

APPENDIX G

Well Development Records and Water Level Measurement Forms

G-1: Piezometer Records

G-2: Monitoring Well Records



CABRERA SERVICES

RADIOLOGICAL
ENVIRONMENTAL
REMEDIATION

FIELD RECORD OF WELL DEVELOPMENT

Project Name: DUPONT FUSRAP
Project Location: DEEPWATER N.J.
Site Name: OU1 AOC 2

Well Designation:	<u>2-MW-1X</u>	2-MW-1
Condition:		
Well Grout Date:		
Well Installation Date:		

Gauge Date:	<u>9-28-01</u>
Sounding Method:	<u>WLE</u>
Stick (up/down) (ft):	<u>2.65</u>
Static Water Level:	<u>5.93</u>
Development Date:	<u>9-28-01</u>
Surge Device:	<u>BLOCK</u>

Gauge Time:	<u>0900</u>
Measurement Reference:	<u>TOP PVC</u>
Well Diameter (in):	
Screen Length (ft):	
Development Time:	

Weather: RMN, OVERCAST; 72°F

Well Volume Determination

A Well Depth:	<u>21.93</u>
B Depth to Water:	<u>5.93</u>
C Liquid Depth (A-B):	
D Well Volume/ft:	
E Well Volume (CxD)gal:	
F Liquid Screen Length (ft):	

G Borehole Vol/ft:	
H Borehole Vol (CxG)gal:	
I Sand Vol (H-E) gal:	
J Liquid Vol in Sand (Ix0.3) gal:	
K One Well Volume (E+J)gal:	

	Beginning	1	2	3	4	5
Time (min)		<u>1036</u>	<u>0912</u>	<u>0945</u>	<u>1010</u>	<u>1040</u>
Pump Rate (gpm)			<u>0.1/0.15 gal/min</u>			
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)		<u>730</u>	<u>101</u>	<u>53</u>	<u>46</u>	<u>32</u>
Dissolved Oxygen (mg/L)						
Eh (mV)						
		<u>15 gal</u>	<u>32 gal</u>			

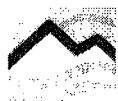
1105 1310 1425
1350
25 20 17 19

Total volume of water removed: 87 gal
Estimated Recharge Rate: 0.2 gal/min

Depth to sediment before development: _____ ft bgs
Depth to sediment after development: _____ ft bgs

Development Description: Sargol pumped on 9-28 and 9-29. Pumped @ low rate (0.18/min) on 9-30 to reduce turbidity. 1500 - batteries checked, changed battery - pump rate surged, turbidity increased.

See Page 2 of 2



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FIELD RECORD OF WELL DEVELOPMENT

Project Name: DU PONT FUSRAP
Project Location: Deepwater NJ
Site Name: 141 AOC2

Well Designation:	<u>2-MW-1</u>
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	
Sounding Method:	
Stick up/down (ft):	
Static Water Level:	
Development Date:	
Surge Device:	
Weather:	

SEE PAGE 1 OF 2

Gauge Time:	
Measurement Reference:	
Well Diameter (in):	
Screen Length (ft):	
Development Time:	

Well Volume Determination

A Well Depth:	
B Depth to Water:	
C Liquid Depth (A-B):	
D Well Volume/ft:	
E Well Volume (Cx D) gal:	
F Liquid Screen Length (ft):	

G Borehole Vol/ft:	
H Borehole Vol (Cx G) gal:	
I Sand Vol (H-E) gal:	
J Liquid Vol in Sand (Ix 0.3) gal:	
K One Well Volume (E+J) gal:	

OCT 1

	Beginning	1	2	3	4	5
Time (min)	<u>0900</u>	<u>1157</u>	<u>1209</u>	<u>1244</u>		
Pump Rate (gpm)						
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)	<u>42</u>	<u>44</u>	<u>32</u>	<u>(18)</u>		
Dissolved Oxygen (mg/L)						
Eh (mV)						
	<u>46 gal</u>			<u>→</u>		

Total volume of water removed: _____ gal

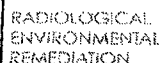
Estimated Recharge Rate: _____

Depth to sediment before development: _____ ft bgs

Depth to sediment after development: _____ ft bgs

Development Description:

Finished development on 1 OCT of c. 18 NTU. Took picture of well
dev. water.
Took 2nd picture of dev. water on 5 OCT at 7 OCT 04



4 Oct 04: Did not surge - pumped at very low rate (200 ml/min). Battery dead @ 1030 - changed out, 1100 well dry! Will resume w/ peristaltic pump on Monday. - No activity in Men on Tues (5/15/04).



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FIELD RECORD OF WELL DEVELOPMENT

Project Name: DuPont FUSRAP
Project Location: DEERWATER NW.
Site Name: 041 Acc 2

Well Designation:	<u>2-MW 2</u>
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	
Sounding Method:	
Stick up/down (ft):	
Static Water Level:	
Development Date:	
Surge Device:	
Weather:	

SEE PAGE 1 OF 2

Gauge Time:	
Measurement Reference:	
Well Diameter (in):	
Screen Length (ft):	
Development Time:	

Well Volume Determination

A Well Depth:		G Borehole Vol/ft:	
B Depth to Water:		H Borehole Vol (CxG) gal:	
C Liquid Depth (A-B):		I Sand Vol (H-E) gal:	
D Well Volume/ft:		J Liquid Vol in Sand (Ix0.3) gal:	
E Well Volume (Cx D) gal:		K One Well Volume (E+J) gal:	
F Liquid Screen Length (ft):			

	Beginning	1	2	3	4	5
Time (min)	0930	0928	0925/24	0950		
Pump Rate (gpm)	872 LCO					
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)	32	231	85 290	91		
Dissolved Oxygen (mg/L)						
Eh (mV)						

Total volume of water removed: _____ gal

Estimated Recharge Rate: _____

Depth to sediment before development: _____ ft bgs

Depth to sediment after development: _____ ft bgs

Development Description:

06 OCT 04 - Barbed Sample - 32 NTU. SURGED
and barbed clay. 7 OCT 04 - Grab Sample @ 0800 - then surged & barbed clay
2 x 3. 08 OCT 04: Grab Sample in a.m. Surged for 10 min. Barbed clay. repeated
7 x 5. Grab Sample in 1215 @ 290 NTU. 11 OCT 04: Grab Sample - Barbed Clay Twice.



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FIELD RECORD OF WELL DEVELOPMENT

Project Name: DUPONT FUSRAP
Project Location: DEEPWATER NJ
Site Name: OU1 AOC2

Well Designation:	<u>2-MW-3</u>
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	<u>9-28-04</u>
Sounding Method:	<u>WLT</u>
Stick (up/down) (ft):	<u>2</u>
Static Water Level:	
Development Date:	
Surge Device:	
Weather:	

Gauge Time:	<u>0845</u>
Measurement Reference:	<u>TOP PUL</u>
Well Diameter (in):	<u>2"</u>
Screen Length (ft):	<u>10'</u>
Development Time:	

Well Volume Determination

A Well Depth:	<u>22.1</u> 15.32
B Depth to Water:	<u>15.32</u>
C Liquid Depth (A-B):	
D Well Volume/ft:	
E Well Volume (Cx D) gal:	
F Liquid Screen Length (ft):	

G Borehole Vol/ft:	
H Borehole Vol (CxG) gal:	
I Sand Vol (H-E) gal:	
J Liquid Vol in Sand (Ix0.3) gal:	
K One Well Volume (E+J) gal:	

	Beginning	1	2	3	4	5
Time (min)	<u>0845</u>	<u>1110</u>	<u>1402</u>	<u>1515</u>	<u>1630</u>	<u>1400</u>
Pump Rate (gpm)						
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)	<u>762</u>	<u>74</u>	<u>106</u>	<u>171</u>	<u>139</u>	<u>1045</u>
Dissolved Oxygen (mg/L)						
Eh (mV)						

9-28 9-29-04 9-30 10-01 10-02
0940 1117 115
0.24/min -
115 120 44 33
See page
2 of 2

Total volume of water removed: _____ gal
Estimated Recharge Rate: _____

Depth to sediment before development: _____ ft bgs
Depth to sediment after development: _____ ft bgs

Development Description: Began development on 9-28 - Surging and pumping. 9-29-04 surf ed in am, pumped. 9-30 Surged in am + pumped. still very turbid. Decided to resume surging + pumping in pm. 10-01 1115-7 Began pumping at slow rate, pumped at 1235-115 NTU. Began pumping @ low rate on 10-02 - grab @ 0940-120 NTU



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FIELD RECORD OF WELL DEVELOPMENT

Project Name: _____
Project Location: _____
Site Name: _____

Well Designation:	2-MW-3
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	
Sounding Method:	
Stick up/down (ft):	
Static Water Level:	
Development Date:	
Surge Device:	
Weather:	

SEE PAGE 1 of 2

Gauge Time:	
Measurement Reference:	
Well Diameter (in):	
Screen Length (ft):	
Development Time:	

Well Volume Determination

A Well Depth:	
B Depth to Water:	
C Liquid Depth (A-B):	
D Well Volume/ft:	
E Well Volume (Cx D) gal:	
F Liquid Screen Length (ft):	

G Borehole Vol/ft:	
H Borehole Vol (Cx G) gal:	
I Sand Vol (H-E) gal:	
J Liquid Vol in Sand (Ix 0.3) gal:	
K One Well Volume (E+J) gal:	

OUT 6

	Beginning	1	2	3	4	5
Time (min)	1410	1440	1450	1310		
Pump Rate (gpm)	0.2 ¹ / _{min}	0.4 ¹ / _{min}	0.4 ¹ / _{min}	0.4 ¹ / _{min}		
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)	95	26	14	10		
Dissolved Oxygen (mg/L)						
Eh (mV)						

Total volume of water removed: 85 gal
Estimated Recharge Rate: _____

Depth to sediment before development: _____ ft bgs

Depth to sediment after development: _____ ft bgs

Development Description:

~~At 1440~~ At 1410 - after gauge, increased flow rate. Slight 1976
water level still 9246!



FIELD RECORD OF WELL DEVELOPMENT

Project Name:
Project Location:
Site Name:

2016 9-15-04
QU 1 / AOC X / RESRATP
DEEPWATER N.J.
QU1 AOC2

Well Designation:	2-MW-4
Condition:	
Well Grout Date:	10 SEPT 04
Well Installation Date:	10 SEPT 04

Gauge Date:	15 SEPT 04
Sounding Method:	WLI
Stick Up/down (ft):	2.8'
Static Water Level:	
Development Date:	15 SEPT 04
Surge Device:	SURGE BLOCK
Weather:	CLOUDY, 64°F; BREEZE FROM EAST

BOREHOLE 8.25 in dia	
Gauge Time:	0715
Measurement Reference:	TOL
Well Diameter (in):	2 in
Screen Length (ft):	10 ft
Development Time:	

Well Volume Determination

A Well Depth:	22.14'	22.12'
B Depth to Water:	6.78'	
C Liquid Depth (A-B):	14.34'	
D Well Volume/ft:	2.3	
E Well Volume (Cx D) gal:		
F Liquid Screen Length (ft):	10	

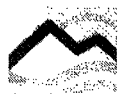
G Borehole Vol/ft:	
H Borehole Vol (Cx G) gal:	
I Sand Vol (H-E) gal:	
J Liquid Vol in Sand (Ix 0.3) gal:	
K One Well Volume (E+J) gal:	

	Beginning	1	2	3	4	5	6
Time (min)		1055	1120	1145	1155	1200	1207
Pump Rate (gpm)							
Volume purged							
pH							
Temperature (C)							
Conductivity (umhos/cm)							
Turbidity (NTU)		182	155	55	18	12	10
Dissolved Oxygen (mg/L)							
Eh (mV)							

Total volume of water removed: _____ gal
Estimated Recharge Rate: _____

Depth to sediment before development: _____ ft bgs
Depth to sediment after development: _____ ft bgs

Development Description: Failed @ 1207 10 Sept 04 Began surging + pumping in am of 10 Sept 04.



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FIELD RECORD OF WELL DEVELOPMENT

Project Name: DUPONT FUSRAP
Project Location: DEERWATER NW
Site Name: OU1 ACCL

Well Designation:	2-MW-5
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	10-11-04
Sounding Method:	WLT
Stick up/down (ft):	22.0-2.5
Static Water Level:	5.86
Development Date:	5/10/04
Surge Device:	Block
Weather:	

Gauge Time:	0945
Measurement Reference:	TOP PVC
Well Diameter (in):	2"
Screen Length (ft):	10'
Development Time:	

Well Volume Determination

A Well Depth:	22.23
B Depth to Water:	5.86
C Liquid Depth (A-B):	
D Well Volume/ft:	
E Well Volume (Cx D) gal:	
F Liquid Screen Length (ft):	

G Borehole Vol/ft:	
H Borehole Vol (CxG) gal:	
I Sand Vol (H-E) gal:	
J Liquid Vol in Sand (Ix0.3) gal:	
K One Well Volume (E+J) gal:	

	Beginning	1	2	3	4	5
Time (min)			0.24/min	0.18 1/4 min		1.52 1/4 min
Pump Rate (gpm)	0.111	0.111	1530	1000/1118	1135/1215	1130/1145/1225/1500
Volume purged	25 gal	15 gal				
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)	177	135	519	72/62	50/40	161/54/38/46
Dissolved Oxygen (mg/L)						
Eh (mV)						

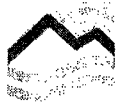
Total volume of water removed: _____ gal

Estimated Recharge Rate: _____

Depth to sediment before development: _____ ft bgs

Depth to sediment after development: _____ ft bgs

Development Description: 6 OCTOY SURGEON FOR TOTAL 9
PUMPED WELL @ 0.5 GPM. HEAVY PRODUCT CAUSED PUMP FAILURE - BAKED
WELL DRY SEVERAL TIMES (REMOVED 25 GALLONS). SURGE AFTER RECHARGE
AT 5 MINUTES PUMP TO DRYING AND EACH TIME TOTAL SURGE TIME = 35 MIN
7 OCT: SURGE FOR 10 MIN. BAKED DRY. REPEATED 4 TIMES, THEN PUMPED AT 0.2 GPM
8 OCT: PUMPED AT 0.2 GPM



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FIELD RECORD OF WELL DEVELOPMENT

Project Name: DUPONT FUSRAP
Project Location: DEERWATER NT
Site Name: OU1 AOC1

Well Designation:	<u>1-MW-6</u>
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	<u>9-21-04</u>
Sounding Method:	<u>WLZ</u>
Stick (up/down) (ft):	<u>1.55</u>
Static Water Level:	<u>3.70</u>
Development Date:	<u>9-21-04</u>
Surge Device:	<u>Bluck</u>
Weather:	

Gauge Time:	<u>0950</u>
Measurement Reference:	<u>TOP PVC</u>
Well Diameter (in):	<u>2"</u>
Screen Length (ft):	<u>2'</u>
Development Time:	

Well Volume Determination

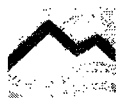
A Well Depth:	<u>7.95</u>	G Borehole Vol/ft: <u>8.25"</u> :	<u>2.61</u>
B Depth to Water:	<u>3.70</u>	H Borehole Vol (CxG) gal:	<u>11.1</u>
C Liquid Depth (A-B):	<u>4.25</u>	I Sand Vol (H-E) gal:	<u>10.4</u>
D Well Volume/ft:	<u>0.16</u>	J Liquid Vol in Sand (Ix0.3) gal:	<u>3.1</u>
E Well Volume (Cx D) gal:	<u>0.68</u>	K One Well Volume (E+J) gal:	<u>3.8</u>
F Liquid Screen Length (ft):	<u>4.25-4.2'</u>		

	Beginning	1	2	3	4	5	
Time (min)		<u>1</u>	<u>1050</u>	<u>1525</u>	<u>1649</u>	<u>1045</u>	<u>1130</u>
Pump Rate (gpm)							
Volume purged							
pH							
Temperature (C)							
Conductivity (umhos/cm)							
Turbidity (NTU)		<u>>700</u>	<u>250</u>	<u>77</u>	<u>45</u>	<u>1457</u>	<u>(10)</u>
Dissolved Oxygen (mg/L)							
Eh (mV)							

Total volume of water removed: 20 gal
Estimated Recharge Rate: 1.100 mL/min

Depth to sediment before development: _____ ft bgs
Depth to sediment after development: _____ ft bgs

Development Description: 9-21-04 began development. Surged + pumped on bailed on 9-21, 9-22, and 9-24, 9-27, 9-28.
On 9-25 - began pumping at low rate (100 mL/min) to see if could clean. Final development @ 1130 @ 10 NTU. Took PHOTO OF DEVELOPMENT WATER.
AND PHOTO OF DEV. WATER COLLECTED ON 7 OCT 04



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FIELD RECORD OF WELL DEVELOPMENT

Project Name: DUPONT FUSRAP
Project Location: DEERLATER NJ
Site Name: OU1 AOC1

Well Designation:	<u>1-MW-7</u>
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	<u>9-21-04</u>	Gauge Time:	<u>0802</u>
Sounding Method:	<u>WLT</u>	Measurement Reference:	<u>TOP PVC</u>
Stick up/down (ft):	<u>2.85</u>	Well Diameter (in):	<u>2"</u>
Static Water Level:	<u>753</u>	Screen Length (ft):	<u>10'</u>
Development Date:	<u>9-21-04</u>	Development Time:	
Surge Device:	<u>Packer</u>		
Weather: <u>Sunny 65°F, slight breeze from W/NW</u>			

Well Volume Determination

A Well Depth:	<u>22.11</u>	G Borehole Vol/ft:	
B Depth to Water:	<u>753</u>	H Borehole Vol (CxG)gal:	
C Liquid Depth (A-B):	<u>14.58</u>	I Sand Vol (H-E) gal:	
D Well Volume/ft:	<u>0.16</u>	J Liquid Vol in Sand (Ix0.3) gal:	
E Well Volume (Cx D)gal:		K One Well Volume (E+J)gal:	
F Liquid Screen Length (ft):			

	Beginning	1	2	3	4	5
Time (min)		<u>1100</u>	<u>1400</u>	<u>1445</u>	<u>1600</u>	<u>0930</u>
Pump Rate (gpm)						
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)		<u>500</u>	<u>200</u>	<u>120</u>	<u>62</u>	<u>52</u>
Dissolved Oxygen (mg/L)						
Eh (mV)						

Total volume of water removed: 80 gal
Estimated Recharge Rate: approx. 1.5 L/min

Depth to sediment before development: _____ ft bgs

Depth to sediment after development: _____ ft bgs

Development Description:

9-21-04 Surged + pumped; 9-22 Surged + pumped; 9-24 Surged + pumped; 9-27 Surged + pumped. Reduced pump rate to 0.5 L/min as 9-27 to see if well would clear up. Resumed pumping at low rate (0.5 L/min) on 9-28

STOPPED at NW - clear per C.Y. Took picture of dev. water.

Second picture of development water taken on 50904

9-20

1010 1100 1140 09

40 24 21 (17)
(-7)



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FIELD RECORD OF WELL DEVELOPMENT

Project Name: DuPont FUSRAP
Project Location: Deepwater N.J.
Site Name: OU1 AOC1

Well Designation:	<u>1-MW-8</u>
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	<u>9-24-04</u>
Sounding Method:	<u>W.L.I.</u>
Stick Up/down (ft):	<u>2.85</u>
Static Water Level:	<u>5.46</u>
Development Date:	<u>9-24-04</u>
Surge Device:	<u>Block</u>

Gauge Time:	<u>0940</u>
Measurement Reference:	<u>TOC</u>
Well Diameter (in):	<u>2</u>
Screen Length (ft):	<u>2</u>
Development Time:	

Weather: Sunny very slight breeze.

Well Volume Determination

A Well Depth:	<u>9.96</u>
B Depth to Water:	<u>5.46</u>
C Liquid Depth (A-B):	
D Well Volume/ft:	
E Well Volume (Cx D) gal:	
F Liquid Screen Length (ft):	

G Borehole Vol/ft:	
H Borehole Vol (CxG) gal:	
I Sand Vol (H-E) gal:	
J Liquid Vol in Sand (Ix0.3) gal:	
K One Well Volume (E+J) gal:	

	Beginning	1	2	3	4	5
Time (min)		<u>0915</u>	<u>1019</u>	<u>1120</u>	<u>0905</u>	<u>1350</u>
Pump Rate (gpm)						
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)		<u>55</u>	<u>44</u>	<u>73</u>	<u>45</u>	<u>11</u>
Dissolved Oxygen (mg/L)						
Eh (mV)						

Total volume of water removed: 1.75 gal 1.75 gal on 27-28.
Estimated Recharge Rate: _____

Depth to sediment before development: _____ ft bgs

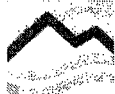
Depth to sediment after development: _____ ft bgs

Development Description:

Surged and bailed 1-MW-8 beginning on 9-24-04. Resumed surging and bailing on 9-27, 9-28.
Hard bailed + surged with turbidity decreased to 11 NTU
11 NTU or as per C-9.

On 9-27. Surged 1 hr bailed dry twice. On 9-28, surged bailed dry, added 2 gal / bailed dry - did this 2 times. Then let recharge then pulled final sample @ 11 NTU; collected well dev. photo.

WPD photo of well dev. water taken on 7 OCT 04.



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FIELD RECORD OF WELL DEVELOPMENT

Project Name: Duke's Farm
Project Location: Deepwater, NJ
Site Name: DU 1 AOC 1

Well Designation:	1-MW-9
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	9-24-04
Sounding Method:	WLI
Stick Up/down (ft):	2.45
Static Water Level:	6.38
Development Date:	
Surge Device:	Block
Weather:	

Gauge Time:	0905
Measurement Reference:	TOL
Well Diameter (in):	2
Screen Length (ft):	10
Development Time:	

Well Volume Determination

A Well Depth:	22.1
B Depth to Water:	6.38
C Liquid Depth (A-B):	
D Well Volume/ft:	
E Well Volume (Cx D)gal:	
F Liquid Screen Length (ft):	

G Borehole Vol/ft:	
H Borehole Vol (CxG)gal:	
I Sand Vol (H-E) gal:	
J Liquid Vol in Sand (Ix0.3) gal:	
K One Well Volume (E+J)gal:	

	Beginning	9-24	9-27	9-28	9-29	
Time (min)		1040		1015	1050	1100
Pump Rate (gpm)						
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)		74	—	370	141	94
Dissolved Oxygen (mg/L)						
Eh (mV)						
		20	12.5 gal	25 gal	—	20 gal

1335

17

Total volume of water removed: 77.5 gal
Estimated Recharge Rate: < 50 mL/min

Depth to sediment before development: 22.0 ft bgs
Depth to sediment after development: — ft bgs

Development Description: Began surging and pumping on 9-24-04.
Resumed surging and pumping on 9-27, 9-28. Stopped surging on
on 9-27, pumped dry 6 hrs, surged 5 hrs. On 9-28 pumped dry
twice (surged once). On 9-29 - pumped low rate for 4.5 hrs to
reduce turbidity to 17. Called CY - all water 17 NTU - dev. finished.
Took photo of development water.
and photo of well dev. water taken on 7 OCT 04



FIELD RECORD OF WELL DEVELOPMENT

Project Name:
Project Location:
Site Name:

1 of 2 9-15-04
OU 1 / AOC 2
AOC 21 DEERWATER NJ
OU 1 / AOC 1

Well Designation:	MW 10
Condition:	
Well Grout Date:	13 Sep 04
Well Installation Date:	13 Sep 04

Gauge Date:	15 Sep 04
Sounding Method:	WLT
Stick Up/down (ft):	1.4
Static Water Level:	-1.6'
Development Date:	9-21
Surge Device:	Surge Block
Weather:	

Gauge Time:	0940
Measurement Reference:	Top casing
Well Diameter (in):	2"
Screen Length (ft):	2'
Development Time:	1040

Well Volume Determination

A Well Depth:	7.9'
B Depth to Water:	4.6'
C Liquid Depth (A-B):	
D Well Volume/ft:	
E Well Volume (CxD)gal:	
F Liquid Screen Length (ft):	

G Borehole Vol/ft:	
H Borehole Vol (CxG)gal:	
I Sand Vol (H-E) gal:	
J Liquid Vol in Sand (Ix0.3) gal:	
K One Well Volume (E+J)gal:	

	Beginning	1	2	3	4	5
Time (min)		1055	1201	1550	1106	1419
Pump Rate (gpm)						
Volume purged				8.02		
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)		182	47	153	109	127
Dissolved Oxygen (mg/L)						
Eh (mV)						

9-27-04 9-28-04 9-29-04 4-30

1605	1645	091005
610	158	118 13

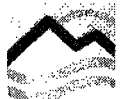
Total volume of water removed: _____ gal
Estimated Recharge Rate: _____

well has very slow recovery rate 1/82 in 3 hrs.

Depth to sediment before development: _____ ft bgs
Depth to sediment after development: _____ ft bgs
Development Description:

*Begin development on 9-21-04 155004.
DUE TO LOW RECHARGE well is running-dry to depth.
Added approximately 5 gal of water per day during development*

*On 9-29 decent recharge due to rain overnight. began pumping @ 1510 @ volume rate. Best rate was 158. stopped pumping at end of day.
No activity on 4 Oct 04*



**CABRERA
SERVICES**

RADIOLOGICAL
ENVIRONMENTAL
REMEDATION

FIELD RECORD OF WELL DEVELOPMENT

Project Name: DUPONT FUSRAP
Project Location: DEEPWATER NS
Site Name: OU1 AOC1

Well Designation:	<u>1-MW-10</u>
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	
Sounding Method:	
Stick up/down (ft):	
Static Water Level:	
Development Date:	
Surge Device:	
Weather:	

SEE PAGE 1 OF 2

Gauge Time:	
Measurement Reference:	
Well Diameter (in):	
Screen Length (ft):	
Development Time:	

Well Volume Determination

A Well Depth:		G Borehole Vol/ft:	
B Depth to Water:		H Borehole Vol (CxG)gal:	
C Liquid Depth (A-B):		I Sand Vol (H-E) gal:	
D Well Volume/ft:		J Liquid Vol in Sand (Ix0.3) gal:	
E Well Volume (Cx D)gal:		K One Well Volume (E+J)gal:	
F Liquid Screen Length (ft):			

	Beginning	1	2	3	4	5
Time (min)	1100	1145	085/6750	126/1420	1515/0700	0930
Pump Rate (gpm)						
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)	56	201	174/210	154/130	99/49	44
Dissolved Oxygen (mg/L)						
Eh (mV)						

Total volume of water removed: _____ gal
Estimated Recharge Rate: _____

Depth to sediment before development: _____ ft bgs
Depth to sediment after development: _____ ft bgs
Development Description:

10 OCT 04: Grab Sample: 56 NTU. Bailed dry. -
Added 2 gal of water - Surged, bailed dry. No activity in 4 OCT 04 or 5 OCT 04.
Bailed grab sample on 6 OCT 04 - 201 NTU. Very little water in well. Bailed dry.
7 OCT 04: ADD WATER (1.5 gal) Surged. Added 2.5 gal Surged 10 min, bailed dry.
Added 2.5 gal - Surged, bailed dry. Added 1.5 gal Surged bailed dry - grab sample = 210.
Added 2 gal - Surged 10 min, bailed dry. Added 2 gal, Surged 10 min, bailed dry -
Repeated 2 more times. Bore for lunch after which grab sample = 154.
2nd grab sample = 130. Additional Grab - 99 after recharge. 8 OCT 04: Grab pg 2 of 2
from 10 min = 49 NTU. Surged for 5 min - bailed dry. Added 2.5 gal Surged 10 min, bailed dry.



WATER & SEWER
CONSTRUCTION
EQUIPMENT

FIELD RECORD OF WELL DEVELOPMENT

Project Name: DUPONT FUSRAP
Project Location: DEPLATER NF
Site Name: ALL AOC1

Well Designation:	MW 11
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	9-21-04
Sounding Method:	WLT
Stick up/down (ft):	2.45
Static Water Level:	6.5
Development Date:	STEAD 9-17-04
Surge Device:	Block

Gauge Time:	0720
Measurement Reference:	TOP PVC
Well Diameter (in):	2in
Screen Length (ft):	10'
Development Time:	

Weather: 9-17-04 Cloudy/Breezy, 9-21-04 SUNNY 90°F

Well Volume Determination

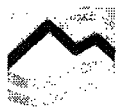
A Well Depth:	22.10	G Borehole Vol/ft:	
B Depth to Water:	6.50	H Borehole Vol (CxG)gal:	
C Liquid Depth (A-B):	15.60	I Sand Vol (H-E) gal:	
D Well Volume/ft:		J Liquid Vol in Sand (Ix0.3) gal:	
E Well Volume (Cx D)gal:		K One Well Volume (E+J)gal:	
F Liquid Screen Length (ft):			

	9-17-04	9-21-04					9-22-04	9-27-04
	Beginning	1	2	3	4	5		
Time (min)	1250	1445	1415	1430	1443	1515	1545	6.00w. 9.50 1.50
Pump Rate (gpm)								
Volume purged								
pH								
Temperature (C)								
Conductivity (umhos/cm)								
Turbidity (NTU)		60	80	121	53	98	12	50 15
Dissolved Oxygen (mg/L)								
Eh (mV)								

Total volume of water removed: 60 gal
Estimated Recharge Rate: 1202/14 sec

Depth to sediment before development: 22.0 ft bgs
Depth to sediment after development: - ft bgs
Development Description:

Well was developed to 12 NTU's then turbidity began increasing due to what appears to be silt.
Stopped development @ 9-27-04 @ 12 NTU, took picture of dev. water.
Took 2nd picture of same development water on 5 OCT 04.



CABRERA SERVICES

RADIOLOGICAL
ENVIRONMENTAL
REMEDATION

FIELD RECORD OF WELL DEVELOPMENT

Project Name: DU PONT FUSRAP
Project Location: DEEDWATER N.S.
Site Name: CH2-001 AOC 2

Well Designation:	<u>A - MW-12</u>
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	<u>9-24-04</u>
Sounding Method:	<u>WLS</u>
Stick (up/down) (ft):	<u>1.3</u>
Static Water Level:	<u>3.55</u>
Development Date:	<u>7</u>
Surge Device:	<u>Block</u>

Gauge Time:	<u>1010</u>
Measurement Reference:	<u>Top PVC</u>
Well Diameter (in):	<u>2"</u>
Screen Length (ft):	<u>2'</u>
Development Time:	

Weather: Sunny, very slight breeze

Well Volume Determination

A Well Depth:	<u>7.89</u>
B Depth to Water:	
C Liquid Depth (A-B):	
D Well Volume/ft:	
E Well Volume (Cx D) gal:	
F Liquid Screen Length (ft):	

G Borehole Vol/ft:	
H Borehole Vol (Cx G) gal:	
I Sand Vol (H-E) gal:	
J Liquid Vol in Sand (Ix 0.3) gal:	
K One Well Volume (E+J) gal:	

	Beginning	1	2	3	4	5
Time (min)		<u>1015</u>	<u>1025</u>	<u>1040</u>	<u>1120</u>	<u>1200</u>
Pump Rate (gpm)						
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)		<u>27</u>	<u>22</u>	<u>18</u>	<u>15</u>	<u>16</u>
Dissolved Oxygen (mg/L)						
Eh (mV)						

<u>9-24-04</u>				<u>9-27-04</u>	
<u>1555</u>	<u>1050</u>	<u>1460</u>	<u>14</u>		
<u>50</u>	<u>220</u>	<u>30</u>	<u>15</u>		

Total volume of water removed: _____ gal
Estimated Recharge Rate: _____

Depth to sediment before development: _____ ft bgs

Depth to sediment after development: _____ ft bgs

Development Description: Surged & bailed on 9-24 through 1130.
Returned (after lunch) Surged & pumped @ greater than 1 gal/min.
Returned on 9-27 at. Surged & bailed through 1130. Returned after
lunch - pumped @ 0.25 gal/min to reduce turbidity.



**CABRERA
SERVICES**

RADIOLOGICAL
ENVIRONMENTAL
REMEDIATION

FIELD RECORD OF WELL DEVELOPMENT

Project Name: DUPONT FUSRAP
Project Location: DEEPWATER N.T.
Site Name: OU1 AOC2

Well Designation:	<u>2-MW-12</u>
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:		SEE PAGE 1 OF 2	Gauge Time:	
Sounding Method:			Measurement Reference:	
Stick up/down (ft):			Well Diameter (in):	
Static Water Level:			Screen Length (ft):	
Development Date:			Development Time:	
Surge Device:				
Weather:				

Well Volume Determination

A Well Depth:		G Borehole Vol/ft:	
B Depth to Water:		H Borehole Vol (CxG)gal:	
C Liquid Depth (A-B):		I Sand Vol (H-E) gal:	
D Well Volume/ft:		J Liquid Vol in Sand (Ix0.3) gal:	
E Well Volume (CxD)gal:		K One Well Volume (E+J)gal:	
F Liquid Screen Length (ft):			

	<u>9-27-04</u>									
	<u>Beginning</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>				
Time (min)	<u>1500</u>	<u>1510</u>	<u>1515</u>	<u>0915/0930</u>	<u>1000</u>	<u>1015</u>	<u>1030</u>	<u>1100</u>	<u>1115</u>	<u>1130</u>
Pump Rate (gpm)										
Volume purged										
pH										
Temperature (C)										
Conductivity (umhos/cm)										
Turbidity (NTU)	<u>23</u>	<u>32</u>	<u>DRY</u>	<u>45/41</u>	<u>40</u>	<u>30</u>	<u>26</u>	<u>22</u>	<u>17</u>	<u>12</u>
Dissolved Oxygen (mg/L)										
Eh (mV)										

Total volume of water removed: _____ gal

Estimated Recharge Rate: _____

Depth to sediment before development: _____ ft bgs

Depth to sediment after development: _____ ft bgs

Development Description:

9-28-04 ? Did not surge - pumped at low rate (200 mL/min).
STOPPED @ 17/18 NTU. WATER LEVEL DROPPING - EQUAL AT 2200 mL/min.
FEARED PULLING ADDITIONAL PIPES INTO WELL w/ DROPPING WATER LEVEL.
STOPPED @ 18 NTU - COLLECTED PHOTO OF DEV. WATER.
AND PHOTO OF DEV. WATER COLLECTED ON 7 OCT 04

Doc. 7-1-7



**CABRERA
SERVICES**

RADIOLOGICAL
ENVIRONMENTAL
REMEDATION

FIELD RECORD OF WELL DEVELOPMENT

Project Name: DUPONT FUSRAP
Project Location: DEEPWATER N.S.
Site Name: _____

Well Designation:	<u>3-MW-13</u>
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	<u>1 Oct 04</u>
Sounding Method:	<u>WLT</u>
Stick (up/down) (ft):	<u>3</u>
Static Water Level:	<u>6.33</u>
Development Date:	<u>1 Oct 04</u>
Surge Device:	<u>Block</u>

Gauge Time:	<u>0902</u>
Measurement Reference:	<u>768 PVC</u>
Well Diameter (in):	<u>2</u>
Screen Length (ft):	<u>10</u>
Development Time:	

Weather: Sunny, 70°F, slight breeze from west.

Well Volume Determination

A Well Depth:	<u>22.0</u>
B Depth to Water:	<u>6.33</u>
C Liquid Depth (A-B):	
D Well Volume/ft:	
E Well Volume (Cx D) gal:	
F Liquid Screen Length (ft):	

G Borehole Vol/ft:	
H Borehole Vol (Cx G) gal:	
I Sand Vol (H-E) gal:	
J Liquid Vol in Sand (Ix 0.3) gal:	
K One Well Volume (E+J) gal:	

	Beginning	1	2	3	4	5
Time (min)	<u>0905</u>	<u>1030</u>	<u>1115</u>	<u>1230</u>	<u>1647</u>	<u>1015 1120</u>
Pump Rate (gpm)	<u>700 ml/min</u>	<u>500 ml/min</u>	<u>500 ml/min</u>	<u>1 L/min</u>	<u>1600</u>	
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)	<u>72</u>	<u>171</u>	<u>154</u>	<u>579</u>	<u>67</u>	<u>45 / 37 / 22 (1)</u>
Dissolved Oxygen (mg/L)						
Eh (mV)						

Total volume of water removed: _____ gal

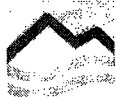
Estimated Recharge Rate: _____

Depth to sediment before development: _____ ft bgs

Depth to sediment after development: _____ ft bgs

Development Description:

Began pumping Surging and purging
on 1 Oct 04. Surged for 10 min and purged @ full rate (2 gpm) 6 and
this 4 times
Development can proceed on 5 Oct 04.



**CABRERA
SERVICES**

RADIOLOGICAL
ENVIRONMENTAL
REMEDATION

FIELD RECORD OF WELL DEVELOPMENT

Project Name: DUPONT FUSRAP
Project Location: DEEPWATER, N.J.
Site Name: OU2 AOC3

Well Designation:	<u>3-NW-14</u>
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	<u>9-30-04</u>
Sounding Method:	<u>WLI</u>
Stick up/down (ft):	<u>2.5</u>
Static Water Level:	<u>6.37</u>
Development Date:	<u>9-30-04</u>
Surge Device:	<u>Block</u>

Gauge Time:	<u>1000</u>
Measurement Reference:	<u>TOP PIC</u>
Well Diameter (in):	<u>2"</u>
Screen Length (ft):	<u>10'</u>
Development Time:	

Weather: Cloudy, overcast; slight breeze from W/SW. Drizzle

Well Volume Determination

A Well Depth:	<u>22.1</u>
B Depth to Water:	<u>6.37</u>
C Liquid Depth (A-B):	
D Well Volume/ft:	
E Well Volume (Cx D) gal:	
F Liquid Screen Length (ft):	

G Borehole Vol/ft:	
H Borehole Vol (Cx G) gal:	
I Sand Vol (H-E) gal:	
J Liquid Vol in Sand (Ix 0.3) gal:	
K One Well Volume (E+J) gal:	

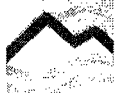
	Beginning	1	2	3	4	5
Time (min)		<u>1546</u>	<u>1615</u>	<u>1640</u>		
Pump Rate (gpm)		<u>1.54/min</u>	<u>1.54/min</u>	<u>1.54/min</u>		
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)		<u>64</u>	<u>37</u>	<u>15</u>		
Dissolved Oxygen (mg/L)						
Eh (mV)						
		<u>52 gal</u>	<u>58</u>	<u>65</u>	<u>X</u>	

Total volume of water removed: 65 gal
Estimated Recharge Rate: _____

Depth to sediment before development: _____ ft bgs

Depth to sediment after development: _____ ft bgs

Development Description: Began surging and pumping on 9-30-04.
Added water @ 1100; surge pump set at 1.54/min. Reduced to 1.54/min
in pm. Reached 15 NTU. Development stopped - picture taken.
END WELL DEV. WATER PHOTO TAKEN and PICTURED.



**CABRERA
SERVICES**

RADIOLOGICAL
ENVIRONMENTAL
REMEDIATION

FIELD RECORD OF WELL DEVELOPMENT

Project Name: DuPont FUSRAP
Project Location: DEERWATER N.J.
Site Name: 041 ACC 2

Well Designation:	<u>2-mw-15</u>
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	<u>9-28-04</u>
Sounding Method:	<u>WLI</u>
Stick up/down (ft):	<u>3.6</u>
Static Water Level:	<u>4.75</u>
Development Date:	<u>Started on 9-28-04</u>
Surge Device:	
Weather:	

Gauge Time:	<u>0915</u>
Measurement Reference:	<u>TDPPVC</u>
Well Diameter (in):	<u>2"</u>
Screen Length (ft):	<u>2'</u>
Development Time:	

Well Volume Determination

A Well Depth:	<u>8.92</u>	G Borehole Vol/ft:	
B Depth to Water:	<u>4.75</u>	H Borehole Vol (CxG)gal:	
C Liquid Depth (A-B):		I Sand Vol (H-E) gal:	
D Well Volume/ft:		J Liquid Vol in Sand (Ix0.3) gal:	
E Well Volume (Cx D)gal:		K One Well Volume (E+J)gal:	
F Liquid Screen Length (ft):			

	Beginning	1	2	3	4	5
Time (min)		<u>0900</u>	<u>1400</u>	<u>0900</u>	<u>1347</u>	<u>1600</u>
Pump Rate (gpm)						
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)	<u>492</u>	<u>395</u>	<u>543</u>	<u>161</u>	<u>599</u>	<u>547/190/180</u>
Dissolved Oxygen (mg/L)						
Eh (mV)						
	<u>2gal</u>	<u>2gal</u>				

Total volume of water removed: gal
Estimated Recharge Rate: < 100 ml/min

Depth to sediment before development: 8.90 ft bgs
Depth to sediment after development: ft bgs

Development Description:

Surge and bailed on 9-28; 9-29 for am.
Returned to mw-15 in pm - bailed sample (543 NTU). Bailed dry, added
2gal of water, surged bailed dry. Added 1 gal of water, bailed
dry, added 1 gal of water bailed dry. let re-charge (543 NTU). Bailed
dry (last time) at 09:30:04: prior to bailing - grab sample @ 101 NTU. Bailed dry
After lunch - grab sample 529 NTU. let recharge - grab sample - 547
10:00:04 = Bailed grab @ 09:05 @ 190 NTU, bailed 2nd grab @ 180 NTU. Attempted to
pump - NOT ENOUGH WATER - DRY.
Resumed on 10:00:04 - Bailed grab sample - 1st bailer = 4 NTU. Second bailer = 14 NTU.



**CABRERA
SERVICES**

RADIOLOGICAL
ENVIRONMENTAL
REMEDATION

FIELD RECORD OF WELL DEVELOPMENT

Project Name: DUPONT FLUXCAP
Project Location: DUNELAND NJ
Site Name: OU1 - 1002

Well Designation:	2-MW-16
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	9-27-04	Gauge Time:	1128
Sounding Method:	WT	Measurement Reference:	TOP PVC
Stick Up/down (ft):	3.25	Well Diameter (in):	2
Static Water Level:	5.40	Screen Length (ft):	10
Development Date:	9-27-04	Development Time:	
Surge Device:			
Weather:			

Well Volume Determination

A Well Depth:	22.15	G Borehole Vol/ft:	
B Depth to Water:	5.40	H Borehole Vol (CxG)gal:	
C Liquid Depth (A-B):		I Sand Vol (H-E) gal:	
D Well Volume/ft:		J Liquid Vol in Sand (Ix0.3) gal:	
E Well Volume (Cx D)gal:		K One Well Volume (E+J)gal:	
F Liquid Screen Length (ft):			

	Beginning	1	2	3	4	5
Time (min)	1435	1145	1016	1100	1500	
Pump Rate (gpm)			1 gal/min	0.2 gal/min		
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)	>1100	>1100	>1100	>1100	>1100	>1100
Dissolved Oxygen (mg/L)						
Eh (mV)						

Total volume of water removed: _____ gal

Estimated Recharge Rate: > 2 gal/min

Depth to sediment before development: _____ ft bgs

Depth to sediment after development: _____ ft bgs

Development Description: 9-27-04 SURGED + PUMPED (REPEATED CYCLE 6 times)

THROUGHTOUT DAY, WATER STILL BLACK AT END OF DAY - ORGANIC SILT.

9-28: SURGE + PUMPED 3 TIMES. PUMP @ 1 gal/min STILL BLACK.

NO EFFORT ON 9-29. 9-30-04: Surged for 15 min - pumped turbidity v. high - samples black
1 OCT 04: SURGED FOR 10 MIN PUMPED @ 0.5 gal/min for 2 hrs - still black & gauge 1145 = >1100.
NO EFFORT ON 4, 5 OCT 04. 6 OCT 04: PUMPED @ 1 gal/min / reduced rate @ 1100 to 0.2 gal/min
still black s. H₂O to date. 140 gal removed.

BOCT 04 - filtered sample through 0.45 um filter - filtered sample

11-11-04



**CABRERA
SERVICES**

RADIOLOGICAL
ENVIRONMENTAL
REMEDATION

FIELD RECORD OF WELL DEVELOPMENT

Project Name: DUPONT FUSRAP
Project Location: Deepwater NJ
Site Name: 041

Well Designation:	<u>1-HW-17</u>
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	<u>9-21-04</u>
Sounding Method:	<u>WLI</u>
Stick Up/Down (ft):	<u>3.7</u>
Static Water Level:	<u>6.55</u>
Development Date:	<u>9-21-04</u>
Surge Device:	<u>Block</u>

Gauge Time:	<u>0910</u>
Measurement Reference:	<u>TOC</u>
Well Diameter (in):	<u>2"</u>
Screen Length (ft):	<u>2'</u>
Development Time:	<u>~4.5 hr</u>

Weather: Sunny 72°F, Slight Breeze

Well Volume Determination

A Well Depth:	<u>22.07'</u>
B Depth to Water:	<u>6.55</u>
C Liquid Depth (A-B):	<u>15.52</u>
D Well Volume/ft:	
E Well Volume (Cx D) gal:	
F Liquid Screen Length (ft):	

G Borehole Vol/ft:	
H Borehole Vol (CxG) gal:	
I Sand Vol (H-E) gal:	
J Liquid Vol in Sand (Ix0.3) gal:	
K One Well Volume (E+J) gal:	

	Beginning	1	2	3	4	5
Time (min)		<u>7:42</u>	<u>1:46</u>			
Pump Rate (gpm)						
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)	<u>off scale</u>	<u>11</u>	<u>4</u>			
Dissolved Oxygen (mg/L)						
Eh (mV)						

Total volume of water removed: 130 gal
Estimated Recharge Rate: 23 gpm

Depth to sediment before development: 22.00 ft bgs
Depth to sediment after development: — ft bgs

Development Description: Began surging and pumping on 9-21-04
Surged in 10min increments / pumped for 10min increments for 1 1/2 hrs
Then pumped at 2 gpm. After lunch resumed pumping @ 0.5 gpm
until turbidity dropped. Collected photo of dev. water.
gms photo of clear effluent water collected on 7 OCT 04



**CABRERA
SERVICES**

RADIOLOGICAL
ENVIRONMENTAL
REMEDIATION

FIELD RECORD OF WELL DEVELOPMENT

Project Name: Dupont FUSEAP
Project Location: Deepwater NJ
Site Name: out

Well Designation:	<u>1-MW-18</u>
Condition:	
Well Grout Date:	
Well Installation Date:	

Gauge Date:	<u>9-21-04</u>
Sounding Method:	<u>WLS</u>
Stick up/down (ft):	<u>4.65</u>
Static Water Level:	<u>6.31</u>
Development Date:	<u>9-21-04</u>
Surge Device:	<u>Block</u>

Gauge Time:	<u>0910</u>
Measurement Reference:	<u>TOL</u>
Well Diameter (in):	<u>2"</u>
Screen Length (ft):	<u>2'</u>
Development Time:	

Weather: Sunny 72°F, Slight Breeze

Well Volume Determination

A Well Depth:	<u>10.85</u>
B Depth to Water:	<u>6.31</u>
C Liquid Depth (A-B):	<u>4.54</u>
D Well Volume/ft:	
E Well Volume (Cx D) gal:	
F Liquid Screen Length (ft):	

G Borehole Vol/ft:	
H Borehole Vol (CxG) gal:	
I Sand Vol (H-E) gal:	
J Liquid Vol in Sand (Ix0.3) gal:	
K One Well Volume (E+J) gal:	

	Beginning	1	2	3	4	5
Time (min)		<u>1553</u>	<u>1610</u>	<u>1620</u>		
Pump Rate (gpm)						
Volume purged						
pH						
Temperature (C)						
Conductivity (umhos/cm)						
Turbidity (NTU)		<u>6</u>	<u>11</u>	<u>10</u>		
Dissolved Oxygen (mg/L)						
Eh (mV)						

Total volume of water removed: 35 gal
Estimated Recharge Rate: 1.5 gpm

Depth to sediment before development: — ft bgs
Depth to sediment after development: — ft bgs

Development Description: Surged and bailed dry 20 times.
Took picture of dev. water. Took second picture of same dev. water
on 5 OCT 04