

## **Appendix C-1**

Dames & Moore 1983: Report of Evaluation of Site  
Contamination, Isaacson Steel Property



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REPORT OF EVALUATION OF SITE CONTAMINATION  
ISAACSON STEEL PROPERTY  
FOR THE  
BOEING AEROSPACE COMPANY

OCTOBER 4, 1983  
0695-276-05

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# Dames & Moore



TABLE 1

RESULTS OF CHEMICAL ANALYSES OF SOIL SAMPLES(a)

Boring Number	Sample Depth (feet)	PCBs (ppm)	Arsenic (ppm)	Barium (ppm)	Cadmium (ppm)	Chromium (ppm)	Total Cyanide (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Selenium (ppm)	Silver (ppm)	Zinc (ppm)	Oil and Grease (ppm)	Total Organic Carbon (ppm)
1	2	5-1/2	<0.2	3.4	26.	0.03	11.	1.3	<0.03	9.5	--	<0.3	21.	--	--
2	1	2-1/2	--(b)	8.7	44.	0.12	20.	11.	0.08	16.	--	<0.3	37.	--	--
3	1	2-1/2	--	1,400.0	--	--	--	--	--	--	--	--	355.	1,040.(c)	5,400.
3	2	6-1/2	--	932.0	43.	0.35	12.	3.1	0.06	10.	--	<0.3	2,030.	--	--
3	3	10-1/2	<0.2	200.0	60.	0.20	16.	4.7	0.06	14.	--	<0.3	416.	1,850.	3,400.
4	1	2-1/2	--	270.5(c)	--	--	--	--	--	--	--	--	124.(c)	350.	2,400
4	2	6-1/2	<0.2	551.0	33.	0.06	11.	2.4	0.04	9.2	--	<0.3	40.	--	1,800.
4	3	10-1/2	--	15.0	--	--	--	--	--	--	--	--	132.	130.	1,500.
5	1	2-1/2	9.7(d)	33.0	650.	16.00	1,130.	1,170.	0.13	82.	--	2.5	2,270.	--	--
6-3	1	2	1.2(e)	18.0	520.	7.70	466.	580.	0.19	76.	--	2.5	2,320.	--	--
7-1	1	2-1/2	0.7(e)	12.0	59.	1.90	44.	230.	0.14	56.	--	1.2	1,640.	--	--
7-5	1	8-1/2	--	10.0	42.	0.76	15.	100.	0.12	34	0.73	0.9	877	--	--
7-5	2	13-1/2	<0.2	7.0	51.	0.26	21.	49.	0.05	17.	--	<0.3	77.	--	--
7-5	3	18-1/2	--	25.0	60.	1.10	32.	24.	0.24	25.	<0.20	0.8	194.	--	--
9	2	3	--	47.	63.	0.96	31.	16.	0.12	16.	--	0.6	80.	2,090.	--

(a) All test results are reported on a dry weight basis.  
 (b) Where no value is reported, the soil sample was not analyzed for that particular contaminant.  
 (c) Represents average of two values determined within one laboratory.  
 (d) Aroclor 1254.  
 (e) Aroclor 1260.

TABLE 1

Boring Number	Sample Depth (feet)	PCBs (ppm)	Arsenic (ppm)	Barium (ppm)	Cadmium (ppm)	Chromium (ppm)	Total Cyanide (ppm)	Lead (ppm)	Mercury (ppm)	Mickel (ppm)	Selenium (ppm)	Silver (ppm)	Zinc (ppm)	Total Organic Carbon (ppm)	
														Oil and Grease (ppm)	Carbon (ppm)
10	2 6	--	20.0	--	--	--	--	--	--	--	--	--	59.5	130.	--
10(S)(L)	5 11	--	4.7	--	--	--	--	--	--	--	--	--	32.0	<100.	--
10(S)(L)	5 11	--	8.8	--	--	--	--	--	--	--	--	--	31.8	<69.	--
10	6 13-1/2	--	7.1	--	--	--	--	--	--	--	--	--	27.2	92.	--
11	2 6-1/2	--	2,880.0	--	--	--	--	--	--	--	--	--	301.0	<58.	--
11	4 11-1/2	--	1,210.0	--	--	--	--	--	--	--	--	--	261.0	649.	--
12	2 6-1/2	--	44.0	--	--	--	--	--	--	--	--	--	18.2	<57.	--
12(S)(L)	3 9	--	3.1	--	--	--	--	--	--	--	--	--	33.0	100.	--
12(S)(L)	3 9	--	13.0	--	--	--	--	--	--	--	--	--	28.5	173.	--
12	5 14	--	23.0	--	--	--	--	--	--	--	--	--	388.0	93.	--
13	4 9	--	7.2	--	--	--	--	--	--	--	--	--	25.0	110.	--
13	5 13-1/2	--	4.5(c)	--	--	--	--	--	--	--	--	--	102.5(c)	53.	--
14	1 2	--	41.0	33.	0.78	16.	--	69.	0.03	14.	<0.20	<0.30	73.9	210.	--
15(S)(L)	1 2	0.4	15.0	200	1.60	44.	--	490.	0.84	35.	0.60	0.24	440.0	900.	--
15(S)(L)	1 2	0.13(e)	11.0	135.	1.90	33.	--	200.	0.18	21.	0.24	0.54	272.0	2,020.	--
16	1 2-1/2	--	9.5	83.	1.90	45.	--	170.	0.04	88.	0.68	0.54	556.0	--	--
16	3 6-1/2	<0.1	5.3	24.	0.69	40.	--	36.	<0.03	20.	<0.20	<0.30	88.8	--	--
17(S)(L)	1 2-1/2	--	16.0	70	2.40	270.	--	280	<0.05	180.	0.60	0.36	390.	1,500.	--

(L) (S) designates split sampler; both sets of data presented for correlation.

TABLE 1

Boring Number	Sample Depth (feet)	PCBs (ppm)	Arsenic (ppm)	Barium (ppm)	Cadmium (ppm)	Chromium (ppm)	Total Cyanide (ppm)	Lead (ppm)	Mercury (ppm)	Nickel (ppm)	Selenium (ppm)	Silver (ppm)	Zinc (ppm)	Oil and Grease (ppm)	Total Organic Carbon (ppm)
17(S)(f) 1	2-1/2	<0.1	19.0	70	3.8	541	--	230	0.17	146	0.22	0.83	511.	--	--
17 3	6-1/2	--	7.4	149	5.1	62	--	396	0.05	108	0.96	3.0	3,640.	--	--
18 1 2	2	--	11.0	30	0.60	16	--	73	0.03	20	<0.20	<0.30	81.	107.	--
18 3	6-1/2	--	4.2(c)	25(c)	0.31(c)	11.5(c)	--	5.5(c)	0.04	8.5(c)	<0.20	<0.30	33.7(c)	<57.	--
19 1	1-1/2	<0.1	8.9	49	0.61	19	--	14	0.11	22	<0.20	<0.30	32.6	642.	--
19 2	3-1/2	0.28(e)	17.	75	1.5	180	--	323	0.03	281	0.28	1.4	289.	698.	--
19 4	9	--	36.0	63	2.9	835	--	220	<0.03	2,030	<0.20	2.8	300.	--	--
20 2	4	<0.1	5.3	28	0.40	19	--	8	<0.03	28	0.40	<0.30	26.8	73.	--
20 5	10-1/2	--	9.2	49	0.45	15	--	9	<0.03	19	0.75	<0.30	30.7	179.	--
20 6	14	--	18.0	71	0.68	19	--	93	4.3	15	0.31	<0.30	52.9	149.	--
21 1	1-1/2	<0.1	6.0	31	0.41	8.2	--	5.5	<0.03(c)	9.3	<0.20	<0.30	18.0	55.	--
21 4	8-1/2	--	5.2	18	0.30	8.5	--	4.0	<0.03	7.0	<0.20	<0.30	12.5	110.	--
22(S)(f) 2	4	0.05	3.8	50	0.10	23.	--	9.2	0.07	24.	<0.50	0.07	45.0	100.	--
22(S)(f) 2	4	<0.1	6.7	34	0.57	22	--	13	<0.03	27.	0.27	<0.30	70.2	165.	--
22 3	6-1/2	--	8.7	60.	1.30	48.	--	110.	0.06	26.	0.26	<0.30	268.	1,710.	--
Bump Sludge		--	39.0(c)	--	--	--	--	--	--	--	--	--	94,950.(c)	350,000	--

TABLE 2  
RESULTS OF CHEMICAL ANALYSES OF WATER SAMPLES (a)

Boring Number	Antimony (mg/l)	Arsenic (mg/l)	Barium (mg/l)	Cadmium (mg/l)	Chromium (mg/l)	Cyanide (mg/l)	Fluoride (mg/l)	Lead (mg/l)	Mercury (mg/l)	Nickel (mg/l)	Selenium (mg/l)	Silver (mg/l)	Phenol (mg/l)	Zinc (mg/l)	Total Organic Carbon
															(mg/l)
7	-(b)	0.028	0.39	<0.002	0.02	0.013	0	0.095	<0.001	0.01	-	<0.01	-	0.11	4.0
12	0.019	0.26	<0.25	0.0004	0.02	<0.003	0.24	0.001	<0.0002	-	0.003	0.0019	0.025	-	-
20(S)(c)	0.041	0.30	0.36	0.0036	0.13	<0.003	0.54	0.017	<0.0002	-	0.004	0.0081	0.016	-	-
20(S)	0.008	0.31	0.26	<0.002	0.031	<0.005	0.40	0.038	<0.001	-	<0.005	0.002	0.081	-	-
48-inch drain	0.017	0.008	<0.25	0.0008	0.033	0.005	0.37	0.023	<0.0002	-	0.004	0.0013	0.017	-	-

(a) All test results are reported on a dry weight basis.

(b) Where no value is reported, the water sample was not analyzed for that particular contaminant.

(c) (S) designates split sample; both sets of data are presented for comparison.

TABLE 3

RESULTS OF CHEMICAL ANALYSES OF SLAG SAMPLE (a)

MAJOR COMPONENTS		Parts per Million
Silica	SiO <sub>2</sub>	-
Alumina	Al <sub>2</sub> O <sub>3</sub>	99,500
Iron	Fe <sub>2</sub> O <sub>3</sub>	123,000
Calcium	CaO	280,000
Magnesium	MgO	81,900
Sodium	Na <sub>2</sub> O	3,800
Potassium	K <sub>2</sub> O	750
Sulphur	SO <sub>3</sub>	-
Loss on Ignition	L.O.I.	-
TRACE COMPONENTS		
Antimony	Sb	<15
Arsenic	As	<30
Barium	Ba	1,350
Beryllium	Be	<0.3
Bismuth	Bi	<50
Boron	B	<1.0
Cadmium	Cd	<2.5
Chromium	Cr	4,330
Cobalt	Co	<2.0
Copper	Cu	62
Lead	Pb	105
Manganese	Mn	70,000
Molybdenum	Mo	42.2
Nickel	Ni	275
Phosphorus	PO <sub>4</sub>	9,520
Silver	Ag	<3.0
Strontium	Sr	240
Tin	Sn	8.1
Titanium	Ti	3,980
Tungsten	W	-
Uranium	U	-
Vanadium	V	1,270
Zinc	Zn	280

(a) Results were obtained by plasma spectrographic analysis; sample preparation: ground, digested, with HNO<sub>3</sub>/HClO<sub>4</sub>/HF/HCl.