UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

March 5, 2009

Mr. Frank Sorce
Bureau of Environmental Measurements and Site Assessment
Division of Remediation Support
State of New Jersey Department of Environmental Protection
PO Box 407
Trenton, New Jersey 08625-0407

Dear Mr. Sorce:

Enclosed is a copy of the HRS Score for the EI Dupont site (EPA ID: NJD980771604) in Popmton Lakes, Passaic which you requested. Please feel free to contact me if you have any questions or concerns at (212) 637-4342.

Sincerely

James Desir

James Desir
Pre-Remedial Section

O = HRS
□ = PRO

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Air Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	HRS	Max. Score	PRO
1 Observed Release	(0) 45	1	O	45	O
Date and Location:					
Sampling Protocol:					
If line 1 is 0, the S_a = 0. Enter on line 5 If line 1 is 45, then proceed to line 2					
2 Waste Characteristics					
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3, 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
Total Targets Score				39	
4 Multiply 1 x 2 x 3				35,100	
5 Divide line 4 by 35,100 and multiply by 100	S_a = O				O

O = HRS
□ = PRO

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Surface Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	HRS	Max. Score	PRO
1 Observed Release	0 (45)	1	45	45	45
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	0
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	2
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	4
Physical State	0 1 2 (3)	1	3	3	3
Total Route Characteristics Score			9	15	9
3 Containment	0 1 2 (3)	1	3	3	3
4 Waste Characteristics					
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	18
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 (8)	1	8	8	8
Total Waste Characteristics Score			26	28	26
5 Targets					
Surface Water Use	0 1 2 (3)	3	9	9	9
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	0
Population Served/Distance to Water Intake Downstream	0 4 6 8 10 12 16 18 20 (35) 40	1	35	40	35
Total Targets Score			44	55	44
6 If line 1 is 45, multiply 1 x 4 x 5 / If line 1 is 0, multiply 2 x 3 x 4 x 5			51,480	64,350	51,480
7 Divide line 6 by 64,350 and multiply by 100		S_{SW} = 80.00			80.00

O = HRS
□ = PRO

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Ground Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	HRS	Max. Score	PRO
1 Observed Release	0 (45)	1	45	45	45
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	6
Net Precipitation	0 1 2 (3)	1	3	3	3
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	2
Physical State	0 1 2 (3)	1	3	3	3
Total Route Characteristics Score			14	15	14
3 Containment	0 1 2 (3)	1	3	3	3
4 Waste Characteristics					
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18 8	18	18 8
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 (8)	1		8	
Total Waste Characteristics Score			26	26	26
5 Targets					
Ground Water Use	0 1 (2) [3]	3	6	9	9
Distance to Nearest Well/Population Served	0 4 6 8 10 12 16 18 20 24 30 32 (35) 40	1	35	40	35
Total Targets Score			41	49	44
6 If line 1 is 45, multiply 1 x 4 x 5 / If line 1 is 0, multiply 2 x 3 x 4 x 5			47,970	57,330	51,480
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} = 83.67			89.80

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HRS

	S	S^2
Groundwater Route Score (S_{gw})	83.67	7000.67
Surface Water Route Score (S_{sw})	80.00	6400.00
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		13400.67
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		115.76
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		66.91

WORKSHEET FOR COMPUTING S_M

PRO

	S	S^2
Groundwater Route Score (S_{gw})	89.80	8064.04
Surface Water Route Score (S_{sw})	80.00	6400.00
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		14464.04
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		120.27
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		69.52

WORKSHEET FOR COMPUTING S_M

Facility Name: E.I. DuPont de Nemours & Co. (Pompton Lakes Works)

Location: Cannonball Rd, Pompton Lakes, Passaic Co, NJ

EPA Region: II

Person(s) in Charge of the Facility: Anthony Farro
Armando Arcenal

Name of Reviewer: Richard Katz Date: 8/4/82

General Description of the Facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Manufacturer of explosives, detonators, ammunition. Releases from the plant result from shooting pond discharge, wet scrubber, wash water and process waste in unlined lagoons

Scores: S_M = (S_{gw} = 64.29 S_{sw} = S_a = 0)

S_{FE} =

S_{DC} =

Figure 1

HRS COVER SHEET

GROUND WATER ROUTE WORK SHEET

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 (45)	1	45	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 3	2		6	
Net Precipitation	0 1 2 3	1		3	
Permeability of the Unsaturated Zone	0 1 2 3	1		3	
Physical State	0 1 2 3	1		3	
Total Route Characteristics Score				15	
3 Containment	0 1 2 3	1		3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 2 (3) 4 5 6 7 8	1	3	8	
Total Waste Characteristics Score			21	26	
5 Targets					3.5
Ground Water Use	0 1 2 (3)	3	9	9	
Distance to Nearest Well/Population Served	0 4 6 8 10 12 16 18 20 24 (30) 32 35 40	1	30	40	
Total Targets Score			39	49	
6 If line 1 is 45, multiply 1 x 4 x 5 / If line 1 is 0, multiply 2 x 3 x 4 x 5	36855			57,330	
7 Divide line 6 by 57,330 and multiply by 100	S_{gw} = 64.29				

SURFACE WATER ROUTE WORK SHEET

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
[1] Observed Release	0 (45)	1	45	45	4.1
If observed release is given a value of 45, proceed to line [4]. If observed release is given a value of 0, proceed to line [2].					
[2] Route Characteristics					4.2
Facility Slope and Intervening Terrain	0 1 2 3	1		3	
1-yr. 24-hr. Rainfall	0 1 2 3	1		3	
Distance to Nearest Surface Water	0 1 2 3	2		6	
Physical State	0 1 2 3	1		3	
Total Route Characteristics Score				15	
[3] Containment	0 1 2 3	1		3	4.3
[4] Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				26	
[5] Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
[6] If line [1] is 45, multiply [1] x [4] x [5] If line [1] is 0, multiply [2] x [3] x [4] x [5]				64,350	
[7] Divide line [6] by 64,350 and multiply by 100 S_{SW} =					

AIR ROUTE WORK SHEET

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	(0)	45	5.1
Date and Location:					
Sampling Protocol:					
If line 1 is 0, the S = 0. Enter on line 5. If line 1 is 45, then proceed to line 2.					
2 Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score			20	
3 Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score			39	
4 Multiply 1 x 2 x 3				35,100	
5 Divide line 4 by 35,100 and multiply by 100	S_a = (0)				

	S	S^2
Groundwater Route Score (S_{gw})		
Surface Water Route Score (S_{sw})		
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73$		$S_M =$

WORKSHEET FOR COMPUTING S_M