US EPA RECORDS CENTER REGION 5
492768

ECOLOGY AND ENVIRONMENT, INC.

FIELD INVESTIGATION TEAM

SITE INSPECTION PLAN

A. GENERAL INFORMATION

SITE: M&W LANDFILL Co

TDD NO.: F05-8703-384

LOCATION: 1999 MOEN ROAD
ROCKDALE, IL WILL Co

U.S. EPA NO.:

SSID NO.:

WSTS NO.: FIL0331GA

PLAN PREPARED BY: KAREN McTIGUE

DATE:

APPROVED BY:

DATE:

OBJECTIVE (including description of work to be performed): SITE INSPECTION TO INCLUDE INTERVIEWS WITH SITE REPRESENTATIVES ALONG WITH A VISUAL INSPECTION.

DESIRED REPORT FORM: SI REPORT (2070-13) ✓ HRS REPORT

OTHER (EXPLAIN)

PROPOSED DATE OF INVESTIGATION:

BACKGROUND REVIEW: Complete: ✓ Preliminary:

HRS PRELIMINARY SCORE OF ROUTES: GW SW AIR
(NO FIELD WORK)

DIRECT CONTACT FIRE AND EXPLOSION

TOTAL PRELIMINARY HRS SCORE VALUE (NO FIELD WORK)

PROJECTED HRS SCORE: GW SW AIR
(WITH FIELD WORK)

DIRECT CONTACT FIRE AND EXPLOSION

TOTAL PROJECTED HRS SCORE

IF NO SAMPLING, EXPLAIN ON PAGE 3.

INSPECTION PRIORITY (BASED ON PROJECTED HRS SCORE): LOW: MEDIUM: HIGH:

B. SITE/WASTE CHARACTERISTICS

WASTE TYPE(S): Liquid Solid ✓ Sludge Gas

CHARACTERISTIC(S): Corrosive Ignitable Radioactive Volatile

Toxic Reactive Unknown ✓ Other (Name)

FACILITY DESCRIPTION: THE FACILITY IS A LANDFILL APPROXIMATELY 10 ACRES IN SIZE.

Principal Disposal Method (type and location): LANDFILL - GENERAL REFUSE

Unusual Features (dike integrity, power lines, terrain, etc.): THE SITE IS LOCATED IN AN INDUSTRIAL AREA NORTH OF THE DES PLAINES RIVER ~ 1 1/2 MILES.

Status: (active, inactive, unknown) THE LANDFILL OPERATED BETWEEN 1974 - 1979. PRIOR TO 1974 OPERATIONAL ACTIVITY IS UNKNOWN.

History: (worker or non-worker injury; complaints from public; previous agency action): THE PAST OWNER, MR. MELVIN F. WATSON PROVIDED FINAL COVER BEFORE LEAVING THE SITE ON 12/31/79, BUT DUE TO ACCESS RESTRICTIONS WAS NOT ABLE TO COMPLETE SEEDING OF FINAL COVER UNTIL MAY OF 1982. THE PRESENT OWNER, W.B. PERSICO, AN ASPHALT PAVING COMPANY HAS BEEN INVOLVED WITH SEVERAL VIOLATIONS AS TO REMOVING FINAL COVER AND REOPENING M+W #2.

C. HAZARD EVALUATION

(Use Hazard Evaluation of Chemicals sheets for specific or representative chemicals present.):

AMMONIA
BARIUM
BORON
CHLORIDE
COOPER
IRON
MANGANESE
SULFATE
ZINC

LEVEL OF PROTECTION: A ___ B ___ C ✓ D ✓

MODIFICATIONS: LEVEL D WITH POSSIBLE UPGRADE TO LEVEL C IF ENTRY EQUIPMENT WARRANTS A CHANGE.

SITE SAFETY PLAN ON FILE AT E & E: YES ✓ NO ___

D. FIELD WORK REQUIRED

PERIMETER ESTABLISHMENT: MAP/SKETCH ATTACHED? YES ✓ NO ___

Perimeter Identified? YES ___ NO ✓

Zone(s) of Contamination Identified? YES ___ NO ✓

Geophysical Work: YES ___ NO ✓

Type: Magnetometry ___ Seismic Refraction ___ GPR ___ Resistivity ___ Other ___

Comments: ASSUME ALL ZONES TO BE CONTAMINATED.

Drilling: YES ___ NO ✓

Well Location Identified: YES ___ NO ___

Drill Plan/Well Installation Plan Attached: YES ___ NO ✓

Sampling Required: YES ___ NO ___

Type: GW ___ SW ___ Air ___ Soil ___ Waste ___ Other ___

Sampling Locations Identified: YES ___ NO ✓

SUMMARY OF SAMPLING PROCEDURES: (Special Equipment, Facilities, or Procedures)

E. ANALYTICAL SERVICES REQUIRED

RAS ____ SAS ____ CRL ____

F. QAPP

REQUIRED: YES ____ NO ✓

IF NO, EXPLAIN: NO/ A QAPP IS ALREADY ON FILE FOR RAS AND CRL SAMPLING.

G. SI WORK TEAM SIZE/LIMITATION

TEAM MEMBER	DISCIPLINE	RESPONSIBILITY
TBA		TEAM LEADER
TBA		TEAM MEMBER
TBA		SAMPLER
TBA		SITE SAFETY OFFICER

WORK LIMITATIONS (Time of day, etc.): WORK DAYLIGHT HOURS ONLY. MONITOR PERSONNEL FOR HEAT AND COLD STRESS. MAINTAIN THE BUDDY SYSTEM AT ALL TIMES

COMMENTS:

PRE-HRS

Facility name: M&W LANDFILL CO

Location: 1999 MOEN ROAD ROCKDALE, IL. WILL CO.

FACILITY DESCRIPTION: M&W OPERATED AS TWO LANDFILLS M&W #2 AND M&W #3, LOCATED ADJACENT TO EACH OTHER. M&W #2 OPENED SOMETIME PRIOR TO 1974, AFTER 1974 THESE LANDFILLS RECEIVED GENERAL REFUSE. PRIOR TO 1974 THERE IS NO RECORD OF WHAT WAS PLACED IN THESE LANDFILLS. M&W #2 WAS CLOSED IN JULY 1976 AND M&W #3 IN DECEMBER OF 1979. THE FORMER OWNER, MR. MELVIN F. WATSON PROVIDED FINAL COVER BEFORE LEAVING THE SITE ON 12/31/79, BUT DUE TO ACCESS RESTRICTIONS WAS NOT ABLE TO COMPLETE SEEDING OF FINAL COVER UNTIL MAY OF 1982. THE PRESENT OWNER, W.B. PERSICO, AN ASPHALT PAVING COMPANY, HAS BEEN INVOLVED WITH SEVERAL VIOLATIONS AS TO REMOVING FINAL COVER AND REOPENING M&W #2.

POTENTIAL SW + GW Scores: S_M = (S_{gw} = 23.26 S_{sw} = 3.72 S_a =) S_{FE} = S_{DC} =	OBS. RELEASE SW + GW S_M = (S_{gw} = 38.77 S_{sw} = 7.97 S_a =) S_{FE} = S_{DC} =
Potential SW OBS. RELEASE GW S_M = (S_{gw} = 38.77 S_{sw} = 3.72 S_a =) S_{FE} S_{DC}	Potential GW OBS RELEASE SW S_M = (S_{gw} = 23.26 S_{sw} = 7.97 S_a =) S_{FE} = S_{DC} =

WORKSHEET

-GW & SW

Groundwater Route			
Depth to aquifer of concern	SILURIAN 5'	3	REF 1
Net precipitation	2"	1	
Perneability (material type)	SILTY CLAY	1	REF GARY COBB
Physical state	SOLID, UNSTABLIZED	1	
Containment (type, degree)	LANDFILL INADEQUATE COVER PONDING	3	REF 2
Toxicity; persistence (compounds)	HEAVY METALS	18	
quantity	UNKNOWN	1	
Groundwater use	DRINKING	2	
Population served	570	2	REF 3
Nearest well	2000'	4	20
Surface Water Route			
Slope and terrain	< 3%	0	
24 hr rainfall	2.3	2	
Nearest Surface water	3000'	2	
Physical state	SOLID, UNSTABLIZED	1	
Containment (type, degree)	LANDFILL, INADEQUATE COVER PONDING	3	
Toxicity; persistence (compounds)	HEAVY METALS	18	
quantity	UNKNOWN	1	
Surface water use	RECREATION	2	
Sensitive environment	N/A		
Intake distance	N/A		
Population served	N/A		

05T:2T

Groundwater Route Score (S_{gw})	23.26	541.03
Surface Water Route Score (S_{sw})	3.72	13.84
Air Route Score (S_a)		
$S_{gw}^2 + S_{sw}^2 + S_a^2$		554.87
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		23.55
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}/1.73 = S_w$:		13.61

OBSERVED RELEASE

	S	S^2
Groundwater Route Score (S_{gw})	38.77	1503.11
Surface Water Route Score (S_{sw})	7.97	63.52
Air Route Score (S_a)		
$S_{gw}^2 + S_{sw}^2 + S_a^2$		1566.63
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		39.58
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}/1.73 = S_w$:		22.88

OBSERVED RELEASE GW ONLY

	S	S^2
Groundwater Route Score (S_{gw})	38.77	1503.11
Surface Water Route Score (S_{sw})	3.72	13.84
Air Route Score (S_a)		
$S_{gw}^2 + S_{sw}^2 + S_a^2$		1516.95
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		38.95
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}/1.73 = S_w$:		22.51

OBSERVED RELEASE SW ONLY

	S	S^2
Groundwater Route Score (S_{gw})	23.26	541.03
Surface Water Route Score (S_{sw})	7.97	63.52
Air Route Score (S_a)		
$S_{gw}^2 + S_{sw}^2 + S_a^2$		604.55
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		24.59
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}/1.73 = S_w$:		14.21

Ground Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	OBS RELEASE
1 Observed Release	0 45	1	0	45	3.1	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					3.2	
Depth to Aquifer of Concern	0 1 2 3	2	6	6		
Net Precipitation	0 1 2 3	1	1	3		
Permeability of the Unsaturated Zone	0 1 2 3	1	1	3		
Physical State	0 1 2 3	1	1	3		
	Total Route Characteristics Score		9	15		
3 Containment	0 1 2 3	1	3	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	1	8		
	Total Waste Characteristics Score		19	26		19
5 Targets					3.5	
Ground Water Use	0 1 2 3	3	6	9		
Distance to Nearest Well/Population Served	0 4 6 8 10 12 16 18 20 24 30 32 35 40	1	20	40		
	Total Targets Score		26	49		26
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			13,338	57,330		22,230
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} = 23.26				38.77

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	OBS. RELEASE
1 Observed Release	(0) 45	1	0	45	4.1	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					4.2	
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3		
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3		
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6		
Physical State	0 (1) 2 3	1	1	3		
	Total Route Characteristics Score		7	15		
3 Containment	0 1 2 (3)	1	3	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	1	8		
	Total Waste Characteristics Score		19	26		19
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
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			2,394	64,350		5,130
7 Divide line 6 by 64,350 and multiply by 100	S_{sw} = 3.72					7.97

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Fire and Explosion Work Sheet : N/A					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Air Route Work Sheet N/A					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 45	1		45	5.1
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 =			

FIGURE 9
AIR ROUTE WORK SHEET

Direct Contact Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	OBS. RSENE
1 Observed Incident	(0) 45	1	0	45	8.1	45
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2						
2 Accessibility	0 (1) 2 3	1	1	3	8.2	
3 Containment	0 (15)	1	15	15	8.3	
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4	15
5 Targets					8.5	
Population Within a 1-Mile Radius	0 1 (2) 3 4 5	4	8	20		
Distance to a Critical Habitat	(0) 1 2 3	4	0	12		
Total Targets Score			8	32		8
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			1800	21,600		5400
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} = 8.33				25.

FIGURE 12
DIRECT CONTACT WORK SHEET