PBW

Consulting Engineers
and Scientists

PASTOR, BEHLING & WHEELER, LLC
2201 Double Creek Drive, Suite 4004
Round Rock, TX 78664

Tel (512) 671-3434
Fax (512) 671-3446

April 4, 2007
(PBW Project No. 1287)

VIA OVERNIGHT DELIVERY

RECEIVED
BY SO DATE 4/5/07

Mr. Gary Miller
Superfund Division, Region 6 (6SF-AP)
Arkansas/Texas Section
U.S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Ms. Barbara A. Nann, Assistant Regional Counsel
U.S. Environmental Protection Agency, Region 6
Superfund Division (6RC-S)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Re: Documentation of Aboveground Storage Tank Sampling Activities, Gulfco Marine Maintenance Site, Freeport, Texas

Dear Mr. Miller and Ms. Nann:

Pastor, Behling & Wheeler, LLC (PBW), on behalf of LDL Coastal Limited LP (LDL), Chromalloy American Corporation (Chromalloy) and The Dow Chemical Company (Dow) (collectively referred to as Respondents in the modified Unilateral Administrative Order (UAO) for the above-reference Site and the Statement of Work (SOW) attached thereto) has prepared this letter report to document aboveground storage tank (AST) sampling activities performed at the Site in December 2006. In accordance with Paragraph 52 of the UAO, I certify that I have been fully authorized by the Respondents to submit this information and to legally bind all Respondents thereto.

AST sampling activities were performed by Clean Harbors Environmental Services, Inc. (CHESI) personnel during the period from December 14 through 15, 2006 in accordance with the Work Plan provided in my letter to you dated November 6, 2006. In addition to the AST samples, samples of water accumulated within the north and south containment areas of the AST tank farm were also collected in response to your verbal request on December 14, 2006. As part of sampling activities, CHESI personnel gauged fluid levels in all tanks within the ASTs and collected samples from separate solid and liquid phases within the tanks. Tank No. 17, which was anticipated to contain chloroform based on a previous report (LT Environmental, Inc.'s *Site Characterization Report* dated June 1999) was found to be empty except for several inches of rust solids at the base of the tank. In conjunction with tank sampling activities, CHESI performed regular monitoring of ambient air for total organic vapor concentrations using an organic vapor meter with a photoionization detector. Attachment A to this letter provides a Site map with

217936

033970

CHESI's observations regarding the contents of each tank, a map of CHESI's air monitoring locations, and CHESI's air monitoring log during sampling activities.

Tank samples were transported to Gulf Coast Analytical Laboratories, Inc. (GCAL) in Baton Rouge, Louisiana for analysis for various waste characterization parameters (e.g., reactivity, corrosivity, ignitability, toxicity). The results of these analyses are summarized on attached Tables 1 through 4. The original laboratory reports for these analyses are provided on the DVD enclosed with this letter. We are currently in the process of evaluating these data and will advise you of proposed future actions.

Thank you for your continued support on this project. Should you have any questions or comments regarding this information, please do not hesitate to contact me.

Sincerely,

PASTOR, BEHLING & WHEELER, LLC

Eric F. Pastor, P.E.
Principal Engineer

cc: Mr. Brent Murray – Environmental Quality, Inc.
Mr. Rob Rouse - The Dow Chemical Company
Mr. Allen Daniels - LDL Coastal Limited, LP
Mr. F. William Mahley - Strasburger & Price, LLP
Mr. James C. Morriss III - Thompson & Knight, LLP
Ms. Elizabeth Webb - Thompson & Knight, LLP

Table 1
Gulfco Former AST Tank Farm
Tank Sample - RCI/Toxicity Data

Tank No.	Sample ID.	Physical Description	pH	Reactivity Sulfide	Reactivity Cyanide	Flashpoint	Arsenic	Barium	Benzene	Cadmium	Carbon Tetrachloride
				ppm	ppm	Deg. F.	mg/L	mg/L	mg/L	mg/L	mg/L
Tank No. 2	TK-2-O	Aqueous Phase	NA	NA	NA	NA	<0.0024	12.1	<0.177	NA	NA
	TK-2-O	Organic Phase	5.95	112	<250	>212	<0.0024	8.19	0.415 J	0.0033 B	<0.013
	TK-2-S	Solids- sand, debris, etc.	NA	NA	NA	NA	<0.0024	2.82	24.1	0.0038 B	<0.256
Tank No. 4	TK-4-A	Oily Water	7.4	<96	<250	>212	<0.0024	29.7	<0.000177	0.016	<0.000336
Tank No. 6	TK-6-S	Rust Solids	NA	NA	NA	NA	<0.0024	0.89 B	<0.009	0.002 B	<0.00512
Tank No. 13	TK-13-O	Oily sludge	6.89	80	<250	>212	<0.0024	0.27 B	13.8	<0.00022	<0.128
Tank No. 14	None	Empty (2 in. of rust solids)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tank No. 15	TK-15-O	Oily sludge	6.38	<80	<250	126	<0.0024	0.22 B	5.3	<0.00022	<0.00512
Tank No. 16	TK-16-O	Oily sludge	6.31	<80	<250	>212	<0.0024	0.39 B	<0.009	<0.00022	<0.00512
Tank No. 17	TK-17-S	Rust solids	NA	NA	NA	NA	<0.0024	0.56 B	<0.009	0.0012 B	<0.00512
Tank No. 18	TK-18-O	Light Organic Phase	3.37	<417	<250	90	<0.024	0.53 B	<9	<0.0022	<5.12
Tank No. 19	TK-19-O	Oily sludge	6.75	216	<250	104	<0.0024	1.33	<4.5	<0.00022	<2.56
Tank No. 21	TK-21-A	Oily water	8.5	<80	<250	>212	<0.0024	0.0021 B	51.6 J	<0.00022	<5.12
Tank No. 22	TK-22-O	Oily sludge	6.74	<80	<250	>212	<0.0024	0.28 B	<0.009	<0.00022	<0.00512
Tank No. 23	TK-23-O (mg/kg)	Appears to be diesel	6.72	160	<250	126	<0.16	0.26B	<2.08	<0.013	<2.4
North Containment Area	Dike North	Water	NA	NA	NA	NA	0.012	1.17	0.011	<0.00019	0.00889 J
South Containment Area	Dike South	Water	NA	NA	NA	NA	0.024	0.49	0.015	<0.00019	<0.000336
Hazardous Criteria			<= 2 or >= 12.5	>= 500	>= 250	<140	5	100	0.5	1	0.5

Table 1
Gulfco Former AST Tank Farm
Tank Sample - RCI/Toxicity Data

Tank No.	Sample ID.	Physical Description	Chlordane	Chlorobenzene	Chloroform	Chromium	o-Cresol	m,p-Cresol	Cresol	1,2-Dichloroethane	1,4-Dichlorobenzene	2,4'-D
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Tank No. 2	TK-2-O	Aqueous Phase	NA	<0.162	1.5 J	0.16	<0.409	<0.368	NA	7.97	<0.0538	NA
	TK-2-O	Organic Phase	<0.00008	<0.021	2.25	<0.0012	<0.0012	<0.0014	<0.003	8.4	<0.0011	<0.0027
	TK-2-S	Solids- sand, debris, etc.	<0.00008	<0.426	20.7	0.0045 B	0.00275 J	<0.0014	0.00414 J	203	<0.0011	<0.0027
Tank No. 4	TK-4-A	Oily Water	NA	<0.000162	<0.00018	<0.0012	<0.00327	<0.00295	NA	<0.000176	<0.000538	<0.00027
Tank No. 6	TK-6-S	Rust Solids	<0.00008	<0.00852	<0.00776	<0.0012	<0.0012	<0.0014	<0.003	<0.0082	<0.0011	<0.0027
Tank No. 13	TK-13-O	Oily sludge	<0.00008	<0.213	1.32 J	<0.0012	<0.0012	0.00143 J	<0.003	2.73 J	<0.0011	<0.0027
Tank No. 14	None	Empty (2 in. of rust solids)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tank No. 15	TK-15-O	Oily sludge	<0.00008	<0.00852	<0.00776	<0.0012	<0.013 J	<0.0014	0.013 J	<0.0082	<0.0011	<0.0027
Tank No. 16	TK-16-O	Oily sludge	<0.00008	<0.00852	<0.00776	<0.0012	<0.0012	0.037 J	0.037 J	<0.0082	<0.0011	<0.0027
Tank No. 17	TK-17-S	Rust solids	<0.0004	<0.00852	<0.00776	<0.0012	<0.0012	<0.0014	<0.003	<0.0082	<0.0011	<0.0027
Tank No. 18	TK-18-O	Light Organic Phase	<0.01431	<8.52	216	<0.012	<0.1764	<0.2134	<0.444	<8.2	<0.1577	<0.0027
Tank No. 19	TK-19-O	Oily sludge	<0.00008	<4.26	<3.88	<0.0012	0.0046 J	<0.0014	0.00486 J	<4.1	<0.0011	<0.0027
Tank No. 21	TK-21-A	Oily water	<0.00008	<8.52	2100	<0.0012	<0.0012	<0.0014	<0.003	224	<0.0011	<0.0027
Tank No. 22	TK-22-O	Oily sludge	<0.00008	<0.00852	<0.00776	<0.0012	<0.0012	0.00364 J	0.00364 J	<0.0082	<0.0011	<0.0027
Tank No. 23	TK-23-O (mg/kg)	Appears to be diesel	NA	<3.31	<2.83	<0.049	NA	NA	NA	<2.28	<8.44	NA
North Containment Area	Dike North	Water	NA	<0.000324	0.095	0.0028 B	<0.000327	<0.000295	NA	0.045	<0.00108	<0.0027
South Containment Area	Dike South	Water	NA	<0.000162	0.03	0.0031 B	<0.000327	<0.000295	NA	0.00304 J	<0.000538	<0.00027
Hazardous Criteria			0.03	100	6	5	200	200	200	0.5	7.5	10

Table 1
Gulfco Former AST Tank Farm
Tank Sample - RCI/Toxicity Data

Tank No.	Sample ID.	Physical Description	1,1-Dichloroethene	2,4-Dinitrotoluene	Endrin	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachloroethane	Lead
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Tank No. 2	TK-2-O	Aqueous Phase	<0.205	<0.579	NA	NA	NA	<0.32	<0.45	<1.05	<0.0013
	TK-2-O	Organic Phase	<0.023	<0.0036	<0.00007	<0.00004	<0.00005	<0.0015	<0.0017	<0.0016	0.043 B
	TK-2-S	Solids- sand, debris, etc.	<0.458	<0.0036	<0.00007	<0.00004	<0.0005	<0.0015	<0.0017	<0.0016	0.0084 B
Tank No. 4	TK-4-A	Oily Water	<0.000205	<0.00464	<0.0000832	<0.0000439	0.00065	<0.00256	<0.00045	<0.00842	0.28
Tank No. 6	TK-6-S	Rust Solids	<0.00916	<0.0036	<0.00007	<0.00004	<0.00005	<0.0015	<0.0017	<0.0016	0.0028 B
Tank No. 13	TK-13-O	Oily sludge	<0.229	<0.0036	<0.00007	<0.00004	0.00057	<0.0015	<0.0017	<0.0016	0.0035 B
Tank No. 14	None	Empty (2 in. of rust solids)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tank No. 15	TK-15-O	Oily sludge	<0.00916	<0.0036	<0.00007	<0.00004	<0.00005	<0.0015	<0.0017	<0.0016	<0.0013
Tank No. 16	TK-16-O	Oily sludge	<0.00916	<0.0036	<0.00007	<0.00004	<0.00005	<0.0015	<0.0017	<0.0016	<0.0013
Tank No. 17	TK-17-S	Rust solids	<0.00916	<0.0036	<0.00033	<0.00019	<0.00024	<0.0015	<0.0017	<0.0016	0.022 B
Tank No. 18	TK-18-O	Light Organic Phase	<9.16	<0.5339	<0.01182	0.029 J	<0.00862	<0.2179	<0.248	<0.2358	<0.013
Tank No. 19	TK-19-O	Oily sludge	<4.58	<0.0036	<0.00007	<0.00004	<0.00005	<0.0015	<0.0017	<0.0016	0.0056 B
Tank No. 21	TK-21-A	Oily water	<9.16	<0.0036	<0.00007	<0.00004	<0.00005	<0.0015	<0.0017	<0.0016	<0.0013
Tank No. 22	TK-22-O	Oily sludge	<0.00916	<0.0036	<0.00007	<0.00004	<0.00005	<0.0015	<0.0017	<0.0016	<0.0013
Tank No. 23	TK-23-O (mg/kg)	Appears to be diesel	<3.19	NA	NA	NA	NA	NA	<24.9	NA	<0.097
North Containment Area	Dike North	Water	<0.000411	<0.000464	<0.00000832	<0.00000439	<0.00000732	<0.000256	<0.0009	<0.000842	<0.0013
South Containment Area	Dike South	Water	<0.000205	<0.000464	<0.00000832	<0.00000439	0.0000329	<0.000256	<0.00045	<0.000842	0.0044 B
Hazardous Criteria			0.7	0.13	0.02	0.008	0.008	0.13	0.5	3	5

Table 1
Gulfco Former AST Tank Farm
Tank Sample - RCI/Toxicity Data

Tank No.	Sample ID.	Physical Description	Lindane	Mercury	Methoxychlor	MEK	Nitrobenzene	Pentachlorophenol	Pyridine	Selenium	Silver
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Tank No. 2	TK-2-O	Aqueous Phase	<0.00003	0.00004	NA	13.4	<0.452	<1.33	<0.437	0.03 B	<0.0006
	TK-2-O	Organic Phase	<0.00003	0.00037	<0.00032	9.77	<0.0008	<0.0037	<0.0182	<0.0046	<0.0006
	TK-2-S	Solids- sand, debris, etc.	<0.00003	0.00014 B	<0.00032	30	<0.0008	<0.0037	<0.0182	<0.0046	<0.0006
Tank No. 4	TK-4-A	Oily Water	0.00035	0.00017 B	0.0018 J	0.011	<0.00362	<0.011	<0.00349	<0.0046	<0.0006
Tank No. 6	TK-6-S	Rust Solids	<0.00003	0.00013 B	<0.00032	<0.017	<0.0008	<0.0037	<0.0182	0.014 B	<0.0006
Tank No. 13	TK-13-O	Oily sludge	<0.00003	0.00012 B	<0.00032	<0.429	<0.0008	<0.0037	<0.0182	0.006 B	<0.0006
Tank No. 14	None	Empty (2 in. of rust solids)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tank No. 15	TK-15-O	Oily sludge	<0.00003	0.00039	<0.00032	0.085 J	<0.0008	<0.0037	<0.0182	0.0095 B	<0.0006
Tank No. 16	TK-16-O	Oily sludge	<0.00003	0.00011 B	<0.00032	0.367	<0.0008	<0.0037	<0.0182	0.013 B	<0.0006
Tank No. 17	TK-17-S	Rust solids	0.0185	0.00015 B	<0.00162	<0.017	<0.0008	<0.0037	<0.0182	<0.0046	<0.0006
Tank No. 18	TK-18-O	Light Organic Phase	<0.00556	<0.0048	<0.05816	<17.2	<0.1262	<0.5607	<2.74	0.88 B	<0.006
Tank No. 19	TK-19-O	Oily sludge	<0.00003	0.00008 B	<0.00032	<8.58	<0.0008	<0.0037	<0.0182	0.0064 B	<0.0006
Tank No. 21	TK-21-A	Oily water	<0.00003	0.00012 B	<0.00032	<17.2	<0.0008	<0.0037	<0.0182	<0.0046	<0.0006
Tank No. 22	TK-22-O	Oily sludge	<0.00003	0.00013 B	<0.00032	0.874	<0.0008	<0.0037	<0.0182	0.0067 B	<0.0006
Tank No. 23	TK-23-O (mg/kg)	Appears to be diesel	NA	0.011	NA	<6.25	NA	NA	NA	1.6B	<0.047
North Containment Area	Dike North	Water	<0.00000255	<0.00004	<0.00000214	<0.00217	<0.000362	<0.00106	<0.000349	0.0049 B	<0.0006
South Containment Area	Dike South	Water	<0.00000255	<0.00004	<0.00000214	<0.00109	<0.000362	<0.00106	<0.000349	<0.0046	<0.0006
Hazardous Criteria			0.4	0.2	10	200	2	100	5	1	5

Table 1
Gulfco Former AST Tank Farm
Tank Sample - RCI/Toxicity Data

Tank No.	Sample ID.	Physical Description	Tetrachloroethylene	Toxaphene	Trichloroethylene	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4,5-TP (Silvex)	Vinyl Chloride
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Tank No. 2	TK-2-O	Aqueous Phase	<0.768	NA	0.851 J	<0.508	<0.525	NA	<0.383
	TK-2-O	Organic Phase	<0.023	<0.00025	1.52	<0.001	<0.0021	<0.0016	0.247 J
	TK-2-S	Solids- sand, debris, etc.	55.7	<0.00025	205	<0.001	<0.0021	<0.0016	0.247 J
Tank No. 4	TK-4-A	Oily Water	<0.000768	<0.00275	0.00102 J	<0.00406	<0.00042	<0.00013	<0.000383
Tank No. 6	TK-6-S	Rust Solids	<0.00908	<0.00025	0.027 J	<0.001	<0.0021	<0.0016	<0.00356
Tank No. 13	TK-13-O	Oily sludge	47.7	<0.00025	2.98 J	<0.001	<0.0021	<0.0016	0.988 J
Tank No. 14	None	Empty (2 in. of rust solids)	NA	NA	NA	NA	NA	NA	NA
Tank No. 15	TK-15-O	Oily sludge	<0.00908	<0.00025	<0.011	<0.001	<0.0021	<0.0016	<0.00356
Tank No. 16	TK-16-O	Oily sludge	<0.00908	<0.00025	<0.011	<0.001	<0.0021	<0.0016	<0.00356
Tank No. 17	TK-17-S	Rust solids	<0.00908	<0.00125	<0.011	<0.001	<0.0021	<0.0016	<0.00356
Tank No. 18	TK-18-O	Light Organic Phase	<9.08	<0.045	<10.8	<0.1552	<0.3149	<0.0016	<3.56
Tank No. 19	TK-19-O	Oily sludge	<4.54	<0.00025	<5.4	<0.001	<0.0021	<0.0016	<1.78
Tank No. 21	TK-21-A	Oily water	<9.08	<0.00025	<10.8	<0.001	<0.0021	<0.0016	<3.56
Tank No. 22	TK-22-O	Oily sludge	<0.00908	<0.00025	<0.011	<0.001	<0.0021	<0.0016	<0.00356
Tank No. 23	TK-23-O (mg/kg)	Appears to be diesel	<3.85	NA	<3.55	NA	NA	NA	<7.03
North Containment Area	Dike North	Water	0.00627 J	<0.000275	0.018	<0.000406	<0.00042	<0.00013	<0.000765
South Containment Area	Dike South	Water	<0.000768	<0.000275	<0.000702	<0.000406	<0.00042	<0.00013	<0.000383
Hazardous Criteria			0.7	0.5	0.5	400	2	1	0.2

Table 1
Gulfco Former AST Tank Farm
Tank Sample - RCI/Toxicity Data

Tank No.	Sample ID.	Physical Description	Comments
Tank No. 2	TK-2-O	Aqueous Phase	Total Data
	TK-2-O	Organic Phase	TCLP Data
	TK-2-S	Solids- sand, debris, etc.	TCLP Data
Tank No. 4	TK-4-A	Oily Water	Total Data
Tank No. 6	TK-6-S	Rust Solids	TCLP Data
Tank No. 13	TK-13-O	Oily sludge	TCLP Data
Tank No. 14	None	Empty (2 in. of rust solids)	
Tank No. 15	TK-15-O	Oily sludge	TCLP Data
Tank No. 16	TK-16-O	Oily sludge	TCLP Data
Tank No. 17	TK-17-S	Rust solids	TCLP Data
Tank No. 18	TK-18-O	Light Organic Phase	TCLP Data
Tank No. 19	TK-19-O	Oily sludge	TCLP Data
Tank No. 21	TK-21-A	Oily water	TCLP Data
Tank No. 22	TK-22-O	Oily sludge	TCLP Data
Tank No. 23	TK-23-O (mg/kg)	Appears to be diesel	Total Data (mg/kg)
North Containment Area	Dike North	Water	Total Data
South Containment Area	Dike South	Water	Total Data
Hazardous Criteria			

Table 2
Gulfco Former AST Tank Farm
Tank Sample TPH/PCB Data

Tank No.	Sample ID.	Physical Description	C6-C12	>C12-C28	>C28-C35	Total TPH (C6-C35)	Arachlor-1016	Arachlor-1221	Arachlor-1232	Arachlor-1242	Arachlor-1248
Tank No. 4	TK-4-A	Oily Water	16.7J	130	<26.6	147	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tank No. 6	TK-6-S	Rust Solids	<100	1,140	1,630	2,770	<1.2	<1.2	<1.2	<1.2	<1.2
Tank No. 13	TK-13-O	Oily sludge	<10	468,000	275,000	743,000	<120	<120	<120	<120	<120
Tank No. 15	TK-15-O	Oily sludge	135,000	719,000	197,000	>99%	<1.2	<1.2	<1.2	<1.2	<1.2
Tank No. 16	TK-16-O	Oily sludge	<20	761,000	512,000	>99%	<1.2	<1.2	<1.2	<1.2	<1.2
Tank No. 17	TK-17-S	Rust solids	<111	880	360	1,240	<1.33	<1.33	<1.33	<1.33	<1.33
Tank No. 18	TK-18-O	Light Organic Phase	961,000	37,800	<50	999,000	<1.2	<1.2	<1.2	<1.2	<1.2
Tank No. 19	TK-19-O	Oily sludge	59,600	441,000	128,000	629,000	<1.2	<1.2	<1.2	<1.2	<1.2
Tank No. 21	TK-21-A	Oily water	<20	51,400	266,000	780,000	<99.3	<99.3	<99.3	<99.3	<99.3
Tank No. 22	TK-22-O	Oily sludge	<20	789,000	449,000	>99%	<1.2	<1.2	<1.2	<1.2	<1.2
Tank No. 23	TK-23-O	Appears to be diesel	260,000	1,230,000	<50	>99%	<1.2	<1.2	<1.2	<1.2	<1.2
North Containment Area	Dike North	Water	<5.42	2.5J	<5.42	2.5J	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
South Containment Area	Dike South	Water	<5.36	<5.36	<5.36	<16.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Table 2
Gulfco Former AST Tank Farm
Tank Sample TPH/PCB Data

Tank No.	Sample ID.	Physical Description	Arachlor-1254	Arachlor-1260	Comments
Tank No. 4	TK-4-A	Oily Water	<0.0005	<0.0005	mg/L
Tank No. 6	TK-6-S	Rust Solids	<1.2	<1.2	mg/kg
Tank No. 13	TK-13-O	Oily sludge	<120	<120	mg/kg
Tank No. 15	TK-15-O	Oily sludge	<1.2	<1.2	mg/kg
Tank No. 16	TK-16-O	Oily sludge	<1.2	<1.2	mg/kg
Tank No. 17	TK-17-S	Rust solids	<1.33	<1.33	mg/kg
Tank No. 18	TK-18-O	Light Organic Phase	<1.2	<1.2	mg/kg
Tank No. 19	TK-19-O	Oily sludge	<1.2	<1.2	mg/kg
Tank No. 21	TK-21-A	Oily water	<99.3	<99.3	mg/kg
Tank No. 22	TK-22-O	Oily sludge	<1.2	<1.2	mg/kg
Tank No. 23	TK-23-O	Appears to be diesel	<1.2	<1.2	mg/kg
North Containment Area	Dike North	Water	<0.0005	<0.0005	mg/L
South Containment Area	Dike South	Water	<0.0005	<0.0005	mg/L

Table 3
Gulfco Former AST Tank Farm
TK-21-A Sample Total Concentrations - Detected Values

Parameter	Result
VOCs	**mg/kg**
1,2-Dichloroethane	663
Benzene	121 J
Chloroform	6,850
Isopropylbenzene (Cumene)	119 J
Methylene chloride	241 J
Toluene	179 J
SVOCs	
2-Methylnapthalene	145 B
Benzaldehyde	123 J
Biphenyl	54.4 J
Bis(2-Ethylhexyl)phthalate	36.5 J
Caprolactum	2,410
Crysene	23.3 J
Fluorene	82.7 J
Phenanthrene	283
Pyrene	85.5 J
Metals	
Barium	7.09
Cadmium	0.062 B
Calcium	304
Chromium	2.28
Iron	1,660
Lead	2.44
Manganese	9.61
Mercury	0.027
Selenium	0.92 B
Silver	0.12 B
TPH (TX 1005)	
>C12-C28	514,000
>C28-C35	266,000
Total TPH	780,000
Pesticides/Herbicides	
Endosulfan I	1.25 J
Endosulfan II	3.72 J
Endrin aldehyde	2.9 J
Endrin ketone	9.6 J
gamma-Chlordane	3.1 J
2,4,5-T	0.446 J

Notes:

J = Estimated value for organics.
B = Estimated value for metals. Detected in blank sample for organics.

Table 4
Gulfco Former AST Tank Farm
North and South Containment Dike Sample Analytical Results

Parameter	Dike North	Dike South
VOCs	mg/L	mg/L
1,1,1,2-Tetrachloroethane	<0.000965	<0.000482
1,1,1-Trichloroethane	0.031	<0.000461
1,1,2,2-Tetrachloroethane	<0.00024	<0.00012
1,1,2-Trichloroethane	<0.000665	<0.000333
1,1,-Dichloroethane	0.00244 J	<0.000237
1,1-Dichloroethene	<0.000411	<0.000205
1,1,-Dichloropropene	<0.00058	<0.00029
1,2,3-Trichloropropane	<0.00145	<0.000726
1,2,4-Trichlorobenzene	< 0.000422	<0.000211
1,2,4-Trimethylbenzene	0.0037 J	0.00939
1,2-Dibromo-3-chloropropane	<0.00038	<0.00019
1,2-Dibromoethane	<0.000539	<0.000269
1,2-Dichlorobenzene	<0.000801	<0.000401
1,2-Dichloroethane	0.045	0.00304 J
1,2-Dichloropropane	<0.000507	<0.000254
1,3,5-Trimethylbenzene	<0.000422	0.00235 J
1,3-Dichlorobenzene	<0.00063	<0.000315
1,3-Dichloropropane	<0.000511	<0.000255
1,4-Dichlorobenzene	<0.00108	<0.000538
2,2-Dichloropropane	<0.000532	<0.000266
2-Butanone	<0.00217	<0.00109
2-Chloroethylvinyl ether	<0.00109	<0.000547
2-Chlorotoluene	<0.000603	<0.000301
2-Hexanone	<0.000823	<0.000412
4-Chlorotoluene	<0.000661	<0.000331
4-Isopropyltoluene	<0.000242	<0.000121
4-Methyl-2-pentanone	<0.0000996	<0.0000498
Acetone	<0.00382	0.021 J
Acrolein	<0.00403	<0.00201
Acrylonitrile	<0.00646	<0.00323
Benzene	0.011	0.015
Bromobenzene	<0.000641	<0.000321
Bromodichloromethane	<0.000289	<0.000145
Bromoform	<0.000755	<0.000377
Bromomethane	<0.00155	<0.000774
Carbon disulfide	<0.000487	<0.000244
Carbon tetrachloride	0.00889 J	<0.000336
Chlorobenzene	<0.000324	<0.000162
Chloroethane	<0.00115	<0.000574
Chloroform	0.095	0.03
Chloromethane	<0.00129	<0.000645
cis-1,2-Dichloroethene	0.00513 J	<0.000292
cis-1,3-Dichloropropene	<0.00033	<0.000165
Cyclohexane	0.00293 J	0.000936 J

Table 4
Gulfco Former AST Tank Farm
North and South Containment Dike Sample Analytical Results

Parameter	Dike North	Dike South
VOCs (cont'd)		
Dibromochloromethane	<0.000455	<0.000228
Dibromomethane	<0.000756	<0.000378
Dichlorodifluoromethane	<0.000677	<0.000339
Ethylbenzene	0.011	0.00135 J
Hexachlorobutadiene	<0.0009	<0.00045
Isopropylbenzene (Cumene)	0.00453 J	0.000515 J
m,p-Xylene	0.00292 J	0.011
Methyl Acetate	<0.00169	<0.000847
Methyl iodide	<0.000841	<0.00042
Methylcyclohexane	<0.000378	<0.000189
Methylene chloride	0.012 J	0.000765 J
Naphthalene	0.023	0.096
n-Butyl alcohol	<0.05	<0.025
n-Butylbenzene	<0.000561	<0.000281
n-Propylbenzene	<0.000609	<0.000305
o-Xylene	0.00189 J	0.00476 J
sec-Butylbenzene	<0.000598	<0.000299
Styrene	<0.000304	<0.000152
tert-Butyl methyl ether (MTBE)	<0.000358	<0.000179
tert-Butylbenzene	<0.000573	<0.000287
Tetrachloroethene	0.00627 J	<0.000768
Toluene	0.00791 J	0.033
trans-1,2-Dichloroethene	<0.000747	<0.000374
trans-1,3-Dichloropropene	<0.000359	<0.00018
trans-1,4-Dichloro-2-butene	<0.00143	<0.000717
Trichloroethene	0.018	<0.000702
Trichlorofluoromethane	<0.00051	<0.000255
Trichlorotrifluoroethane	<0.00072	<0.00036
Vinyl acetate	<0.000756	<0.000378
Vinyl chloride	<0.000765	<0.000383
Xylene (total)	0.00481 J	0.016
SVOCs		
1,2Diphenylhydrazine/Azobenzen	<0.000204	<0.000204
2,4,5-Trichlorophenol	<0.000406	<0.000406
2,4,6-Trichlorophenol	<0.00042	<0.00042
2,4-Dichlorophenol	<0.000387	<0.000387
2,4-Dimethylphenol	<0.00131	<0.00131
2,4-Dinitrophenol	<0.00112	<0.00112
2,4-Dinitrotoluene	<0.000464	<0.000464
2,6-Dinitrotoluene	<0.00041	<0.00041
2-Chloronaphthalene	<0.000343	<0.000343
2-Chlorophenol	<0.000344	<0.000344
2-Methylnaphthalene	<0.000102	<0.000102
2-Nitroaniline	<0.000267	<0.000267

Table 4
Gulfco Former AST Tank Farm
North and South Containment Dike Sample Analytical Results

Parameter	Dike North	Dike South
SVOCs (cont'd)		
2-Nitrophenol	<0.000522	<0.000522
3,3'-Dichlorobenzidine	<0.00208	<0.00208
3-Nitroaniline	<0.0004	<0.0004
4,6-Dinitro-2-methylphenol	<0.000284	<0.000284
4-Bromophenyl phenyl ether	<0.000366	<0.000366
4-Chloro-3-methylphenol	<0.000408	<0.000408
4-Chloroaniline	<0.000786	<0.000786
4-Chlorophenyl phenyl ether	<0.000346	<0.000346
4-Nitroaniline	<0.000564	<0.000564
4-Nitrophenol	<0.00201	<0.00201
Acenaphthene	<0.000135	<0.000135
Acenaphthylene	<0.0000884	<0.0000884
Acetophenone	0.00633 J	<0.000371
Aniline	<0.000556	<0.000556
Anthracene	<0.000102	<0.000102
Atrazine (Aatrex)	<0.00205	<0.00205
Benzaldehyde	<0.00121	<0.00121
Benzidine	<0.00718	<0.00718
Benzo(a)anthracene	<0.0000796	<0.0000796
Benzo(a)pyrene	<0.00015	<0.00015
Benzo(b)fluoranthene	<0.000165	<0.000165
Benzo(g,h,i)perylene	<0.000141	<0.000141
Benzo(k)fluoranthene	<0.0000662	<0.0000662
Benzoic acid	<0.001	<0.001
Benzyl alcohol	<0.000442	<0.000442
Biphenyl	<0.000341	<0.000341
Bis(2-Chloroethoxy)methane	<0.000241	<0.000241
Bis(2-Chloroethyl)ether	<0.00047	<0.00047
Bis(2-Chloroisopropyl)ether	<0.000528	<0.000528
Bis(2-Ethylhexyl)phthalate	<0.00191	<0.00191
Butyl benzyl phthalate	<0.000356	<0.000356
Caprolactam	<0.00258	<0.00258
Carbazole	<0.000293	<0.000293
Chrysene	<0.0000563	<0.0000563
Dibenz(a,h)anthracene	<0.000257	<0.000257
Dibenzofuran	<0.00032	<0.00032
Diethyl phthalate	<0.000257	<0.000257
Dimethyl phthalate	<0.000206	<0.000206
Di-n-butyl phthalate	<0.000944	<0.000944
Di-n-octyl phthalate	<0.000889	<0.000889
Fluoranthene	<0.000155	<0.000155
Fluorene	<0.00011	<0.00011
Hexachlorobenzene	<0.000256	<0.000256
Hexachlorocyclopentadiene	<0.000597	<0.000597

Table 4
Gulfco Former AST Tank Farm
North and South Containment Dike Sample Analytical Results

Parameter	Dike North	Dike South
SVOCs (cont'd)		
Hexachloroethane	<0.000842	<0.000842
Indeno(1,2,3-cd)pyrene	<0.000158	<0.000158
Isophorone	<0.00024	<0.00024
m,p-Cresol	<0.000295	<0.000295
Nitrobenzene	<0.000362	<0.000362
n-Nitrosodimethylamine	<0.00101	<0.00101
n-Nitrosodi-n-propylamine	<0.000313	<0.000313
n-Nitrosodiphenylamine	<0.00051	<0.00051
o-Cresol	<0.000327	<0.000327
Pentachlorophenol	<0.00106	<0.00106
Phenanthrene	<0.000137	<0.000137
Phenol	<0.000325	<0.000325
Pyrene	<0.0000899	<0.0000899
Pyridine	<0.000349	<0.000349
Metals		
Arsenic	0.012	0.024
Barium	1.17	0.49
Cadmium	<0.00019	<0.00019
Calcium	45.4	7.36
Chromium	0.0028 B	0.0031 B
Hardness	192	34.9
Iron	0.6	1.52
Lead	<0.0013	0.0044 B
Manganese	0.034	0.043
Selenium	0.0049 B	<0.0046
Silver	<0.0006	<0.0006
Mercury	<0.00004	<0.00004
TPH (TX 1005)		
>C12-C28	2.5 J	<0.815
>C28-C35	<0.824	<0.815
C6-C12	<0.249	<0.247
Total TPH (C6-C35)	2.5 J	<1.88
Pesticides/Herbicides		
4,4'-DDD	0.00095	0.00021
4,4'-DDE	<0.00000556	0.00004 J
4,4'-DDT	0.00026	0.00027
Aldrin	<0.00000261	0.00000336
alpha-BHC	0.0000466	0.0000113
alpha-Chlordane	<0.00000274	<0.00000274
beta-BHC	<0.00000424	<0.00000424
delta-BHC	<0.00000232	<0.00000232
Dieldrin	0.0000427 J	<0.00000471
Endosulfan I	0.00022	0.0000508
Endosulfan II	0.00019	0.000043 J

Table 4
Gulfco Former AST Tank Farm
North and South Containment Dike Sample Analytical Results

Parameter	Dike North	Dike South
Pesticides/Herbicides (cont'd)		
Endosulfan sulfate	0.00095	0.0000878
Endrin	<0.00000832	<0.00000832
Endrin aldehyde	0.00037	<0.00000484
Endrin ketone	0.000053	<0.00000426
gamma-BHC (Lindane)	<0.00000255	<0.00000255
gamma-Chlordane	<0.00000542	<0.00000542
Heptachlor	<0.00000439	<0.00000439
Heptachlor epoxide	<0.00000732	0.0000329
Methoxychlor	<0.00000214	<0.00000214
Toxaphene	<0.000275	<0.000275
2,4,5-T	<0.00015	<0.00015
2,4,5-TP (Silvex)	<0.00013	<0.00013
2,4'-D	<0.00027	<0.00027
PCBs		
Aroclor-1016	<0.000125	<0.000125
Aroclor-1221	<0.000115	<0.000115
Aroclor-1232	<0.0001	<0.0001
Aroclor-1242	<0.000125	<0.000125
Aroclor-1248	<0.000065	<0.000065
Aroclor-1254	<0.000105	<0.000105
Aroclor-1260	<0.00012	<0.00012
TDS/TSS		
Total Dissolved Solids	976	973
Total Suspended Solids	15	11

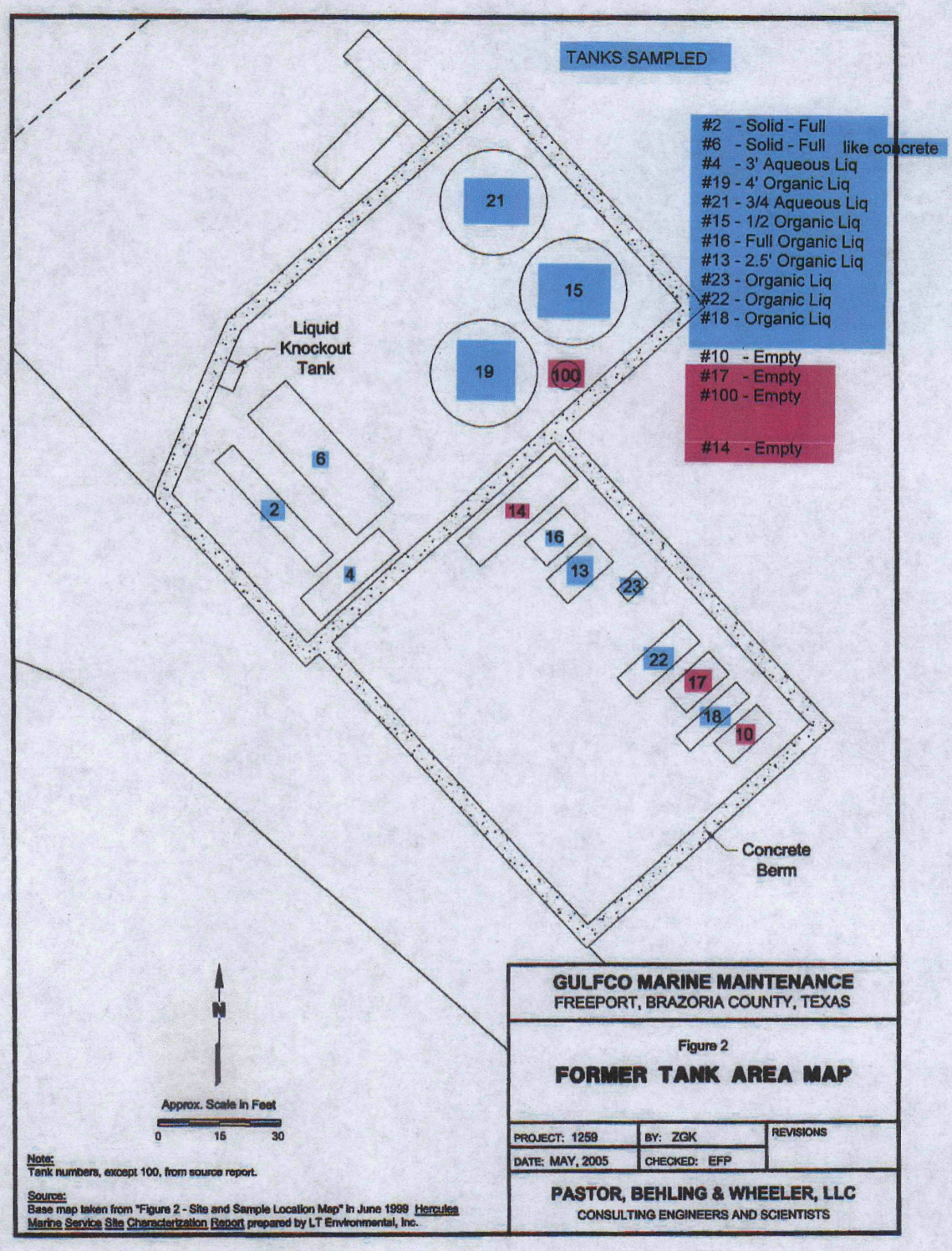
Notes:

J = Estimated value for organics.
B = Estimated value for metals.

ATTACHMENT A

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
TANK GAUGING/SAMPLING DOCUMENTATION

JOHN - JOB Number TX1335697



Note:
Tank numbers, except 100, from source report.

Source:
Base map taken from "Figure 2 - Site and Sample Location Map" in June 1999 Hercules Marine Service Site Characterization Report prepared by LT Environmental, Inc.

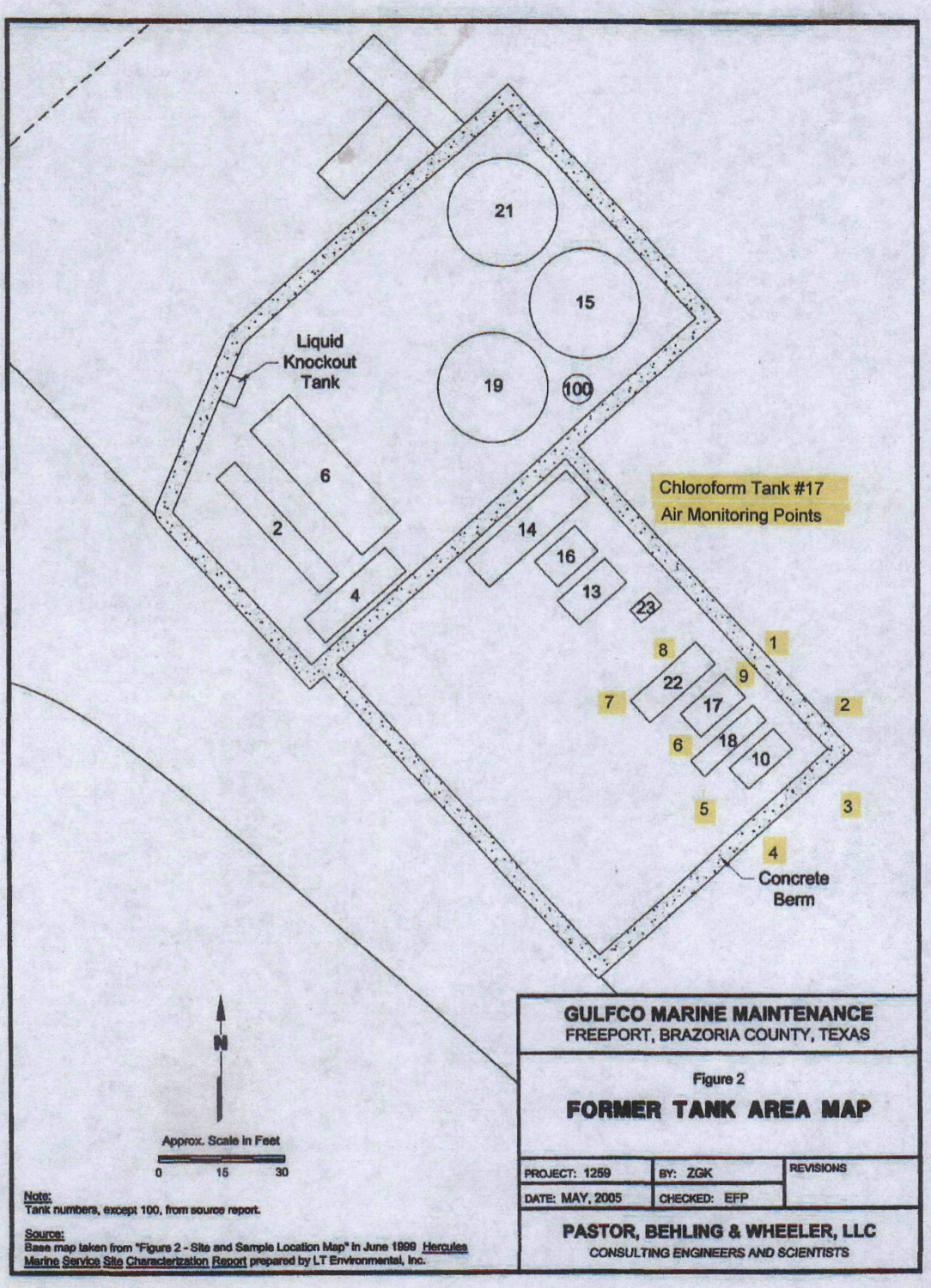
GULFCO MARINE MAINTENANCE
FREEPORT, BRAZORIA COUNTY, TEXAS

Figure 2

FORMER TANK AREA MAP

PROJECT: 1259	BY: ZGK	REVISIONS
DATE: MAY, 2005	CHECKED: EFP	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



GULFCO MARINE MAINTENANCE
FREEPORT, BRAZORIA COUNTY, TEXAS

Figure 2

FORMER TANK AREA MAP

PROJECT: 1259	BY: ZGK	REVISIONS
DATE: MAY, 2005	CHECKED: EFP	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

Note:
Tank numbers, except 100, from source report.

Source:
Base map taken from "Figure 2 - Site and Sample Location Map" in June 1999 Hercules Marine Service Site Characterization Report prepared by LT Environmental, Inc.

GULFCO SITE
Air Monitoring Log

Date	Time	Point	Reading PPM	Wind Direction
14-Dec	1223	1	0.0	SW
14-Dec	1225	2	0.0	SW
14-Dec	1226	3	0.3	SW
14-Dec	1227	4	0.0	SW
14-Dec	1228	5	0.0	SW
14-Dec	1229	6	0.0	SW
14-Dec	1230	7	0.0	SW
14-Dec	1231	8	0.0	SW
14-Dec	1232	9	0.0	SW
14-Dec	1300	DW Tank 22	0.0	SW
14-Dec	1325	DW Tank 17	0.0	SW
14-Dec	1455	DW Tank 17	0.0	SW
14-Dec	1515	DW Tank 13	0.0	SW
14-Dec	1530	DW Tank 13	0.0	SW
14-Dec	1545	DW Tank 13	0.0	SW
14-Dec	1610	DW Tank 15	0.0	SW
14-Dec	1625	DW Tank 15	0.0	SW
14-Dec	1640	DW Tank 15	0.0	SW

GULFCO SITE
Air Monitoring Log

Date	Time	Point	Reading	Wind Direction
15-Dec	1030	Downwind	0.0	SW
15-Dec	1100	Downwind	0.0	NE
15-Dec	1130	Downwind	0.0	NE
15-Dec	1145	Downwind	0.0	NE
15-Dec	1200	Downwind	0.0	NE
15-Dec	1315	Downwind	0.0	NE
15-Dec	1330	Downwind	0.0	NE
15-Dec	1345	Downwind	0.0	NE
15-Dec	1400	Downwind	0.0	NE
15-Dec	1415	Downwind	0.0	NE
15-Dec	1430	Downwind	0.0	NE
15-Dec	1445	Downwind	0.0	NE
15-Dec	1500	Downwind	0.0	NE
15-Dec	1510	Downwind	0.0	NE