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HRS DOCUMENTATION RECORD

for

Cox Road Dump Site

Dayton, Texas

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August 2005

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PROTECTING TEXAS BY REDUCING AND PREVENTING POLLUTION

Hazard Ranking System Documentation Record

for

Cox Road Dump Site
Dayton, Liberty County, Texas
Solid Waste Registration # 39016
EPA Facility Identifier # TXD987987179

Prepared by:

Texas Commission on Environmental Quality
Superfund Site Discovery and Assessment Program
Austin, Texas

August 2004

HRS
Documentation Record

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HRS DOCUMENTATION RECORD

COX ROAD DUMP SITE

DAYTON, LIBERTY COUNTY, TEXAS

SIGNATURE PAGE

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8/25/04
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CONTENTS

FIGURES

TABLES

HRS DOCUMENTATION RECORD COVER SHEET

SITE NAME: Cox Road Dump Site

CONTACT PERSON:

Documentation Record: Meagan H. Guin - TCEQ Project Manager 512/239-2176

PATHWAYS OF CONCERN:

Groundwater Pathway

Releases of hazardous substances to the Groundwater Pathway are one of the concerns for this site. Hazardous substances from the former landfill have been documented in the shallow ground water at the site. The Groundwater Pathway is being scored based on the actual contamination and potential contamination. The primary constituents of concern evaluated for this HRS documentation record are barium, boron, manganese, cyanide, 4,4'-DDE, polyaromatic hydrocarbons (PAHs), volatile organic compounds (VOCs) inlcuding benzene, toluene, ethylbenzene, and xylene (BTEX), and semi-volatile organic compounds (SVOCs) including phenol.

Soil Exposure Pathway

The Soil Exposure Pathway is a concern for this site. Hazardous substances have been found on-site in the shallow and deep soils of the landfill. The Soil Exposure Pathway is being scored based on the actual contamination detected in the soil. The primary constituents of concern evaluated for this HRS documentation record are barium, cadmium, chromium, lead, mercury, VOCs inlcuding BTEX, and SVOCs including phenol.

PATHWAYS, COMPONENTS, OR THREATS NOT EVALUATED:

Surface Water Pathway

The Surface Water Pathway was not evaluated because the inclusion of this pathway would not significantly affect the score.

Air Migration Pathway

The Air Migration Pathway was not evaluated because the inclusion of this pathway would not significantly affect the site score.

(Although these pathways have not been evaluated, the TCEQ is concerned for all pathways surrounding the site. However, evaluation of these pathways would not have significantly increased the overall site score.)

NOTES TO THE READER

The following rules were used when citing references in the HRS Documentation Record:

1. All references attached to this report have been stamped with a designated page number (example: Ref. 1, p. 10 = 001 00010). However, if the reference being cited has an original page number, that page number was cited. If the reference being cited has no original page number or the pagination is not complete, then the designated page number is cited.

2. The State predecessor agencies: Texas Natural Resource Conservation Commission (TNRCC), Texas Water Quality Board (TWQB), Texas Department of Water Resources (TDWR), Texas Water Commission (TWC), and Texas Air Control Board (TACB), referred to throughout this report are now known as the Texas Commission on Environmental Quality (TCEQ). The new agency, TCEQ, became effective September 1, 2002, as mandated under House Bill 2912, Article 18 of the 77th Regular Legislative Session.

HRS DOCUMENTATION RECORD

Name of Site: Cox Road Dump Site **Date Prepared:** 08/04

Site Specific Identifier: Pile-Other

Location of Site: One mile north of FM 1413 on CR 491 (Cox Road)

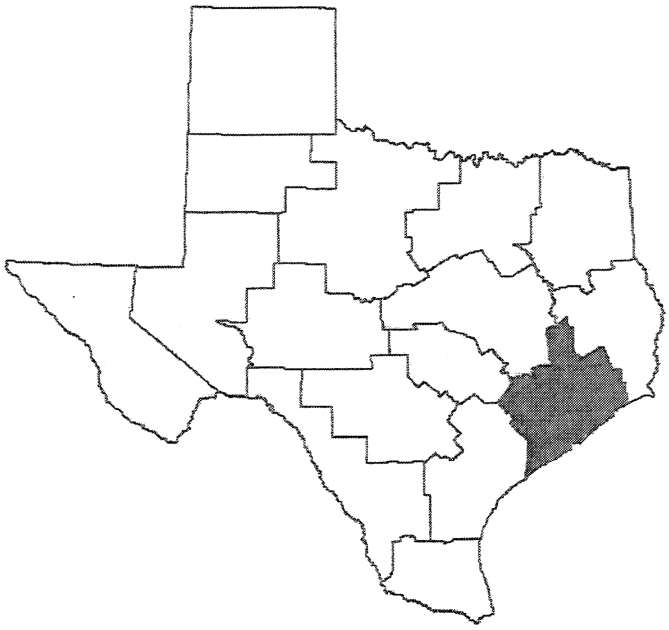
City, County, State: Dayton, Liberty County, Texas

General Location in the State: (see Figure 1, Site Location Map).

Topographic Map(s): US Geological Survey 7.5 Minute Topographic Map, Sheeks Quadrangle.

Latitude: 29° 58' 30.84" North **Longitude:** 94° 56' 12.83" West

TCEQ Region: 12

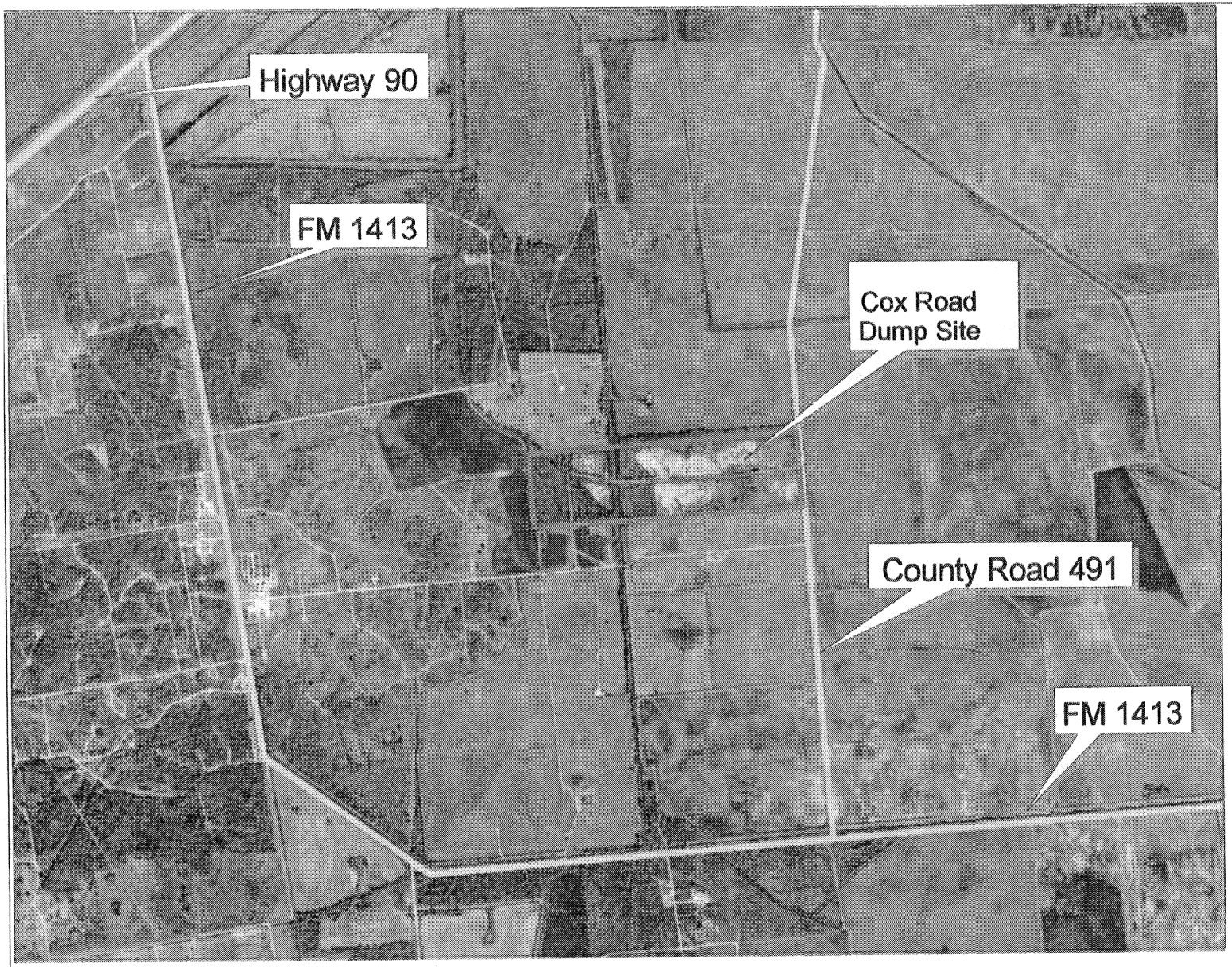


Region 12 - Houston

Pathway Scores:
Ground Water Migration Pathway - 26.27
Surface Water Migration Pathway - NE
Soil Exposure Pathway - 0.0
Air Migration Pathway - NE

NE - Not Evaluated

HRS SITE SCORE: 13.14



Cox Road Dump Site

HRS Documentation Record
Site Location Map
Figure 1

Liberty County
Dayton,
Texas

0.7 0 0.7 1.4 Miles

N
W E
S

The base data used is the Sheeks NW and NE Digital Orthphoto Quadrangle (DOQ) which is a digital version of an aerial photograph. This DOQ was produced by the TCEQ using USGS guidelines. UTM NAD 83 Zone 15

SITE SUMMARY

General Description of the Site:

The Cox Road Dump Site is located northeast of Houston, Texas in Liberty County. The site is on the east side of County Road 491 (Cox Road), one mile north of FM 1413 in Dayton, Texas 77535. This landfill or landfarm is approximately 83 acres and was in operation from 1969 to 1983 by Joiner Oil Company. The site is now owned by Joiner Liquidating Trust with no owners, trustees or attorneys known to manage the property.

Cox Road Dump Site in Dayton, Texas (TXD 987987179) has another name, the Liberty Waste Disposal Landfill (TXD 051109692). Both names and identification numbers are owned by Liberty Waste Disposal Company (LWDC) and refer to the same site located in Dayton, Texas. Liberty Waste Disposal Company also had a landfill operation in Highlands, Texas (TXD 980514954).

Site History:

The Cox Road Dump Site was a nonhazardous industrial waste disposal facility. Operations began at the landfill in approximately 1969. LWDC requested a temporary permit to operate a commercial/industrial solid waste disposal facility from the Texas Water Quality Board (TWQB), predecessor to TCEQ, in April 1970. TWQB issued a permit and later a Solid Waste Registration Number (No. 2008) to the facility. The registration number was changed to a permit number (No.39106) in February 1971. The facility was originally used to landfill tank bottoms and filter cake from petroleum companies, including Lubrizol, using a trench and fill method (Reference 5). The trenches used to dispose of the wastes were originally 18 to 20 feet deep and penetrated the shallow water-bearing zone; boring logs that were included with the originally permit application documented water levels at 13 to 15 feet below ground surface (bgs). When the industrial solid waste regulations became effective in 1970, the landfill operations were limited to a depth of 8 feet and a landfarm operation was initiated.

At the close of operations, the landfill was capped with soil dug up from a portion of the site. Since then the three foot layer of topsoil has been eroded away and exposed the buried waste. Runoff from the site drains into the Trinity River through a series of ditches that run at the peripheries and across the center of the property. There is no approved closure plan for the Cox Road Dump Site (Reference 5).

In 1990, the Environmental Protection Agency (EPA) investigated the Cox Road Dump Site to be a chemical landfill according to the Preliminary Assessment completed for the site. The EPA also investigated this site in 1988 with a Preliminary Assessment and Site Inspection under the name Liberty Waste Disposal Landfill.

Complaints have been received by the TCEQ Houston Region 12 Office and by the TCEQ EXEC/Intergovernmental Relations Section, which were referred to the TCEQ Houston Region 12 Office for investigation. The complainants witnessed substances oozing from the ground surface of the dump site and are concerned about contamination spreading to their residences when the area floods. The site has numerous pint sized jars with oily substances, rusted drums, what appears to be rock or cake sulfur, and brownish black ooze seeping from the ground. Area residents indicate the landfill was

approximately 40 feet deep with no liner.

A compliance evaluation investigation at the site was conducted on November 7, 15, and December 17, 2002. In November and December 2002 samples were collected from the abandoned disposal site. The samples from three random pint jars were collected in November 2002 and had levels of acetone, 2-hexanone, methyl ethyl ketone (MEK) and phenol which exceeded Tier 1 Texas Risk Reduction Program (TRRP) Protective Concentration Levels (PCLs) for a potential soil to groundwater contamination for a 30-acre source area (Reference 5).

The results of soil and water samples collected in December 2002 indicate that arsenic, chromium, barium, lead and mercury concentrations exceeded the Texas Site-Specific Background levels. Toluene, ethyl benzene, and xylene were detected and phenol concentrations exceeded levels for TRRP Tier 1 Residential Soil PCLs (Reference 5).

The EPA completed an Integrated Assessment (IA) at the abandoned site in August 2003. The IA included sampling on site surface soil, surface water, sediment, and waste. Off site samples were comprised of surface water, sediment, and residential soil samples. The on site source soil samples identified inorganics, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). Analytical data collected from the surface water pathway, including surface water and sediment samples, and the residential soil samples did not contain constituents attributable to the site (Reference 4).

In April 2004, the TCEQ collected soil and shallow groundwater samples from the Cox Road Dump Site and at a background location. The on site soil samples contained levels of contaminants above three times the background including barium, cadmium, chromium, cobalt, lead, mercury, Aroclor 1016, SVOCs (including phenol), and VOCs (including benzene, toluene, ethylbenzene and xylene (BTEX)). The attached tables indicate which contaminants were above three times the background levels (Reference 6). The on site water samples were identified to have various VOCs (including BTEX), SVOCs including phenol, polyaromatic hydrocarbons (PAHs), cyanide, inorganics including barium and boron, and 4,4'-DDE (pesticide) (Reference 6).

TABLE 1 --GROUND WATER MIGRATION PATHWAY SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned	
Aquifer Evaluated: Chicot/Evangeline Aquifer			
Likelihood of Release to an Aquifer:			
1. Observed Release (Reference 1, Section 3.1.1; Reference 6, pp. 10-15)	550	550	
2. Potential to Release:			
2a. Containment	10	10	
2b. Net Precipitation	10	10	
2c. Depth to Aquifer	5	3	
2d. Travel Time	35	5	
2e. Potential to Release [lines 2a(2b + 2c + 2d)]	500	180	
3. Likelihood of Release (higher of lines 1 and 2e)	550		550
Waste Characteristics:			
4. Toxicity/Mobility (Reference 1, Section 3.2.1; Reference 6, p. 10-barium)	(a)	10000	
5. Hazardous Waste Quantity (Reference 1, Section 3.2.2; Reference 10, p. 1)	(a)	10000	
6. Waste Characteristics	100		100
Targets:			
7. Nearest Well (Reference 1, Section 3.3.1; Reference 4, p. 47)	(b)	9	
8. Population:			
8a. Level I Concentrations	(b)		
8b. Level II Concentrations	(b)		
8c. Potential Contamination (Reference 1, Section 3.3.2.4; Reference 4, pp. 47-48)	(b)	20.4	
8d. Population (lines 8a + 8b + 8c)	(b)	20.4	
9. Resources (Reference 1, Section 3.3.3; Reference 11, pp. 1-2)	5	5	
10. Wellhead Protection Area (Reference 1, Section 3.3.4; Reference 4, p. 47)	20	5	
11. Targets (lines 7 + 8d + 9 + 10)	(b)		39.4
Ground Water Migration Score for an Aquifer:			
12. Aquifer Score [(lines 3 x 6 x 11)/82,5000][c]	100		26.27
Ground Water Migration Pathway Score:			
13. Pathway Score (S_{gw}), (highest value from line 12 for all aquifers evalueated)[c]	100		26.27

[a] Maximum value applies to waste characteristcs category
[b] Maximum value not applicable
[c] Do not round to nearest integer

TABLE 2 --SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned	
Watershed Evaluated:			
Drinking Water Threat			
Likelihood of Release:			
1. Observed Release	550	0	
2. Potential to Release by Overland Flow:			
2a. Containment	10	10	
2b. Runoff	10	25	
2c. Distance to Surface Water	5	3	
2d. Potential to Release by Overland Flow [lines 2a(2b + 2c)]	35	280	
3.Potential to Release by Flood:			
3a. Containment (Flood)	10	10	
3b. Flood Frequency	50	25	
3c. Potential to Release by Flood (lines 3a x 3b)	500	250	
4. Potential to Release (lines 2d + 3c, subject to a maximum of 500)	500	500	
5. Likelihood of Release (higher of lines 1 and 4)	550		500
Waste Characteristics:			
6. Toxicity/Persistence	(a)	1000	
7. Hazardous Waste Quantity	(a)	10000	
8. Waste Characteristics	100		56
Targets:			
9. Nearest Intake	50		
10. Population:			
10a. Level I Concentrations	(b)		
10b. Level II Concentrations	(b)		
10c. Potential Contamination	(b)		
10d. Population (lines 10a + 10b + 10c)	(b)		
11. Resources	5		
12. Targets (lines 9 + 10d + 11)	(b)		
Drinking Water Threat Score:			
13. Drinking Water Threat Score [(lines 5x8x12)/82,500, subject to a max of 100]	100		0
Human Food Chain Threat			
Likelihood of Release:			
14. Likelihood of Release (same value as line 5)	550		500
Waste Characteristics:			
15. Toxicity/Persistence/Bioaccumulation	(a)	500	
16. Hazardous Waste Quantity	(a)	10000	
17. Waste Characteristics	1000		32
Targets:			
18. Food Chain Individual	50		
19. Population			
19a. Level I Concentration	(b)		
19b. Level II Concentration	(b)		
19c. Potential Human Food Chain Contamination	(b)		
19d. Population (lines 19a + 19b + 19c)	(b)		
20. Targets (lines 18 + 19d)	(b)		
Human Food Chain Threat Score:			
21. Human Food Chain Threat Score [(lines 14x17x20)/82500, subject to max of 100]	100		0

Environmental Threat			
Likelihood of Release:			
22. Likelihood of Release (same value as line 5)	550		500
Waste Characteristics:			
23. Ecosystem Toxicity/Persistence/Bioaccumulation	(a)	500	
24. Hazardous Waste Quantity	(a)	10000	
25. Waste Characteristics	1000		32
Targets:			
26. Sensitive Environments			
26a. Level I Concentrations	(b)		
26b. Level II Concentrations	(b)		
26c. Potential Contamination	(b)		
26d. Sensitive Environments (lines 26a + 26b + 26c)	(b)		
27. Targets (value from line 26d)	(b)		
Environmental Threat Score:			
28. Environmental Threat Score [(lines 22x25x27)/82,500 subject to a max of 60]	60		0
Surface Water Overland/Flood Migration Component Score for a Watershed			
29. Watershed Score[c] (lines 13+21+28, subject to a max of 100)	100		0
Surface Water Overland/Flood Migration Component Score			
30. Component Score (S_{sw})[c] (highest score from line 29 for all watersheds evaluated)	100		0

[a] Maximum value applies to waste characteristics category
[b] Maximum value not applicable
[c] Do not round to nearest integer

TABLE 3 --SOIL EXPOSURE PATHWAY SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned	
Likelihood of Exposure:			
1. Likelihood of Exposure (Reference 1, Section 5.1.1; Reference 6, p. 4)	550		0
Waste Characteristics:			
2. Toxicity (Reference 1, Section 5.1.2.1; Reference 6, p. 4-barium, Aroclor 1016)	(a)	10000	
3. Hazardous Waste Quantity (Reference 1, Section 5.1.2.2; Reference 10, p. 1)	(a)	10000	
4. Waste Characteristics	100		100
Targets:			
5. Resident Individual	50		
6. Resident Population:			
6a. Level I Concentrations	(b)		
6b. Level II Concentrations	(b)		
6c. Population (lines 6a + 6b)	(b)		
7. Workers (Reference 1, Section 5.1.3.3; Reference 4, p. 82)	15	0	
8. Resources (Reference 1, Section 5.1.3.4; Reference 4, p. 79)	5	0	
9. Terrestrial Sensitive Environments	(c)		
10. Targets (lines 5 + 6c + 7 + 8 + 9)	(b)		5
Resident Population Threat Score			
11. Resident Population Threat Score (lines 1 x 4 x 10)	(b)		0
Nearby Population Threat			
Likelihood of Exposure:			
12. Attractiveness/Accessibility (Reference 1, Section 5.2.1.1; Reference 4, p. 81)	100	10	
13. Area of Contamination (Reference 1, Section 5.2.1.2; Reference 10, p. 1)	100	100	
14. Likelihood of Exposure	500		125
Waste Characteristics:			
15. Toxicity (Reference 1, Section 5.2.2.1; Reference 6, p. 4-barium)	(a)	10000	
16. Hazardous Waste Quantity (Reference 1, Section 5.1.2.2; Reference 10, p. 1)	(a)	10000	
17. Waste Characteristics	100		100
Targets:			
18. Nearby Individual (Reference 1, Section 5.2.3.1; Reference 4, p. 82)	1	0	
19. Population Within 1 Mile (Reference 1, Section 5.2.4; Reference 4, p.83)	(b)	0.03	
20. Targets (lines 18 + 19)	(b)		0.03
Nearby Population Threat Score			
21. Nearby Population Threat (lines 14 x 17 x 20)	(b)		375
Soil Exposure Pathway Score:			
22. Pathway Score[d] (S_s), [lines (11+21)/82,500, subject to max of 100]	100		0

[a] Maximum value applies to waste characteristics category
[b] Maximum value not applicable
[c] No specific maximum value applies to factor. However, pathway score based solely on terrestrial sensitive environments is limited to a maximum of 60
[d] Do not round to nearest integer

TABLE 4 --AIR MIGRATION PATHWAY SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned	
Likelihood of Release:			
1. Observed Release	550	0	
2. Potential to Release:			
2a. Gas Potential to Release	500		
2b. Particulate Potential to Release	500		
2c. Potential to Release (higher of lines 2a and 2b)	500		
3. Likelihood of Release (higher of lines 1 and 2c)	550		0
Waste Characteristics:			
4. Toxicity/Mobility	(a)		
5. Hazardous Waste Quantity	(a)		
6. Waste Characteristics	100		
Targets:			
7. Nearest Individual	50	1	
8. Population:			
8a. Level I Concentrations	(b)		
8b. Level II Concentrations	(b)		
8c. Potential Contamination	(c)		
8d. Population (lines 8a + 8b + 8c)	(b)		
9. Resources	5		
10. Sensitive Environments:			
10a. Actual Contamination	(c)		
10b. Potential Contamination	(c)		
10c. Sensitive Environments (lines 10a + 10b)	(c)		
11. Targets (lines 7 + 8d + 9 + 10c)	(b)		1
Air Migration Pathway Score:			
12. Pathway Score (S_a) [(lines 3 x 6 x 11)/82,500][d]	100		0.00

[a] Maximum value applies to waste characteristics category
[b] Maximum value not applicable
[c] No specific maximum value applies to factor. However, pathway score based solely on sensitive environments is limited to a maximum of 60.
[d] Do not round to nearest integer

0 350 700

SCALE IN FEET

LEGEND

- TEMPORARY PIEZOMETER
- GATE
- SITE BOUNDARY
- DITCH

N

WESTON SOLUTIONS

FIGURE 2
SITE AREA MAP
COX ROAD DUMP SITE
LIBERTY COUNTY, TEXAS

DATE	PROJECT NO	SCALE
MAY 2004	02444.015.025.0060	AS SHOWN

SOURCE: USGS 3.75 MIN DIGITAL ORTHO QUARTERQUAD, SHEEKS NE AND SHEEKS NW - 1996

File: \\shcv02\data\02444_TCEQ\CoxRoad\GIS\SITE_AREA_MAP.mxd, 18-May-04 12:10, wilder

Cox Road Dump Soil Samples (5-7') - Metals									
	MW-1(6-7) Background		3X Background	MW-2(6-7)		MW-3(5-7)		MW-4(6-7)	
Analyte (mg/kg)	Result	SQL	Result	Result	SQL	Result	SQL	Result	SQL
Barium	82.3	0.059	246.9	82.3	0.059	**602**	3.4	54.5	0.058
Cadmium	0.108	0.025	0.324	0.0767	0.028	**0.575**	0.029	0.0883	0.025
Chromium	3.60	0.059	10.8	9.17	0.066	**12.6**	0.068	6.52	0.058
Copper	1.51	0.034	4.53	3.65	0.037	**9.26**	0.039	2.77	0.033
Lead	6.27	0.076	18.81	8387	0.084	**46.2**	0.088	7.21	0.074
Mercury	0.00869	0.0017	0.026	0.0109	0.0019	0.013	0.0017	**0.0557**	0.0017
Silver	0.0317	0.017	0.0951	0.0271	0.019	**0.154**	0.020	0.0234	0.017
Zinc	5.27	0.085	15.81	7.41	0.094	**302**	4.9	14.1	0.083

Notes

J Estimated due to quality control issues.

Boldface indicates a release.

Cox Road Dump Soil Samples (9-10') - Metals											
	MW-1(9-10) Background		3X Background	MW-2(9-10)		MW-3(9-10)		MW-4(9-10)		MW-4A Dup of MW-4(9-10)	
Analyte (mg/kg)	Result	SQL	Result	Result	SQL	Result	SQL	Result	SQL	Result	SQL
Cobalt	9.50	0.017	28.5	**31.7**	0.016	5.16	0.017	0.987 J	0.014	2.22 J	0.013
Mercury	U	0.0019	0.0019	U	0.0017	U	0.0017	**0.00967**	0.0016	**0.0149**	0.0017

Notes
NA Not applicable.
J Estimated due to quality control issues.
U Undetected at the laboratory reported sample quantitation limit.
Boldface indicates a release.

Cox Road Dump Soil Samples (19-20') - Metals											
	MW-1(19-20) Background		3X Background	MW-2(19-20)		MW-2A Dup of MW-2(19-20)		MW-3(19-20)		MW-4(19-20)	
Analyte (mg/kg)	Result	SQL	Result	Result	SQL	Result	SQL	Result	SQL	Result	SQL
Mercury	U	0.0018	0.0018	**0.00903 J**	0.0018	**0.0199 J**	0.0017	**0.00311**	0.0017	U	0.0017

Notes
NA Not applicable.
J Estimated due to quality control issues.
U Undetected at the laboratory reported sample quantitation limit.
Boldface indicates a release.

Cox Road Dump Soil Samples (5-7') - PCBs								
	MW-1(6-7) Background		MW-2(6-7)		MW-3(5-7)		MW-4(6-7)	
Analyte (µg/kg)	Result	SQL	Result	SQL	Result	SQL	Result	SQL
Aroclor 1016	U	3.6	U	4.0	**1000 J**	18	**180**	3.6

Notes

J Estimated due to quality control issues.

U Undetected at the laboratory reported sample quantitation limit.

Boldface indicates a release.

Cox Road Dump Soil Samples (5-7') - Semivolatiles								
	MW-1(6-7) Background		MW-2(6-7)		MW-3(5-7)		MW-4(6-7)	
Analyte (µg/kg)	Result	SQL	Result	SQL	Result	SQL	Result	SQL
1,1'-biphenyl	UJ	29	U	32	UJ	150	**90**	29
2,4-dimethylphenol	UJ	80	U	87	UJ	400	**190**	80
2-methylnaphthalene	UJ	39	**62**	42	UJ	200	**59**	39
4-methylphenol	UJ	140	U	160	UJ	730	**310**	150
Fluoranthene	UJ	41	U	45	UJ	210	**54**	41
Isophorone	UJ	36	U	40	UJ	180	**86**	36
Phenanthrene	UJ	45	U	49	UJ	230	**260**	45
Phenol	UJ	92	U	100	**5100 J**	460	**10000**	460
Pyrene	UJ	42	U	46	UJ	210	**43**	43

Notes

U Undetected at the laboratory reported sample quantitation limit.

Boldface indicates a release.

Cox Road Dump Soil Samples (5-7') - Volatiles								
	MW-1(6-7) Background		MW-2(6-7)		MW-3(5-7)		MW-4(6-7)	
Analyte (µg/kg)	Result	SQL	Result	SQL	Result	SQL	Result	SQL
1,2,4-trimethylbenzene	UJ	0.78	**47 J**	0.79	**3.3**	0.74	**5.0 J**	0.88
1,2-dichlorobenzene	UJ	0.72	UJ	0.73	**4.8 J**	0.69	**5.2 J**	0.82
1,3,5-trimethylbenzene	UJ	0.86	**17 J**	0.87	**2.2**	0.83	**1.9 J**	0.98
1,4-dichlorobenzene	UJ	0.78	UJ	0.75	U	0.74	**1.9 J**	0.88
2-butanone	UJ	1.4	UJ	1.4	U	1.3	**44 J**	1.6
4-methyl-2-pentanone	UJ	0.61	UJ	0.62	**330 J**	0.59	**92 J**	0.70
Acetone	UJ	0.83	**34 J**	0.84	**97 J**	0.79	**210 J**	0.94
Benzene	UJ	0.74	**8.0 J**	0.75	**2.5**	0.71	UJ	0.84
Chlorobenzene	UJ	0.85	UJ	0.86	U	0.82	**4.4 J**	0.96
Cyclohexane	UJ	1.5	**11 J**	1.5	**5.6**	1.4	UJ	1.7
Ethylbenzene	UJ	0.99	**19 J**	1.0	**94 J**	0.95	**12 J**	1.1
Isopropylbenzene	UJ	1.0	**6.1 J**	1.0	**2.1**	0.98	**19 J**	1.2
m,p-xylene	UJ	3.0	**75 J**	3.1	**340 J**	2.9	**28 J**	3.4
Methylcyclohexane	UJ	1.2	**25 J**	1.2	**4.8**	1.1	**4.8 J**	1.3
n-butylbenzene	UJ	0.89	UJ	0.91	U	0.86	**6.0 J**	1.0
n-propylbenzene	UJ	0.95	**7.5 J**	0.96	U	0.91	**17 J**	1.1
Naphthalene	UJ	0.42	**29 J**	0.43	**2.8 J**	0.40	**14 J**	0.48
o-xylene	UJ	0.87	**23 J**	0.88	**98 J**	0.84	**10 J**	0.99
tert-butylbenzene	UJ	0.81	**3.0 J**	0.82	U	0.77	**5.8 J**	0.92
Tetrachloroethene	UJ	0.83	UJ	0.84	**8.8**	0.79	**2.3 J**	0.94
Toluene	UJ	1.1	**6.2 J**	1.1	**110 J**	1.0	**6.0 J**	1.2

Notes

J Estimated due to quality control issues.

U Undetected at the laboratory reported sample quantitation limit.

Boldface indicates a release.

Cox Road Dump Soil Samples (9-10') - Volatiles										
	MW-1(9-10) Background		MW-2(9-10)		MW-3(10)		MW-4(9-10)		MW-4A Dup of MW-4(9-10)	
Analyte (µg/kg)	Result	SQL	Result	SQL	Result	SQL	Result	SQL	Result	SQL
1,2,4-trimethylbenzene	UJ	0.85	**1.9 J**	0.78	U	0.74	UJ	0.72	U	0.75
Acetone	UJ	0.91	**20 J**	0.83	U	0.79	**77 J**	0.77	**57 J**	0.80
Cyclohexane	UJ	1.6	**6.2 J**	1.5	U	1.4	UJ	1.4	U	1.5
Ethylbenzene	UJ	1.1	**1.6 J**	1.0	U	0.94	UJ	0.92	U	0.95
m,p-xylene	UJ	3.3	**4.2 J**	3.0	U	2.9	UJ	2.8	U	2.9
Methylcyclohexane	UJ	1.3	**9.4 J**	1.2	U	1.1	UJ	1.1	U	1.1
Naphthalene	UJ	0.46	**3.1 J**	0.42	U	0.40	UJ	0.39	U	0.40
o-xylene	UJ	0.95	**1.1 J**	0.88	U	0.83	UJ	0.81	U	0.84

Notes

J Estimated due to quality control issues.

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Boldface indicates a release.

Cox Road Dump Water Samples - Metals											
	MW-1 Background		3X Background	MW-2		MW-2B Dup of MW-2		MW-3		MW-4	
Analyte(mg/L)	Result	SQL	Result	Result	SQL	Result	SQL	Result	SQL	Result	SQL
Barium	0.483	0.0060	1.449	0.415	0.0006	0.396	0.0006	1.38	0.0006	**4.55**	0.06
Boron	0.0598	0.011	0.1794	**0.204**	0.011	**0.200**	0.011	0.130	0.011	**5.21**	0.55
Magnesium	6.01	0.25	18.03	6.4	0.25	5.93	0.50	**44.6**	0.25	**279**	1.2
Manganese	0.606	0.010	1.818	1.55	0.020	1.41	0.020	1.13	0.010	**2.90**	0.05

Notes

Boldface indicates a release.

Cox Road Dump Water Samples - Cyanide										
	MW-1 Background		MW-2		MW-2B Dup of MW-2		MW-3		MW-4	
Analyte(mg/L)	Result	SQL	Result	SQL	Result	SQL	Result	SQL	Result	SQL
Cyanide	U	0.003	U	0.003	U	0.003	U	0.003	**0.0118**	0.003

Notes

U Undetected at the laboratory reported sample quantitation limit.

Boldface indicates a release.

Cox Road Dump Water Samples - Pesticides										
	MW-1 Background		MW-2		MW-2B Dup of MW-2		MW-3		MW-4	
Analyte (µg/L)	Result	SQL	Result	SQL	Result	SQL	Result	SQL	Result	SQL
4,4'-DDE	U	0.023	U	0.023	U	0.024	U	0.022	**0.054**	0.022

Notes

U Undetected at the laboratory reported sample quantitation limit.

Boldface indicates a release.

Cox Road Dump Water Samples - PAHs										
	MW-1 Background		MW-2		MW-2B Dup of MW-2		MW-3		MW-4	
Analyte(µg/L)	Result	SQL	Result	SQL	Result	SQL	Result	SQL	Result	SQL
Acenaphthene	U	0.21	U	0.22	U	0.21	U	0.21	**0.46**	0.21
Anthracene	U	0.21	U	0.22	U	0.21	U	0.21	**0.32**	0.21
Fluorene	U	0.21	**0.36**	0.22	**0.34**	0.21	U	0.21	**0.53**	0.21
Naphthalene	U	0.21	**2.3**	0.22	**1.7**	0.21	**0.26**	0.21	**0.33**	0.21
Phenanthrene	U	0.21	**0.31**	0.22	**0.27**	0.21	U	0.21	**0.69**	0.21

Notes

U Undetected at the laboratory reported sample quantitation limit.

Boldface indicates a release.

Cox Road Dump Water Samples - Semivolatiles										
	MW-1 Background		MW-2		MW-2B Dup of MW-2		MW-3		MW-4	
Analyte(µg/L)	Result	SQL	Result	SQL	Result	SQL	Result	SQL	Result	SQL
2,4-dimethylphenol	U	3.9	U	3.9	U	3.9	**47 J**	3.9	**6.9 J**	3.7
2-methylnaphthalene	U	0.91	**2.1 J**	0.90	**1.6 J**	0.91	UJ	0.90	**6.9 J**	0.86
4-methylphenol	U	0.78	U	4.8	U	4.8	**37 J**	4.8	UJ	0.46
Isophorone	U	1.3	U	1.2	U	1.3	UJ	1.2	**2.8 J**	1.2
Phenol	U	3.7	U	3.6	U	3.7	**160 J**	18	**56 J**	3.5

Notes

J Estimated due to quality control issues.

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Cox Road Dump Water Samples - Volatiles										
	MW-1 Background		MW-2		MW-2B Dup of MW-2		MW-3		MW-4	
Analyte (µg/L)	Result	SQL	Result	SQL	Result	SQL	Result	SQL	Result	SQL
1,2,4-trimethylbenzene	U	0.10	**4.0** J	0.10	**4.2 J**	0.10	**0.49**	0.10	**0.31 J**	0.10
1,2-dichlorobenzene	U	0.17	UJ	0.17	UJ	0.17	**1.1**	0.17	**0.90 J**	0.17
1,3,5-trimethylbenzene	U	0.17	**1.7 J**	0.17	**1.9 J**	0.17	**0.32**	0.17	UJ	0.17
4-isopropyltoluene	U	0.18	**0.29 J**	0.18	**0.32 J**	0.18	U	0.18	UJ	0.18
4-methyl-2-pentanone	U	0.50	UJ	0.50	UJ	0.50	**43**	0.50	**5.2 J**	0.50
Benzene	U	0.11	**1.8 J**	0.11	**1.9 J**	0.11	**0.78**	0.11	**0.71 J**	0.11
Carbon disulfide	U	0.16	**0.35 J**	0.16	**0.40 J**	0.16	U	0.16	UJ	0.16
Chlorobenzene	U	0.10	UJ	0.24	UJ	0.10	U	0.10	**1.3 J**	1.0
Cyclohexane	U	0.10	UJ	1.0	**1.1 J**	1.0	U	0.10	UJ	1.0
Ethylbenzene	U	0.11	**3.2 J**	0.11	**3.4 J**	0.11	**19 J**	0.11	**3.0 J**	0.11
Isopropylbenzene	U	0.13	**0.44 J**	0.13	**0.46 J**	0.13	**0.18**	0.13	**1.8 J**	0.13
m,p-xylene	U	0.20	**8.4 J**	0.20	**8.9 J**	0.20	**72 J**	0.20	**11 J**	0.20
Methylcyclohexane	U	1.0	**1.8 J**	1.0	**2.1 J**	1.0	U	1.0	UJ	1.0
n-propylbenzene	U	0.13	**0.59 J**	0.13	**0.58 J**	0.13	U	0.13	**1.6 J**	0.13
Naphthalene	U	0.20	**5.2 J**	0.20	**6.2 J**	0.20	**1.2**	0.20	**1.5 J**	0.20
o-xylene	U	0.20	**3.1 J**	0.20	**3.3 J**	0.20	**24 J**	0.20	**3.5 J**	0.20
sec-butylbenzene	U	0.20	UJ	0.20	UJ	0.20	U	0.20	**0.32 J**	0.20
Tetrachloroethene	U	0.12	UJ	0.12	UJ	0.12	**1.2**	0.12	UJ	0.12
Toluene	U	0.10	**3.7 J**	0.10	**4.1 J**	0.10	**25 J**	.010	**2.2 J**	0.10

Notes

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REFERENCES

Reference Number	Description of the Reference
1.	U.S. Environmental Protection Agency, Federal Register - 40 CFR Part 300, *Hazard Ranking System; Final Rule*, Volume 55, No. 241, December 14, 1990.
2.	U.S. Environmental Protection Agency, *Hazard Ranking System Guidance Manual*, EPA 540-R-92-026, OSWER Directive 9345.1-07, November 1992. 431 pages plus appendices.
3.	U.S. Environmental Protection Agency, *1996 Superfund Chemical Data Matrix (SCDM)*. June 1996.
4.	U.S. Environmental Protection Agency, Integrated Assessment Report for Cox Road Dump Site, 5 Miles Southwest of Dayton, Texas, Liberty County, Texas. December 2003. 98 pages.
5.	Texas Commission on Environmental Quality, Investigation Report, Investigation No. 21750, Joiner Liquidating Trust, Cox Road Dump Site, Liberty County, Texas, RN 102924636. April 2003. 336 pages.
6.	Texas Commission on Environmental Quality. Data Assessment Summary. Cox Road Dump Site, TXD987987179. July 2004. 15 pages.
7.	Weston Solutions, Inc., Investigation Activities Results, Cox Road Dump Site, Dayton, Texas. May 2004. 82 pages.
8.	Texas Department of Water Resources, Climatic Atlas of Texas LP-192. December 1983. 151 pages.
9.	Texas Department of Water Resources, Stratigraphic and Hydrogeologic Framework of Part of the Coastal Plain of Texas. July 1979. 43 pages.
10.	Texas Commission on Environmental Quality. Calculation of Hazardous Waste Quantity. August 2004. 1 page.
11.	Texas Water Development Board. Groundwater Database Query Result. August 2004. 2 pages.