LOWER RIVER RD., P.O. BOX 248, CHARLESTON, TN 37310

January 8, 1993

Phillip Masters
Hazardous Waste Facilities Branch
United States Environmental Protection Agency
Region II
26 Federal Plaza, Room 1037
New York, New York 10278

Re: Groundwater Chemistry Data from DuPont Wells
Olin Corporation
Niagara Falls, NY, Plantsite
EPA ID No. NYD002123461, Index No. RCRA-3013-0208
RCRA Facility Investigation

Dear Mr. Masters:

Enclosed are the data from the DuPont groundwater monitoring wells along the borders of Olin property. The locations of the well clusters are shown in Figure 3-1 of the Interim Report (February 1992), a copy of which is also enclosed for your convenience. Please note there is a typographical error in the data tables: the column of data for Well 20B sampled 4/30/92 on the third page of the tables is entered twice. We will correct this in future submissions.

Per our previous discussions, you will review these data to decide if they satisfy comment number 4 in your November 4, 1992, letter regarding the Interim Report. If you decide that Olin needs to collect additional data from these wells, please note that DuPont has indicated that it would be desirable to have Olin obtain a sample when they do for site safety and security reasons. DuPont samples at approximately three month intervals, with the next sampling scheduled for later in January.

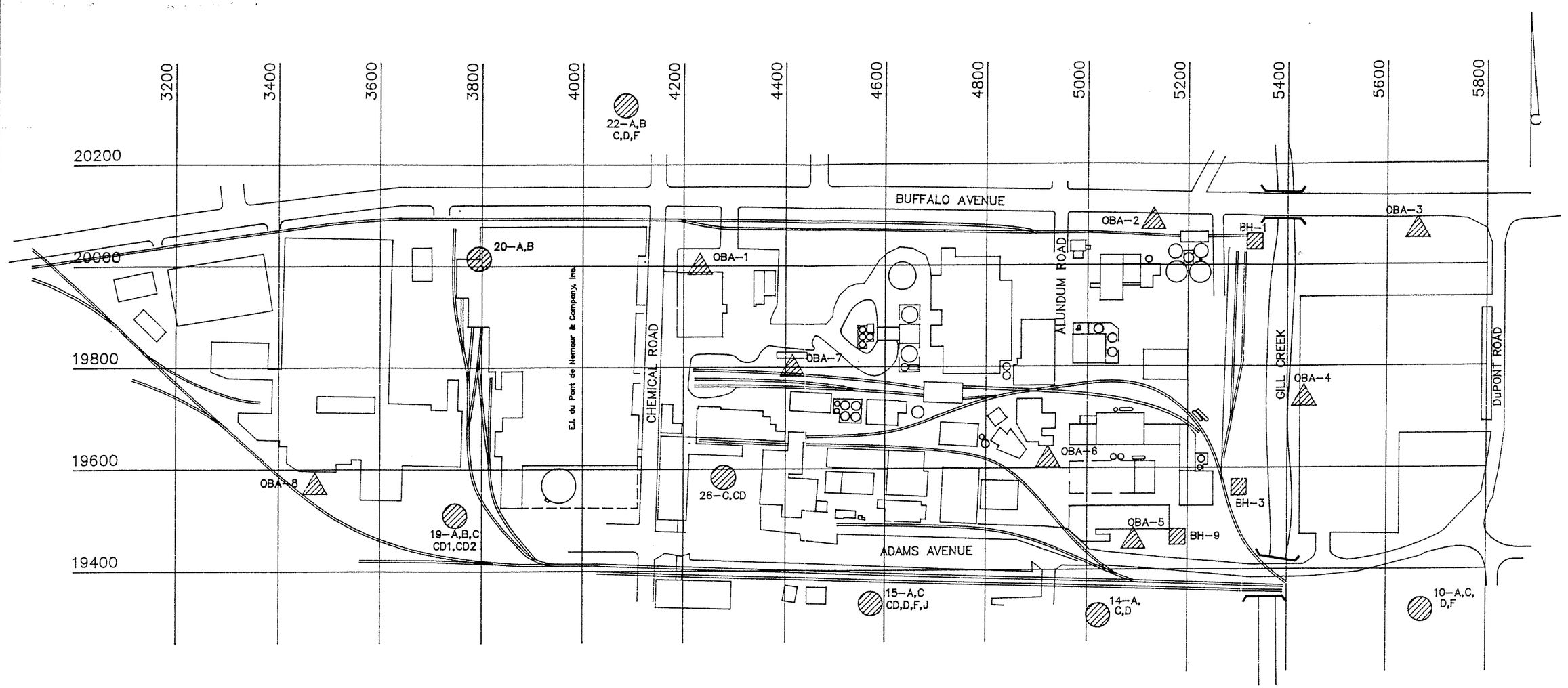
Please call (615-336-4308) if you have any questions about this report or any of the work under the RFI.

Sincerely,

J. C. Brown
Manager, Environmental Technology

\jcb\174
Enclosure

cc: P. Counterman (2)
W. G. McGlasson
K. R. McIntosh
G. C. Meyer
J. P. Mitchell
S. F. Radon
A. D. Rheingold
Permits Admin. Branch - EPA



LEGEND:

HBH–1 ▨ EXISTING HARZA MONITORING WELLS

OBA–1 △ OLIN MONITORING WELL LOCATIONS

20–A,B ◯ DuPONT MONITORING WELLS

OLIN CHEMICALS NIAGARA PLANT
RCRA FACILITY INVESTIGATION

WOODWARD–CLYDE CONSULTANTS
Consulting Engineers, Geologists and Environmental Scientists

MONITORING WELL LOCATION PLAN

Job No.: 86C2346–12	Drawing No.	Date:
Checked by: KRM	Rev. No.:	Figure 3–1
Scale: 0 200 Feet		

3571 Niagara Falls Boulevard
North Tonawanda
New York 14120
(716) 692-7172
Fax (716) 692-1512

Woodward-Clyde Consultants

December 10, 1992
92C2030-08

Mr. James C. Brown
Manager, Environmental Technology
Olin Chemicals
P.O. Box 248
Lower River Road
Charleston, Tennessee 37310

Re: Analytical Data from Du Pont Niagara Plant Groundwater Monitoring Program

Dear Mr. Brown:

Enclosed are analytical results from groundwater samples collected by Du Pont from monitoring wells located near the perimeter of the Olin Buffalo Avenue Plant. Woodward-Clyde Consultants (WCC) has been authorized by Du Pont to release these data for use in Olin's RCRA Facility Investigation (RFI). The attached tables contain the results from the two most recent sampling events conducted at the Du Pont Niagara Plant for the following wells: 14A, 15A, 15CD, 19A, 19B, 19CD1, 20A-R, 20B, 22B, 22C, and 26CD. Du Pont Well 22A was not sampled because it was found to be dry.

The water-bearing zone designations for Du Pont monitoring wells have the same meaning as those used by Olin. The one addition is the "A-R" designation which refers to a well spanning the overburden, but not penetrating into bedrock (compared to "A" wells which span the overburden/top-of-rock interface).

The data has been validated by WCC using the following documents for guidance:

> "CLP Organics Data Review and Preliminary Review. SOP No. HW-6, Revision 8". USEPA Region II. January 1992.
>
> "Evaluation of Metals Data for the Contract Laboratory Program (CLP) Based on SOW 3/90, Revision XI". January 1992.

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Data validation qualifiers are listed at the end of the analytical data tables. If you have any questions or comments, please contact the undersigned.

Sincerely,

Kelly R. McIntosh, P.E., P.HGW.
Associate

KRM:jee

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DUPONT NIAGARA PLANT
INDICATOR PARAMETER ANALYSIS

Location		14A	14A	15A	15A	15CD	15CD
Date Sampled		8/7/92	9/3/92	8/7/92	9/3/92	4/23/92	8/5/92
Field Parameters							
pH - Field Measured		8.52	7.98	10.3	7.92	8.44	7.84
Spec. Cond. (umhos/cm)		780	780	840	660	840	980
Specific Gravity-Field		1	1	1	1	1	1
Temperature C -Field		19.3	19	19.8	20.5	13.7	14.8
Other Parameters							
Barium, Soluble	mg/l	1 U	1 U	1 U	1 U	1 U	1 U
Chloride	mg/l	119	127	124	87.3	139	68.6
Cyanide, Total	mg/l	0.194 R	0.197	1.41	0.142	0.0663	0.0476 R
Phenol, Total	mg/l	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Total Organic Halogens	mg/l	84	83	0.57	0.48	73	170
Volatiles							
1,1,1-Trichloroethane	ug/l	500 U	500 U	11	10	470	1000 U
* 1,1,2,2-Tetrachloroethane	ug/l	9400	7000	10 U	4 U	3100	12000
1,1,2-Trichloroethane	ug/l	500 U	500 U	5 U	2 U	250 U	1000 U
1,1-Dichloroethane	ug/l	500 U	500 U	5 U	2 U	250 U	1000 U
1,1-Dichloroethene	ug/l	500 U	500 U	60	2 U	250 U	1000 U
1,2-Dichlorobenzene(o)	ug/l	1000 U	1000 U	10 U	4 U	500 U	2000 U
1,4-Dichlorobenzene(p)	ug/l	1000 U	1000 U	10 U	4 U	500 U	2000 U
1,4-Dichlorobutane	ug/l	1000 U	1000 U	10 U	4 U	500 U	2000 U
2-Methyl Furan	ug/l	1000 U	1000 U	10 U	4 U	500 U	2000 U
* Benzene	ug/l	1000 U	1000 U	10 U	4 U	500 U	2000 U
Carbon Tetrachloride	ug/l	500 U	500 U	7.9	2 U	250 U	1000 U
* Chlorobenzene	ug/l	1000 U	1000 U	10 U	4 U	500 U	2000 U
Chloroethane	ug/l	NA	1000 U	NA	4 U	NA	NA
* Chloroform	ug/l	500 U	500 U	500	390	8200	18000
Chloromethane	ug/l	2500 U	2500 U	25 U	10 U	1300 U	5000 U
* Cis-1,2-Dichloroethene	ug/l	3000	2300	26	28	930	3400
Hexachlorobutadiene	ug/l	1000 U	1000 U	10 U	4 U	500 U	2100
Hexachloroethane	ug/l	1000 U	1000 U	10 U	4 U	500 U	2000 U
* Methylene Chloride	ug/l	500 U	500 U	7.4	4.9	5200	14000
* Tetrachloroethene	ug/l	84000	90000	80	52	4100	45000
Tetrahydrothiophene	ug/l	1000 U	1000 U	10 U	4 U	500 U	2000 U
Toluene	ug/l	1000 U	1000 U	10 U	4 U	500 U	2000 U
* Trans-1,2-Dichloroethene	ug/l	500 U	500 U	5 U	2 U	250 U	1000 U
* Trichloroethene	ug/l	71000	53000	190	160	27000	160000
* Vinyl Chloride	ug/l	1000 U	1000 U	10 U	4.1	500 U	2000 U
Total Volatiles	ug/l	167400	152300	882.3	649	49000	254500
Other Organics							
* alpha-BHC	ug/l	0.5 UR	0.56 J	0.5 U	0.5 U	5	13
* beta-BHC	ug/l	0.5 UR	0.5 UR	0.5 U	0.5 U	2	5 U
* delta-BHC	ug/l	0.5 UR	0.5 UR	0.5 U	0.5 U	0.5 U	5 U
* gamma-BHC (Lindane)	ug/l	0.5 UR	0.5 UR	0.5 U	0.5 U	3.3	19
* PCB 1016	ug/l	5 U	50 U	5 U	0.5 U	5 U	50 U
* PCB 1221	ug/l	5 U	50 U	5 U	0.5 U	5 U	50 U
* PCB 1232	ug/l	5 U	5 U	5 U	0.5 U	0.5 U	50 U
* PCB 1242	ug/l	5 U	5 U	5 U	0.5 U	0.5 U	50 U
* PCB 1248	ug/l	5 U	5 U	5 U	0.5 U	0.5 U	50 U
* PCB 1254	ug/l	5 U	5 U	5 U	0.5 U	0.5 U	50 U
* PCB 1260	ug/l	5 U	5 U	5 U	0.5 U	0.5 U	50 U
Bis(2-ethylhexyl)phthalate	ug/l	10 U	10 U	10 U	10 U	76	10 U
Naphthalene		20 U	20 U	20 U	20 U	20 U	20 U
Total Loading Indicators(*)		167400	152300.6	803.4	639	48540.3	252432

DUPONT NIAGARA PLANT
INDICATOR PARAMETER ANALYSIS

		Location	19A	19A	19B	19B	19CD1	19CD1
		Date Sampled	4/23/92	8/5/92	4/23/92	8/5/92	4/23/92	8/5/92
		Field Parameters						
		pH - Field Measured	8.52	8.89	7.94	7.96	7.95	8.45
		Spec. Cond. (umhos/cm)	2100	1200	2100	2000	615	380
		Specific Gravity-Field	1	1	1	1	1	1
		Temperature C -Field	9.5	16.6	11.8	15	9.4	16.2
		Other Parameters						
	mg/l	Barium, Soluble	1 U	1 U	1 U	1 U	1 U	1 U
	mg/l	Chloride	782	322	874	860	106	37.8
	mg/l	Cyanide, Total	0.0231	0.0308 R	0.0118	0.0122 R	0.01	0.01 U
	mg/l	Phenol, Total	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
	mg/l	Total Organic Halogens	0.25	0.26	0.091	0.13	4	2.4
		Volatiles						
	ug/l	1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	25 U	10 UJ
*	ug/l	1,1,2,2-Tetrachloroethane	2 U	2 U	2 U	2 U	66	40 J
	ug/l	1,1,2-Trichloroethane	1 U	1 U	1 U	1 U	25 U	10 UJ
	ug/l	1,1-Dichloroethane	1 U	1 U	1 U	1 U	25 U	10 UJ
	ug/l	1,1-Dichloroethene	1 U	1 U	1 U	1 U	25 U	10 UJ
	ug/l	1,2-Dichlorobenzene(o)	2 U	2 U	2 U	2 U	50 U	20 UJ
	ug/l	1,4-Dichlorobenzene(p)	2 U	2 U	2 U	2 U	50 U	20 UJ
	ug/l	1,4-Dichlorobutane	2 U	2 U	2 U	2 U	50 U	20 UJ
	ug/l	2-Methyl Furan	2 U	2 U	2 U	2 U	50 U	20 UJ
*	ug/l	Benzene	2 U	2 U	2 U	2 U	50 U	20 UJ
	ug/l	Carbon Tetrachloride	1 U	1 U	1 U	1 U	25 U	10 UJ
*	ug/l	Chlorobenzene	2 U	2 U	2 U	2 U	50 U	20 UJ
	ug/l	Chloroethane	NA	NA	NA	NA	NA	NA
*	ug/l	Chloroform	21	14	2.5	9.5	2500	1100 J
	ug/l	Chloromethane	5 U	5 U	5 U	5 U	130 U	50 UJ
*	ug/l	Cis-1,2-Dichloroethene	48	92	9.7	6.4 J	1100	710 J
	ug/l	Hexachlorobutadiene	2 U	2 U	3.2	2.4	50 U	20 UJ
	ug/l	Hexachloroethane	2 U	2 U	2 U	2 U	50 U	20 UJ
*	ug/l	Methylene Chloride	1 U	1 U	1 U	1.5 J	400	78 J
*	ug/l	Tetrachloroethene	71	40	2.5	4.7	1200	490 J
	ug/l	Tetrahydrothiophene	2 U	2 U	2 U	2 U	50 U	20 UJ
	ug/l	Toluene	2 U	2 U	2 U	2 U	50 U	20 UJ
*	ug/l	Trans-1,2-Dichloroethene	1 U	1.2	1.1	1 U	37	23 J
*	ug/l	Trichloroethene	49	37	4	9.3	3200	1900 J
*	ug/l	Vinyl Chloride	3.6	2 U	49	21 J	130	40 J
	ug/l	**Total Volatiles**	192.6	184.2	72	54.8	8633	4381
		Other Organics						
*	ug/l	alpha-BHC	0.5 U	0.5 U	0.5 U	0.5 U	2.6	1.1
*	ug/l	beta-BHC	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
*	ug/l	delta-BHC	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
*	ug/l	gamma-BHC (Lindane)	0.5 U	0.5 U	0.5 U	0.5 U	1	0.75
*	ug/l	PCB 1016	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
*	ug/l	PCB 1221	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
*	ug/l	PCB 1232	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
*	ug/l	PCB 1242	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
*	ug/l	PCB 1248	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
*	ug/l	PCB 1254	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
*	ug/l	PCB 1260	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	ug/l	Bis(2-ethylhexyl)phthalate	10 U	10 U	10 U	10 U	10 U	10 U
		Naphthalene	20 U	20 U	20 U	20 U	20 U	20 U
		Total Loading Indicators(*)	192.6	184.2	68.8	52.4	8636.6	4382.85

DUPONT NIAGARA PLANT
INDICATOR PARAMETER ANALYSIS

Location		19CD1 dup.	20A-R	20A-R	20B	20B	20B
Date Sampled		8/5/92	4/30/92	8/5/92	4/30/92	4/30/92	8/5/92
Field Parameters							
pH - Field Measured		8.48	10.2	9.26	10.6	10.6	10.7
Spec. Cond. (umhos/cm)		380	500	420	9500	9500	7800
Specific Gravity-Field		1	1	1	1	1	1
Temperature C -Field		16	10.2	18.5	11	11	15.7
Other Parameters							
Barium, Soluble	mg/l	1 U	1 U	1 U	1 U	1 U	1 U
Chloride	mg/l	38	63.3 R	26.8	2640	2640	2300
Cyanide, Total	mg/l	0.01 U	0.01 U	0.011 U	0.0588	0.0588	0.0514 R
Phenol, Total	mg/l	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Total Organic Halogens	mg/l	2.7	0.044	0.042	1.4	1.4	1.4
Volatiles							
1,1,1-Trichloroethane	ug/l	25 U	1 U	1 U	10 U	10 U	10 U
* 1,1,2,2-Tetrachloroethane	ug/l	50	2 U	2 U	20 U	20 U	20 U
1,1,2-Trichloroethane	ug/l	25 U	1 U	1 U	10 U	10 U	10 U
1,1-Dichloroethane	ug/l	25 U	1 U	1 U	10 U	10 U	10 U
1,1-Dichloroethene	ug/l	25 U	1 U	1 U	10 U	10 U	10 U
1,2-Dichlorobenzene(o)	ug/l	50 U	2 U	2 U	20 U	20 U	20 U
1,4-Dichlorobenzene(p)	ug/l	50 U	2 U	2 U	20 U	20 U	20 U
1,4-Dichlorobutane	ug/l	50 U	2 U	2 U	20 U	20 U	20 U
2-Methyl Furan	ug/l	50 U	2 U	2 U	20 U	20 U	20 U
* Benzene	ug/l	50 U	2 U	2 U	20 U	20 U	20 U
Carbon Tetrachloride	ug/l	25 U	1 U	1 U	10 U	10 U	10 U
* Chlorobenzene	ug/l	50 U	2 U	2 U	20 U	20 U	20 U
Chloroethane	ug/l	NA	NA	NA	NA	NA	NA
* Chloroform	ug/l	1100	1 U	1 U	190	190	73
Chloromethane	ug/l	130 U	5 U	5 U	50 U	50 U	50 U
* Cis-1,2-Dichloroethene	ug/l	660	2	1 U	1200	1200	1400
Hexachlorobutadiene	ug/l	50 U	2 U	2 U	20 U	20 U	20 U
Hexachloroethane	ug/l	50 U	2 U	2 U	20 U	20 U	20 U
* Methylene Chloride	ug/l	78	1 U	1 U	67	67	32
* Tetrachloroethene	ug/l	530	1 U	2.3	130	130	82
Tetrahydrothiophene	ug/l	50 U	2 U	2 U	20 U	20 U	20 U
Toluene	ug/l	50 U	2 U	2 U	20 U	20 U	20 U
* Trans-1,2-Dichloroethene	ug/l	25 U	1 U	1 U	63	63	80
* Trichloroethene	ug/l	2100	9.8	13	960	960	550
* Vinyl Chloride	ug/l	50 U	2 U	2 U	140	140	140
Total Volatiles	ug/l	4518	11.8	15.3	2750	2750	2357
Other Organics							
* alpha-BHC	ug/l	1.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* beta-BHC	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* delta-BHC	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* gamma-BHC (Lindane)	ug/l	0.75	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* PCB 1016	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* PCB 1221	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* PCB 1232	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* PCB 1242	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* PCB 1248	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* PCB 1254	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* PCB 1260	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bis(2-ethylhexyl)phthalate	ug/l	10 U	10 U	15	10 U	10 U	10 U
Naphthalene		20 U	20 U	20 U	20 U	20 U	20 U
Total Loading Indicators(*)		4519.85	11.8	15.3	2750	2750	2357

DUPONT NIAGARA PLANT
INDICATOR PARAMETER ANALYSIS

Location		22B	22B	22C	22C	26CD	26CD
Date Sampled		5/20/92	8/13/92	5/20/92	9/1/92	4/30/92	9/1/92
Field Parameters							
pH - Field Measured		7.25	7.98	7.2	8.15	9.16	8.8
Spec. Cond. (umhos/cm)		540	500	800	200	555	320
Specific Gravity-Field		1	1	1	1	1	1
Temperature C -Field		11.6	17.3	11.4	17	11.1	17
Other Parameters							
Barium, Soluble	mg/l	1 U	1 U	1 U	2	1 U	1 U
Chloride	mg/l	70.3	52.8	102	51.2 R	74.4 R	23.5 R
Cyanide, Total	mg/l	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Phenol, Total	mg/l	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Total Organic Halogens	mg/l	0.12	0.064	0.17	0.078	4.1	4.4
Volatiles							
1,1,1-Trichloroethane	ug/l	1 U	1 U	2 U	1 U	36	17
* 1,1,2,2-Tetrachloroethane	ug/l	2 U	2 U	4 U	2 U	100	20 U
1,1,2-Trichloroethane	ug/l	1 U	1 U	2 U	1 U	25 U	10 U
1,1-Dichloroethane	ug/l	1 U	1 U	2 U	1 U	25 U	10 U
1,1-Dichloroethene	ug/l	1 U	1 U	2 U	1 U	25 U	10 U
1,2-Dichlorobenzene(o)	ug/l	2 U	2 U	4 U	2 U	50 U	20 U
1,4-Dichlorobenzene(p)	ug/l	2 U	2 U	4 U	2 U	50 U	20 U
1,4-Dichlorobutane	ug/l	2 U	2 U	4 U	2 U	50 U	20 U
2-Methyl Furan	ug/l	2 U	2 U	4 U	2 U	50 U	20 U
* Benzene	ug/l	2 U	2 U	4 U	2 U	50 U	20 U
Carbon Tetrachloride	ug/l	1 U	1 U	2 U	1 U	25 U	10 U
* Chlorobenzene	ug/l	2 U	3.8	4 U	2 U	50 U	20 U
Chloroethane	ug/l	NA	NA	NA	NA	NA	NA
* Chloroform	ug/l	15	23	50	14	600	210
Chloromethane	ug/l	5 U	5 U	10 U	5 U	130 U	50 U
* Cis-1,2-Dichloroethene	ug/l	1 U	1 U	110	5.1	88	54
Hexachlorobutadiene	ug/l	2 U	2 U	4 U	2 U	50 U	20 U
Hexachloroethane	ug/l	2 U	2 U	4 U	2 U	66	20 U
* Methylene Chloride	ug/l	1 U	1 U	6.1	4	25 U	10 U
* Tetrachloroethene	ug/l	2	3.8	16	19	3100	1200
Tetrahydrothiophene	ug/l	2 U	2 U	4 U	2 U	50 U	20 U
Toluene	ug/l	2 U	2 U	4 U	2 U	50 U	20 U
* Trans-1,2-Dichloroethene	ug/l	1 U	1 U	3	1 U	25 U	10 U
* Trichloroethene	ug/l	1.9	2.9	110	76	3700	1800
* Vinyl Chloride	ug/l	2 U	2 U	77	2 U	50 U	20 U
Total Volatiles	ug/l	18.9	33.5	372.1	118.1	7690	3281
Other Organics							
* alpha-BHC	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* beta-BHC	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* delta-BHC	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* gamma-BHC (Lindane)	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* PCB 1016	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
* PCB 1221	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
* PCB 1232	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
* PCB 1242	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
* PCB 1248	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
* PCB 1254	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
* PCB 1260	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bis(2-ethylhexyl)phthalate	ug/l	10 U	10 U	12	10 U	80	10 U
Naphthalene		20 U	20 U	20 U	20 U	20 U	20 U
Total Loading Indicators(*)		18.9	33.5	372.1	118.1	7588	3264

DATA VALIDATION QUALIFIERS

U	Indicates compound was analyzed for but not observed at a quantifiable concentration
J	Indicates an estimated value due to failure to meet QA/QC requirements
R	Indicates the associated value is unusable due to failure to meet QA/QC requirements
NA	Sample was not analyzed for this compound