

**DECEMBER 2001
GROUNDWATER MONITORING REPORT**

**FOR WASHINGTON WORKS FACILITY AND LOCAL,
LETART AND LETART DRY RUN LANDFILLS
Washington, West Virginia**

January 2002 Project No. D6WW7423

Prepared by



CORPORATE REMEDIATION GROUP
*An Alliance between
DuPont and URS Diamond*

Barley Mill Plaza, Building 27
Wilmington, Delaware 19805

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FOR WASHINGTON WORKS FACILITY AND LOCAL, LETART AND DRY RUN LANDFILLS
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TABLE OF CONTENTS

1.0	Introduction.....	1
2.0	C-8 Analytical Reporting.....	2
3.0	Washington Works Facility	3
4.0	Local Landfill.....	4
5.0	Letart Landfill	4
6.0	Dry Run Landfill	4
7.0	References.....	4

TABLES

Table 1.0	C-8 in Surface Water – Washington Works Facility
Table 2.0	Monitoring Well Construction and Groundwater Elevation Data – Local Landfill
Table 2.1A	C-8 in Surface Water – Local Landfill
Table 2.1B	C-8 in Groundwater – Local Landfill
Table 3.0	Monitoring Well Construction and Groundwater Elevation Data – Letart Landfill
Table 3.1A	C-8 in Surface Water – Letart Landfill
Table 3.1B	C-8 in Groundwater – Letart Landfill
Table 4.0	Monitoring Well Construction and Groundwater Elevation Data – Dry Run Landfill
Table 4.1A	C-8 in Surface Water – Dry Run Landfill
Table 4.1B	C-8 in Groundwater – Dry Run Landfill

FIGURES

Figure 1.0	Site Location Map – Washington Works Facility
Figure 1.1	Outfall Location Map – Washington Works Facility
Figure 1.2	C-8 Concentration Map December 2001 – Washington Works Facility Surface Water
Figure 2.0	Site Location Map – Local Landfill

Figure 2.1	Outfall and Monitoring Well Location Map – Local Landfill
Figure 2.2	Groundwater Elevation Map December 2001 – Local Landfill
Figure 2.3	C-8 Concentration Map December 2001 – Local Landfill Outfalls and Monitoring Wells
Figure 3.0	Site Location Map – Letart Landfill
Figure 3.1	Outfall and Monitoring Well Location Map – Letart Landfill
Figure 3.2	F-Zone Groundwater Elevation Map November 2001 – Letart Landfill
Figure 3.3A	C-8 Concentration Map December 2001 – Letart Landfill Outfalls and Monitoring Wells
Figure 3.3B	C-8 Concentration Map December 2001 – Letart Landfill Zone F
Figure 4.0	Site Location Map – Dry Run
Figure 4.1	Outfall and Monitoring Well Location Map – Dry Run Landfill
Figure 4.2	Groundwater Elevation Map December 2001 – Dry Run Landfill
Figure 4.3	C-8 Concentration Map December 2001 – Dry Run Surface Water
Figure 4.4	C-8 Concentration in Groundwater December 2001 – Dry Run Bedrock Monitoring Wells

APPENDICES

Appendix 1.0	Laboratory Analytical Data Reports – Washington Works Facility
Appendix 1.1	Chain-of-Custody Records – Washington Works Facility
Appendix 2.0	Laboratory Analytical Data Reports – Local Landfill
Appendix 2.1	Chain-of-Custody Records – Local Landfill
Appendix 3.0	Laboratory Analytical Data Reports – Letart Landfill
Appendix 3.1	Chain-of-Custody Records – Letart Landfill
Appendix 4.0	Laboratory Analytical Data Reports – Dry Run Landfill
Appendix 4.1	Chain-of-Custody Records – Dry Run Landfill

1.0 INTRODUCTION

A multi-media Consent Order was entered into between the West Virginia Department of Environmental Protection (WVDEP), the West Virginia Department of Health and Human Resources – Bureau for Public Health (WVDHHR-BPH) and DuPont on November 15, 2001 (Order No. GWR-2001-019). The Consent Order identified a series of requirements and tasks that need to be performed by the parties (WVDEP, WVDHHR-BPH, and DuPont) in order to determine whether there has been any impact on human health and the environment as a result of releases of ammonium perfluorooctanoate (C-8), CAS Number 3825-26-1, to the environment from DuPont operations at the Washington Works facility and the associated landfills (Local, Letart and Dry Run).

The Consent Order established the C-8 Groundwater Investigation Steering team (GIST) to oversee investigations and activities that will be conducted to assess the presence and extent of C-8 in drinking water, groundwater, and surface water at and around the Washington Works facility and the Local, Letart and Dry Run Landfills.

An additional component of the Consent Order relates to the National Pollutant Discharge Elimination System (NPDES) requirements. In this portion of the Consent Order, specific outfalls and outlets (outfalls) to be sampled monthly for C-8 by DuPont are identified.

Pursuant to Attachment A of the Consent Order, three tasks will be performed by DuPont and evaluated by the GIST, Tasks A, B, and C. Task A: Groundwater Use and Well Survey/Groundwater Monitoring is ongoing. Task B: Assessment of Existing Groundwater and Surface Water Monitoring Data includes the compilation of historical C-8 data, monitoring all wells at the landfills and the development of a Groundwater Monitoring Plan (GMP) for the Washington Works facility. The first part of the task, the historical C-8 data compilation report has been submitted to the GIST for evaluation (DuPont, January 2002a). The second part of this task, monitoring C-8 in groundwater at the landfills, began in December 2001 and will be performed monthly for four months and quarterly thereafter. The third part of the task, the proposed GMP for the Washington Works facility, has been submitted to the GIST for evaluation (DuPont, January 2002b) and groundwater sampling on the Washington Works facility will begin in late January 2002. Groundwater sampling at the Washington Works facility will also be conducted monthly for four months and quarterly thereafter. Task C: Plume Identification/Groundwater Assessment will be performed on a schedule to be approved by the GIST.

This report presents the results of the C-8 sampling that was performed in December 2001. Outfall sampling results are presented for the Washington Works facility. Groundwater and surface water results are presented for the landfills. Additionally, C-8 results are presented for several surface water samples not required by the Consent Order or the NPDES permits.

2.0 C-8 ANALYTICAL REPORTING

The analytical method, method detection limit, and laboratory utilized for C-8 analysis has changed over time. Prior to 1991, DuPont performed C-8 analysis at the DuPont Experimental Station in Wilmington, Delaware. In 1991, when the RCRA Verification Investigation was conducted, the analysis was contracted to the CH₂MHill Laboratory in Montgomery, Alabama. Both labs used a Gas Chromatography/Electron Capture Detector (GC-ECD) based analytical method with detection limits for C-8 that ranged from 0.1 to 1.0 ug/l.

CH₂MHill conducted C-8 analysis for DuPont into the fall of 1998 when the laboratory ceased operation. At that time, DuPont had completed one round of analysis for the RCRA Facility Investigation (RFI). The analytical work was transferred to Lancaster Laboratories, Lancaster, PA, for the RFI second round analysis in February 1999. Lancaster Laboratories continued to conduct C-8 analysis using GC-ECD for DuPont until October 2001, when development and testing was initiated on a new analytical method developed by Exygen Research, Inc. (located in State College, PA) that utilizes Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). DuPont adopted the use of LC/MS/MS for C-8 analysis in November 2001.

Exygen Research Inc. reports C-8 results for the laboratory replicate of each field sample. These results are evaluated for precision by comparing the field sample result to the corresponding laboratory replicate result.

- ☐ If both results are less than the practical quantitation limit (PQL), the replicate sample for that analyte is considered to have passed the precision criteria.
- ☐ If one or both results are between one and five times the PQL, the replicate is considered to have met the precision criteria if the two results differ by less than the PQL.
- ☐ If one result is less than the PQL and the other is not, and if the two results differed by a value less than the PQL, the replicate is said to have met the acceptance criteria.
- ☐ Finally, if both results are at least five times the PQL, the replicate is considered to have met the criteria if the relative percent difference (RPD) between the two results is less than or equal to 20%. The RPD is the absolute value of the difference of two measurements divided by their average.

When the precision criteria outlined above are met, DuPont reports the average of the field sample and lab replicate results reported by the laboratory. If criteria for precision are exceeded, DuPont reports the higher of the sample and lab replicate results. Finally, when one result (from the sample/lab replicate pair) is above the PQL and one below, the result that is above the PQLs is reported. C-8 results are recorded in the Corporate Environmental Database (CED) and are reported as FC-143 for consistency with historical results.

3.0 WASHINGTON WORKS FACILITY

Figure 1.0 shows the location of the Washington Works facility. On December 20, 2001, six outfalls were sampled for C-8 (001, 002, 003, 005, 007, and 105). All of these outfalls collect process water and stormwater runoff. Sampling of these outfalls is required by the Consent Order and the WV NPDES permit No. WV0001279. The locations of these outfalls are shown in Figure 1.1. Figure 1.2 presents the C-8 concentration map. Table 1.0 provides the C-8 analytical results for the outfalls. For each outfall listed in this table, historical data is summarized with the most recent results listed first. Laboratory analytical data reports are included in Appendix 1.0 and the Chain-of-Custody records are in Appendix 1.1.

4.0 LOCAL LANDFILL

Figure 2.0 shows the location of the Local Landfill. On December 13, 2001, three outfalls (004, 005, and 101) and four wells (LLMW-4, -6, -9, and -10) were sampled for C-8. Sampling of these outfalls is required by the Consent Order and the WV NPDES permit No. WV0076538. The locations of the outfalls and monitoring wells are shown on Figure 2.1. Outfalls 004, 005, and 101 collect stormwater runoff and process water. Outfalls 004 and 005 were dry during sampling; therefore, no samples were collected. Table 2.0 summarizes the well screen data and December 2001 groundwater elevations measured for the monitoring wells. Figure 2.2 presents the groundwater elevation map for December 2001. Tables 2.1A and 2.1B present the C-8 analytical results for the outfalls and the monitoring wells, respectively. These tables include the historic data available for each location sampled. The historical data is presented with the most recent data first. Figure 2.3 is the C-8 concentration map for December 2001. Laboratory analytical data reports and Chain-of-Custody records are provided in Appendices 2.0 and 2.1, respectively.

5.0 LETART LANDFILL

Figure 3.0 presents the Letart Landfill location map. In December 2001, 13 wells and three outfalls were sampled for C-8. Sampling of outfalls 002 (leachate) and 003 (stormwater runoff) are required by the Consent Order and the WV NPDES permit No. WV0076066. The Rt. 33 stream surface water sample is not a required sampling point. The locations of monitoring wells and two of the surface water samples are shown on Figure 3.1. The location of the Rt. 33 stream sample is near the property boundary to the west and is not shown in this Figure.

Thirteen monitoring wells at Letart Landfill were sampled on December 10-11, 2001. Groundwater elevation and well screen data for the 13 monitoring wells are presented in Table 3.1. Changes to routine sampling protocols were recorded in the field notes and are summarized below.

Depth to groundwater was not measured in five wells (LMW-2A, -6, -9, -10, and -11) because of equipment limitations. Because these wells included four of the five wells screened in Zone F, it was not possible to construct a groundwater elevation contour map for the Zone F. However, the most recent groundwater elevation contour map for the Letart Landfill Zone F aquifer (November 2001) is presented in Figure 3.2.

Monitoring wells LMW-3 and -10 went dry during low-flow purging. Monitoring well LMW-3 was sampled with a bailer after allowing 48 hours for recharge. No field parameters were monitored due to the very slow recharge rate. Only one 500 ml bottle was collected. Monitoring well LMW-10 was purged and sampled three days later. No field parameters were collected due to the very slow recharge rate. Monitoring well LMW-4 went dry after the third round of field parameters was collected. This well was also sampled with a bailer after allowing 48 hours for recharge. Only one 500 ml sample was collected. Due to the very slow recharge rate at monitoring well LMW-9, the sample bottles were filled without monitoring the field parameters.

The C-8 results for the surface water samples and monitoring wells are presented in Tables 3.1A and 3.1B, respectively. Figure 3.3 presents a C-8 concentration map for monitoring wells and outfalls for December 2001. Figure 3.3B provides a C-8 concentration contour map for the F-zone, the underlying significant aquifer. Appendices 3.0 and 3.1 present the laboratory analytical data reports and the Chain-of-Custody records, respectively.

6.0 DRY RUN LANDFILL

Figure 4.0 shows the location of the Dry Run Landfill. In December 2001, three outfalls (001, 003, and 004) and eight wells were monitored for C-8. (Outfall 002 is a required outfall sampling location as stated in the WV NPDES permit No. WV0076244. However, it was a temporary relocation of outfall 001 and no longer exists). Outfall 001 collects stormwater and leachate. Outfalls 003 and 004 collect stormwater only. Outfalls 001, 003, and 004 were dry during field sampling, therefore, no samples were collected. Five additional surface water locations (not required to be sampled by the Consent order or the NPDES permit) were also sampled for C-8. These include Stream Samples #1 and #2, DR Leachate, Pond Underdrain and Property Boundary. The location of the surface water and monitoring wells are shown on Figure 4.1. The Property Boundary sample location is on the western property boundary and is not shown in this Figure.

Table 4.0 summarizes the well screen data and groundwater elevations for the monitoring wells. Figure 4.2 presents the groundwater elevation map for December 2001. Tables 4.1A and 4.1B present the C-8 analytical results for the surface water samples and the monitoring wells, respectively. The data in these tables include historic data available for each location sampled. Figure 4.3 presents the C-8 concentration map for surface water in December 2001 and Figure 4.4 presents the C-8 concentrations in bedrock groundwater (December 2001). Laboratory analytical data reports and Chain-of-Custody records are provided in Appendices 4.0 and 4.1, respectively.

7.0 REFERENCES

DuPont. 2002a. *Compilation of Historical C-8 Data, DuPont Washington Works Main Plant and Landfills* January 2002. Corporate Remediation Group

DuPont. 2002b. *Proposed Groundwater Monitoring Plan for Washington Works Facility Plant and Landfills* January 2002. Corporate Remediation Group.

Tables

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TABLES

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Table 1.0
Summary of Analytical Results:
C-8 in Surface Water
DuPont Washington Works Facility
Washington, WV

Sample	Date	C-8 (ug/l)
OUTLET 001	12/20/01	3.720
OUTFALL 002	12/20/01	1.980
	10/25/01	2.8
	9/19/01	0.118
	7/11/01	0.558
	6/14/01	0.594
	5/31/01	0.436
	4/11/01	1.5
	3/21/01	8.54
	2/14/01	1.74
OUTLET 003	12/20/01	0.713
OUTFALL 005	12/20/01	31.40
	12/20/01 (dup)	35.20
	10/25/01	65.7
	9/19/01	2.86
	8/30/01	2.16
	7/11/01	120
	6/14/01	7.4
	5/31/01	1.43
	4/11/01	4.31
	3/21/01	199
	2/14/01	153
OUTLET 007	12/20/01	1.99
OUTLET 105	12/20/01	9.78

Note: Analytical method changed as of November 2001 (see Section 2.0 for details).

Table 2.0
Monitoring Well Construction Data
Local Landfill
Washington, WV

Monitoring Wells	Surface Elevation (feet)	Total Depth (feet)	Well Diameter (Inches)	Slot Size (inches)	Screen Length (feet)	Elevation of Screen Interval (feet)	Groundwater Elevation (feet)
LLMW-4	844.7	155	4	0.020	20	717.2-697.2	692.55
LLMW-6	793.2	90	4	0.020	20	723.2-703.2	719.69
LLMW-9	788.54	80	4	0.020	20	728.54-708.54	727.78
LLMW-10	805.94	87	4	0.020	20	738.94-718.94	720.67

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Table 2.1A
Summary of Analytical Results:
C-8 in Surface Water
Local Landfill
Washington, WV

Sample	Date	C-8 (ug/l)
OUTFALL 004	12/13/01	No-flow conditions
	9/27/2000	4.73
	12/10/1999	7.1
	6/3/1999	3.06
	6/2/1998	12
	5/29/1997	13
	4/2/1996	13
	2/16/1994	11
OUTFALL 005	12/13/01	No-flow conditions
	9/27/2000	13.3
	12/10/1999	34
	6/3/1999	6.8
	6/2/1998	39
	5/29/1997	41
	4/2/1996	39
	2/16/1994	35
OUTLET 101	12/13/01	82.40
	9/14/2000	12
	6/3/1999	15
	6/2/1998	54

Note: Analytical method changed as of November 2001 (see Section 2.0 for details).

Table 2.1B
Summary of Analytical Results:
C-8 in Groundwater
Local Landfill
Washington, WV

Sample	Date	C-8 (ug/l)
LLMW-4	12/13/01	54.60
	5/16/2001	1.4
	5/11/2000	10
	5/19/1999	16.2
	5/27/1998	26
	4/11/1996	39
LLMW-6	12/13/01	11.90
	5/16/2001	3
	5/10/2000	1.42
	5/19/1999	1.32
	5/27/1998	9
	4/11/1996	15
LLMW-9	12/13/01	ND
	5/16/2001	0.039 J
	5/10/2000	<0.029
	5/20/1999	0.046 J
	5/27/1998	<0.1
	4/11/1996	0.14
LLMW-10	12/13/01	0.133
	5/20/1999	0.15
	5/28/1998	0.22

J=estimated value (below laboratory quantitation limit)

ND=Compound not detected

Note: Analytical method changed as of November 2001 (see Section 2.0 for details).

Table 3.0
Monitoring Well Construction Data
Letart Landfill
Letart, WV

Zone	Monitoring Wells	Surface Elevation (feet)	Total Depth (feet)	Well Diameter (inches)	Slot Size (inches)	Screen Length (feet)	Elevation of Screen Interval (feet)	Groundwater Elevation (feet)
A	LMW- 1	766.53	33	2		5	738.53-733.53	752.76
	LMW- 7	770.24	35	4		10	745.24-735.24	749.73
	LMW- 8	777.06	38.5	4		9	748.06-739.06	745.04
	LMW- 3	673.1	30	2		5	650.1-645.1	646.95
C	LMW- 3A	672.61	60.1	4	0.010	5	619.61-614.61	618.04
	LMW- 4	649.17	28	2		5	626.17-621.17	628.22
	LMW- 5A	645.23	28	4	0.010	10	627.23-621.23	619.97
	LMW- 2A	778.53	180.8	4	0.010	30	628.53-598.53	NA
F	LMW- 5B	644.39	72	4	0.010	20	594.39-574.39	597.07
	LMW- 6	754.22	183	4	0.010	30	606.22-576.22	NA
	LMW- 9	774.85	225	4	0.010	20	572.85-552.85	NA
	LMW- 10	732.37	189.85	4	0.010	20	562.52-542.52	NA
	LMW- 11	774.34	161.5	4	0.010	25	637.84-612.84	NA

Note: Groundwater elevations were not determined in some wells (NA) because of equipment limitations.

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Table 3.1A
Summary of Analytical Results:
C-8 in Surface Water
Letart Landfill
Letart, WV

Sample	Date	C-8 (ug/l)
002(LEACHATE BASIN)	12/14/01	36.1
	11/27/2001	53.2
	7/20/01	159
	7/25/2000	1350
	4/3/2000	1900
	1/14/2000	920
	10/21/1999	3240
003	12/14/01	0.390
RT 33 STREAM	7/20/2001	2.01
	7/31/2000	0.573
	7/20/1999	2.23
	7/23/1997	2
	4/17/1996	1.8

Note: Analytical method changed as of November 2001 (see Section 2.0 for details).

Table 3.1B
Summary of Analytical Results:
C-8 in Groundwater
Letart Landfill
Letart, WV

F-Zone Wells		
Sample	Date	C-8 (ug/l)
LMW-2A	12/11/01	830
	7/19/2001	242
	1/30/2001	423
	10/5/2000	248
	7/25/2000	275
	4/3/2000	308
	1/14/2000	453
	10/21/1999	370
	7/20/1999	350
	5/28/1998	980
	7/23/1997	460
	4/17/1996	460
	9/20/1994	270
	3/15/1994	260
	11/22/1991	63
	3/22/1991	50
LMW-5B	12/11/01	1880
	7/20/2001	483
	7/20/01 (dup)	592
	1/31/2001	615
	10/5/2000	1190 J
	10/5/00 (dup)	780
	7/25/2000	900 J
	4/3/2000	1100
	4/3/00 (dup)	1020
	1/14/2000	1030
	10/21/1999	1750
	10/21/99 (dup)	1700
	7/20/1999	445
	7/23/1997	480
	9/20/1994	530
	3/15/1994	1200
	11/22/1991	380
	3/22/1991	340
LMW-6	12/11/01	15.8
	1/13/2000	9.4
	5/28/1998	30
	11/22/1991	24
	3/22/1991	25
LMW-9	12/10/01	0.845
	10/7/1992	0.2
LMW-10	12/13/01	0.134
LMW-11	12/11/01	0.128

J = estimated value (below laboratory quantitation limit).

Note: Analytical method changed as of November 2001 (see Section 2.0 for details).

D/E-Zone Wells		
Sample	Date	C-8 (ug/l)
LMW-3A	12/11/01	100
	7/19/1999	60.3
	11/22/1991	350
	3/22/1991	380

Table 3.1B
Summary of Analytical Results (Con't):
C-8 in Groundwater
Letart Landfill
Letart, WV

D/E-Zone Wells		
Sample	Date	C-8 (ug/l)
LMW-4	12/13/01	1580
	4/3/2000	272
	1/14/2000	172
	11/22/1991	830
	3/28/1991	690
LMW-5A	12/11/01	94.4
	11/22/1991	0.8
	3/22/1991	1.6

Note: Analytical method changed as of November 2001 (see Section 2.0 for details).

C-Zone Wells		
Sample	Date	C-8 (ug/l)
LMW-3	12/13/01	1520
	11/22/1991	1000
	3/22/1991	390

Note: Analytical method changed as of November 2001 (see Section 2.0 for details).

A-Zone Wells		
Sample	Date	C-8 (ug/l)
LMW-1	12/10/01	24600
	7/19/2001	6100
	1/31/2001	9190
	10/4/2000	10800
	7/24/2000	8990
	4/3/2000	13600
	1/13/2000	17400
	10/21/1999	12600
	7/20/1999	6920
	5/28/1998	24000
	7/23/1997	5100
	4/17/1996	1700
	11/22/1991	68
	3/22/1991	60
LMW-7	12/10/01	334
	7/20/2001	242
	1/31/2001	249
	10/4/2000	231
	7/25/2000	158
	4/3/2000	211
	1/13/2000	219
	10/20/1999	339
	7/20/1999	78.3
	5/28/1998	260
	7/23/1997	53
	4/17/1996	15
LMW-8	11/22/1991	0.1
	12/10/01	3240
	7/19/2001	1120
	1/30/2001	2650
	10/4/2000	2300
	7/24/2000	2160
	4/3/2000	2180
	1/13/2000	2100
	10/20/1999	3260
	7/20/1999	1790
	5/28/1998	2700
	7/23/1997	2000
	4/17/1996	2200
	11/22/1991	280

Note: Analytical method changed as of November 2001 (see Section 2.0 for details).

Table 4.0
Monitoring Well Construction Data
Dry Run Landfill
Lubeck, WV

Monitoring Wells	Surface Elevation (feet)	Total Depth (feet)	Well Diameter (inches)	Slot Size (inches)	Screen Length (feet)	Elevation of Screen Interval (feet)	Groundwater Elevation (feet)
DRMW-14	936.14	260	10	NA	NA	NA	754.09
DRMW-13	720.6	35	4	0.010	15	700.6-685.6	712.08
DRMW-13A	720.3	11	4	0.010	5	714.3-709.3	714.68
DRMW-12	730.5	35	4	0.010	15	710.5-695.5	724.68
DRMW-12A	730.3	17	4	0.010	5	718.3-713.3	727.63
DRMW-12B	730.5	15	4	0.010	10	726.5-716.5	728.00
DRMW-8A	744.93	12.2	2				738.28
DRMW-15	730.87	45	2	0.010	20	705.87-685.87	716.10

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Table 4.1A
Summary of Analytical Results:
C-8 in Surface Water
Dry Run Landfill
Lubeck, WV

Sample	Date	C-8 (ug/l)
OUTLET 001	12/12/01	No-flow conditions
	10/3/2000	31.5
	12/29/1999	66
	5/19/1998	17
	4/9/1995	86
OUTLET 003	12/12/01	No-flow conditions
OUTLET 004	12/12/01	No-flow conditions
PROPERTY BOUNDARY	12/12/01	3.99
	10/3/2000	10.3
	4/9/1998	9.9
	7/14/1998	0.88
	12/29/1999	39
STREAM SAMPLING POINT#1	12/12/01	1.19
	10/3/2000	0.758
	12/29/1999	0.54
	5/19/1998	1
STREAM SAMPLING POINT#2	12/12/01	20.5
	10/3/2000	27.6
	12/29/1999	87
	5/19/1998	4.6
DRLEACHATE	12/12/01	109
	10/3/2000	27.4
	12/29/1999	34
	5/19/1998	56
	7/22/1997	62
POND UNDERDRAIN	12/12/01	35.4

Note: Analytical method changed as of November 2001 (see Section 2.0 for details).

Table 4.1B
Summary of Analytical Results:
C-8 in Groundwater
Dry Run Landfill
Lubeck, WV

Sample	Date	C-8 (ug/l)
DRMW-12	12/12/01	0.086
	7/19/2000	0.16
	7/21/1999	0.134
	5/26/1998	<0.10
	7/22/1997	<0.1
	4/10/1996	<0.1
DRMW-12A	12/12/01	0.158
	7/19/2000	0.128
	7/21/1999	0.081 J
	5/26/1998	<0.10
	7/22/1997	<0.1
	4/10/1996	<0.1
DRMW-12B	12/12/01	0.215
	7/20/2000	ND (0.029)
	7/21/1999	5.4
	6/16/1998	<0.1
DRMW-13	12/12/01	9.86
	7/20/2000	9.8
	7/21/1999	3.8
	5/26/1998	9.2
	7/22/1997	7
DRMW-13A	12/12/01	6.4
	7/20/2000	9.9
	7/21/1999	0.070 J
	5/26/1998	8.7
	7/22/1997	15
	4/10/1996	8.2
	4/10/1996 (dup)	11
DRMW-14	12/12/01	NQ
	7/20/2000	0.115
	7/21/1999	2.5
	6/16/1998	<0.1
	7/21/1997	<0.1
	4/10/1996	<0.1
DRMW-15	12/12/01	4.94
	7/20/2000	0.763
	7/21/1999	0.263
DRMW-6A	12/12/01	1.04
	7/20/2000	0.212
	7/21/1999	0.096
	5/26/1998	0.27
	7/22/1997	0.36
	4/10/1996	0.19

ND = Compound not detected.

NQ = Compound detected at a level between the limit of detection and the limit of Quantitation. Result is not quantifiable.

J = estimated value (below laboratory quantitation limit).

Note: Analytical method changed as of November 2001 (see Section 2.0 for details).

Figures

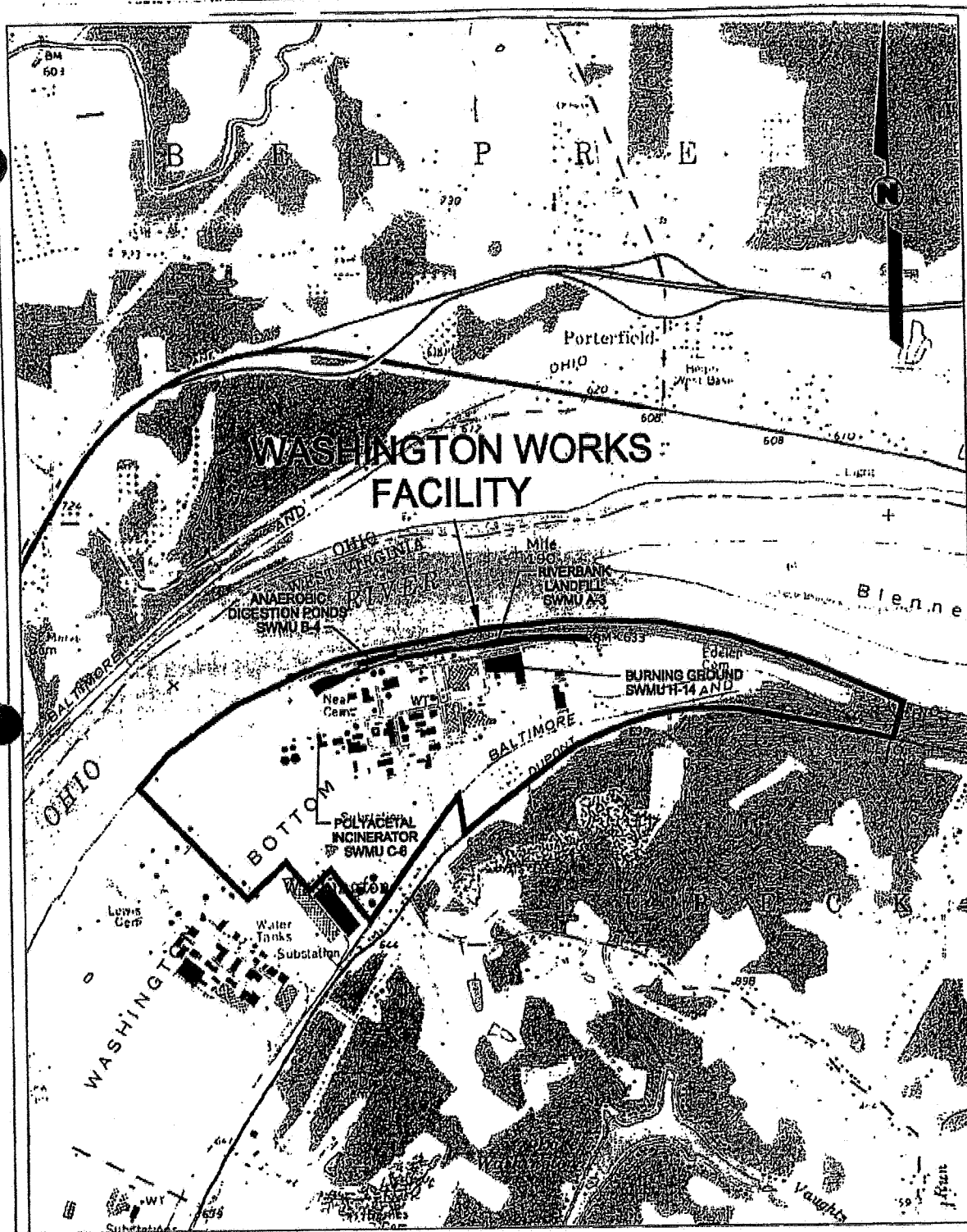
ASH015649

EID193207

FIGURES

ASH015650

EID193208



Source: MAP TAKEN FROM THE LUBBECK, WV
USGS QUADRANGLE



Corporate Remediation Group

An Alliance between
DuPont and URS Diamond

Barley Mill Plaza, Building 27
Wilmington, Delaware 19805



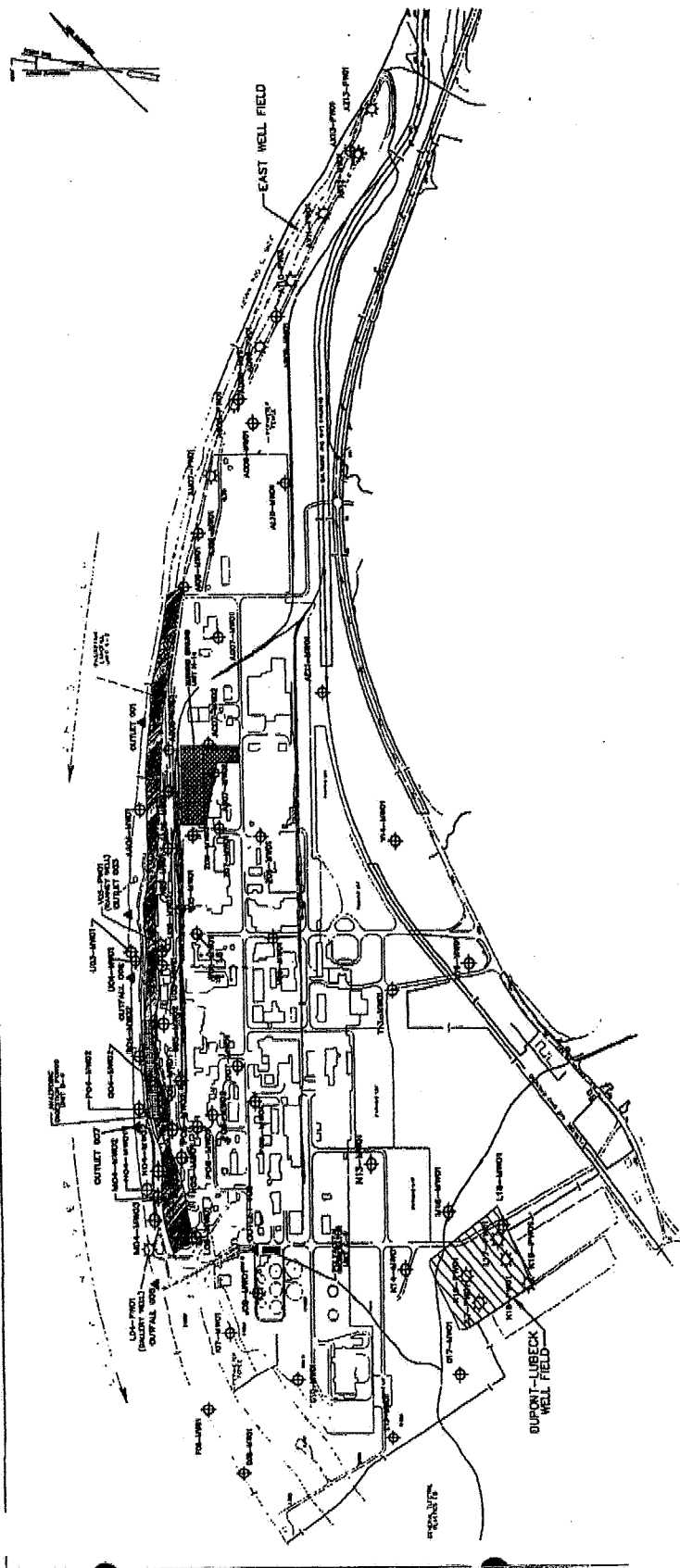
SITE LOCATION MAP

DuPont Washington Works Facility
Washington, West Virginia

SCALE	DESIGNED	DRAWN	DD FILE NO.
Not to scale	DEL	DEL	74224201
DATE	CHECKED	APPROVED	FIGURE
9/27/01	M. HOUDEY		1.0

ASH015651

EID193209



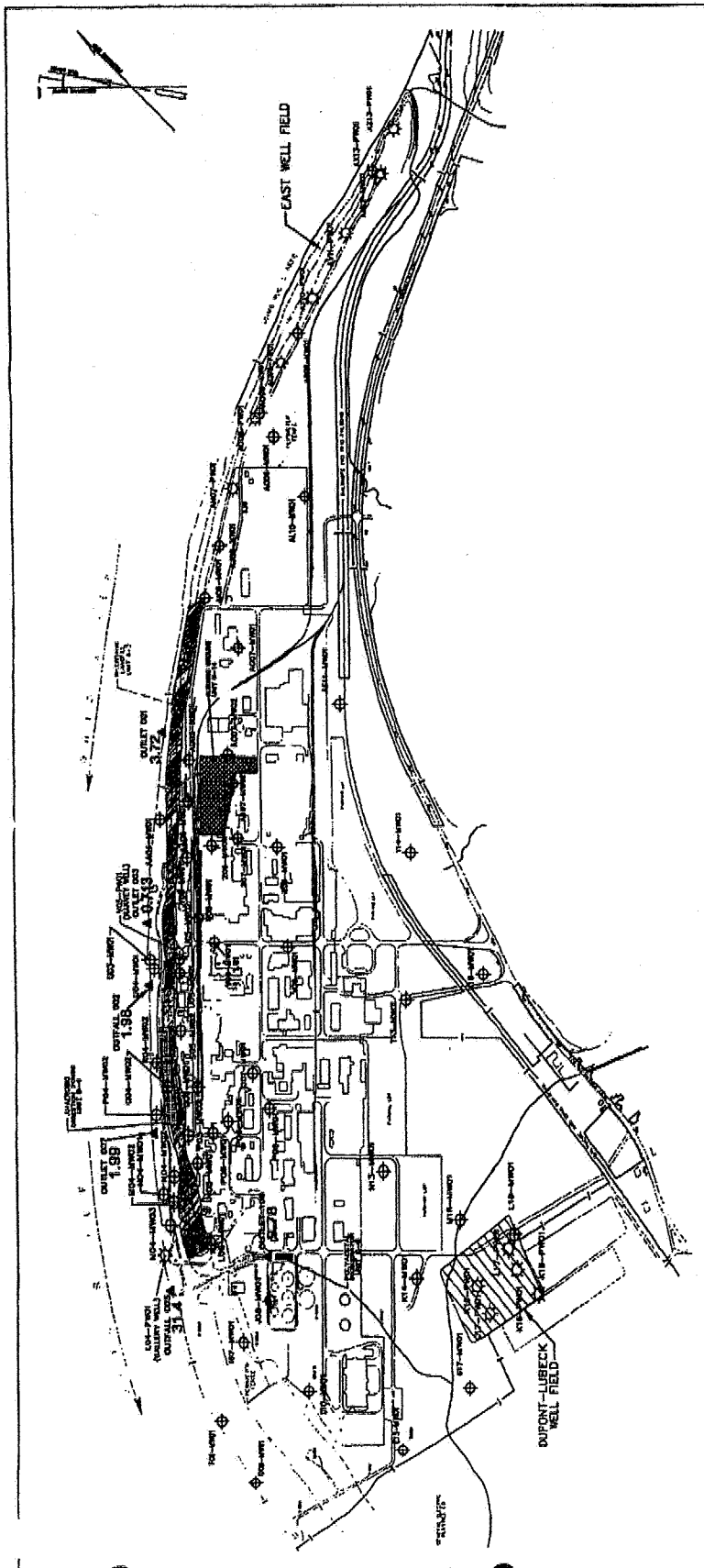
SCALE
700 0 700

LEGEND
 ⊕ MONITORING WELL
 ☆ PRODUCTION WELL
 ▲ OUTFALL SAMPLING POINT

MONITORING WELL AND SURFACE WATER SAMPLE LOCATION MAP	
DuPont Washington Works Facility Washington, West Virginia	
Corporate Remediation Group An Alliance between DuPont and PRT Planners Energy Lab Plaza, Building 27 Washington, D.C. 20005	
DATE	1/1/85
BY	J. L. HARRIS
FOR	U.S. E.P.A.
PROJECT	1.1

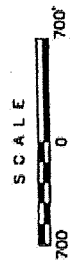
ASH015652

EID193210



LEGEND

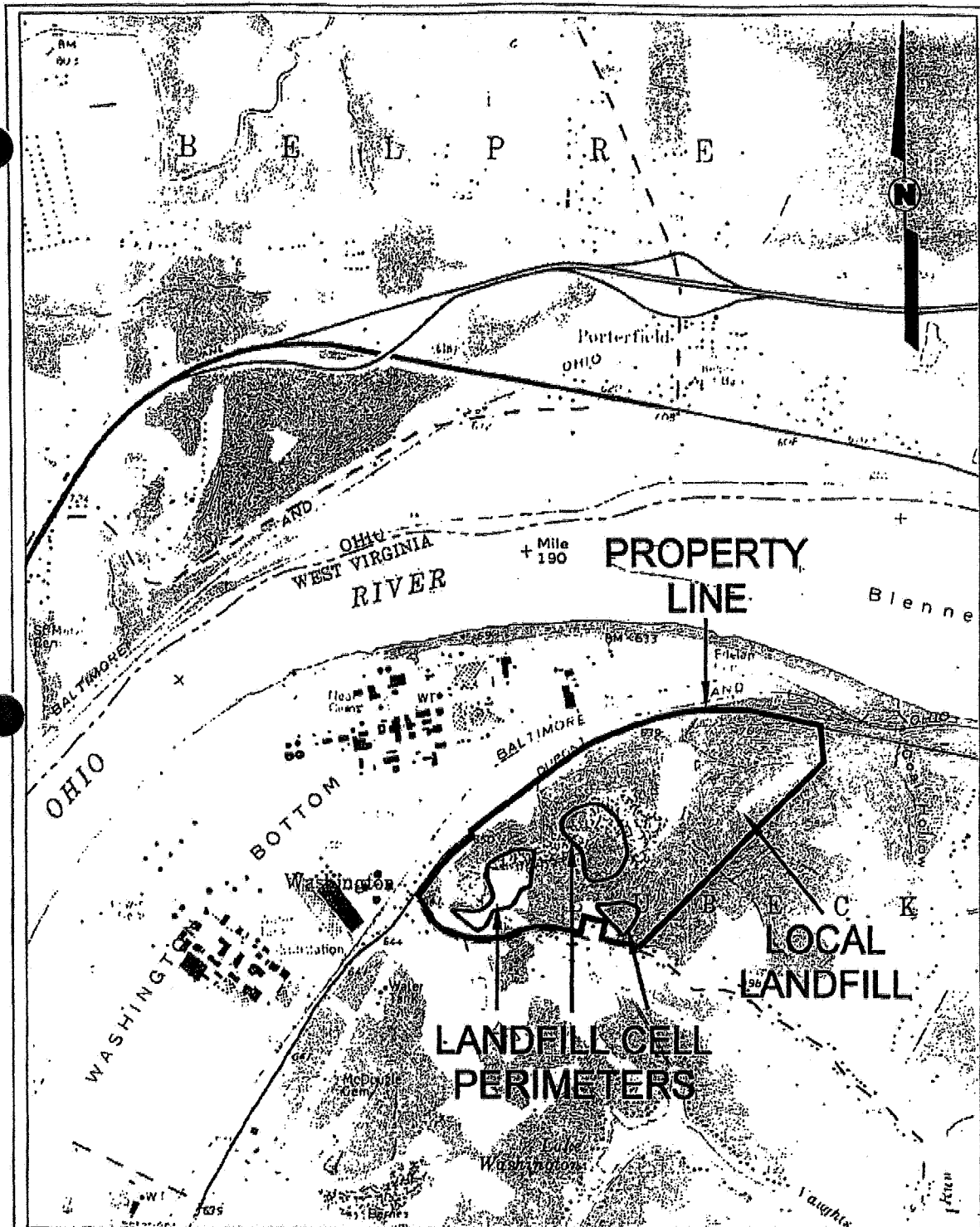
- MONITORING WELL
- PRODUCTION WELL
- OUTFALL SAMPLING POINT
- CONCENTRATION C-B (ug/L)
DECEMBER 2001



C-B IN SURFACE WATER DECEMBER 2001	
DuPont Washington Works Facility Washington, West Virginia	
Corporate Remediation Group An Atlantic Richfield DuPont and UIC Subsidiary Berkley Hill Plaza, Building 27 Wilmington, Delaware 19805	
DATE	12/01/01
BY	12/01/01
REV	12/01/01
APP	12/01/01
CHK	12/01/01
DATE	12/01/01
BY	12/01/01
REV	12/01/01
APP	12/01/01
CHK	12/01/01

ASH015653

EID193211



Source: USGS Little Hocking, Ohio - West Virginia
Quadrangle



Corporate Remediation Group

An Alliance between
DuPont and URS Diamond

Barley Mill Plaza, Building 27
Wilmington, Delaware 19805



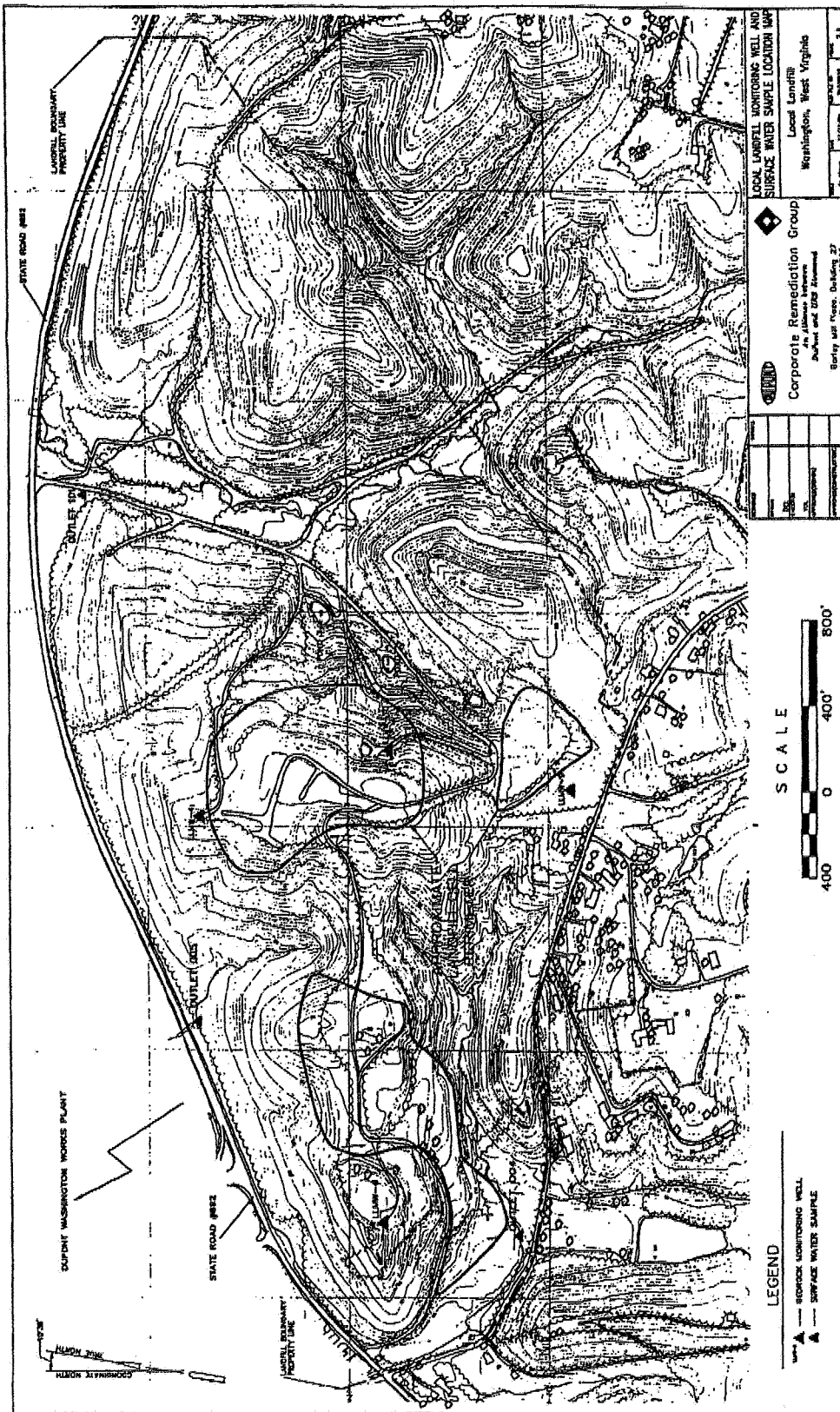
SITE LOCATION MAP

Local Landfill
Washington, West Virginia

SCALE Not to scale	DESIGNED DEL	DRAWN DEL	CAD FILE NO. 7421A001
DATE 9/27/01	ENGINEER M. HOUGHTON	APPROVED	FIGURE 2.0

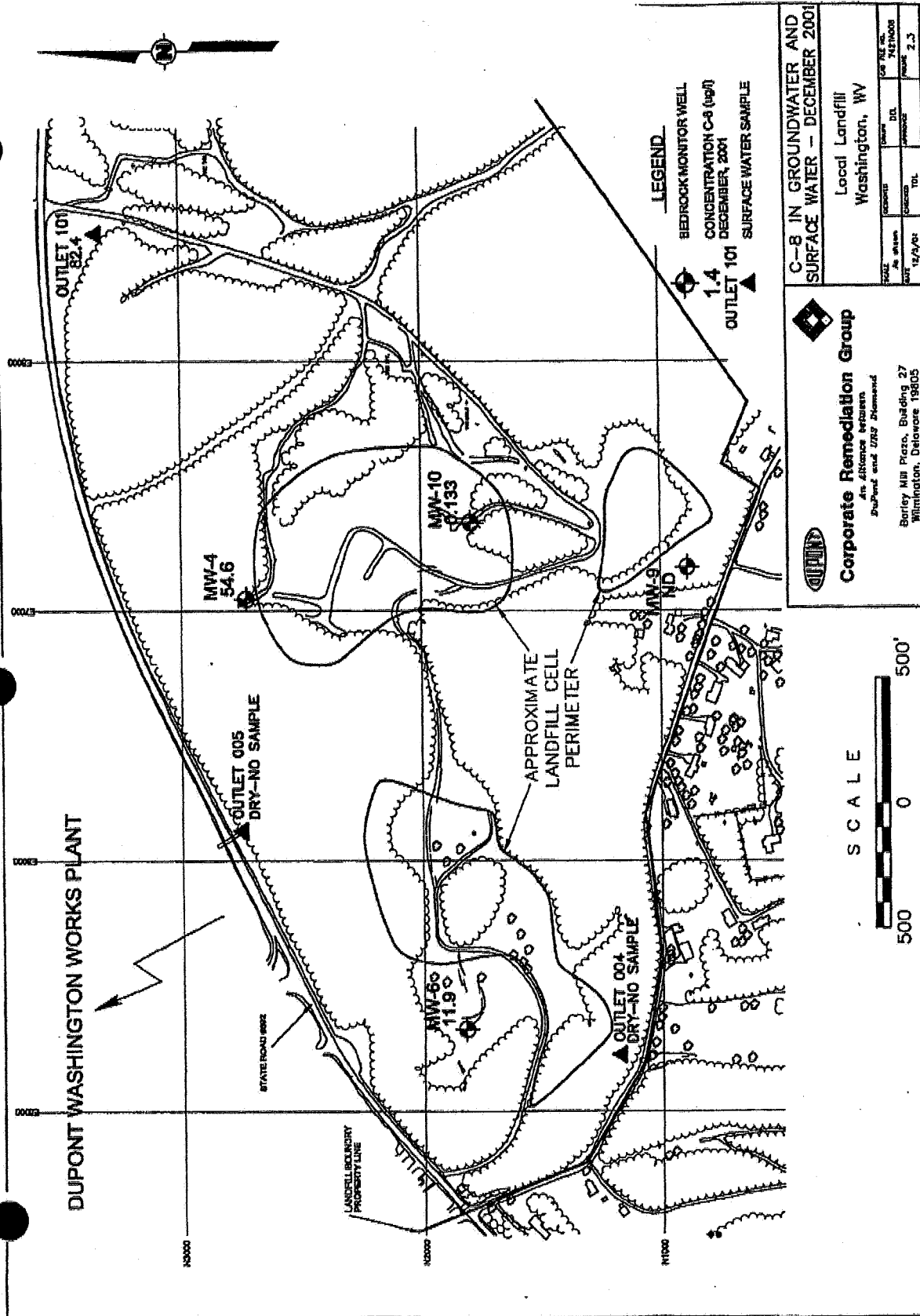
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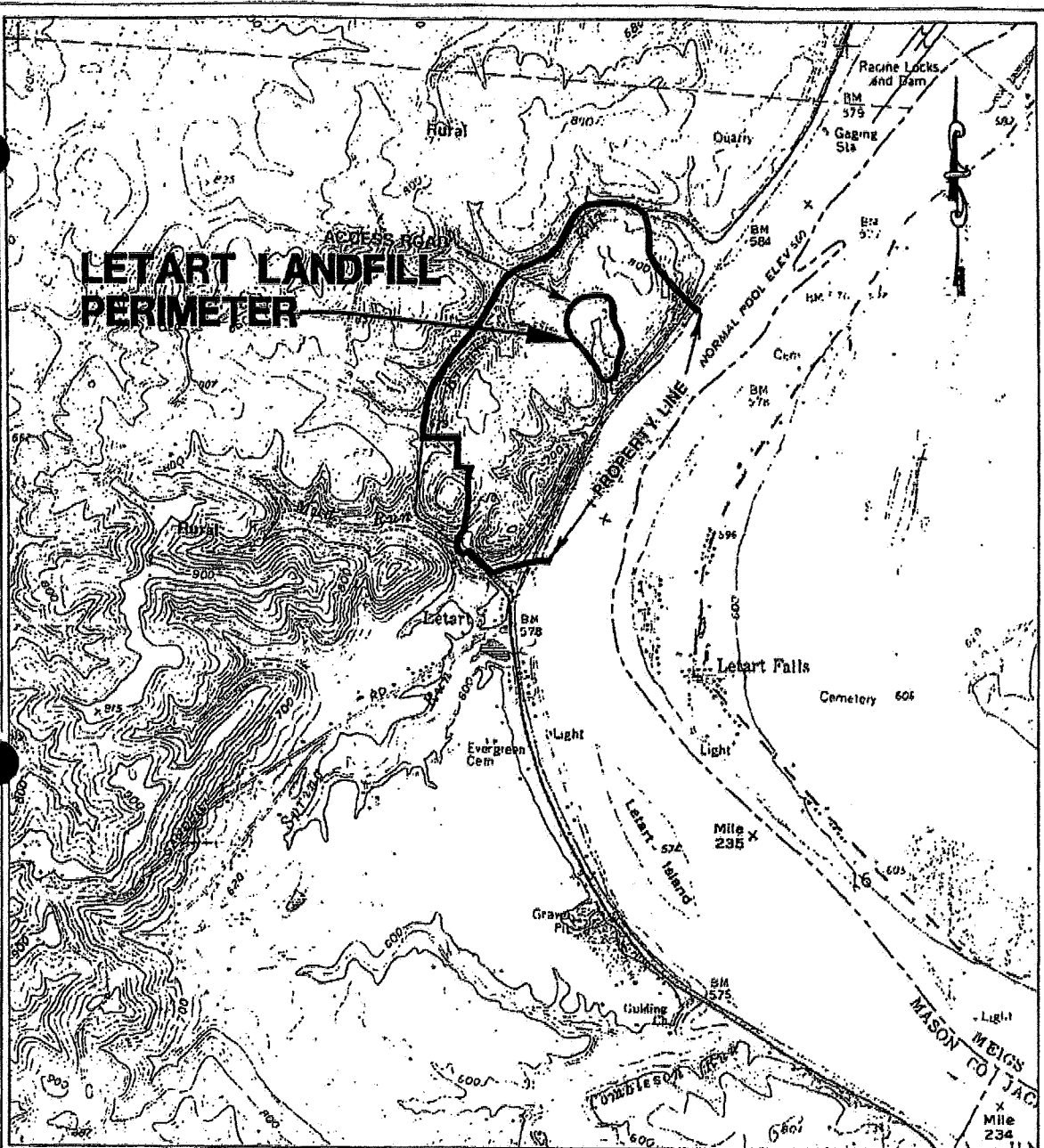
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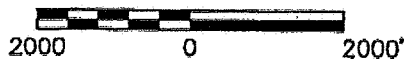


ASH015657

EID193215



SCALE



SOURCE: NEW HAVEN, VV-DHD QUADRANGLE 7.5' SERIES



Corporate Remediation Group

*An Alliance between
DuPont and The W-C Diamond Group*

Borley Mill Plaza, Building 27
Wilmington, Delaware 19880-D027



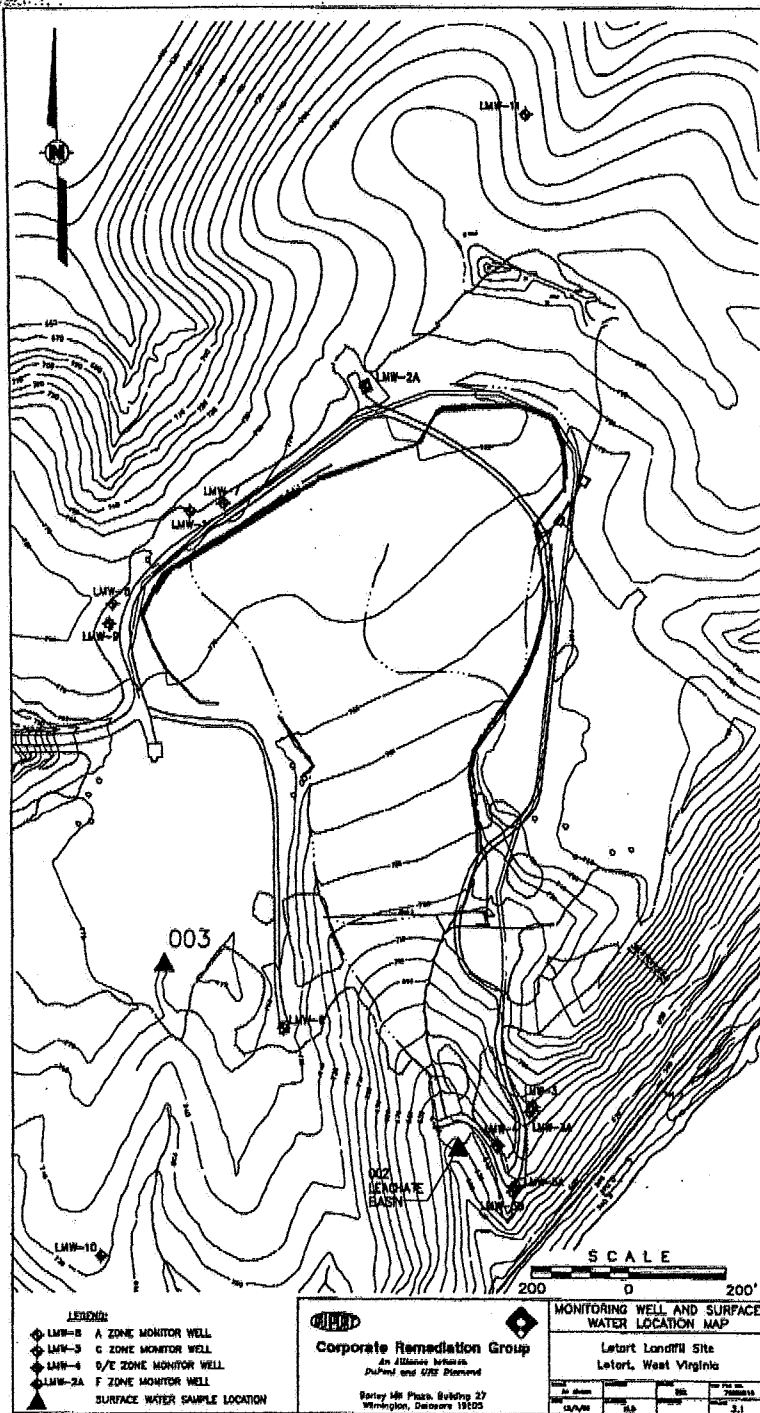
SITE LOCATION MAP

Letart Landfill Site
Letart, WV

SCALE As shown	DESIGNED TDL	DRAWN DEL	CAD FILE NO 72394003
DATE 12/21/8	DESIGNED	APPROVED	SCALE 3.0

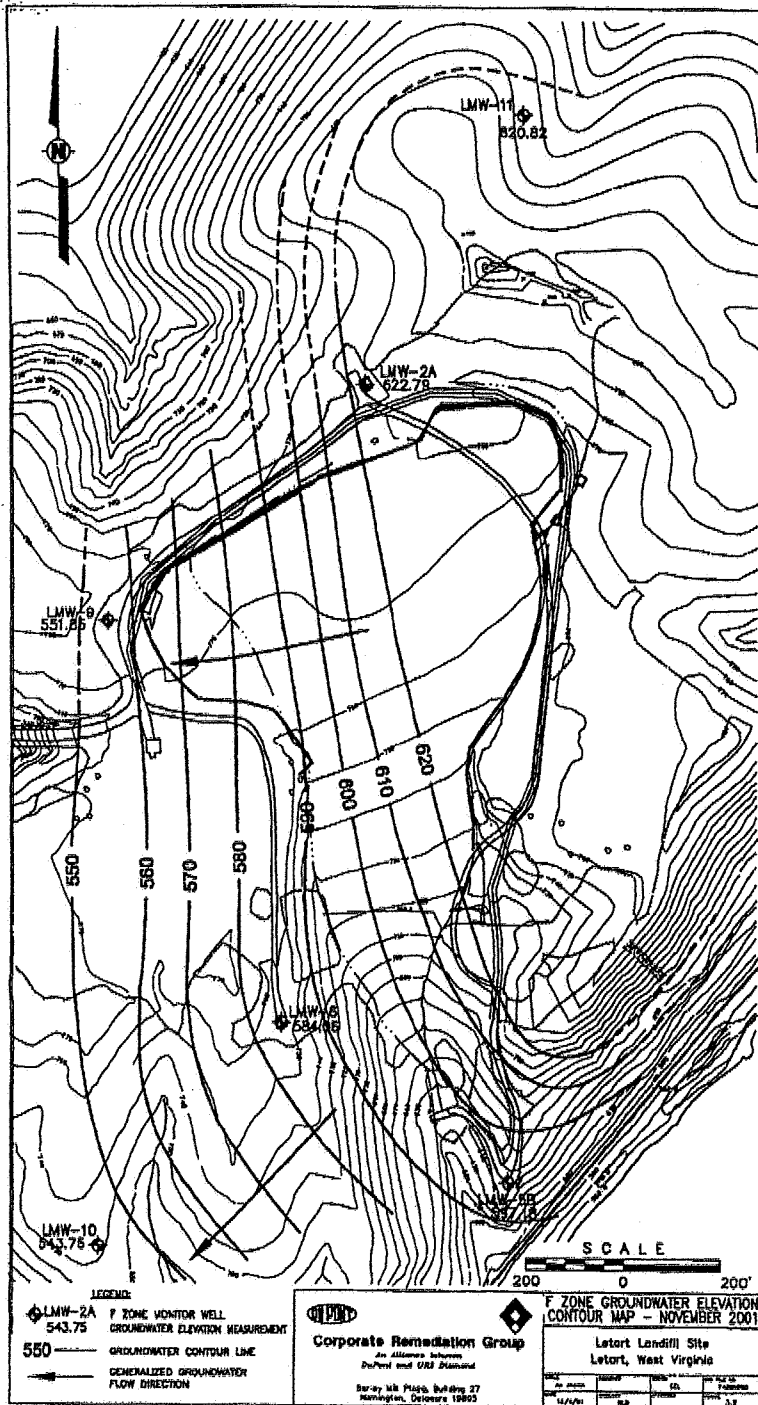
ASH015658

EID193216



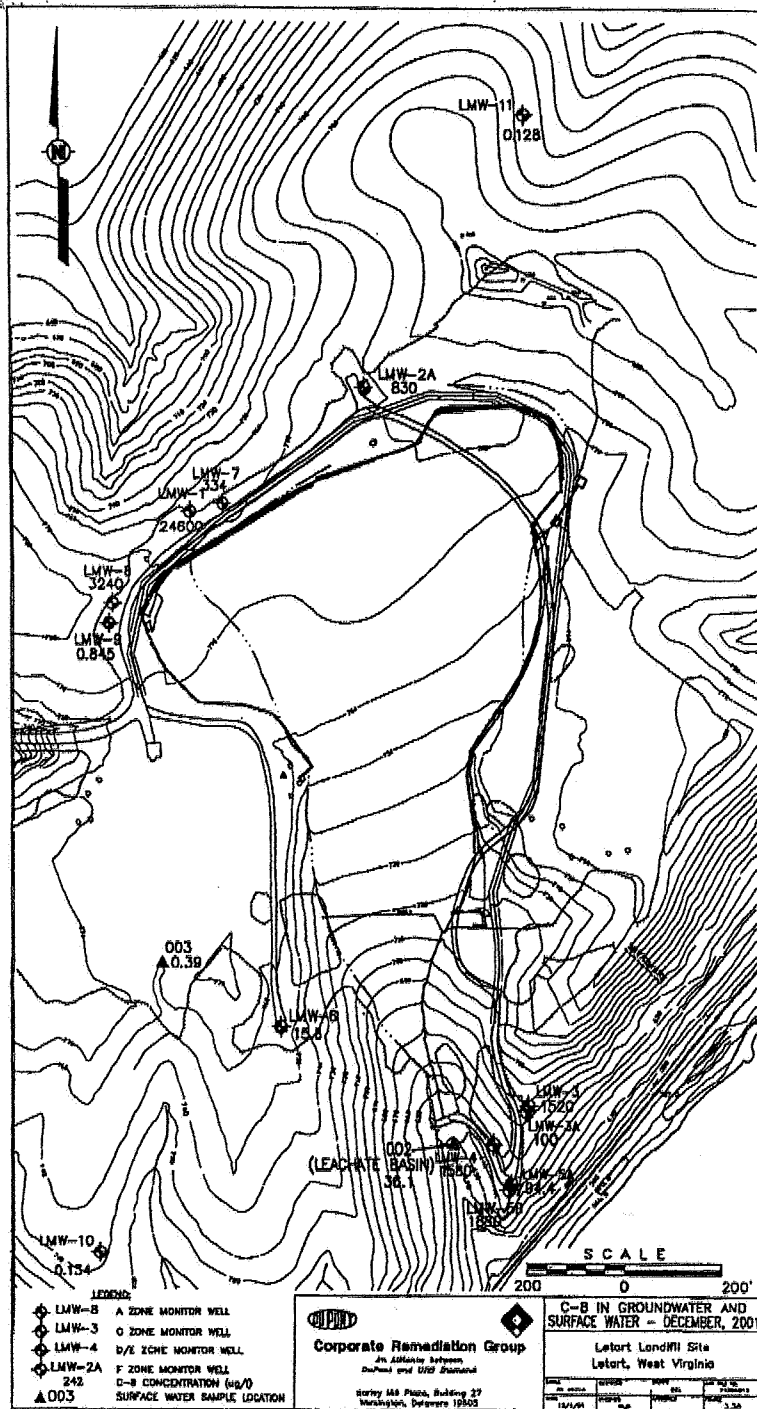
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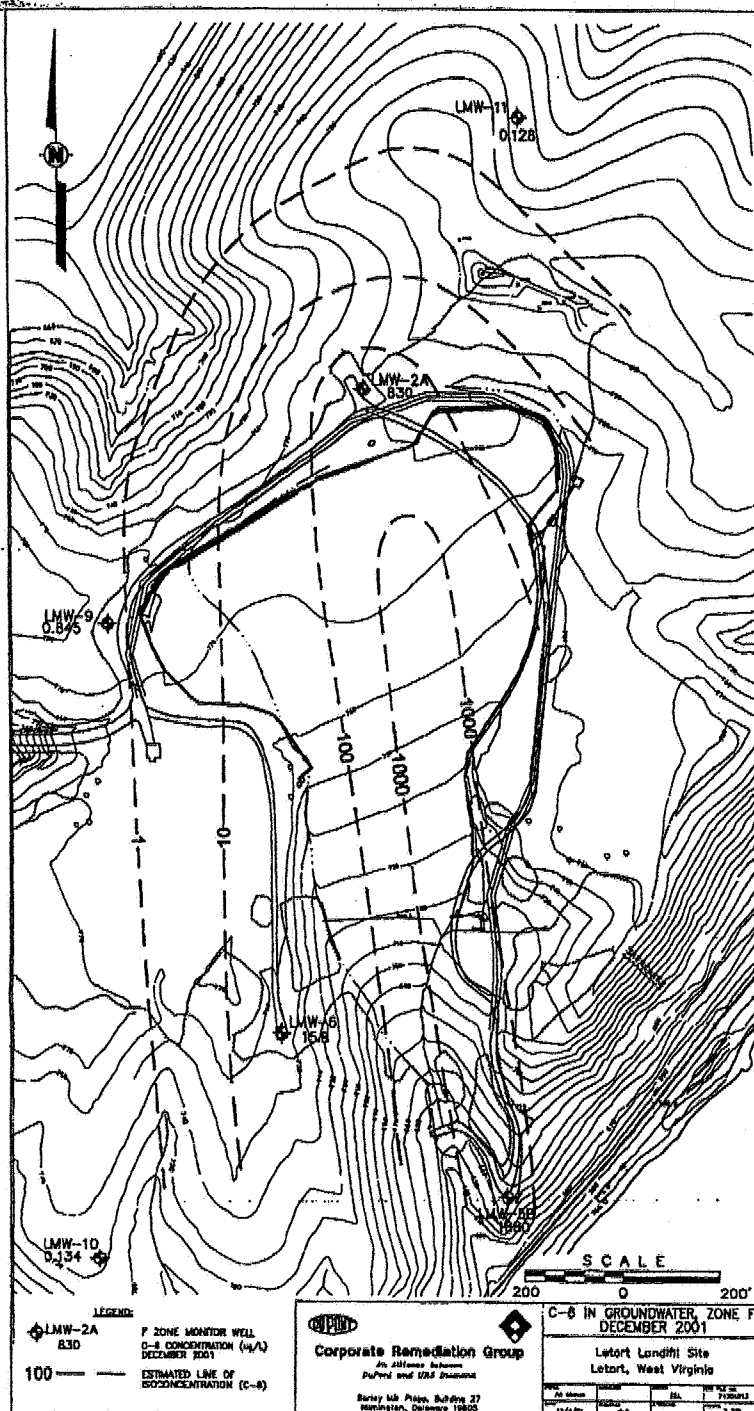
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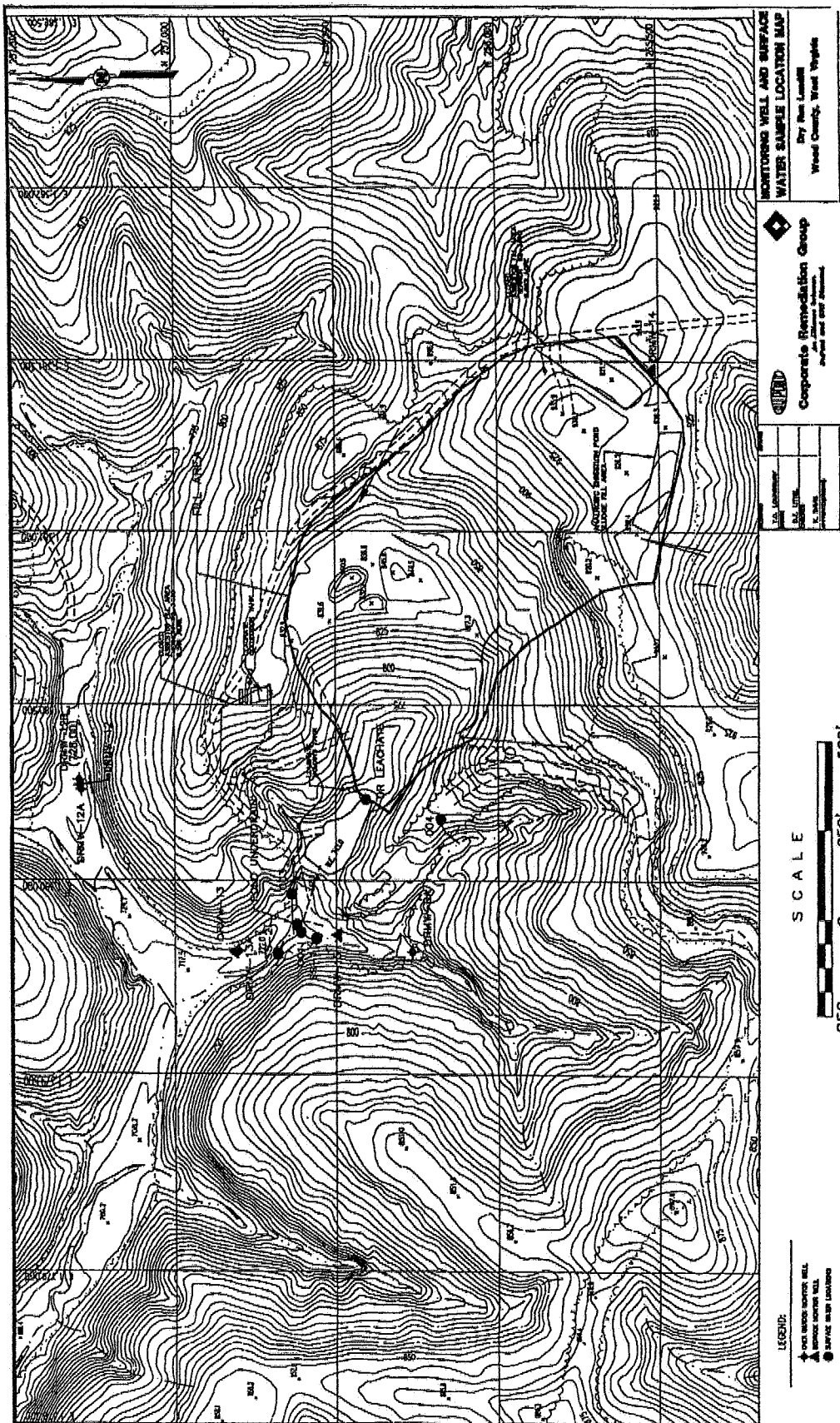
ASH015661

EID193219



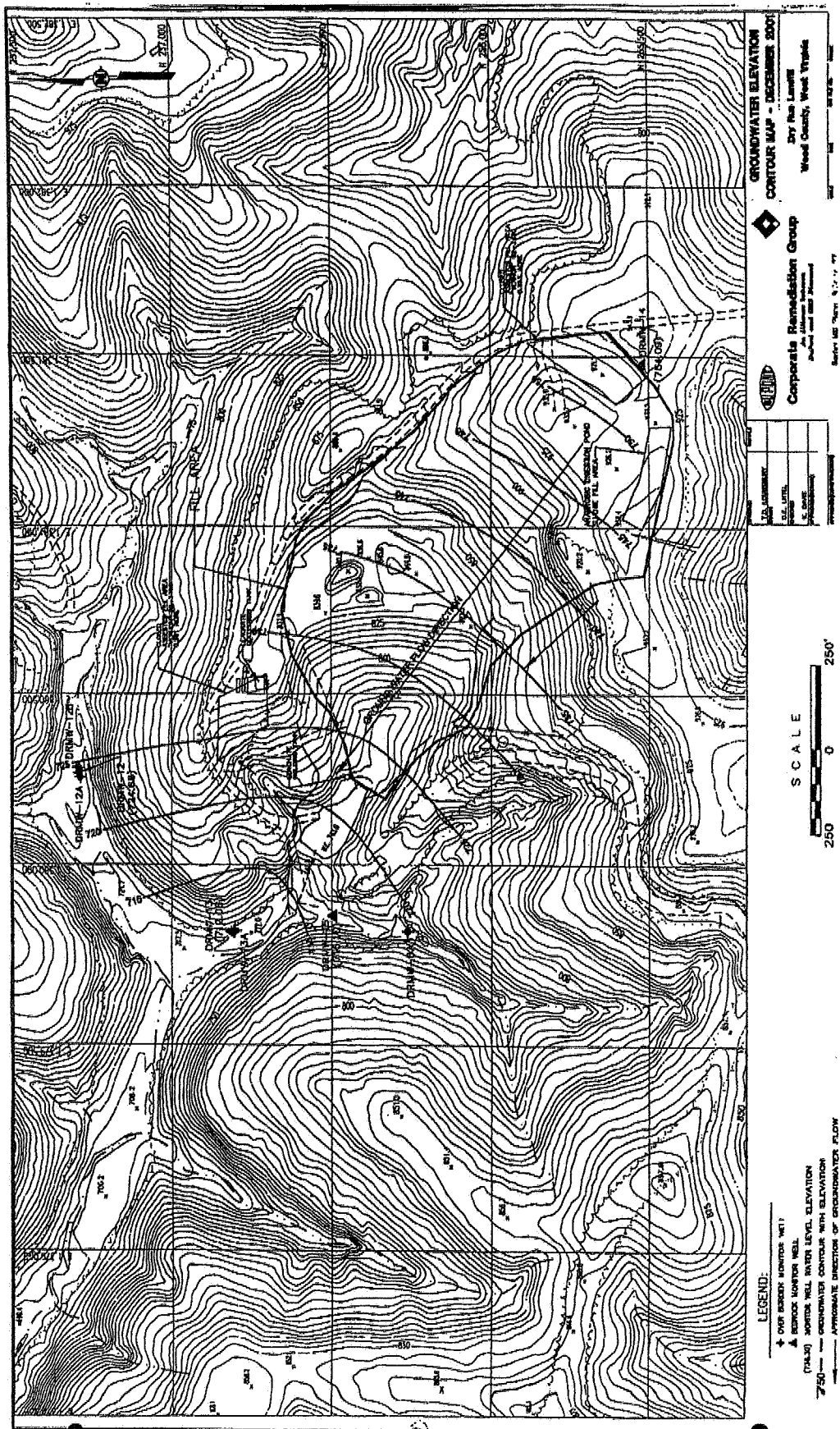
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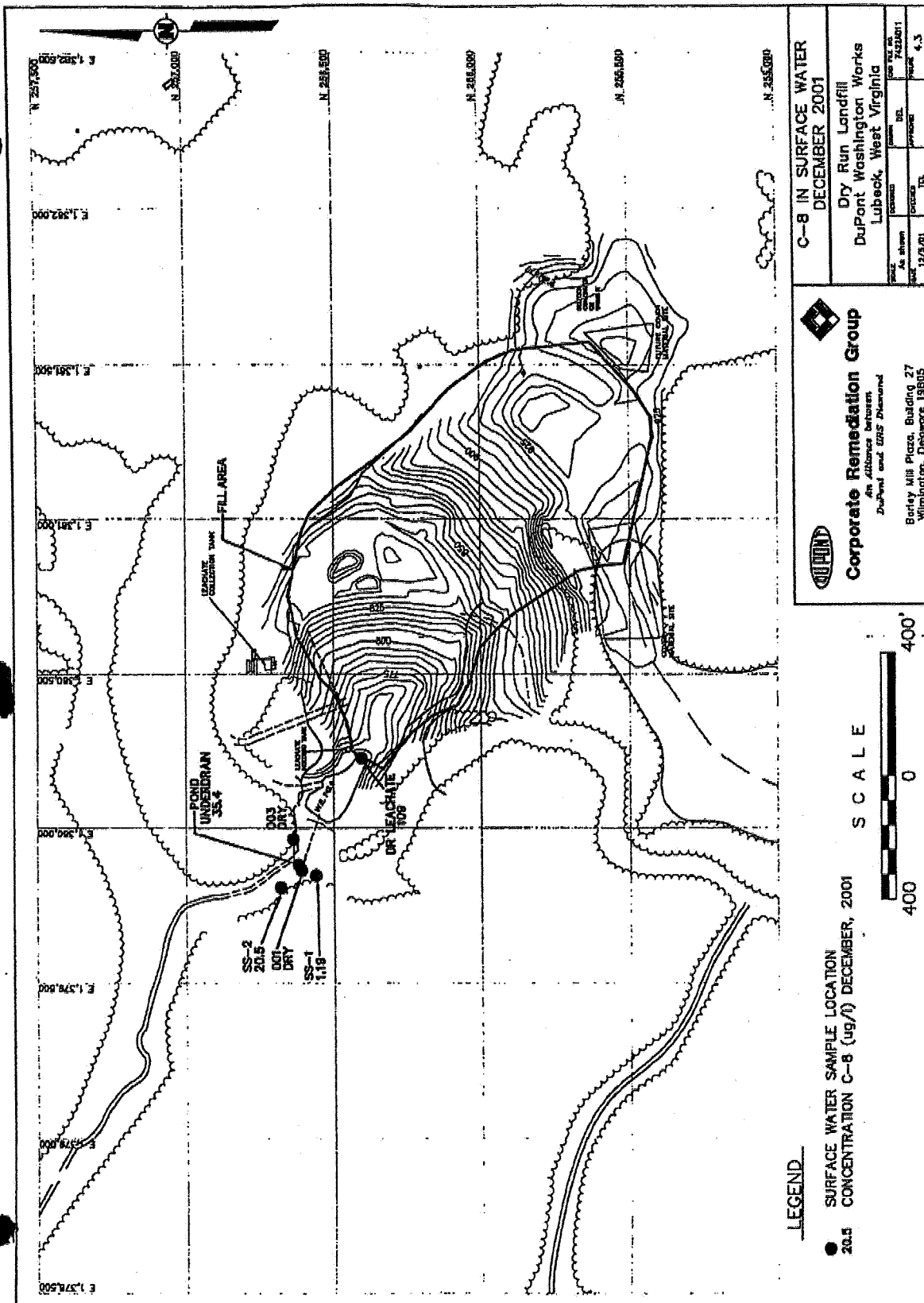
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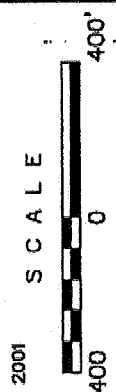
ASH015665

EID193223



C-8 IN SURFACE WATER			
DECEMBER 2001			
Dry Run Landfill			
DuPont Washington Works			
Lubeck, West Virginia			
As Shown	As Shown	As Shown	As Shown
12/29/01	12/29/01	12/29/01	12/29/01
74324011	74324011	74324011	74324011
4.5	4.5	4.5	4.5

Corporate Remediation Group
 An Alliance between
 DuPont and EOR Management
 Burley Mill Plaza, Building 27
 Wilmington, Delaware 19805



ASH015666

EID193224

