Facility Name: Hummel Chemical

Location: Newark, Essex County, NJ

EPA Region: II

Person(s) in Charge of the Facility:

Name of Reviewer: E. Torpey Date: 12-20-89

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.)

Hummel operated a chemical warehouse/distribution center here until the mid 1960's. Spills and poor housekeeping are the major concerns. A variety of chemical-related industries have operated here from the mid 1930's to the present; therefore, it may be difficult to attribute site-specific contamination to Hummel, who vacated over 20 years ago.

Scores:

HRS S_M = 5.28 (S_{gw} = 4.47 S_{sw} = 7.97 S_a = 0)

PRO S_M = 7.23 (S_{gw} = 6.12 S_{sw} = 10.91 S_a = 0)

HRS COVER SHEET

217196

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	
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	
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	1	8	8
Total Waste Characteristics Score			19	26	26
5 Targets					
Ground Water Use	0 (1) 2 3	3	3	9	3
Distance to Nearest Well/Population Served	(0) 4 6 8 10 / 12 16 18 20 / 24 30 32 35 40	1	0	40	0
Total Targets Score			3	49	3
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			2565	57,330	3510
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	4.47		6.12

Surface Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multi-plier	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		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 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	1	8	8
Total Waste Characteristics Score			19	26	26
5 Targets					
Surface Water Use	0 1 (2) 3	3	6	9	6
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 / 24 30 32 35 40	1	0	40	0
Total Targets Score			6	55	6
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			5130	64,350	7020
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} =	7.97		10.91

AIR ROUTE WORK SHEET

Rating Factor	Assigned Value (Circle One)	Multiplier	HRS	Max. Score	PRO
1 Observed Release	0 45	1		45	
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					
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 =					

HRS

	S	S^2
Groundwater Route Score (S_{gw})	4.47	19.98
Surface Water Route Score (S_{sw})	7.97	63.52
Air Route Score (S_a)		
$S_{gw}^2 + S_{sw}^2 + S_a^2$		83.5
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		9.14
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		5.28

WORKSHEET FOR COMPUTING S_M

PRO

	S	S^2
Groundwater Route Score (S_{gw})	6.12	37.45
Surface Water Route Score (S_{sw})	10.91	119.03
Air Route Score (S_a)		
$S_{gw}^2 + S_{sw}^2 + S_a^2$		156.48
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		12.51
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		7.23

WORKSHEET FOR COMPUTING S_M