SHELL CHEMICAL COMPANY
A DIVISION OF SHELL OIL COMPANY
P. O. BOX 2633
DEER PARK, TEXAS 77536

March 17, 1977

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Regional Administrator, Region VI
United States Environmental Protection Agency (6AEP)
1201 Elm Street
First International Building
Dallas, Texas 75270

Gentlemen:

The attached information is submitted in compliance with General Condition No. 11 of Disposal Permit No. 730D008F. This information summarizes disposal operations between August 16, 1976 and February 16, 1977.

If you should have any questions concerning this data, please let us know.

Very truly yours,

R. V. Matteis
FOR R. G. Dillard, General Manager
Deer Park Manufacturing Complex

RECEIVED
MAR 28 1977
EPA
REGION VI
LEGAL

RECEIVED
MAR 28 1977
6AEP

TABLE I
DEEP SEA DISPOSAL CUMULATIVE REPORT
8-16-76 THROUGH 2-16-77

BARGE NO.		20-F	21-F	22-F	23-F	24-F	25-F	26-F
DATE OF DISPOSAL		8-20-76	8-27-76	9-6-76	9-14-76	9-22-76	9-28-76	10-4-76
DIGESTED SLUDGE TONS		3053.74	3084.41	2917.99	3107.74	3042.56	3111.03	3163.82
TSS, DRY BASIS	PPM	22,540	32,057	23,730	33,185	22,260	21,985	28,853
	POUNDS	137,663	197,754	138,488	206,239	135,455	136,792	182,571
VSS, DRY BASIS	PPM	17,013	22,587	18,985	25,540	17,360	17,110	20,173
	POUNDS	103,907	139,335	110,796	158,726	105,638	106,459	127,647
TOC (LIQUID PHASE)	PPM	160	238	267	235	70	116	152
	POUNDS	834	1,167	1,558	1,116	362	616	840
TOC (TOTAL WASTE)	PPM	8,610	11,030	10,434	12,002	9,356	9,358	11,133
	POUNDS	52,285	68,042	60,893	74,590	56,932	58,226	70,446
METALS								
CHROMIUM	PPM	19.0	13.0	14.0	70	42.5	49.5	37.5
	POUNDS	116	80.2	81.7	435	258.6	308	273.3
CADMIUM SOLID PHASE	PPM	0.06	0.080	0.034	0.030	0.009	0.090	0.056
	POUNDS	0.054	0.101	0.038	0.044	0.008	0.080	0.045
LIQUID PHASE	PPM	<0.003	0.002	< 0.002	<0.001	0.005	0.004	<0.001
	POUNDS	0.008	0.010	0.007	0.002	0.026	0.020	0.002
MERCURY SOLID PHASE	PPM	0.024	0.017	0.012	0.018	0.018	0.023	0.025
	POUNDS	0.022	0.021	0.014	0.026	0.017	0.020	0.020
LIQUID PHASE	PPM	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	POUNDS	0.003	0.002	0.002	0.002	0.003	0.003	0.002

TABLE I
DEEP SEA DISPOSAL CUMULATIVE REPORT
8-16-76 THROUGH 2-16-77

BARGE NO.		27-F	28-F	29-F	30-F	31-F	32-F	33-F
DATE OF DISPOSAL		10-15-76	10-25-76	11-5-76	11-13-76	11-26-76	12-7-76	12-19-76
DIGESTED SLUDGE TONS		3030.78	3179.92	3061.09	3202.06	3156.78	2926.59	1682.44
TSS, DRY BASIS	PPM	26,950	30,710	26,465	27,280	23,080	25,448	24,635
	POUNDS	163,359	182,860	162,023	174,704	145,717	148,947	154,881
VSS, DRY BASIS	PPM	20,165	19,143	19,935	20,093	16,965	21,369	15,335
	POUNDS	122,231	113,985	122,046	128,678	107,110	125,073	96,441
TOC (LIQUID PHASE)	PPM	624	117	274	141	208	191	102
	POUNDS	3,143	589	1,409	779	1,141	961	568
TOC (TOTAL WASTE)	PPM	11,335	10,734	10,354	9,245	9,239	10,205	10,462
	POUNDS	68,708	63,915	63,389	59,206	58,330	59,730	65,775
METALS								
CHROMIUM	PPM	59	37	37	51	51	50	51
	POUNDS	358	220	226.5	326.6	322	292.7	321
CADMIUM SOLID PHASE	PPM	0.050	0.016	0.024	0.007	0.011	0.010	0.007
	POUNDS	0.05	0.015	0.024	0.006	0.009	0.008	0.005
LIQUID PHASE	PPM	<0.001	0.005	0.006	0.005	0.006	0.003	0.003
	POUNDS	0.0025	0.025	0.031	0.028	0.033	0.015	0.017
MERCURY SOLID PHASE	PPM	0.029	0.021	0.023	0.062	0.019	0.012	0.033
	POUNDS	0.03	0.019	0.023	0.055	0.016	0.010	0.024
LIQUID PHASE	PPM	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	POUNDS	0.0025	0.003	0.003	0.002	0.003	0.005	0.003

TABLE I
DEEP SEA DISPOSAL CUMULATIVE REPORT
8-16-76 THROUGH 2-16-77

BARGE NO.		34-F	35-F	36-F	37-F	38-F	39-F	6-Month Total
DATE OF DISPOSAL		12-26-76	1-6-76	1-18-77	1-26-77	2-6-77	2-15-77	
DIGESTED SLUDGE TONS		3151.46	2980.67	3149.86	3218.15	2860.79	2771.84	59,853.72
TSS, DRY BASIS	PPM	31,440	30,904	21,210	27,185	27,504	28,287	
	POUNDS	198,164	184,229	133,617	174,971	157,366	156,814	3,272,614
VSS, DRY BASIS	PPM	25,020	25,117	16,343	19,000	18,838	23,103	
	POUNDS	157,699	149,731	102,956	122,289	107,783	123,076	2,431,~~666~~ 606
TOC (LIQUID PHASE)	PPM	255	170	211	283	138	147	
	POUNDS	1272.9	836	1,194	1,621	720	671	21,397.9
TOC (TOTAL WASTE)	PPM	12,474	12,520	9,156	9,010	9,430	11,629	
	POUNDS	78,623	74,636	57,680	57,991	53,954	64,467	1,267,818
METALS								
CHROMIUM	PPM	52	59.5	28	29	29.5	29	
	POUNDS	327.8	354.7	176.4	186	168.8	160.8	~~4,958.1~~ 4,994.1
CADMIUM SOLID PHASE	PPM	0.009	0.007	0.004	0.013	0.005	0.005	
	POUNDS	0.012	0.007	0.003	0.009	0.002	0.005	0.525
LIQUID PHASE	PPM	0.007	0.005	0.002	0.003	0.003	0.002	
	POUNDS	0.035	0.025	0.011	0.017	0.016	0.009	0.340
MERCURY SOLID PHASE	PPM	0.021	0.038	0.026	0.018	0.012	0.027	
	POUNDS	0.028	0.040	0.017	0.013	0.006	0.026	0.447
LIQUID PHASE	PPM	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	
	POUNDS	0.002	0.002	0.003	0.003	0.010	0.002	0.061

TABLE II
DISPOSAL INFORMATION
BARGING OPERATION

BARGE NUMBER		DATE	CDT	LATITUDE	LONGITUTE	FATHOMS
20-F	Departed	8/20/76	0530	Shell Oil Docks		
	Commenced	8/22/76	2230	27° 27N	94° 39W	500
	Midpoint	8/23/76	0500	27° 16N	94° 34W	680
	Stopped	8/23/76	1000	27° 26N	94° 39W	520
	Returned	8/24/76	1245	Western Fleet		
21-F	Departed	8/27/76	2400	Shell Oil Docks		
	Commenced	8/29/76	1610	27° 27.5N	94° 36.5W	500
	Midpoint	8/29/76	2200	27° 14 N	94° 43 W	650
	Stopped	8/20/76	0230	27° 27 N	94° 37 W	500
	Returned	8/31/76	0300	Western Fleet		
22-F	Departed	9/6/76	1330	Shell Oil Docks		
	Commenced	9/8/76	1400	27° 27N	94° 32W	455
	Midpoint	9/8/76	1900	27° 14N	94° 42W	650
	Stopped	9/8/76	2300	27° 27N	94° 35W	540
	Returned	9/10/76	0400	Western Fleet		
23-F	Departed	9/14/76	0630	Shell Oil Docks		
	Commenced	9/16/76	1700	27° 28N	94° 39.5W	480
	Midpoint	9/16/76	2200	27° 24N	94° 38 W	520
	Stopped	9/17/76	0240	27° 27N	94° 41 W	520
	Returned	9/18/76	0720	Western Fleet		
24-F	Departed	9/22/76	0700	Shell Oil Docks		
	Commenced	9/25/76	1000	27° 26N	94° 36W	490
	Midpoint	9/25/76	1500	27° 16N	94° 42W	620
	Stopped	9/25/76	1930	27° 23.5N	94° 31W	550
	Returned	9/26/76	2300	Shell Oil Docks		
25-F	Departed	9/28/76	0145	Shell Oil Docks		
	Commenced	9/30/76	1410	27° 27N	94° 37W	480
	Midpoint	9/30/76	1900	27° 16N	94° 38W	480
	Stopped	9/30/76	2400	27° 27N	94° 38W	480
	Returned	10/2/76	0530	Western Fleet		
26-F	Departed	10/4/76	2235	Shell Oil Docks		
	Commenced	10/11/76	1430	27° 28'N	94° 39'N	480
	Midpoint	10/11/76	1900	27° 13'N	94° 38'W	650
	Stopped	10/11/76	2400	27° 26'N	94° 34'W	460
	Returned	10/13/76	0430	Western Fleet		
27-F	Departed	10/15/76	0850	Shell Oil Docks		
	Commenced	10/22/76	2345	27° 27'N	94° 38'W	440
	Midpoint	10/23/76	0400	27° 17'N	94° 34'W	650
	Stopped	10/23/76	0900	27° 27'N	94° 38'W	470
	Returned	10/24/76	1815	Shell Oil Docks		

TABLE II
DISPOSAL INFORMATION
BARGING OPERATIONS

BARGE NUMBER		DATE	CDT	LATITUDE	LONGITUDE	FATHOMS
28-F	Departed	10/25/76	0840	Shell Oil Docks		
	Commenced	11/3/76	1315	27° 27N	94° 36W	455
	Midpoint	11/3/76	1800	27° 14N	94° 40W	720
	Stopped	11/3/76	2300	27° 26N	94° 35W	455
	Returned	11/4/76	2045	Bolivar Terminal		
29-F	Departed	11/5/76	1700	Shell Oil Docks		
	Commenced	11/7/76	0340	27° 27N	94° 39W	500
	Midpoint	11/7/76	0900	27° 16N	94° 33W	585
	Stopped	11/7/76	1345	27° 25N	94° 32W	460
	Returned	11/9/76	0515	Levingston Shipyard		
30-F	Departed	11/13/76	1025	Shell Oil Docks		
	Commenced	11/24/76	0300	27° 27N	94° 38W	520
	Midpoint	11/24/76	0900	27° 17N	94° 38W	700
	Stopped	11/24/76	1240	27° 26N	94° 39W	485
	Returned	11/25/76	1430	Shell Oil Docks		
31-F	Departed	11/26/76	0930	Shell Oil Docks		
	Commenced	12/4/76	2300	27° 26N	94° 39W	520
	Midpoint	12/5/76	0400	27° 16N	94° 40W	585
	Stopped	12/5/76	0900	27° 25N	94° 39W	500
	Returned	12/6/76	1400	Shell Oil Docks		
32-F	Departed	12/7/76	0740	Shell Oil Docks		
	Commenced	12/16/76	1130	27° 28N	94° 39W	530
	Midpoint	12/16/76	1600	27° 19N	94° 33W	680
	Stopped	12/16/76	2100	27° 27N	94° 39W	550
	Returned	12/17/76	2330	Shell Oil Docks		
33-F	Departed	12/19/76	0700	Shell Oil Docks		
	Commenced	12/23/76	0830	27° 28N	94° 38W	780
	Midpoint	12/23/76	1100	27° 16N	94° 41W	650
	Stopped	12/23/76	1320	27° 13N	94° 40W	520
	Returned	12/25/76	1830	Shell Oil Docks		
34-F	Departed	12/26/76	0920	Shell Oil Docks		
	Commenced	1/8/77	0800	27° 27N	94° 43W	500
	Midpoint	1/8/77	1300	27° 19N	94° 32W	580
	Stopped	1/8/77	1730	27° 26N	94° 41W	520
	Returned	1/9/77	1620	Galveston		
35-F	Departed	1/6/77	2130	Shell Oil Docks		
	Commenced	1/15/77	1336	27° 28N	94° 39W	520
	Midpoint	1/15/77	1800	27° 16N	94° 39W	655
	Stopped	1/15/77	2320	27° 28N	94° 35W	520
	Returned	1/17/77	1500	Shell Oil Docks		

TABLE II
DISPOSAL INFORMATION
BARGING OPERATIONS

BARGE NUMBER		DATE	CDT	LATITUDE	LONGITUDE	FATHOMS
36-F	Departed	1/18/77	0740	Shell Oil Docks		
	Commenced	1/22/77	0900	27° 28N	94° 38W	485
	Midpoint	1/22/77	1400	27° 20N	94° 42W	585
	Stopped	1/22/77	1915	27° 27N	94° 38W	485
	Returned	1/24/77	1600	Shell Oil Docks		
37-F	Departed	1/26/77	2000	Shell Oil Docks		
	Commenced	2/2/77	1915	27° 28N	94° 37W	520
	*Stop Disch.	2/2/77	2400	27° 26N	94° 41W	560
	Commenced	2/3/77	0330	27° 15N	94° 32W	605
	*Stop Disch.	2/3/77	0400	27° 17N	94° 34W	650
	Commenced	2/3/77	0900	27° 27N	94° 36W	540
	Stopped	2/3/77	1315	27° 26N	94° 37W	540
	Returned	2/5/77	0830	Western Fleet		
38-F	Departed	2/6/77	1310	Shell Oil Docks		
	Commenced	2/8/77	1730	27° 28N	94° 36W	480
	Midpoint	2/8/77	2300	27° 18N	94° 44W	585
	Stopped	2/9/77	0325	27° 22N	94° 40W	550
	Returned	2/11/77	1730	Western Fleet		
39-F	Departed	2/15/77	1130	Shell Oil Docks		
	Commenced	2/18/77	0700	27° 17N	94° 38W	455
	Midpoint	2/18/77	1200	27° 12N	94° 45W	650
	Stopped	2/18/77	1600	27° 27N	94° 36W	455
	Returned	2/20/77	0120	Shell Oil Docks		

*Fathometer failure

TABLE III

COMPOSITE METAL ANALYSIS
(PER GENERAL CONDITION 11d)

METAL	CONCENTRATION, ppm
Beryllium	0.001
Copper	1.5
Lead	0.38
Nickel	1.3
Vanadium	0.12
Zinc	3.2
Arsenic	0.056
Selenium	0.05