32067

ORIGI
(Red

1. COST CENTER	TECHNICAL DIRECTION DOCUMENT (TDD) UNCONTROLLED HAZARDOUS WASTE SITE PROJECT ecology and environment, inc.	2. No. F3-8106-16
EP 152-13		

3. Priority:	4. Authorized Overtime	5. EPA Site Identification Number	6. Completion Date:	7. Reference Info:
☒ High ☐ Medium ☐ Low	☐ Yes ☒ No	PA-399	*see below	☐ Yes ☐ No ☐ Attached ☒ Pick Up

8. General Task Description: Prepare and complete a Mitre Model and any sampling necessary to complete the Mitre Model for the following site:

Site Name: Osborne Site

9. Specific Elements:

*Completion dates are dependent on approval of Mitre Model and will be site specific. TDD will be amended later to include completion dates. However, this task supercedes other high priority assignments.

10. Interim Deadlines

11. Desired Report Form: Formal Report ☒ Letter Report ☐ Formal Briefing ☐

Other (Specify):

12. COMMENTS:

Perform concurrently with FJ-8105-J4. JBH

13. Authorizing DPO:

(Signature)

14. Date: June 16, 1981

15. Received By: ☒ Accepted ☐ Accepted with exceptions ☐ Rejected

Joseph K. McGovern
(FITL Signature)

16. Date: 6-19-81

Exceptions Comments From (15)

Sheet 1 White – FITL Copy
Sheet 2 Canary – DPO Copy
Sheet 3 Pink – Contracting Officer's Copy (Washington, D. C.)
Sheet 4 Goldenrod – Project Officer's Copy (Washington, D. C.)
☐ Photocopy to E & E NPM (Washington, D. C.)

100004

ORIGINAL (Red)

1. COST CENTER	ACKNOWLEDGMENT OF COMPLETION FOR TDD	2.
EP-152-13	☒ Complete ☐ Interim UNCONTROLLED HAZARDOUS WASTE SITE PROJECT ecology and environment, inc.	F3-8106-16 No.

3A. RESPONSE:

Mitre Model - Osborne Site
PA-399

☒ FORMAL REPORT
☐ LETTER REPORT
☐ FORMAL BRIEFING
☐ OTHER (SPECIFY) :

3B. TECHNICAL LABOR HOURS EXPENDED 25.5

4. DPO ACTION ☐ Accepted ☐ Accepted with exceptions ☐ Rejected

5. COMMENTS:

6. I certify that the attached materials meet and comply with all requirements of the subject TDD. Joseph H Mc Govern (FITL Signature)	7. Date: 07/30/81
8. I acknowledge that I have been provided with the materials and services specified in the subject TDD within its original or revised time frames. (Authorizing DPO Signature)	9. Date:

Sheet 1 White – FITL Copy
Sheet 2 Canary – DPO Copy
Sheet 3 Pink – Contracting Officer's Copy (Washington, D.C.)
Sheet 4 Goldenrod – Project Officer's Copy (Washington, D.C.)
☐ Photocopy to E & E NPM (Washington, D. C.)

100005

Revised Summary

F3-8106-16 ORIGINAL (Red)

24 June 1981 PEG

Citrec Model Summary
Osborne Dump (PA-399)
F3-8106-16

Osborne ~~Reclamation~~ Industrial Waste Site is located east of Grove City on Pine Street Extension in Mercer County, PA (40°09'40"; 80°03'30"). The site is ~~a~~ an abandoned strip mine partially back-filled but not lined or bonded. Wastes from Cooper-Energy, Grove City, PA, which include liquids, foundry sands and other industria wastes, were dumped into a mine pool. The site was closed by the State Department of Environmental Resources (PA-DER) in 1978.

The PA-DER has requested legal action against James Osborne and Cooper Energy for illegal disposal of wastes. This request was filed in September, 1980 ~~since~~ as an inactive site involving hazardous wastes. ~~Since the late~~ Ownership of this property ~~has been~~ changed in 1979 and now belongs to Mr. Edward McDougall. *

100006

The major concern with Osborne Dump is the possibility of ground-water contamination from the mine

DOC. April 1980 sample results for metals and phenol show concentration (except for iron) less than 1 mg/L of zinc, lead, nickel, copper, cadmium and manganese on-site in the lagoons and in the discharge from the site.

* Any action against Mr. Osborne has been terminated as he has died. Although the present owner is available he bought ~~it~~ the land after it was closed for waste disposal. Copper-Energies is known to have disposed wastes (liquid) there. ~~although~~ A list of their products (RCRA) is in the model notes as additional information.

100006A

P3: 8106-16-04
ORIGINAL
(Red)

APPENDIX E
MODEL WORKSHEETS

Site Name: Osborne Dump

Location: Pine Township, Mercer Co. PA

EPA Region: III

Person(s) in Charge of the Site: Patrick Boyle-PADER
Meadville Office
814-724-8557

Name of Reviewer: Beth Gross

Site Overall Score: ~~41.01~~ 39.57

General Description of the Site:

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

An old strip-pit surface coal mine which was used for industrial waste. The wastes were disposed into a mine pool. The wastes included liquids, sludges, sewage and other industrial wastes from Cooper-Energy. The primary concern is the mine pools and their possible impact on groundwater. Waste characteristics are needed for a more accurate rating.

100007

ORIGINAL
(Red)

ROUTE - GROUND WATER

Rating Factor	Basis of Information	Site Rating (Circle One)	Multiplier	Site Score	Maximum Possible Score
1 OBSERVED RELEASE (ref GW 1)					
Measured Level or Evidence of Release		(0) 45	1	0	45
If the site score is zero, go to step 2 otherwise, go to step 5					
2 ROUTE CHARACTERISTICS[1] (ref GW 2)					
Depth to Aquifer of Concern	footnote 1	0 1 (2) 3	2	4	6
Net Precipitation	" 2	0 1 (3) 3	1	3	3
Permeability of Unsaturated Zone	" 3	0 1 2 (3)	2	6	6
			Subtotal	13	15
3 CONTAINMENT[1,2] (ref GW 3)					
Containment		0 1 2 (3)	1	3	3
4 POTENTIAL FOR RELEASE					
Multiply site score from 2 by site score from 3. The product is site rating for this route.		36	1	36	45
5 RELEASE					
Enter site score from 1 or 4				36	45
6 WASTE CHARACTERISTICS[1,3] (ref GW 4)					
Physical State	footnote 4	0 1 (2) 3	1	2	3
Persistence		0 1 2 (3)	2	6	6
Toxicity/ Infectiousness		0 1 2 (3)	2	6	6
			Subtotal	14	15
7 HAZARDOUS WASTE QUANTITY[1] (ref GW 5)					
Total Waste Quantity (by Superfund definition) excluding waste that is totally contained	footnote 5	0 1 2 3 4 (5)	1	5	5
8 TARGETS[1] (ref GW 6)					
Ground Water Use	footnote 6	0 1 (2) 3	3	6	9
Distance to Nearest Well Downgradient	topo	0 1 2 (3)	3	9	9
Population Served by Ground Water Within 3 Mile Radius	topo	0 1 2 3 4 (5)	6	30	30
			Subtotal	45	48
9 GROUND WATER ROUTE SUBTOTAL					
A. Multiply 5 x 6 x 7 x 8				113,400	162,000
B. Multiply [A.] by Normalization Factor of 0.6 and Divide by 1,000			0.6	68,04 [B.] Route Subtotal	97.2

[1] A rating of zero should be entered when data is unavailable to rate an additive factor. A rating of 1 should be entered when data is unavailable to rate a multiplicative category such as the waste quantity or containment. A total of 5% missing data for the entire site is allowed when rating a site.

[2] If the site has more than one type of containment (e.g., surface impoundment, landfill, containers), consider all cases separately and enter the score from the worst case.

[3] Rate the five most hazardous wastes. Select the one with the highest subtotal score and enter that score.

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ORIGINAL (Red)

ROUTE - SURFACE WATER

Rating Factor	Basis of Information	Site Rating (Circle One)	Multiplier	Site Score	Maximum Possible Score
1 OBSERVED RELEASE (ref SW 1)					
Measured level or evidence of release	fn 57	0 (45)	1	45	45
If the site score is zero, go to step 2 otherwise, go to step 5					
2 ROUTE CHARACTERISTICS[1] (ref SW 2)					
Site Slope and Terrain		0 1 2 3	1		3
1 Year 24 Hour Rainfall		0 1 2 3	1		3
Distance to Surface Water		0 1 2 3	1		3
Flood Potential		0 1 2 3	2		6
			Subtotal		15
3 CONTAINMENT[1,2] (ref SW 3)					
Containment		0 1 2 3	1		3
4 POTENTIAL FOR RELEASE					
Multiply site score from 2 by site score from 3. The product is site rating for this route.			1		45
5 RELEASE					
Enter site score from 1 or 4				45	45
6 WASTE CHARACTERISTICS[1,3] (ref SW 4)					
Physical State	fn. 68	0 1 (2) 3	1	2	3
Toxicity/ Infectiousness		0 1 2 (3)	2	16	6
Persistence		0 1 2 (3)	2	.16	6
			Subtotal	14	15
7 HAZARDOUS WASTE QUANTITY[1] (ref SW 5)					
Total Waste Quantity (By Superfund definition, excluding waste that is totally contained)	fn 79	0 1 2 3 4 (5)	1	5	5
8 TARGETS[1] (ref SW 6)					
Surface Water Use	fn. 810	0 1 (2) 3	3	6	9
Critical Habitats	fn. 911	0 1 (2) 3	2	4	6
Population Served by Surface Water With Water Intake Within 3 Miles Downstream From Site	fn 1012	(0) 1 2 3 4 5	6	0	30
			Subtotal	10	45
9 SURFACE WATER ROUTE SUBTOTAL					
A. Multiply 5 x 6 x 7 x 8				31500	151,875
B. Multiply [A.] by normalization factor of 0.64 and divide by 1,000			0.64	20.16 [B.] Route Subtotal	97.2

ORIGINAL (Red)

ROUTE - AIR

Rating Factor	Basis of Information	Site Rating (Circle One)				Multiplier	Site Score	Maximum Possible Score
1	**OBSERVED RELEASE*** (ref A 1)							
Evidence of Release	fn. #13	(0)			45	1	0	45
If the site score is zero, the route subtotal score is zero, otherwise, go to Step 2								
2	**RELEASE**							
Enter site score from 1								45
3	**WASTE CHARACTERISTICS**[1,3] (ref A 2)							
Physical State/ Volatility		0	1	2	3	1		3
Reactivity		0	1	2	3	1		3
Incompatibility		0	1	2	3	1		3
Toxicity/ Infectiousness		0	1	2	3	2		6
						Subtotal		15
4	**HAZARDOUS WASTE QUANTITY**[1] (ref A 3)							
Total Waste Quantity		0	1	2	3	4	5	1		5
(by Superfund definition) excluding waste that is totally contained								
5	**TARGETS**[1] (ref A 4)							
Distance to Nearest Population		0	1	2	3			2		6
Population Within 1 Mile Radius		0	1	2	3	4	5	5		25
Critical Environments		0	1	2	3			2		6
Land Use		0	1	2	3			1		3
							Subtotal			40
6	**AIR ROUTE SUBTOTAL**							
A. Multiply 2 x 3 x 4 x 5										135,000
B. Multiply [A] by normalization factor of 0.72 and divide by 1,000							0.72	(0) [B.] Route Subtotal		97.2

*Only air monitoring data will be considered as evidence of release.

100010

ORIGINAL
(Red)

ROUTE - FIRE AND EXPLOSION

Rating Factor	Basis of Information	Site Rating (Circle One)	Multiplier	Site Score	Maximum Possible Score
1 ROUTE CHARACTERISTICS* (ref FE 1)					
Ignition Source	fn 12 14	(0) 15	1	0	15
2 CONTAINMENT[1,2] (ref FE 2)					
Containment		0 3	1		3
3 POTENTIAL FOR RELEASE					
Multiply site score from 1 by site score from 2. The product is site rating for this route.			1	0	45
4 RELEASE					
Enter site score from 3					45
5 WASTE CHARACTERISTICS[1,3] (ref FE 3)					
Ignitability		0 1 2 3	1		3
Reactivity		0 1 2 3	1		3
Incompatibility		0 1 2 3	1		3
			Subtotal		9
6 HAZARDOUS WASTE QUANTITY[1] (ref FE 4)					
Total Waste Quantity (By Superfund definition) excluding waste that is totally contained.		0 1 2 3 4 5	1		5
7 TARGETS[1,2] (ref FE 5)					
Distance to Nearest Population		0 1 2 3 4 5	1		5
Distance to Nearest Off-Site Building		0 1 2 3	1		3
Distance to Environmentally Sensitive Area		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
Number of Buildings Within 2 Mile Radius		0 1 2 3 4 5	1		5
			Subtotal		24
8 FIRE AND EXPLOSION ROUTE SUBTOTAL					
A. Multiply 4 x 5 x 6 x 7					43,600
B. Multiply [A.] by normalization factor of 2.0 and divide by 1,000			2.0	0 [B.] Route Subtotal	97.2

*The fire and explosion route will be considered only if a state or local fire marshall has certified that the site represents a significant fire and explosion threat to the public and to sensitive environment. However, any demonstrated fire and explosion threat based on field observation (e.g., explosivity meter readings) will also be considered as sufficient evidence.

100011

ORIGINAL
(Red)

ROUTE - DIRECT CONTACT

Rating Factor	Basis of Information	Site Rating (Circle One)	Multiplier	Site Score	Maximum Possible Score
1	OBSERVED RELEASE* (ref DC 1)				
Evidence of Contact		(0) 45	1	0	45
If the site score is zero, go to step 2. Otherwise, go to step 5					
2	ROUTE CHARACTERISTICS (ref DC 2)				
Accessibility of Waste	fn. 13 15	0 (15)	1	15	15
3	CONTAINMENT[1,2] (ref DC 3)				
Containment	fn 14 16	0 1 (2) 3	1	2	3
4	POTENTIAL FOR RELEASE				
Multiply site score from 2 by site score from 3. The product is site rating for this route.			1	30	45
5	RELEASE				
Enter site score from 1 or 4				30	45
6	WASTE CHARACTERISTICS[1,3] (ref DC 4)				
Toxicity/ Infectiousness	fn 15 17	0 1 2 (3)	5	15	15
7	TARGETS[1] (ref DC 5)				
Population Within 1 Mile Radius	fn 16 18	0 1 2 3 (4) 5	4	16	20
Critical Habitat	fn 17 19	0 1 (2) 3	2	4	6
Land Use	fn 18 20	0 1 (2) 3	2	4	6
		Subtotal		24	32
8	DIRECT CONTACT ROUTE SUBTOTAL				
A. Multiply 5 x 6 x 7				10,800	21,600
B. Multiply [A] by normalization Factor of 4.5 and divide by 1,000			4.5	48.6 [B.] Route Subtotal	97.2

*Health report certified by a physician will be considered as sufficient evidence.

100012

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(Red)

10 AGGREGATE SITE RATING			
Route	Route Subtotal from 6, 8 or 9	Route Subtotal Squared	Maximum Possible Score
Ground Water	68.04	4629.44	$(97.2)^2 = 9447.84$
Surface Water	20.16	406.43	$(97.2)^2 = 9447.84$
Air	0	0	$(97.2)^2 = 9447.84$
Fire and Explosion	0	0	$(97.2)^2 = 9447.84$
Direct Contact	48.6	2361.96	$(97.2)^2 = 9447.84$
Sum		7397.83	47239.2
Square root of Sum		86.01	217.35
Overall Score* $= \left(\frac{\sqrt{\text{sum}} \times 100}{217.35}\right)$		39.57	100

*The overall score will be between 0 and 100. The Maximum Overall Score for a Site With Only One Exposure Route is 44.7.

100013

F3-8106-16 ORIGINAL (Red)

Osborne Dump
model justification

RCRA data

Cooper Energy Services
Lincoln Ave
Grove City, PA 16127
Facility Id. = PAD000800201
Contact: E.B. Stolba, Manager Mfg. Ope.
(412) 458-8000
Waste info.
D000: non-listed toxic wastes
D001 - non-listed ignitable wastes
D002 " " corrosive wastes
F001 - spent halo chlorides & sludges fr
iron gray foundry
F003 - non-halogenated solv. & solv. re
still bottoms
F006 electroplating treat sludge
K061 emission control dust fm
elec/furn prod. steel
U154 methanol or methyl alcohol
U210 tetrachloroethane *

above information not valid for
Nitro model - it is noted here as
possible wastes disposed of at
Osborne Dump since Cooper Energy
was mentioned as a source of this
wastes.

100014

Groundwater

footnote 1 - Groundwater in Northwestern
Pennsylvania, vol. W-3 (21
footnote 2 - Water Resources Bulletin N

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Net precipitation - 16"   Dept. of ER
Office of Resources Management
Water Resources Bulletin 13

35' of surface glacial deposits (overburden)

footnote 3 - Mercer Co. Soil Survey
(3 rating) 2-6.3 in/hr = $1.4 \times 10^{-3} - 4.5 \times 10^{-3}$ cm/sec

footnote 4 - based on substances found in water quality analyses of water on-site
phenols - see chart in Model Document (pg 49)
zinc: (possibly from electroplating sludge)
Physical State - solid - ~~3~~ 2
Persistance - 3
Toxicity - 3
(phenol is 3, 1, 3 respectively)
use zinc as waste

~~footnote 5 - waste quantity unknown at least 40 drums~~
footnote 6 -

~~After discussion with Pat Boyle - PA DER who has been on-site the model was revised per the telecon.~~

~~Groundwater~~
~~footnote 1 - mine pools on-site are groundwater fed - sample results of lagoons show evidence of release~~

~~footnote 2 - see footnote 4 above~~ 100015

footnote 5 - based on dimensions of the lagoons in a memo in

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the lagoons is ~2769 sq. yds - based on the fact that the area is an abandoned strip mine a depth of at least 1 yd is estimated - ∴ hazardous waste quantity is ≥ 437 cu. yds.

footnote 6 - Grove City has municipal water

Surface Water

footnote 9 - The water sample taken of the discharge from the site shows contamination. This drainage flows to a swamp which drains to a small stream.

footnote 8 - see footnote 2 under ground water

footnote 7 see footnote 3 under groundwat

footnote 8[10] - Swamp Run is fished.

footnote 9[11] upland wetlands which feed Swamp Run within ½ mi - 1 mi.

footnote ~~10~~ 12 - water supply is groundwater

100016

Air

footnote ~~11~~ 13 - Gary Bryant - WFO scanned site ~~No air monitoring done on or near site, although organic odors have been noted.~~
with HNU - no readings noted

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Fire and Explosion

~~footnote 12 — phenol is present & is a NFPA Level 2 flammable material~~

~~footnote 13 — phenol — is [illegible]~~

footnote ~~12~~ 14 - insufficient data to substantiate a fire or explosion possibility.

Direct Contact

footnote ~~13~~ 15 the wastes lie in mine pools and lagoons - without cover.

footnote ~~14~~ 16 there is a gate across the access road but no fence or guards - easily accessable.

footnote ~~15~~ 17 based on zinc.

footnote ~~16~~ 18 one mile radius includes part of Grove City

footnote ~~17~~ 19 see footnote 9 - Surface Water

footnote ~~18~~ 20 - farm lands and commercial properties between 1/4 and 1/2 mile.