164674

Facility Name: Camdens Municipal Wells

Location: The City of Camden and Pennsacken Township

EPA Region: Camden County N.J

Person(s) in Charge of the Facility: The City of Camden Dept of Utilities

Name of Reviewer: Dan Maltese Date: 1-3-90

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.)

Public supply wells serving approximately 50,000 residents. The wells have a history of groundwater contamination. Chromium has forced wells at Puchack Wellfield to close. Also, increased levels of VOC's is a concern for Camdens potable water

Scores:

HRS S_M = 42.24 (S_{gw} = 73.08 S_{sw} = 0 S_a = 0)

PRO S_M = 42.24 (S_{gw} = 73.08 S_{sw} = 0 S_a = 0)

HRS COVER SHEET

Ground 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 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	1
Total Waste Characteristics Score			19	26	19
5 Targets					
Ground Water Use	0 1 2 3	3	9	9	9
Distance to Nearest Well/Population Served	0 4 6 8 10 / 12 16 18 20 / 24 30 32 35 40	1	40	40	40
Total Targets Score			49	49	4
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			41,895	57,330	41,895
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	73.08		73.08

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		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			0	15	0
3 Containment	0 1 2 3	1		3	
4 Waste Characteristics					
Toxicity/Persistence	0 3 6 9 12 15 18	1		18	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score			0	26	0
5 Targets					
Surface Water Use	0 1 2 3	3		9	
Distance to a Sensitive Environment	0 1 2 3	2		6	
Population Served/Distance to Water Intake Downstream	0 4 6 8 10 / 12 16 18 20 / 24 30 32 35 40	1		40	
Total Targets Score				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} =	0		0

AIR ROUTE WORK SHEET

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

HRS

	S	S^2
Groundwater Route Score (S_{gw})	73.08	5340.68
Surface Water Route Score (S_{sw})	0	0
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		5340.68
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		73.08
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		42.24

WORKSHEET FOR COMPUTING S_M

PRO

	S	S^2
Groundwater Route Score (S_{gw})	73.08	5340.68
Surface Water Route Score (S_{sw})	0	0
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		5340.68
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		73.08
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		42.24

WORKSHEET FOR COMPUTING S_M