HRS COVER SHEET

CONFIDENTIAL

FACILITY NAME: Union Carbide

EPA I.D. #: NYD 980532410

ORIGINAL PRIORITY: Low

REVIEWED BY: Laura LaForge

REASSESSED PRIORITY: Medium

REVIEWED BY: Carol DiGuardia

COMMENTS:

PREPARER: Carol DiGuardia

DATE: 10/06/88

362421

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Union Carbide Corp.
NYD980532410

HRS

	S	S^2
Groundwater Route Score (S_{gw})	1.15	1.32
Surface Water Route Score (S_{sw})	2.18	4.75
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		6.07
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		2.46
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		1.42

WORKSHEET FOR COMPUTING S_M

PRO

	S	S^2
Groundwater Route Score (S_{gw})	24.18	584.67
Surface Water Route Score (S_{sw})	38.05	1447.80
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		2032.47
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		45.08
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		26.05

WORKSHEET FOR COMPUTING S_M

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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	0	45	0
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	4	6	6
Net Precipitation	0 1 2 3	1	3	3	3
Permeability of the Unsaturated Zone	0 1 2 3	1	1	3	2
Physical State	0 1 2 3	1	3	3	3
Total Route Characteristics Score			11	15	14
3 Containment	0 1 2 3	1	1	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	2	8	4
Total Waste Characteristics Score			20	26	22
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	12
Total Targets Score			3	49	15
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			660	57,330	13860
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	1.15		24.18

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Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	HRS	Max. Score	PRO
1 Observed Release	0 45	1	0	45	0
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	2	6	2
Physical State	0 1 2 3	1	3	3	3
	Total Route Characteristics Score		7	15	7
3 Containment	0 1 2 3	1	1	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	2	8	4
	Total Waste Characteristics Score		20	26	22
5 Targets					
Surface Water Use	0 1 2 3	3	6	9	9
Distance to a Sensitive Environment	0 1 2 3	2	4	6	4
Population Served/Distance to Water Intake Downstream	0 4 6 8 10 / 12 16 18 20 / 24 30 32 35 40	1	0	40	40
	Total Targets Score		10	55	53
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			1400	64,350	24486
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} =	2.18		38.05

Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	0 45	1	0	45	5.1	0
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					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				

HRS

PRO

FIGURE 9
AIR ROUTE WORK SHEET