HEALTH CONSULTATION

DOEBOY DUMP

JACKSONVILLE, DUVAL COUNTY, FLORIDA

CERCLIS NO. FLD980846448

Prepared by:

Exposure Investigation and Consultation Branch
Division of Health Assessment and Consultation
Agency for Toxic Substances and Disease Registry

BACKGROUND AND STATEMENT OF ISSUES

The U.S. Environmental Protection Agency (EPA) Region IV requested the Agency for Toxic Substances and Disease Registry (ATSDR) to review the results of environmental samples (i.e., soil, sediment and groundwater samples) obtained from Doeboy Dump Site, and provide a public health opinion regarding exposure to the contaminants reported.

The Doeboy Dump Site is situated on 35 acres in a residential area near the intersection of Doeboy and 45th Street in Jacksonville, Florida. The site contains a burrow pit 5 acres in size, which received trash, debris, and industrial waste in the past. The pit contains surface water and is connected to Moncrief Creek by two drainage ditches. Moncrief Road forms the eastern boundary of the site, and residences are on the west, south and north. No official records exist for the disposal activities at the site. The site is not fenced, and therefore it is easily accessible. EPA has reported that children play on-site and people fish at the burrow pit on-site.

EPA requested their Superfund Technical Assessment and Response Team (START) (Tetra Tech Em, Inc.) to conduct an expanded site inspection at the site to determine whether the site has the potential to be placed on the National Priorities List. During the week of January 18, 1999, Tetra Tech Em, Inc., conducted the expanded site inspection of the site (see attached sampling map). They collected background soil samples, surface water and sediment samples from Moncrief Creek. Also, they collected 7 on-site surface soil samples (from 0-3 inches); 6 subsurface soil (depth not specified) samples from on-site; 3 groundwater samples from potable residential wells; 3 from temporary monitoring wells that were installed within the site's boundary; and 1 background sample from a temporary monitoring well installed outside of the site's boundary; 8 surface water samples (6 from Moncrief Creek and 2 from the burrow pit on-site); and 8 sediment samples from similar locations along Moncrief Creek. The samples were analyzed for EPA's target list compounds, which included volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), metals and cyanide [1]. See attachments for sampling results.

DISCUSSION

The results of surface soil samples indicated that low levels of PAHs and PCBs were detected at sampling stations DD-SS-03, DD-SS-04, DD-SS-05, DD-SS-06, and DD-SS-07 (see attached map). Furthermore, surface soil samples obtained from DD-SS-02 and DD-SS-05 contained lead at 580 parts per million (ppm) and 1,200 ppm, respectively. Lead was also detected at 1,000 ppm in subsurface soil samples obtained from sampling location DD-SS-05, and at 1,200 ppm at sampling location DD-SS-06. Also, the results of subsurface soil samples revealed the presence of various carcinogenic and non-carcinogenic PAHs, which totaled slightly below100 parts per million (ppm) at sampling location DD-SS07. At this sampling location, the carcinogenic PAHs totaled 40 ppm, and the non-carcinogenic PAHs totaled 57 ppm.

In general, ATSDR considers soil lead levels below 500 ppm in vegetated residential areas not a health threat to humans other than the most sensitive population. Exposure to elevated levels of lead may cause serious adverse health effects, particularly in young children. Young children and fetuses are especially sensitive to the toxic effects of lead exposures. Factors influencing this susceptibility include: (1) the immaturity of the blood brain barrier; (2) hand-to-mouth behavior; (3) pica behavior (ingestion of at least 1 gram of soil/day); (4) nutritional status of the child; (5) low body weight; and (6) passive diffusion of contaminants across the placenta to the developing fetus [2].

Because of these factors, children are more at risk of developing adverse health effects than adolescents and adults. Children who play in surface soil at DD-SS-02 and DD-SS-05 could be exposed to lead, which may result in elevated body burdens. Blood lead levels at 10 micrograms/deciliter or greater have been linked to adverse developmental effects in fetuses, hearing impairment, stunting of growth and reductions in intelligence quotients in children [2].

Polycyclic aromatic hydrocarbons occur as mixtures in a number of environmental products such as soot, coal tar, petroleum, cutting oils and air pollutants. They are lipid soluble and can easily penetrate or cross the skin barrier. Animal (rodents or rats) studies have shown that skin application of carcinogenic PAHs such as benz (a) anthracene, benz (a) pyrene and 3, methylcholanthrene results quickly in carcinoma (cancerous growth) formation. Several reports have shown the occurrence of dermal and ocular irritation, burns, and warts, itching, vesiculation, and ulceration following acute or prolonged skin contact with PAHs. However, no human studies were located regarding adverse systemic effects on the liver, kidney, eye, or heart following dermal exposure to PAHs [3]. Generally, because subsurface soil contaminants are not easily accessible it is unlikely for exposure to PAHs to occur at this site. EPA has indicated that children often play at this site. Therefore, opportunities for exposure to on-site subsurface soil contaminants may exist if children dig into the ground while playing.

At this site, 2 groundwater samples obtained from temporary monitoring wells installed within the site's boundary contained elevated levels of lead [29 parts per billion (ppb) and 51 ppb]. Several residential wells are located within a 4 mile radius of the site, which draw water from the underlying aquifer. Sodium was detected in the potable well water samples from the residential wells at 16 ppm and at 17 ppm. Other chemicals detected in the residential well water samples are not at levels of health concern. A groundwater sample collected from a temporary monitoring well installed outside of the site's boundary, which is considered a background sample contained sodium at 12 ppm. The results of surface water and sediment samples obtained from Moncrief Creek did not indicate that contaminants were present at levels of health concern.
The Drinking Water Equivalent Level for sodium is 20 ppm. The DWEL is an estimate of a lifetime exposure concentration protective of adverse, non-cancer health effects, that assumes all of the exposure to a contaminant is from a drinking water source. Although sodium detected in groundwater samples from these wells are lower than the DWEL of 20 ppm, persons who are hypertensive and consume this water on a daily basis should be aware of the additional sodium in there diet.

ATSDR Child Health Initiative

ATSDR's Child Health Initiative recognizes that the unique vulnerabilities of infants and children must be recognized and considered in any analysis of adverse health effects of communities impacted by contamination of hazardous substances. At this site, exposure to surface and subsurface soil contaminants at certain locations is likely to occur.

CONCLUSIONS

1. There exists a potential health hazard from exposure to lead to those children who play frequently in contaminated surface soils at sampling station DD-SS-02 and DD-SS-05.

2. Frequent contact with subsurface soil contaminants (lead and PAHs) at certain areas (i.e., DD-SS-05, DD-SS-06, and DD-SS-07) on-site pose a potential public health threat from dermal, oral or inhalation exposure.

3. Surface water and sediment samples obtained from Moncrief Creek did not reveal elevated levels of contamination.

4. Potable drinking water samples from the private wells did not contain contaminants at levels of health concern.

5. Groundwater samples obtained from a temporary monitoring well installed on-site contained elevated levels of lead.

6. The limited environmental sampling may not fully characterize the extent of contamination.

RECOMMENDATIONS

1. Prevent frequent exposure or contact with contaminants at or near sampling locations DD-SS-02, DD-SS-05, DD-SS-06 and DD-SS-07.

2. Conduct additional environmental sampling (i.e., soil, sediment, surface water) to fully characterize the extent of contamination.

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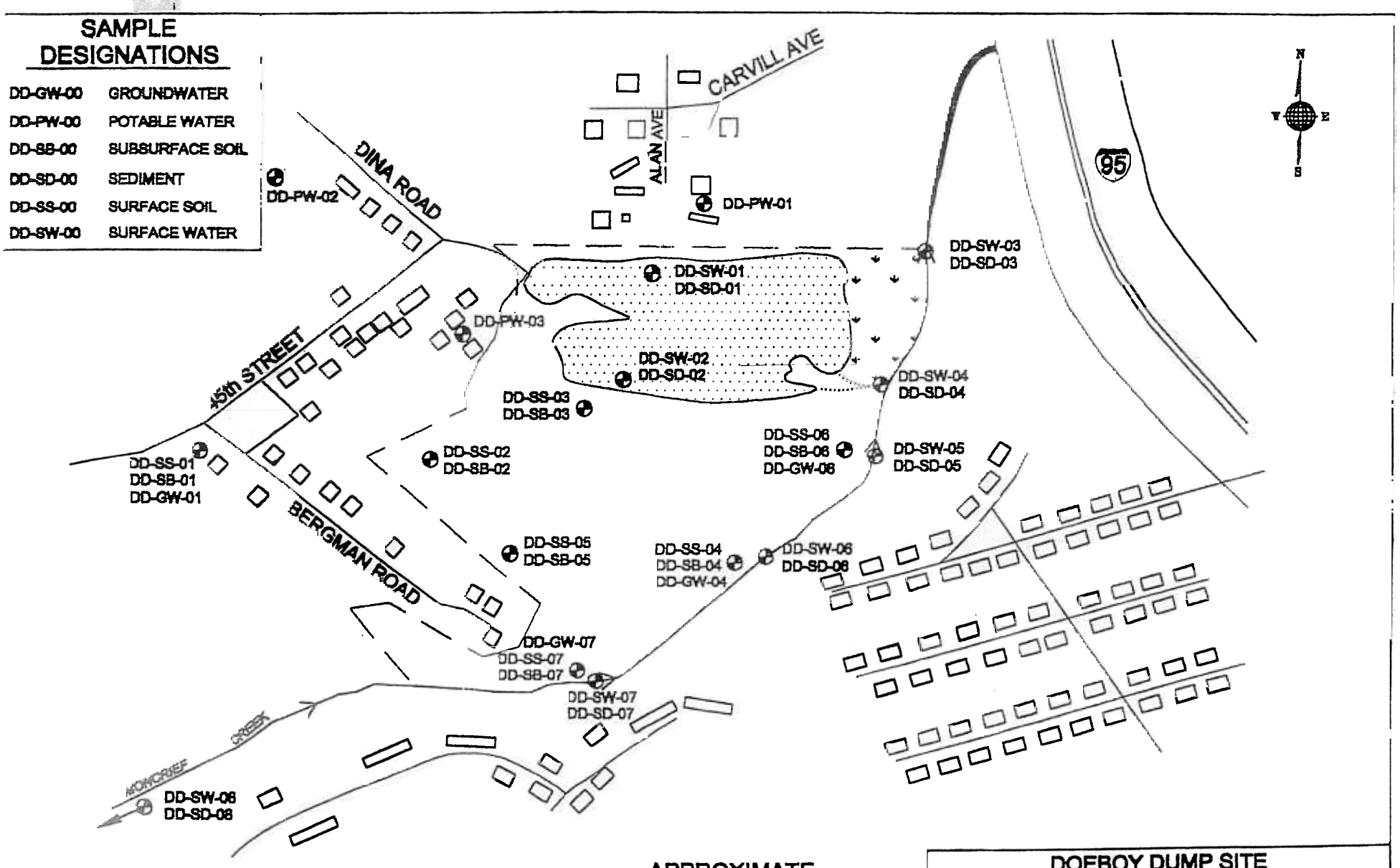
REFERENCES

1. Expanded Site Inspection Report, Doeboy Dump Site, Jacksonville, Florida, prepared by Tetra Tech EM, Inc., for U.S. Environmental Protection Agency Region IV, August 6, 1999.

2. Toxicological Profile for Lead, U.S. Public Health Service, ATSDR, Atlanta, Georgia, October 1991.

3. Toxicological Profile for Polycyclic Aromatic Hydrocarbons, U.S. Public Health Service, ATSDR, Atlanta, Georgia, August 1995.



DOEBOY DUMP SITE
JACKSONVILLE, DUVAL COUNTY, FLORIDA
TDD No. 04-9712-0024

FIGURE 3
SAMPLE LOCATION MAP

TETRA TECH EM INC START

TABLE 7
SUMMARY OF SURFACE SOIL ANALYTICAL RESULTS
DOEBOY DUMP SITE

	FDEP* SCREENING VALUES	EPA* SCREENING VALUES	DDSS01 *Background*	DDSS02	DDSS03	DDSS04	DDSS05	DDSS06	DDSS07
EXTRACTABLES (UG/KG)									
BENZO(A)ANTHRACENE	1,400	870	350U	46J	620	120J	180J	460	780
BENZO(B)FLUORANTHENE	1,400	870	350U	98J	1,200J	210J	210J	360J	1,000
BENZO(GHI)PERYLENE	2,300,000	NE	350U	85J	530	140J	110J	220J	490J
BENZO(K)FLUORANTHENE	15,000	870	350U	98J	1,200J	110J	160J	310J	590
BENZO-A-PYRENE	100	87	350U	50J	630	140J	180J	320J	640
CHRYSENE	140,000	87,000	350U	49J	770	160J	200J	440	820
FLUORANTHENE	2,900,000	3,100,000	350U	72J	940	170J	340J	780	1,100
INDENO (1,2,3-CD) PYRENE	1,500	870	350U	79J	460	150J	120J	240J	500J
PHENANTHRENE	2,000,000	NE	350U	--	380J	--	--	360J	440J
PYRENE	2,200,000	2,300,000	350U	54J	1,100	150J	320J	720	880
MISCELLANEOUS EXTRACTABLES (UG/KG)*									
2 UNIDENTIFIED COMPOUNDS	NE	NE		1,300JN					
BENZOPYRENE (NOT A)	NE	NE		78JN					
11 UNIDENTIFIED COMPOUNDS	NE	NE					16,000J		
4 UNIDENTIFIED COMPOUNDS	NE	NE						2,200J	
6 UNIDENTIFIED COMPOUNDS	NE	NE				6,000J			
8 UNIDENTIFIED COMPOUNDS	NE	NE			6,400J				
ACETOPHENONE	2,700,000	NE					410JN		
BENZALDEHYDE	2,200,000	NE					230JN		
BENZENEACETONITRILE	NE	NE				490JN			
BENZOFLUORANTHENE (NOT B OR K)	NE	NE			500JN				
BENZOPYRENE (NOT A)	NE	NE						500JN	
DIBENZPYRENE	NE	NE			520JN				
HEPTACHLOROBIPHENYL (4 ISOMERS)	NE	NE			3,300JN				
HEXACHLOROBIPHENYL (6 ISOMERS)	NE	NE			6,500JN				
OCTACHLOROBIPHENYL (3 ISOMERS)	NE	NE			1,700JN				
PARACYCLOPHANE	NE	NE					330JN		
PENTACHLOROBIPHENYL (2 ISOMERS)	NE	NE			900JN				
8 UNIDENTIFIED COMPOUNDS	NE	NE							7,500J
BENZOFLUORANTHENE (NOT B OR K)	NE	NE							660JN
PCB/PESTICIDES (UG/KG)									
4,4'-DDE (P,P'-DDE)	3,300	1,900	3.9	12	370C	13	27	34	9.8
4,4'-DDT (P,P'-DDT)	3,300	1,900	11U	--	3,900C	--	87	160	--
GAMMA-CHLORDANE /2	3,000	1,800	1.8U	3.5N	--	7.4	--	13N	--
PCB-1248 (AROCLOR 1248)	500	320	35U	--	--	--	170	--	--
PCB-1260 (AROCLOR 1260)	500	320	35U	320	30,000C	400	270	390	230

Taken from expanded site inspection report for Doeboy Dump Site, August 6, 1999.

TABLE 7
SUMMARY OF SURFACE SOIL ANALYTICAL RESULTS
DOEBOY DUMP SITE

	FDEP[a] SCREENING VALUES	EPA[b] SCREENING VALUES	DDSS01 *Background*	DDSS02	DDSS03	DDSS04	DDSS05	DDSS06	DDSS07
METALS (MG/KG)									
ALUMINUM	72,000	78,000	1,700	6,700	3,000	1,900	4,300	1,400	4,300
ARSENIC	0.8	0.43	1.2U	**4.9**	**5.4J**	--	**8.1**	--	**9**
BARIUM	110	5,500	87J	**208**	140	110	**300J**	49	**120**
BERYLLIUM	120	160	0.06U	0.2	--	--	--	--	--
CADMIUM	75	39	1.2	5.7JN	4	1.5	3.5	--	--
CALCIUM	NE	NE	3,000	6,200	15,000	5,000	10,000	6,700	15,000
COBALT	4,700	4,700	1.2J	3.4J	3.6J	0.88J	5.5J	0.52J	1.6J
COPPER	110	3,100	19J	**160J**	**220J**	40J	**210J**	40J	56J
CYANIDE	30	1,600	0.33U	0.85	0.68	0.91	1.2	--	--
IRON	23,000	23,000	6,000	**35,000**	**26,000**	4,800	**42,000**	3,800	12,000
LEAD	400	NE	180	**580**	350	270	**1200**	120	140
MAGNESIUM	NE	1,600	230J	730J	740J	370J	620J	250J	1,000J
MANGANESE	1,600	1,600	110	290	220	87	470	40	72
NICKEL	110	1,600	4.1J	17	38	6.6J	26	3.1J	7.2J
POTASSIUM	NE	NE	110J	360	280	150	190J	130	370
SELENIUM	390	390	0.66U	1.4	0.79J	--	--	--	--
SILVER	390	390	0.32J	7.3	2J	0.5	5.6	--	--
SODIUM	NE	NE	45	350	200	57	100	45	150
TOTAL MERCURY	3.4	NE	0.05U	--	0.32	0.19	0.7	--	--
VANADIUM	15	550	5.6J	10J	9J	**18**	**17**	5.7J	**17J**
ZINC	23,000	23,000	550	730J	750J	260J	2,100	260J	340J

REMARKS

a FDEP screening values for residential use dated May 26, 1999.
b EPA Region 3 cleannup goals for residential use dated April 15, 1998.
c A complete listing of analytical results can be found in Appendix A.

DATA QUALIFIERS AND ABBREVIATIONS

MG/KG - Milligrams per kilogram
UG/KG - Micrograms per kilogram
SQL - Sample quantitation limit
EPA - U.S. Environmental Protection Agency
FDEP - Florida Department of Environmental Protection
NE - Not established
N-Presumptive evidence of presence of material
NR-Not reported
J-Estimated value
U-Material was analyzed for but not detected
DD - Doeboy Dump
SS - Surface soil
DDD - dichlorodiphenyldichloroethane
DDE - dichlorodiphenyldichloroethylene
DDT - dichlorodiphenyltrichloroethene
PCB - polychlorinated biphenyl
* - Miscellaneous compounds are not on the target analyte compound list and are reported only as detected in individual samples; SQL isnot provided.
Shaded areas indicate elevated concentrations of constituents.
-- Sample data is flagged as "U" or "UJ" and at levels less than the background.
Bolded numbers indicate that the sample met or exceeded FDEP or EPA cleanup goals.

Taken from expanded site inspection report for Doeboy Dump Site August 6, 1999

TABLE 8
SUMMARY OF SUBSURFACE SOIL ANALYTICAL RESULTS
DOEBOY DUMP SITE

	DDSB01 *Background*	DDSB02	DDSB03	DDSB04	DDSB05	DDSB06	DDSB07
VOLATILES (UG/KG)							
ACETONE	10U	--	--	--	--	140	170J
CHLOROBENZENE	10U	--	--	11J	--	--	390
MISCELLANEOUS VOLATILES (UG/KG)*							
3 UNIDENTIFIED COMPOUNDS	NR					290J	
CAMPHENE	NR					21JN	
EXTRACTABLES (UG/KG)							
1,4-DICHLOROBENZENE	340U	--	--	--	--	--	430J
2-METHYLNAPHTHALENE	340U	--	--	--	--	--	420J
ACENAPHTHENE	340U	--	42J	46J	--	--	1,600
BENZO(A)ANTHRACENE	340U	--	330J	--	140J	230J	6,400
BENZO(B)FLUORANTHENE	340U	56J	320J	--	180J	190J	6,000
BENZO(GHI)PERYLENE	340U	--	340J	--	120J	190J	2,500
BENZO(K)FLUORANTHENE	340U	56J	170J	--	150J	260J	4,500
BENZO (A) PYRENE	340U	--	260J	--	140J	210J	5,800
BIS(2-ETHYLHEXYL) PHTHALATE	340U	--	840	--	1,000	--	810
CARBAZOLE	340U	--	54J	--	--	--	1,800
CHRYSENE	340U	--	350	--	170J	270J	9,000
DIBENZO(A,H)ANTHRACENE	340U	--	94J	--	52J	100J	1,400
DIBENZOFURAN	340U	--	--	--	--	--	1,400
FLUORANTHENE	340U	42J	630	--	250J	310J	22,000
FLUORENE	340U	--	--	--	--	--	2,500
INDENO (1,2,3-CD) PYRENE	340U	--	200J	--	120J	180J	3,200
NAPHTHALENE	340U	--	--	--	--	--	670J
PHENANTHRENE	340U	--	360	--	--	--	18,000
PYRENE	340U	--	500	--	210J	320J	14,000
MISCELLANEOUS EXTRACTABLES (UG/KG)*							
25 UNIDENTIFIED COMPOUNDS	NR				27,000J		
METHYLBENZENESULFONAMIDE (2 ISOMERS)	NR				1,400JN		
19 UNIDENTIFIED COMPOUNDS	NR						27,000J
BENZOFLUORANTHENE (NOT B OR K) (2 ISOMERS	NR						6,400JN
BENZOFLUORENE	NR						920JN
BENZONAPHTHOTHIOPHENE	NR						900JN
BINAPHTHALENE	NR						820JN
CYCLOPENTAPHENANTHRENE	NR						2,000JN
DDD/DDT ISOMERS	NR						910JN
DIBENZOTHIOPHENE	NR						1,100JN
METHYLANTHRACENE (2 ISOMERS)	NR						3,600JN
METHYLCHRYSENE	NR						1,200JN
PHENYLNAPHTHALENE	NR						1,600JN
3 UNIDENTIFIED COMPOUNDS	NR		1,300J				
6 UNIDENTIFIED COMPOUNDS	NR					7,300J	
ANTHRACENEDIONE	NR		130JN				
BENZANTHRACENONE	NR					360JN	
BENZANTHRACENONE (2 ISOMERS)	NR		170JN				
BENZOFLUORANTHENE (NOT B OR K)	NR					290JN	
BENZOPYRENE (NOT A)	NR		410JN				
HEPTACHLOROBIPHENYL	NR		74JN				
HEXACHLOROBIPHENYL	NR		110JN				
5 UNIDENTIFIED COMPOUNDS	NR	5,000J					

Taken from expanded site inspection report for Doeboy Dump Site, August 6, 1999.

TABLE 8
SUMMARY OF SUBSURFACE SOIL ANALYTICAL RESULTS
DOEBOY DUMP SITE

	DDSB01 *Background*	DDSB02	DDSB03	DDSB04	DDSB05	DDSB06	DDSB07
PCB/PESTICIDES (UG/KG)							
4,4'-DDD (P,P'-DDD)	3.4UJ	--	--	--	--	40J	820CJ
4,4'-DDE (P,P'-DDE)	3.4U	3.6J	73	17	--	60	260
4,4'-DDT (P,P'-DDT)	3.4U	--	--	--	--	110	540C
ALPHA-BHC	1.7U	--	--	--	--	--	99
DELTA-BHC	1.7U	--	--	--	--	--	160
ENDRIN	3.4U	--	7	--	--	--	--
GAMMA-BHC (LINDANE)	1.7U	--	--	--	--	--	200
GAMMA-CHLORDANE /2	1.7U	3.5	79	--	--	61	120N
PCB-1248 (AROCLOR 1248)	34U	--	--	--	260	--	--
PCB-1260 (AROCLOR 1260)	34U	56	1,200C	93	2,200C	--	--
METALS (MG/KG)							
ALUMINUM	970	1,400	3,700	1,400	13,000	1,500	4,700
ARSENIC	0.75U	2.3	6.9	--	13	3.5	8.9
BARIUM	4.4UJ	16	120	14	200J	260	98
CADMIUM	0.06U	--	2.5JN	--	5.9J	2.1	--
CALCIUM	140	1,400	18,000	900	10,000	12,000	27,000
CHROMIUM	2U	8.4	17	3.6	130	38	33
COBALT	0.32U	0.54J	2.4J	--	9.7J	1.4J	1.9J
COPPER	3UJ	19J	150J	8.3J	280J	100J	89J
CYANIDE	0.1U	0.96	1.6	--	29	--	--
IRON	1200	6,000	29,000	2,100	100,000	9,500	12,000
LEAD	3.4	77	390	37	1,000J	1,200	250
MAGNESIUM	40UJ	--	690J	--	740J	370J	1,600J
MANGANESE	18	77	530	9.8	610	69	50
NICKEL	0.62U	2.1J	18	1.3J	47	11	9.7J
POTASSIUM	41J	120	120	90	110J	120	260
SILVER	0.14U	1.1J	2.4	--	19JN	0.75J	--
SODIUM	24	39	200	100	160	110	200
TOTAL MERCURY	0.05U	--	0.27	--	3	0.18	0.35
VANADIUM	1.9J	5.7J	13	4.5J	6.6J	5.8J	15J
ZINC	12	68J	1,200J	55J	1,800	790J	580J

Taken from expanded site inspection report for Doeboy Dump Site, August 6, 1999.

TABLE 10
SUMMARY OF GROUNDWATER AND POTABLE WATER ANALYTICAL RESULTS
DOEBOY DUMP SITE

	FDEP[a] SCREENING VALUES	EPA[b] SCREENING VALUES	DDGW01 *Background*	DDGW04	DDGV/06	DDGW07	DDPW02 *Control*	DDPW01	DDPW01D *Duplicate*	DDPW03
VOLATILES (UG/L)										
CHLOROBENZENE	100	100	10U	12	--	86	1U	--	--	--
MISCELLANEOUS VOLATILES (UG/L)*										
5 UNIDENTIFIED COMPOUNDS	NE	NE	91J							
EXTRACTABLES (UG/L)										
ACENAPHTHENE	20	NE	10U	14	1J	--	5U	--	--	--
CARBAZOLE	4	NE	10U	15	6J	4J	NA			
MISCELLANEOUS EXTRACTABLES (UG/L)*										
BENZOIC ACID	28,000	NE	NR	8JN						
CHLOROISOCYANATOBENZENE	NE	NE	NR	2JN						
HYDROXYBENZENEACETIC ACID, METHYL ESTER	NE	NE	NR	4JN						
PARACHLOROPHENOL	NE	NE	NR			3JN				
TERTIARYBUTYLPHENOL	NE	NE	NR	2JN						
METALS (UG/L)										
BARIUM	2,000	2,000	110	620	440	580	15U	38	38	54
CALCIUM	NE	NE	9,300	180,000	200,000	160,000	57,000	62,000	62,000	76,000
COPPER	1,000	1,300	2.5J	26	17J	18J	5.7J	8.4J	9J	3.8J
IRON	300	NE	200U	15,000	7,800	29,000	12U	--	--	--
LEAD	15	15	2.1U	51	15	29	1.9U	--	--	4.1
MAGNESIUM	NE	NE	7,300	37,000	37,000	29,000	21,000	13,000	13,000	19,000
MANGANESE	50	NE	100	390	550	480	0.98U	--	--	41
NICKEL	100	NE	4U	5.2J	--	--	3.1U	--	--	--
POTASSIUM	NE	NE	1,600J	24,000J	26,000J	12,000J	1,800J	2,100J	2,100J	1,300J
SODIUM	160,000	NE	18,000	57,000	170,000	42,000	12,000	17,000	17,000	16,000
VANADIUM	49	NE	1.4U	2.4J	--	--	1.4U	--	--	--
ZINC	5,000	NE	100	140	180	79	6U	42	30	55

REMARKS

a FDEP groundwater screening standards dated May 26, 1999.
b EPA primary drinking water standards dated September 21, 1998.
c A complete listing of analytical results can be found in Appendix A.

DATA QUALIFIERS AND ABBREVIATIONS

UG/L - Micrograms per LITER:
SQL - Sample quantitation limit
EPA - U.S. Environmental Protection Agency
FDEP - Florida Department of Environmental Protection
NE - Not established
N - Presumptive evidence of presence of material
J - Estimated value
U - Material was analyzed for but not detected
DD - Doeboy Dump
GW - Groundwater well
PW-Potable well
NR - Not reported
NA - Not analyzed
* - Miscellaneous compounds are not on the target analyte compound list and are reported only as detected in individual samples; SQL is not provided.
Shaded areas indicate elevated concentrations of constituents.
-- Sample data is flagged as "U" or "UJ" and at levels less than the background.
Bolded numbers indicate that the sample met or exceeded FDEP or EPA Screening Values.

Taken from expanded site inspection report for Doeboy Dump Site, Autust 6, 1999

TABLE 11
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS
DOEBOY DUMP SITE

	FDEP[a] SCREENING VALUES	EPA[b] SCREENING VALUES	DDSW08 *Background*	DDSW01 Borrow Pit	DDSW02 Borrow Pit	DDSW03 Moncrief Creek	DDSW04 Moncrief Creek	DDSW05 Moncrief Creek	DDSW05D Moncrief Creek *Duplicate*	DDSW06 Moncrief Creek	DDSW07 Moncrief Creek
VOLATILES (UG/L)											
CHLOROBENZENE	17	105	10U	--	--	--	--	--	--	23	--
METALS (UG/L)											
ALUMINUM	13	NE	84U	--	--	2,300	--	--	--	--	--
COPPER	2.9	2.9	4.4J	12J	28	32	10J	10J	9.1J	2.1J	9.1J
CYANIDE	1	NE	10U	--	--	--	--	24	--	--	--
IRON	300	NE	980	1,400	2,600	5,500	840	1,000	1,000	4,600	2,400
LEAD	5.6	8.5	3.6	11	31	34	8.8	--	--	4.2	7J
MAGNESIUM	NE	NE	16,000	59,000	64,000	150,000	90,000	54,000	54,000	23,000	40,000
MANGANESE	NE	NE	45	100	110	170	71	77	75	170	97
NICKEL	8.3	8.3	3.1U	--	--	4.4J	--	--	--	--	--
POTASSIUM	NE	NE	3,600J	23,000J	25,000J	65,000J	37,000J	21,000J	20,000J	5,700J	14,000J
SODIUM	NE	NE	20,000	400,000	470,000	1,200,000	660,000	360,000	360,000	66,000	280,000
VANADIUM	NE	NE	1.4U	1.4J	2.1J	8.6J	--	--	--	--	--

REMARKS

a FDEP saltwater surface water screening values dated May 26, 1999.
b EPA saltwater surface water screening values dated June 1997.
c A complete listing of analytical results can be found in Appendix A.

DATA QUALIFIERS AND ABBREVIATIONS

UG/L - Micrograms per liter
SQL - Sample quantitation limit
N - Presumptive evidence of presence of material
NR - Not reported
NE - Not established
J - Estimated value
U - Material was analyzed for but not detected
DD - Doeboy Dump Site
SW - Sediment Surfacewater
* - Miscellaneous compounds are not on the target analyte compound list and are reported only as detected in individual samples; SQL is not provided.
Shaded areas indicate elevated concentration of constituents.
-- Sample data is flagged as "U" or "UJ" and at levels less than the background.

Taken from expanded site inspection report for Doeboy Dump Site, August 6, 1999

TABLE 12
SUMMARY OF SEDIMENT ANALYTICAL DATA
DOEBOY DUMP SITE

	FDEP[a] SCREENING VALUES	EPA[b] SCREENING VALUES	DDSD08 *Background*	DDSD01 Borrow Pit *Duplicate*	DDSD01D Borrow Pit	DDSD02 Borrow Pit	DDSD03 Moncrief Creek	DDSD04 Moncrief Creek	DDSD05 Moncrief Creek	DDSD06 Moncrief Creek	DDSD07 Moncrief Creek
MISCELLANEOUS EXTRACTABLES (UG/KG)*											
2 UNIDENTIFIED COMPOUNDS	NE	NE	NR	1,400J							
4 UNIDENTIFIED COMPOUNDS	NE	NE	NR								2,500J
BENZOFLUORANTHENE (NOT B OR K)	NE	NE	NR							310JN	180JN
BENZOPYRENE (NOT A)	NE	NE	NR						190JN		
2 UNIDENTIFIED COMPOUNDS	NE	NE	1500J								
BENZOFLUORANTHENE (NOT B OR K)	NE	NE	120JN								
1 UNIDENTIFIED COMPOUND	NE	NE	NR		720J						
2 UNIDENTIFIED COMPOUNDS	NE	NE	NR			1700J					
BENZOPYRENE (NOT A)	NE	NE	NR			230JN					
3 UNIDENTIFIED COMPOUNDS	NE	NE	NR				2,000J				
BENZOFLUORANTHENE (NOT B OR K)	NE	NE	NR					130JN			
PCB/PESTICIDES (UG/KG)											
DIELDRIN	NE	3.3	1.9J	–	–	40	–	–	–	1.5J	–
PCB-1260 (AROCLOR 1260)	NE	33	46U	–	–	260	50	–	–	–	–
METALS (MG/KG)											
COBALT	NE	NE	0.55J	–	–	2.1J	–	--	–	0.46J	0.58J
COPPER	NE	18.7	19J	1.8J	1.7J	110J	17J	16J	13J	15J	20J
IRON	NE	NE	2900	310	310	24,000	3,000	1,600	1,900	3,100	3,500
LEAD	NE	30.2	75	3.2	3.2	320	53	64	60	57	76
MANGANESE	NE	NE	34	3J	3.8J	160	21	9.6	9.5	34	46
NICKEL	NE	15.9	2.2J	–	–	12	2.1J	1.5J	1.4J	2.2J	2.4J
SILVER	NE	2	0.21U	–	–	2.7J	–	–	–	–	–
SODIUM	NE	NE	62	200	240	530	1,500	640	620	190	350

REMARKS

a FDEP sediment screening values have not been established.
b EPA sediment screening values dated June 1997.
c A complete listing of analytical results can be found in Appendix A.

DATA QUALIFIERS AND ABBREVIATIONS

MG/KG - Milligrams per kilogram
UG/KG - Micrograms per kilogram
SQL - Sample quantitation limit
N - Presumptive evidence of presence of material
NE - Not established
NR - Not reported
J - Estimated value
U - Material was analyzed for but not detected
DD - Doeboy Dump Site
SD - Sediment
PCB - polychlorinated biphenyl
* - Miscellaneous compounds are not on the target analyte compound list and are reported only as detected in individual samples; SQL is not provided.
Shaded areas indicate elevated concentrations of constituents.
-- Sample data is flagged as "U" or "UJ" and at levels less than the background.

Taken from expanded site inspection report for Doeboy Dump Site,August 6, 1999.