Prepared for

Mississippi Department of Environmental Quality
Jackson, Mississippi

RCRA PART B PERMIT APPLICATION
Hazardous Waste Management
Permit No. HW-980-600-084
Wiggins Treated Wood Products Facility
Wiggins, Mississippi

Volume 2 of 2

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6400 Poplar Avenue
Memphis, TN 38197

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APPENDIX E-3

MNA INDICATOR RESULTS

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Field Parameters					
Well Number	Date	pH	ORP (mv)	Turbidity (NTU)	Temperature (^{0}C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)
WC-05	11/17/2006	5.25	-25	87.9	20.5	247	0.47
WC-05	05/07/2007	4.4	-85	3	18.9	87	0.52
WC-05	11/01/2007	11.84	-2.3	47	20.4	2673	-0.02
WC-05	05/07/2008	11.21	131.5	9	20.55	2032	37.82
WC-05	10/23/2008	12.07	-23.8	9.6	20.64	4386	37.22
WC-05	06/03/2009	8.35	103	46.3	20.36	795	29.45
WC-05	11/13/2009	7.01	95	14	19.39	444	16.98
WC-05	10/26/2011	7.1	33.8	14	21.22	701	0.76
WC-05	05/14/2013	7.79	106.4	123	18.63	563	3.58
WC-05	11/19/2013	8.32	69.4	42	19.23	515	5.61
WC-05	11/15/2018	6.87	-71	7.4	19.75	289	0.11
WC-06	11/12/2014	4.71	71.2	9.33	18.87	56	6.89
WC-08	05/25/2004	4.9	232	108	19.1	33	5.12
WC-08	11/10/2004	4.9	257	18	18.86	23	5.1
WC-08	06/06/2005	4.83	-241	21.1	20.19	26	2.38
WC-08	11/14/2005	4.08	330	8	19.3	3400	0.99
WC-08	05/08/2006	4.93	95	0	20.3	4800	1.28
WC-08	11/13/2006	5.07	215	6.7	18.9	4300	0.4
WC-08	05/08/2007	5	266	4.2	19.44	1600	0.56
WC-08	10/29/2007	5.37	237.4	-2.2	19.28	64	5.7
WC-08	05/07/2008	5.27	162.4	8.8	19.58	52	1.3
WC-08	10/21/2008	7.6	-70.2	2.1	20.07	67	3.69
WC-08	06/01/2009	4.57	164.5	0.87	20.37	69	1.41
WC-08	11/11/2009	4.93	199.8	2.88	19.65	47	0.33
WC-08	05/25/2010	5.01	269.8	1.56	19.81	50	3.54
WC-08	10/31/2010	5.14	160.3	0.23	19.54	40	3.55
WC-08	05/23/2011	5.4	66.8	1.81	19.54	35	3.59
WC-08	10/25/2011	5.12	242.4	1.35	19.2	41	1.27
WC-08	05/13/2013	5.5	102.2	51.1	19.61	40	5.94
WC-08	11/19/2013	4.61	259	5.28	18.96	43	5.7
WC-08	02/27/2014	5.14	-15.6	2.12	18.11	32	3.66
WC-08	03/31/2014	5.13	279.6	1.3	19.05	28	2.95
WC-08	05/19/2014	5.05	147.7	0.6	19.69	27	4.41
WC-08	11/10/2014	5.14	251.6	3.21	19.42	32	1.68
WC-08	05/22/2018	0.66	331	9.6	21.45	24	2.2
WC-08	11/14/2018	3.83	295	6.12	18.37	17	10.79
WC-11	05/25/2004	6.17	-45	19.3	18.41	85	0.97

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Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Field Parameters					
Well Number	Date	pH	ORP (mv)	Turbidity (NTU)	Temperature (^{0}C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)
WC-11	11/10/2004	5.59	117	21.3	20.54	55	4.32
WC-11	06/08/2005	5.59	92	6.8	20.51	63	0.52
WC-11	11/15/2005	6.1	-125	64	20.5	9500	0.24
WC-11	05/08/2006	5.21	155	52.6	18.84	69	2.26
WC-11	11/13/2006	5.3	221	11.1	20.4	5500	1.81
WC-11	05/10/2007	5.57	284	113	17.93	3900	0.66
WC-11	10/30/2007	5.47	242.6	13.1	21.6	73	1.2
WC-11	05/06/2008	5.94	130.6	39.6	17.7	73	0.84
WC-11	10/22/2008	6.06	-142.9	28.3	20.31	240	0.32
WC-11	06/02/2009	4.87	15	23.2	18.83	84	0.1
WC-11	11/12/2009	5.87	126.4	49.7	18.32	45	0.2
WC-11	05/26/2010	5.7	14.1	43.6	17.7	95	0.11
WC-11	11/01/2010	5.33	-80	15.4	21.3	66	0.19
WC-11	05/23/2011	6.19	-8	28.7	20.08	107	0.23
WC-11	10/25/2011	5.51	80.7	9.75	20.68	80	0.91
WC-11	05/13/2013	6.23	71.8	14.2	18.87	67	0.87
WC-11	11/18/2013	5.97	-127.1	50.5	20.34	92	2.82
WC-11	02/27/2014	5.93	-32.3	31.6	13.81	37	2.82
WC-11	05/20/2014	5.82	-83.5	40.1	17.73	72	0.23
WC-11	08/20/2014	6.03	-29.6	5.91	21.39	117	0.15
WC-11	11/10/2014	6.05	-56.2	6.84	19.96	164	0.38
WC-11	03/02/2018	5.65	108.2	8.3	17.33	78	0.44
WC-11	05/22/2018	2.92	170.6	9.6	19.36	74	2.16
WC-11	11/13/2018	5.47	176.7	8.24	20.8	75	3.56
WC-13	05/25/2004	5.17	211	646	20.87	30	4.77
WC-13	11/10/2004	5.2	298	346	20.97	28	6.38
WC-13	06/06/2005	4.97	494	52.7	22.74	25	6.25
WC-13	11/14/2005	4.69	274	400	20.52	35	7.62
WC-13	05/08/2006	4.95	406	342	21.05	30	7.71
WC-13	11/13/2006	5.2	254	246	21.7	2900	7.75
WC-13	05/09/2007	4.97	380	613	21.71	600	6.27
WC-13	10/30/2007	5.17	272.4	30.1	20.86	36	6.58
WC-13	05/05/2008	5.24	342.8	35.6	21.49	32	4.04
WC-13	10/20/2008	4.9	110.1	168.5	21.61	27	6.91
WC-13	06/01/2009	4.19	232.1	189	22.49	28	5.01
WC-13	11/10/2009	5.26	261	9.71	20.83	27	4.29
WC-13	10/29/2010	5.24	170.8	15.8	21.06	26	0.38

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Wiggins, Mississippi

		Field Parameters					
Well Number	Date	pH	ORP (mv)	Turbidity (NTU)	Temperature (^{0}C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)
WC-13	10/24/2011	4.68	259.1	41.23	21.75	29	6.84
WC-13	11/18/2013	5.25	10.7	65.3	20.95	30	66.1
WC-13	11/10/2014	5.25	10.7	65.3	20.95	30	66.1
WC-13	11/14/2018	4.21	311.6	6	19.16	25	5.38
WC-14	05/25/2004	6.78	-97	74.6	21.84	219	0.74
WC-14	11/10/2004	6.19	-98	111	19.82	197	0.59
WC-14	06/09/2005	6.06	-43	31.7	23.79	120	0.89
WC-14	11/16/2005	5.47	-11	208	19.09	125	1.86
WC-14	05/11/2006	6.13	-66	94.2	20.24	145	2.67
WC-14	11/16/2006	6.1	-84	329	18.9	21500	0.87
WC-14	05/11/2007	5.84	-40	136	21.47	17200	0.84
WC-14	11/01/2007	6.32	-34.7	7	21.93	215	0.81
WC-14	05/08/2008	5.91	-85.6	17.2	21.13	194	0.61
WC-14	10/22/2008	5.58	-5.9	34.4	20.26	276	1.05
WC-14	06/03/2009	5.83	-27.8	8.76	22.63	157	0.54
WC-14	11/13/2009	5.1	-51.5	13.2	20.97	104	2.39
WC-14	11/02/2010	5.81	-105.8	2.57	20.33	118	1.04
WC-14	10/26/2011	5.74	18.5	17.44	19.72	126	0.89
WC-14	11/18/2013	5.36	-15.4	9.98	19.64	133	1.67
WC-14	11/10/2014	5.83	-10.1		20.31	100	1.67
WC-14	11/15/2018	4.26	98.8	27.7	20.42	65	1.63
WC-16	08/02/2005	5.71	42	298	22.83	12	5.4
WC-19	05/25/2004	5.53	94	999	21.66	70	4.02
WC-19	11/10/2004	5.15	137	73.2	21.62	60	3.81
WC-19	06/08/2005	4.98	121	206	24.98	66	0.69
WC-19	11/16/2005	5.41	65	245	20.18	7200	1.14
WC-19	05/10/2006	5.27	13	652	21.9	93	2.66
WC-19	11/16/2006	5.27	-56	152	20	11800	0.53
WC-19	05/10/2007	5.27	88	299	22.03	8900	0.45
WC-19	11/01/2007	5.64	-107.4	1.9	21.89	156	0.89
WC-19	05/05/2008	5.4	-7	46.9	21.39	110	0.44
WC-19	10/22/2008	5.02	21.5	479.8	22.1	200	3.32
WC-19	06/02/2009	5.16	69	206	23.68	117	3.58
WC-19	11/12/2009	5.28	118.2	228	22.59	137	0.84
WC-19	11/02/2010	5.2	-71	3.25	21.93	100	1.24
WC-19	10/26/2011	5.01	28.4	84.39	21.66	137	1.05
WC-22	05/25/2004	4.59	179	65	21.89	41	2.21

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		Field Parameters					
Well Number	Date	pH	ORP (mv)	Turbidity (NTU)	Temperature (^{0}C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)
WC-22	11/10/2004	4.86	312	25.4	20.67	38	4.28
WC-22	06/08/2005	4.77	222	29.6	22.02	34	0.23
WC-22	11/16/2005	5.07	295	0	19.6	5000	0.46
WC-22	05/10/2006	4.43	315	64.8	21.08	46	2.43
WC-22	11/15/2006	4.8	300	81.5	20.6	5200	0.02
WC-22	05/11/2007	4.4	287	15	21.7	4700	0.12
WC-22	10/31/2007	4.56	156	25	23.86	62	0.01
WC-22	05/07/2008	4.7	329.7	2	22.6	58	0.54
WC-22	10/22/2008	4.81	-136.4	14.2	21.68	61	1.34
WC-22	06/03/2009	4.09	188.5	9.73	24.08	51	1.06
WC-22	11/11/2009	4.39	-26.5	8.7	20.45	50	0.49
WC-22	11/01/2010	4.66	202.9	0.9	21.7	55	0.83
WC-22	10/25/2011	4.35	294.5	0.96	22.68	56	1.5
WC-22	05/14/2013	4.94	319	19.9	22.52	64	26.44
WC-22	11/19/2013	4.6	373	14.7	20.51	57	22.2
WC-22	11/11/2014	3.91	196.7	6.29	21.69	69	20.01
WC-22	11/14/2018	4.76	426.4	22.12	18.09	58	14.52
WC-23	05/25/2004	4.74	192	120	23.49	164	1.1
WC-23	11/10/2004	4.92	135	27.4	21.23	166	0.63
WC-23	06/09/2005	4.57	189	82.5	24.16	160	0.77
WC-23	11/17/2005	4.65	174	20	18.13	23300	0.55
WC-23	05/11/2006	4.64	205	86.2	21.76	202	2.58
WC-23	11/16/2006	4.96	162	30.9	18.8	22600	1.2
WC-23	05/07/2007	4.95	116	28.3	22	182	5.8
WC-23	11/02/2007	6.41	272	6.7	22.76	992	0.17
WC-23	05/08/2008	5.69	173.2	10	23.41	460	4.58
WC-23	10/23/2008	5.19	-60.5	14.2	21.08	748	2.91
WC-23	06/03/2009	5.03	181.7	25	22.94	338	10.9
WC-23	11/13/2009	5.24	280.4	9.4	20.12	206	14.48
WC-23	11/03/2010	5.08	163.9	1.98	20.73	338	23.53
WC-23	10/25/2011	5.32	249.3	56.12	24.68	223	10.72
WC-23	05/14/2013	5.39	180	10.9	23.23	223	6.8
WC-23	11/18/2013	5.06	330.3	61.4	21.05	189	10.65
WC-23	11/10/2014	5.36	147.4	9.7	21.31	246	12.21
WC-23	11/14/2018	5.72	277.8	8.06	19.2	548	2.54
WC-24	05/25/2004	5.45	118	754	21.29	72	5
WC-24	11/10/2004	4.86	241	36.6	21	35	5.82

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		Field Parameters					
Well Number	Date	pH	ORP (mv)	Turbidity (NTU)	Temperature (^{0}C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)
WC-24	06/08/2005	4.62	179	167	24.61	45	2.34
WC-24	11/16/2005	4.19	197	240	18.8	4400	4.77
WC-24	05/10/2006	4.56	145	44.4	22.79	4200	3.56
WC-24	11/15/2006	5.14	132	338	20.4	18000	4.22
WC-24	10/31/2007	5.47	74.5	77.4	22.45	43	2.6
WC-24	05/07/2008	5.04	253	5.3	22.19	40	3.62
WC-24	10/21/2008	4.87	-75.2	49.3	22.61	35	8.48
WC-24	06/02/2009	4.68	155	3.37	25.54	35	2.51
WC-24	11/11/2009	4.07	275.3	66.9	20.67	28	4.6
WC-24	11/01/2010	4.78	249.7	21.7	22.17	31	4.17
WC-24	10/25/2011	4.88	244.7	69.32	22.7	27	5.18
WC-24	11/18/2013	4.83	-5.2	22.6	21.12	33	7.21
WC-24	11/10/2014	4.89	85.9	15.16	20.43	33	8.04
WC-24	11/13/2018	4.34	330.2	8.1	9.92	28	9.7
WC-25	05/25/2004	4.92	231	73.6	21.9	30	6.12
WC-25	11/10/2004	4.02	389	13.3	21.51	23	6.33
WC-25	06/06/2005	4.39	512	30.9	23.39	27	6
WC-25	11/14/2005	3.92	384	380	20.99	4300	5.79
WC-25	05/08/2006	4.02	381	119	22.5	32	6.51
WC-25	11/14/2006	4.66	285	233	21.3	4200	6.23
WC-25	05/09/2007	3.72	330	51	24.6	158	5.49
WC-25	10/30/2007	4.46	222	43.4	22.25	62	
WC-25	05/05/2008	4.72	453.4	19	21.23	45	5.27
WC-25	10/20/2008	4.58	318	83.1	21.51	50	4.92
WC-25	06/02/2009	3.97	227.1	7.84	22.29	50	4.82
WC-25	11/10/2009	3.69	96.2	29	20.55	38	5.13
WC-25	10/30/2010	5.07	166.7	7.74	21.21	29	5.13
WC-25	10/24/2011	4.61	269.4	61.83	23.67	49	6.02
WC-25	11/19/2013	4.55	292.1	8.66	13.34	44	8.5
WC-25	11/10/2014	3.78	244.6	7.26	18.49	57	8.06
WC-25	03/02/2018	3.59	160	9.2	18.67	46	3.55
WC-25	11/14/2018	4.86	300.2	8	18.67	30	4.28
WC-26	05/25/2004	5.02	182	91.7	22.53	29	5.68
WC-26	11/10/2004	4.1	346	37.9	22.09	22	4.87
WC-26	06/06/2005	4.33	-96	52	22.85	25	5.27
WC-26	11/14/2005	4.86	286	149	23.23	33	6.04
WC-26	05/11/2006	4.64	363	398	21.2	34	7.48

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		Field Parameters					
Well Number	Date	pH	ORP (mv)	Turbidity (NTU)	Temperature (^{0}C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)
WC-26	11/15/2006	5.01	249	999	20.5	5300	8.74
WC-26	05/09/2007	5.15	171	339	23.76	2300	4.9
WC-26	10/30/2007	6.03	-38.7	7.3	21.83	32	3.39
WC-26	05/06/2008	5.11	246	65.4	22.88		5.94
WC-26	10/21/2008	4.48	91.2	290.5	22.15	40	6.37
WC-26	06/01/2009	4.63	74.5	10.7	21.83	42	7.93
WC-26	11/10/2009	4.71	-98.1		21.11	26	3.14
WC-26	05/24/2010	5.03	295	454	21.9	34	3.62
WC-26	10/30/2010	5.01	158.7		24.43	37	5.64
WC-26	05/23/2011	4.91	82.2	2.84	26.15	32	3.17
WC-26	10/24/2011	5.08	157	158.5	22.34	33	4.29
WC-26	05/14/2013	5.23	200.9	5.87	21.52	38	4.21
WC-26	11/19/2013	5.14	205.2	125	20.37	37	5.07
WC-26	02/27/2014	5.21	-18.1	86.3	19.89	37	5.28
WC-26	05/19/2014	4.5	246.6	751	22.11	33	4.62
WC-26	08/20/2014	5.12	170.3	80.8	24.55	34	4.82
WC-26	11/10/2014	5.05	188.3	5.31	20.79	32	4.74
WC-26	05/22/2018	5.1	237	141	25.19	26	4.11
WC-26	11/15/2018	5.14	257.3	42.4	18.27	32	3.57
WC-28	05/25/2004	4.49	361	388	19.9	78	3.54
WC-28	11/10/2004	4.8	371	142	20.31	54	2.82
WC-28	06/06/2005	4.39	558	17.5	22.1	49	2.08
WC-28	11/15/2005	4.1	419	51	20.63	6200	2.55
WC-28	05/08/2006	4.51	290	87	21.7	4800	1.97
WC-28	11/13/2006	4.6	491	93	19.8	4900	0.62
WC-28	05/10/2007	4.26	487	59	20.6	152	1.25
WC-28	10/31/2007	4.74	173	0	20.76	52	-0.03
WC-28	05/07/2008	4.76	152.7	13.5	21.56	50	0.66
WC-28	10/22/2008	4.63	-115.2	27.5	19.92	51	0.38
WC-28	06/02/2009	3.89	423.5	30.8	21.58	43	0.89
WC-28	11/11/2009	4.04	388.9	16.2	19.86	44	0.97
WC-28	11/01/2010	4.74	258.7	9.06	20.72	69	2.01
WC-28	10/24/2011	4.08	291.4	48.11	19.44	55	0.92
WC-28	11/19/2013	4.92	-15.4	19.2	18.34	58	4.16
WC-28	11/11/2014	4.32	204.5	13.4	18.6	82	3.05
WC-28	11/15/2018	5.1	269.2	8.3	18.6	49	2.81
WC-29	05/25/2004	5.55	170	74.9	21.86	70	2.05
WC-29	11/10/2004	5.76	174	54.8	20.41	178	1.29

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		Field Parameters						
Well Number	Date	pH	ORP (mv)	Turbidity (NTU)	Temperature (^{0}C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)	
WC-29	06/06/2005	5.21	-110	42	21.4	83	1.09	
WC-29	11/15/2005	5.15	154	26.4	21.48	143	1.44	
WC-29	05/09/2006	5.1	90	24.9	21.78	13000	1.68	
WC-29	11/14/2006	5.39	200	139	19.5	14600	5.15	
WC-29	05/09/2007	5.28	331	134	21.1	9400	2.71	
WC-29	10/30/2007	5.76	4	42	21.02	113	4.34	
WC-29	05/06/2008	5.36	327.5	6.1	20.59	130	2.39	
WC-29	10/20/2008	5.3	211.8	13.9	20.28	150	2.75	
WC-29	06/01/2009	4.61	184	10.5	21.6	95	2.5	
WC-29	11/10/2009	5.41	-124.2	8.7	20.37	113	1.93	
WC-29	10/30/2010	5.53	137.8	7.05	20.52	106	2.17	
WC-29	10/24/2011	5.34	134.1	6.59	20.59	86	2.65	
WC-29	11/19/2013	5.35	-34.7	9.73	18.76	81	2.78	
WC-29	11/11/2014	5.3	-14		19.29	96	0.3	
WC-29	11/14/2018	6.15	148.1	8.6	17.38	118	9.71	
WC-30	05/25/2004	4.8	187	397	21.2	66	2.09	
WC-30	11/10/2004	4.66	368	105	20.29	61	1.47	
WC-30	06/08/2005	4.89	-131	210	22.71	55	2.63	
WC-30	11/15/2005	4.21	331	380	20.51	7100	1.96	
WC-30	05/09/2006	4.09	329	78.9	21.78	7400	2.47	
WC-30	11/14/2006	5.6	260	176	20.5	100	9.92	
WC-30	05/08/2007	4.5	258	100	21.8	121	1.46	
WC-30	10/29/2007	5.41	155.4	62.7	20.55	71300		
WC-30	05/05/2008	5.09	331.7	109	20.2	69	1.5	
WC-30	10/20/2008	4.65	136.4	121.2	21.28	65	1.98	
WC-30	06/02/2009	4.33	-3.3	230	22.1	62	1.87	
WC-30	11/10/2009	4.65	43	64	20.13	123	4.23	
WC-30	10/30/2010	5.01	158	26.9	21.55	60	2.69	
WC-30	10/25/2011	4.81	254.7	10.76	23.93	64	3.54	
WC-30	11/19/2013	4.74	332	34.4	19.17	57	2.36	
WC-30	11/11/2014	4.8	115.3	26.7	19.85	66	8.82	
WC-30	11/15/2018	4.68	266.1	6.6	17.88	53	1.68	
WC-31	05/25/2004	5.57	119	53.2	20.98	170	0.9	
WC-31	11/10/2004	5.09	125	90	20.2	136	0.76	
WC-31	06/09/2005	5.31	144	51.7	21.62	149	0.19	
WC-31	11/17/2005	4.87	102	124	19.05	164	1.43	
WC-31	05/11/2006	5.07	31	53.9	20.92	24000	0.46	

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Field Parameters					
Well Number	Date	pH	ORP (mv)	Turbidity (NTU)	Temperature (^{0}C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)
WC-31	11/15/2006	5.31	-42	211	19.5	28400	0.54
WC-31	05/11/2007	5.15	84	112	20.91	21200	0.39
WC-31	11/01/2007	5.43	70.7	12.5	23.19	320	0.94
WC-31	05/07/2008	5.21	121.7	24.1	22.24	279	0.27
WC-31	10/22/2008	5.5	-118.6	36.1	21.02	318	0.42
WC-31	06/03/2009	5.17	96	280	21.53	256	0.34
WC-31	11/12/2009	5.28	96	39.7	20.61	179	0.36
WC-31	11/02/2010	5.53	32.7	3.52	21.04	312	0.3
WC-31	10/26/2011	5.68	-11.7	12.11	21.52	302	0.45
WC-31	05/15/2013	8.4	212.9	20.8	21.21	860	14.45
WC-31	11/19/2013	7.2	242	6.2	20.37	1629	29.25
WC-31	11/11/2014	6.88	50.5	12.47	20.69	850	18.19
WC-31	11/14/2018	6.58	253.8	8	18.9	844	6.17
WC-33	05/25/2004	5.44	29	34.1	21.96	52	3.57
WC-33	11/10/2004	4.95	80	18.2	21.35	48	0.93
WC-33	06/08/2005	5.29	-11	0	24.01	50	0.4
WC-33	11/16/2005	4.82	61	0	20.42	86	1.57
WC-33	05/10/2006	4.9	-96	14	21.94	17800	0.52
WC-33	11/16/2006	5.31	6	35.4	20.1	12800	0.57
WC-33	05/10/2007	4.5	116	61	27.2	218	1.78
WC-33	11/01/2007	5.44	79.4	21.9	21.88	145	0.44
WC-33	05/05/2008	5.68	68.3	9.5	22.39	111	1.09
WC-33	10/22/2008	5.04	-126.3	6.8	22.28	131	0.47
WC-33	06/03/2009	5.74	53.2	626	24.83	104	6.46
WC-33	11/12/2009	4.9	-61.2	29.8	21.93	107	1.55
WC-33	11/02/2010	5.19	-72.3	1.27	21.14	143	0.87
WC-33	10/25/2011	5.48	78	0	24.08	138	0.79
WC-33	05/14/2013	12.57	-24.4	1000	21.13	10072	27.17
WC-33	11/19/2013	12.67	17	52.9	20.21	3817	20.92
WC-33	11/11/2014	12.58	-49.1	4.25	22.57	7476	31.25
WC-33	11/14/2018	9.18	209.1	58.95	13.48	222	10.71
WC-34	05/25/2004	5.13	204	168	20.94	37	5.2
WC-34	11/10/2004	4.24	388	69.9	20.63	30	4.92
WC-34	06/06/2005	4.81	459	5.8	23.86	34	4.9
WC-34	11/16/2005	4.28	379	350	21.14	3400	4.89
WC-34	05/09/2006	4.49	360	113	21.21	36	5.77
WC-34	11/14/2006	5.11	226	202	20.2	3400	4.27

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Field Parameters					
Well Number	Date	pH	ORP (mv)	Turbidity (NTU)	Temperature (^{0}C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)
WC-34	05/09/2007	4.9	354	254	20.5	1600	3.9
WC-34	10/30/2007	5.2	256.8	17.6	20.44	44	4.84
WC-34	05/06/2008	4.86	485.9	4.5	22.37	49	4.64
WC-34	10/22/2008	4.84	148.3	34.2	20.6	75	4.97
WC-34	06/01/2009	4.42	198.9	29.8	23.51	41	4.27
WC-34	11/11/2009	4.64	291	49.1	20.78	40	3.81
WC-34	11/01/2010	4.8	275.8	2.77	20.55	41	5.57
WC-34	10/25/2011	4.71	285.1	9.66	20.95	39	3.91
WC-34	11/20/2013	5.09	322	9.8	20.12	45	3.09
WC-34	11/11/2014	5.15	55.3	4.7	20.12	43	5.89
WC-34	11/14/2018	5.05	314.8	88	17.92	35	4.6
WC-35	05/25/2004	5.41	212	39.2	20.83	50	4.86
WC-35	11/10/2004	4.71	384	27.7	20.46	27	4.58
WC-35	06/07/2005	4.89	-65	129	22.51	34	4.92
WC-35	11/15/2005	5.03	239	700	21.85	42	8.66
WC-35	05/08/2006	5.07	266	160	22.8	3600	8.13
WC-35	11/14/2006	5.53	281	200	20.2	2700	7.57
WC-35	10/30/2007	5.52	55	9.3	20.38	30	5.81
WC-35	05/06/2008	5.59	339.5	28.5	20.5	70	4.95
WC-35	10/21/2008	5.12	-18.6	5	21.69	27	14.31
WC-35	06/01/2009	3.84	194.3	28	21.48	22	6.98
WC-35	11/10/2009	5.65	30	252	20.3	33	5.74
WC-35	10/31/2010	5.09	199.2	18	20.27	33	5.44
WC-35	10/24/2011	5.59	198.8	9.19	20.48	24	5.87
WC-35	11/19/2013	5.27	-9.1	33.7	20.17	33	5.87
WC-35	11/11/2014	4.75	178.9	20	20.6	43	4.34
WC-35	11/14/2018	5.02	278.6	43.44	18.79	36	4.85
WC-39	05/25/2004	4.39	242	23.1	21.53	29	5.75
WC-39	11/10/2004	3.71	450	41.8	20.39	27	4.98
WC-39	06/07/2005	4.18	532	0.3	25.14	34	0.91
WC-39	11/16/2005	4.24	482	4.2	17.94	40	1.94
WC-39	05/09/2006	4.11	443	47.6	20.96	39	3.78
WC-39	11/14/2006	4.59	281	55.4	19.5	5000	4.6
WC-39	05/09/2007	4.63	279	29	26.4	63	7.16
WC-39	10/30/2007	4.36	217	3.5	20.75	56	-0.03
WC-39	05/06/2008	4.54	158.5	21.1	21.05	51	1.13
WC-39	10/21/2008	4.1	173	5.6	21.06	56	0.52

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Field Parameters					
Well Number	Date	pH	ORP (mv)	Turbidity (NTU)	Temperature (^{0}C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)
WC-39	06/01/2009	3.5	-122.4	4	22.28	46	0.86
WC-39	11/11/2009	3.83	569.2	3.97	20.69	50	1.13
WC-39	05/25/2010	4.39	574.2	8.2	20.92	44	0.18
WC-39	08/27/2010	4.87	129	1.29	25.18	200	0.33
WC-39	10/31/2010	4.56	274.8	0.42	21.18	37	0.38
WC-39	02/23/2011	5.14		2.12	22.07	36	1.22
WC-39	05/23/2011	4.9	12.01	0.9	24.27	35	4.2
WC-39	10/25/2011	4.48	333.5	0.73	21.82	36	0.23
WC-39	05/13/2013	4.66	519	0.11	20.56	46	0.12
WC-39	11/18/2013	4.31	310	0.37	20.57	44	0.94
WC-39	05/19/2014	4.53	129.5	0.55	21.88	37	1.39
WC-39	11/11/2014	4.8	233.8	8.43	19	37	1.4
WC-39	05/22/2018	1.07	310.7	7.6	24.69	24	3.44
WC-39	11/13/2018	3.57	285.7	9.2	19.28	27	6.97
WC-40	05/25/2004	5.99	77	92.9	21.78	47	0.64
WC-40	11/10/2004	5.68	93	96.6	20	35	0.91
WC-40	06/09/2005	5.66	87	22.9	21.98	32	2.81
WC-40	11/17/2005	5.49	89	180	18.51	43	1.35
WC-40	05/11/2006	4.79	156	82.2	21.51	4600	2.67
WC-40	11/16/2006	5.53	74	37.3	19.7	4800	0.87
WC-40	05/07/2007	4.51	126	47	21.2	57	0.16
WC-40	11/01/2007	5.76	-24.8	0.3	21.05	61	0.19
WC-40	05/07/2008	5.4	93.1	4.9	21.27	67	0.37
WC-40	10/23/2008	8.18	-88.4	10.5	20.69	86	0.64
WC-40	06/03/2009	3.92	-115	39.6	21.33	73	0.96
WC-40	11/13/2009	5.2	134.9	22.7	21.7	54	0.55
WC-40	11/02/2010	5.24	-32.5	0.45	20.66	51	1.31
WC-40	10/26/2011	5.07	30.1	0	21.91	69	0.45
WC-40	05/14/2013	5.7	27.7	0.3	20.9	101	0.67
WC-40	11/19/2013	5.66	-67.6	0.74	20.63	107	1.64
WC-40	11/11/2014	5.73	26.9	3.19	22.1	138	2.33
WC-40	11/15/2018	5.15	-8.2	6.94	18.17	120	3.01
WC-41	05/25/2004	5.19	224	360	22.19	39	6.12
WC-41	11/10/2004	5.3	360	20.9	20.7	34	5.88
WC-41	06/07/2005	4.68	-149	183	23.9	30	6.43
WC-41	11/15/2005	4.99	263	86.4	22.22	45	6.77
WC-41	05/09/2006	4.46	277	104	22.86	4500	6.08

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Field Parameters					
Well Number	Date	pH	ORP (mv)	Turbidity (NTU)	Temperature (^{0}C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)
WC-41	11/14/2006	5.26	305	74.1	20.2	3900	6.48
WC-41	05/10/2007	4	324	47	23.2	56	6.06
WC-41	10/31/2007	5.14	255.1	7.1	21.54	47	6.96
WC-41	05/07/2008	5	383.9	26.6	21.95	52	5.38
WC-41	10/21/2008	4.84	134.7	64.1	21.26	55	5.33
WC-41	06/01/2009	4.4	222	90	23.45	44	3.61
WC-41	11/11/2009	4.35	128.3	4.72	20.34	40	4.67
WC-41	05/25/2010	5.15	299.4	0.95	22	50	3.27
WC-41	10/31/2010	5.01	195.5	1.94	21.52	40	5.29
WC-41	05/24/2011	5.08	59.2	0.54	26.34	44	2.24
WC-41	10/25/2011	5	213.8	17.59	20.96	41	4.51
WC-41	05/13/2013	5.58	196.9	1.53	22.99	57	3.97
WC-41	11/18/2013	5.4	-13.7	0.74	21.54	53	5.21
WC-41	05/19/2014	5.04	111.1	0.45	22.22	40	3.63
WC-41	11/11/2014	5.24	242.5	9.23	21.73	43	4.63
WC-41	05/22/2018	2.08	261	5.5	23.46	38	4.8
WC-41	11/13/2018	4.87	268.4	7.62	12.47	38	10.56
WC-42	08/02/2005	4.87	269	84.8	23.9	4.7	5.9
WC-43	11/12/2014	5.16	95.7	0.42	19.63	31	5.41
WC-44	06/10/2005	5.23	217	999	23.34	27	6.6
WC-44	08/01/2005	4.92	212	37.7	21.91	3.6	8.9
WC-44	11/15/2005	4.28	287	50.5	20.84	26	7.4
WC-44	05/09/2006	4.46	354	150	21.1	26	7.6
WC-44	11/15/2006	4.68	303	163	20.6	3000	7.11
WC-44	05/09/2007	4.82	282	39	21.1	39	7.01
WC-44	10/30/2007	4.66	208	29	20.77	34	0.03
WC-44	05/06/2008	4.86	252.1	10.1	22.13	34	6.46
WC-44	10/21/2008	4.43	173.8	23.1	21.57	37	6.92
WC-44	06/01/2009	3.95	284	33.3	21.64	28	6.24
WC-44	11/11/2009	4.26	302.3	7.25	20.84	22	6.85
WC-44	05/25/2010	4.69	317.6	14.2	22.2	30	6.29
WC-44	10/31/2010	4.79	175.3	8.33	21.59	27	6.88
WC-44	05/24/2011	5.37	53.9	6.47	23.26	28	3.84
WC-44	10/25/2011	4.36	307.8	8.43	20.44	28	7.65
WC-44	05/13/2013	4.8	311	25.7	21.43	33	6.49
WC-44	11/19/2013	4.7	336	9	20.04	25	6.74
WC-44	05/20/2014	4.84	148.6	7.19	21.25	26	2.48

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Field Parameters					
Well Number	Date	pH	ORP (mv)	Turbidity (NTU)	Temperature (^{0}C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)
WC-44	11/11/2014	4.94	270.4	19.58	22.44	24	6.45
WC-44	05/22/2018	1.75	231.6	8.7	21.63	22	6.61
WC-44	11/13/2018	4.84	338	9.86	19.5	25	7.7
WC-45	11/12/2014	12.54	-0.9	4.1	20.33	6575	47.02
WC-46	11/11/2014	5.85	-113.8	13.26	20.69	136	1.02
WC-47	11/12/2014	593	19.7	91.9	19.7	69	11.08
WC-49	11/12/2014	5.79	51.6	12.67	17.77	547	1.9
WC-49s	11/13/2014	5.7	43.6	8.4	17.74	242	9.7
WC-50i	11/12/2014	10.81	-13.6		19.13	731	46.15
WC-50s	11/12/2014	3.93	385.3	31	19.45	376	8.45
WC-51i	11/12/2014	5.06	-25.6	0.93	18.67	265	5.26
WC-51s	11/12/2014	5.24	13	18.05	18.48	44	5.5
WC-52i	11/13/2014	6.14	-22.7	5.86	16.73	139	0.55
WC-52i	11/15/2018	4	107.4	6.22	15.99	98	5.05
WC-52s	11/13/2014	6.05	29.6		16.99	166	2.41
WC-52s	11/15/2018	4.92	36.5	27.46	16.13	135	0.15
WC-53i	11/13/2014	6.38	-100.2	0.01	17.9	288	0.39
WC-53s	11/13/2014	5.77	-64.7		17.84	93	2.7
WC-54s	11/13/2014	6.36	-84.6	43.59	15.85	280	0.46
WC-55i	11/12/2014	6.08	-46.2		18.6	214	0.65
WC-55s	11/12/2014	5.74	-7.1	3.59	17.43	142	3.31
WCP-01	11/12/2014	11.45	72.5	12.83	18.19	471	44.48
WCP-02	11/12/2014	6.27	-82.4	1.1	17.82	173	0.37
WCP-04	11/12/2014	5.61	57.7	5.4	18.6	138	0.26
WCP-05	11/12/2014	3.96	211	0.45	18.29	49	7.07
WCP-09	11/12/2014	12.65	-89.6	34.32	20.06	9046	34.11
WCP-09	11/14/2018	12.96	-39.3	6.75	18.12	7179	25.9
WP-03	10/30/2010	6.62	136.1	4.71	20.06	108	5.06

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters											
Well Number	Date	Total Organic Carbon (TOC) (mg/L)	Alkalinity (mg/L)	Chloride (mg/L)	Ferrous Iron (mg/L)	Nitrate (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)
WC-05	5/16/2002		15	8.7		0.02 U	4.65	9.4				
WC-05	11/14/2002		33.8	7		0.017 U	4.3	12.4				
WC-05	11/17/2006	2.3	15	6.9	2.56	0.4		5.6	0.62 J			
WC-05	11/17/2006									0.1 U	0.1 U	93
WC-05	5/7/2007	2.1	22	5.3				4.4	0.38 U			
WC-05	5/7/2007									0.1 U	0.1 U	47
WC-05	7/10/2007	48	440	9.8				1200	7			
WC-05	7/10/2007									0.1 U	0.1 U	0.3 U
WC-05	8/21/2007	36	800	8.5				510	0.38 U			
WC-05	8/21/2007									0.1 U	0.1 U	0.3 U
WC-05	11/1/2007	41	470	7.9				350	5.4			
WC-05	11/1/2007									0.1 U	0.1 U	0.48 U
WC-05	1/15/2008	94	1000	17				5600	5.5			
WC-05	1/15/2008									0.1 U	0.1 U	0.48 U
WC-05	2/28/2008	12	210	5.5				660	4.2			
WC-05	2/28/2008									0.1 U	0.17 J	49
WC-05	5/7/2008	13	370	7.7				480	2			
WC-05	5/7/2008									0.1 U	0.1 U	0.48 U
WC-05	10/23/2008	22	430	7.8				410	1.5 J			
WC-05	10/23/2008									0.11 U	0.19 U	0.3 U
WC-05	6/3/2009	22	300	6.4				220	2.1			
WC-05	6/3/2009									0.11	0.19	0.3
WC-05	10/26/2011	25.8		5.03				48.4	0.4 U			
WC-05	10/26/2011											1.9 J
WC-05	2/17/2012	88.7		6.35				80.5	0.4 J			
WC-05	2/17/2012											0.32 J
WC-05	5/15/2012	10.5		5.36				69	0.5 J			
WC-05	5/15/2012											0.3 U
WC-05	8/21/2012	15.4		5.65				42.4	0.4 U			
WC-05	8/21/2012											1 U
WC-05	11/7/2012	48.1		4.62				79.7	0.6 J			
WC-05	11/7/2012											0.43 BJ
WC-05	5/15/2013	13.2		3.47				29.1	3			
WC-05	5/15/2013											1 U
WC-05	11/19/2013	14.9		3.59				30.7	0.6 J			
WC-05	11/19/2013											1.1 U
WC-05	11/12/2014	6.7		3.6				40.6	0.4 J			

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																					
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-05	11/12/2014																					1.9	
WC-05	11/18/2015	9.3																					
WC-05	11/18/2015																	0.2	U	0.11	U	0.24	J
WC-05	11/16/2016	7.9																					
WC-05	11/16/2016																	0.17	U	0.21	J	1.2	
WC-06	4/3/2002			2.5	U	8				0.02	U	24	U	5.4									
WC-06	5/13/2002			2.5	U	9.7				0.02	U	0.158		2.2	U								
WC-06	11/11/2002			10.6		0.82	U			0.017	U	0.0235	U	2	U								
WC-06	11/17/2006							0.09		0.01	U												
WC-06	8/20/2012	0.4	J			6.72								0.59		0.8	J						
WC-06	8/20/2012																					0.3	U
WC-06	11/6/2012	21.6				10.4								0.56		0.4	U						
WC-06	11/6/2012																					1	U
WC-06	11/19/2013	0.3	J			10.1								0.56		0.4	U						
WC-06	11/19/2013																					0.3	U
WC-06	11/11/2014	0.5	J			11.2								0.8	J	0.4	U						
WC-06	11/11/2014																					0.21	U
WC-08	4/3/2002			2.5	U	8.9				0.02	U	0.463		17									
WC-08	5/15/2002			2.5	U	8				0.02	U	0.347		17									
WC-08	11/13/2002			2.5	U	7.2				0.32		0.201	U	7.4									
WC-08	5/24/2004	1.6		1.54	U	4.4								2.4		22.5							
WC-08	5/24/2004																	1	U	1	U	2	U
WC-08	11/13/2006	1.8		2		5.5		0.04		0.3				0.87		1.4	J						
WC-08	11/13/2006																	0.1	U	0.1	U	130	
WC-08	5/7/2008	0.43	J	3	J	6								0.9		0.38	U						
WC-08	5/7/2008																	0.1	U	0.1	U	0.48	U
WC-08	10/25/2011	0.8	J			3.06								2.88		0.4	U						
WC-08	10/25/2011																					0.3	U
WC-08	2/16/2012	1.4				2.79								4.36		0.4	U						
WC-08	2/16/2012																					0.3	U
WC-08	8/20/2012	0.8	J			4.39								4.55		0.4	U						
WC-08	8/20/2012																					0.34	J
WC-08	11/6/2012	4.8				3.95								3.87		0.4	U						
WC-08	11/6/2012																					0.3	U
WC-08	11/18/2013	0.4	J			3.95								1.85		0.4	U						
WC-08	11/18/2013																					2.3	
WC-08	11/10/2014	0.6	J			3.2								2.2		0.4	U						

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																							
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-08	11/10/2014																					0.21	U
WC-08	11/16/2015	1.6																					
WC-08	11/16/2015																	0.28	U	0.28	U	1.9	
WC-08	11/14/2016	0.9	J																				
WC-08	11/14/2016																	0.17	U	0.14	U	0.35	J
WC-08A	11/15/2006	0.5	U	5		6.2		0.07		1.8				0.19	J	1.8	J						
WC-08A	11/15/2006																	0.1	U	0.1	U	3.1	
WC-09	11/17/2006							0.13		0.7													
WC-10	11/17/2006							0.09		0.01	U												
WC-11	5/25/2004	2		27		4								6		6.67	U						
WC-11	5/25/2004																	2	U	2	U	110	E
WC-11	11/13/2006	0.897	J	1.9	U	5.4		0.07		0.4				4.1		0.79	J						
WC-11	11/13/2006																	0.1	U	0.1	U	0.57	
WC-11	5/6/2008	3.2		1.6	U	3.2								46		0.64	J						
WC-11	5/6/2008																	0.1	U	0.1	U	76	
WC-13	4/3/2002			27		5.9				0.02	U	24	U	9.4									
WC-13	5/15/2002			2.5	U	6				0.02	U	24	U	5.4									
WC-13	11/12/2002			2.5	U	0.82	U			0.017	U	0.0235	U	2	U								
WC-13	5/24/2004	2		1.54	U	3.9								0.49		40.1							
WC-13	5/24/2004																	1	U	1	U	2	U
WC-13	11/13/2006	1.1		1.9	U	5.4		0.14		0.01	U			0.27	J	0.85	J						
WC-13	11/13/2006																	0.1	U	0.1	U	0.3	U
WC-13	5/5/2008	0.41	U	1.6	U	4.1								0.28	J	0.38	U						
WC-13	5/5/2008																	0.1	U	0.1	U	0.48	U
WC-14	5/27/2004	4.1		40		3.9								3.3		1	U						
WC-14	5/27/2004																	1	U	1	U	5.1	
WC-14	11/16/2006	1.6		23		4.3		32.2		2.1				4		5.7							
WC-14	11/16/2006																	0.1	U	0.1	U	24	
WC-14	5/8/2008	6.2		43		3.5								1.5		0.9	J						
WC-14	5/8/2008																	0.1	U	0.1	J	32	
WC-16	11/17/2006							0.13		0.01	U												
WC-17	11/18/2006							0.4		1.9													
WC-18	11/17/2006							-9		-9													
WC-19	4/4/2002			23		15				0.02	U	6.34		2.2	U								
WC-19	5/16/2002			23		9.3				0.02	U	0.678		2.2	U								
WC-19	11/13/2002			40.1		9.7				0.017	U	1.62		2	U								
WC-19	5/27/2004	8.3		5		6.4								3.4		1	U						

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																					
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-19	5/27/2004																	1	U	1	U	5.4	
WC-19	11/16/2006	16		14		19		2.93		0.01	U			0.47		3.8							
WC-19	11/16/2006																	0.1	U	0.1	U	24	
WC-19	5/5/2008	12		7		18								0.45		1.2							
WC-19	5/5/2008																	0.1	U	0.36	J	44	
WC-19	10/25/2010	10.8										5.2		0.88									
WC-19	10/26/2011	20.7				24.8								0.61		0.4	U						
WC-19	10/26/2011																					46	
WC-20	11/18/2006							0.13		0.01	U												
WC-22	4/4/2002			2.5	U	8				0.02	U	24	U	2.2	U								
WC-22	5/15/2002			2.5	U	7.2				0.02	U	24	U	2.2	U								
WC-22	11/13/2002			11.6		6.8				0.017	U	0.0235	U	2	U								
WC-22	5/26/2004	0.35	U	2	J	5.7								0.89		1	U						
WC-22	5/26/2004																	1	U	1	U	2	U
WC-22	11/16/2005															0.6							
WC-22	11/15/2006	0.5	U	2	J	7.9		0.14		0.01	U			0.32	J	0.48	J						
WC-22	11/15/2006																	0.1	U	0.1	U	1.7	
WC-22	5/7/2008	0.41	U	1.6	U	7.9								0.32	J	0.38	U						
WC-22	5/7/2008																	0.1	U	0.1	U	1.6	
WC-22	10/25/2010	0.3	U									0.004	U	0.59									
WC-22	10/25/2011	18.1				9.17								0.54		0.4	U						
WC-22	10/25/2011																					3.5	
WC-22	2/14/2012	1.1				9.97								0.6		0.4	U						
WC-22	2/14/2012																					0.3	U
WC-22	5/15/2012	0.6	J			10.5								0.55		0.4	U						
WC-22	5/15/2012																					0.76	J
WC-22	8/22/2012	0.7	J			10.6								0.58		0.4	U						
WC-22	8/22/2012																					1.9	
WC-22	11/9/2012	46.7				10.3								0.67	B	0.5	J						
WC-22	11/9/2012																					1.5	
WC-22	5/14/2013	0.6	J			8.75								0.59		0.4	U						
WC-22	5/14/2013																					1	U
WC-22	11/19/2013	0.5	J			10.4								0.58		0.4	U						
WC-22	11/19/2013																					1.5	U
WC-22	11/11/2014	0.8	J			11.5								0.8	J	0.4	J						
WC-22	11/11/2014																					1	
WC-22	11/18/2015	0.8	J																				

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																					
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-22	11/18/2015																	0.2	U	0.11	U	0.48	J
WC-22	11/16/2016	0.5	J													0.4	U						
WC-22	11/16/2016																	0.17	U	0.14	U	0.7	J
WC-23	4/5/2002			2.5	U	43				0.02	U	13.3		10									
WC-23	5/16/2002			2.5	U	28				0.05		7.48		7.4									
WC-23	11/14/2002			2.5	U	38.9				0.058		10.4		13.4									
WC-23	5/27/2004	7.7		6		36								13		1	U						
WC-23	5/27/2004																	1	U	1	U	74	
WC-23	11/16/2006	11.7		3	J	50		13.6		1.5				6		0.56	J						
WC-23	11/16/2006																	0.1	U	0.1	U	4.6	
WC-23	5/7/2007	6.2		7.5		32								5.4		0.38	U						
WC-23	5/7/2007																	0.1	U	0.12	J	4.3	
WC-23	7/10/2007	8.2		50		34								69		0.41	J						
WC-23	7/10/2007																	0.1	U	0.2	J	43	
WC-23	8/21/2007	9.7		91		33								310		0.93	J						
WC-23	8/21/2007																	0.1	U	0.66	J	150	
WC-23	11/2/2007	7.5		120		35								290		0.38	U						
WC-23	11/2/2007																	0.1	U	0.1	U	23	
WC-23	1/9/2008	5.7		36		34								280		0.38	U						
WC-23	1/9/2008																	0.1	U	0.18	J	25	
WC-23	2/28/2008	10		26		33								120		1.7	J						
WC-23	2/28/2008																	0.1	U	0.1	U	0.48	U
WC-23	5/8/2008	7.6		35		37								67		0.59	J						
WC-23	5/8/2008																	0.1	U	0.11	J	130	
WC-23	10/23/2008	3.8		25		37								170		0.38	U						
WC-23	10/23/2008																	0.11	U	0.19	U	52	
WC-23	6/3/2009	22		15		31								53		0.38							
WC-23	6/3/2009																	0.11		0.19		9.4	
WC-23	2/14/2012	3.1				40.3								14.5		0.4	U						
WC-23	2/14/2012																					0.33	J
WC-23	5/14/2012	2.4				40.2								11.2		0.4	U						
WC-23	5/14/2012																					1.3	J
WC-23	8/20/2012	2.3				42.8								12.4		0.4	U						
WC-23	8/20/2012																					0.92	J
WC-23	11/7/2012	48.3				38								11.9		0.4	U						
WC-23	11/7/2012																					3.3	
WC-23	5/14/2013	2				28.2								10		0.4	U						

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																							
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-23	5/14/2013																					26	
WC-23	11/18/2013	1.3				30.8								15.4		0.4	U						
WC-23	11/18/2013																					1	U
WC-23	11/10/2014	1.5				35.8								16.6		0.4	U						
WC-23	11/10/2014																					0.21	U
WC-23	11/17/2015	2																					
WC-23	11/17/2015																	0.28	U	0.28	U	0.48	U
WC-23	11/15/2016	2.1																					
WC-23	11/15/2016																	0.17	U	0.14	U	0.36	J
WC-24	4/5/2002			2.5	U	17				0.02	U	0.648		2.2	U								
WC-24	5/15/2002			2.5	U	9.9				0.02	U	0.107		2.2	U								
WC-24	11/13/2002			14.8		12.1				0.067		0.647	U	2	U								
WC-24	5/27/2004	3.5		2	J	14								1.6		1	U						
WC-24	5/27/2004																	1	U	1	U	26	
WC-24	11/15/2006	4.9		9.9		6.3		2.47		0.3				1.2		0.69	J						
WC-24	11/15/2006																	0.1	U	0.1	U	0.76	
WC-24	5/7/2008	0.41	U	4	J	3.1								0.5		0.74	J						
WC-24	5/7/2008																	0.1	U	0.1	U	0.56	
WC-25	4/4/2002			2.5	U	11				0.3		24	U	2.2	U								
WC-25	5/15/2002			2.5	U	17				0.2		0.15		2.2	U								
WC-25	11/13/2002			2.5	U	10.7				0.45		0.0235	U	2	U								
WC-25	5/24/2004	2.2		1.54	U	8.7								0.67		1.05	U						
WC-25	5/24/2004																	1	U	1	U	2	U
WC-25	11/14/2006	0.5	U	1.9	U	6.9		0.05		0.01	U			0.19	J	8.4							
WC-25	11/14/2006																	0.1	U	0.1	U	0.3	U
WC-25	5/5/2008	0.41	U	1.6	U	8.7								0.29	J	1.8							
WC-25	5/5/2008																	0.1	U	0.1	U	0.48	U
WC-25	11/10/2009															0.38	U						
WC-25	11/28/2017															2	U						
WC-26	4/4/2002			2.5	U	8.5				0.5		24	U	7.4									
WC-26	5/14/2002			13		18				0.3		24	U	6.4									
WC-26	5/16/2002					8.1				0.3													
WC-26	11/13/2002			2.5	U	7.2				0.06		0.0235	U	5.4									
WC-26	5/25/2004	1.2		3		6.1								0.75		106							
WC-26	5/25/2004																	1	U	1	U	2	U
WC-26	11/15/2006	4.5		2	J	8.3		0.13		0.01	U			0.42		2.8							
WC-26	11/15/2006																	0.1	U	0.1	U	0.36	J
WC-26	5/7/2008	0.64	J	1.6	U	5.1								0.37	J	0.38	U						

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																					
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-26	5/7/2008																	0.1	U	0.1	U	0.48	U
WC-26	2/14/2012	4.7				5.12								0.66		0.4	U						
WC-26	2/14/2012																					0.3	U
WC-26	8/21/2012	2.7				5.22								0.6		0.4	U						
WC-26	8/21/2012																					2.6	
WC-26	11/7/2012	35.9				4.64								0.65		0.4	U						
WC-26	11/7/2012																					0.3	U
WC-26	11/19/2013	7.5				4.43								0.63		0.4	J						
WC-26	11/19/2013																					1	U
WC-26	11/10/2014	7				3.7								0.9	J	0.4	U						
WC-26	11/10/2014																					0.21	U
WC-26	11/17/2015	0.9	J																				
WC-26	11/17/2015																	0.28	U	0.28	U	0.48	U
WC-26	11/14/2016	6.5																					
WC-26	11/14/2016																	0.17	U	0.14	U	0.12	U
WC-28	11/11/2002															1	U						
WC-28	5/26/2004	0.35	U	1.54	U	15								1.2		1	U						
WC-28	5/26/2004																	1	U	1	U	6.8	
WC-28	11/13/2006	0.5	U	1.9	U	8.7		0.04		0.01	U			0.2	J	0.51	J						
WC-28	11/13/2006																	0.1	U	0.1	U	9.8	
WC-28	5/7/2008	0.94	J	1.6	U	6.8								0.36	J	1.1	J						
WC-28	5/7/2008																	0.1	U	0.1	U	51	
WC-28	11/1/2010															0.4	U						
WC-28	11/15/2018															0.4	U						
WC-29	1/14/2004															0.06							
WC-29	5/26/2004	2.5		22		5.2								7.8		1	U						
WC-29	5/26/2004																	1	U	1	U	2	U
WC-29	11/14/2006	0.5	U	9.1		5.5		0.01	U	0.01	U			2.8		1.9	J						
WC-29	11/14/2006																	0.1	U	0.1	U	9.5	
WC-29	5/6/2008	0.66		24		22								0.64		1.2	J						
WC-29	5/6/2008																	0.1	U	0.1	U	29	
WC-30	5/26/2004	0.35	U	11		9.3								6.9		1	U						
WC-30	5/26/2004																	1	U	1	U	4.2	
WC-30	11/11/2004															1.06							
WC-30	11/14/2006	0.5	U			5		0.01	U	0.01	U			3.7		0.85	J						
WC-30	11/14/2006																	0.1	U	0.1	U	0.39	J
WC-30	5/5/2008	0.71	J	1.6	U	5.6								0.6		0.38	U						

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																			
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-30	5/5/2008																	0.1	U	0.1	U	6.7	
WC-30	11/8/2012															0.5	J						
WC-31	4/4/2002			15		26				0.02	U	11.4		7.4									
WC-31	5/16/2002			13		19				0.1		7.35		5.4									
WC-31	11/14/2002			23.2		19.5				0.017	U	6.58		5.4									
WC-31	5/28/2004	17		6		35								9.3		1	U						
WC-31	5/28/2004																	5	U	5	U	440	
WC-31	11/16/2006	35.4		10		59		1.25		0.01	U			6.7		3.5							
WC-31	11/16/2006																	0.43	J	0.48	J	960	
WC-31	5/7/2008	28		34		46								7.9		3.2							
WC-31	5/7/2008																	0.1	U	0.45	J	490	
WC-31	10/25/2010	23.3										35		6.51									
WC-31	10/26/2011	28.6				43.2								6.67		0.4	U						
WC-31	10/26/2011																					950	
WC-31	2/15/2012	20.9				20								3620		0.4	U						
WC-31	2/15/2012																					2.3	
WC-31	5/16/2012	6.4				15.5								1160		0.4	U						
WC-31	5/16/2012																					3.8	
WC-31	8/22/2012	9.8				19.3								1370		0.4	U						
WC-31	8/22/2012																					15	
WC-31	11/9/2012	26.5				16.9								1070		0.4	J						
WC-31	11/9/2012																					9.6	
WC-31	5/15/2013	1.6				9.96								199		0.4	U						
WC-31	5/15/2013																					1.9	
WC-31	11/19/2013	1.5				10.9								567		0.4	U						
WC-31	11/19/2013																					1	
WC-31	11/11/2014	3				10.4								235		0.4	U						
WC-31	11/11/2014																					0.65	J
WC-31	11/19/2015	3.7																					
WC-31	11/19/2015																	0.2	U	0.11	U	0.21	U
WC-31	11/16/2016	1.1																					
WC-31	11/16/2016																	0.17	U	0.14	U	0.28	J
WC-33	4/5/2002			21		15				0.02	U	2.4		2.2	U								
WC-33	5/15/2002			16		7.4				0.02	U	3.22		2.2	U								
WC-33	11/14/2002			27.4		10.1				0.017	U	1.3		2	U								
WC-33	5/27/2004	7.8		21		7.1								1.7		1	U						
WC-33	5/27/2004																	1	U	1	U	5.9	

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																					
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-33	11/16/2006	24		26		22		4.16		0.01	U			0.33	J	2.1							
WC-33	11/16/2006																	0.1	U	0.22	J	4.7	
WC-33	5/5/2008	8.6		13		8.4								0.34	J	1							
WC-33	5/5/2008																	0.1	U	0.2	J	26.7	
WC-33	10/25/2011	1				21.5								0.58		0.4	U						
WC-33	10/25/2011																					43	
WC-33	2/14/2012	26				13								12		8	U						
WC-33	2/14/2012																					0.3	U
WC-33	5/15/2013	27.2				14.6								2.3		1.4	J						
WC-33	5/15/2013																					0.3	U
WC-33	11/19/2013	19.4				13.6								3.1		2.8							
WC-33	11/19/2013																					0.3	U
WC-33	11/11/2014	19.9				22								1.3		4	J						
WC-33	11/11/2014																					0.48	U
WC-33	11/18/2015	24.6																0.2	UJ	0.11	UJ	0.21	UJ
WC-33	11/16/2016	13.7																					
WC-33	11/16/2016																	0.17	U	0.14	U	0.27	J
WC-34	4/3/2002			2.5	U	9.4				0.02	U	24	U	2.2	U								
WC-34	5/15/2002			2.5	U	6				0.02	U	24	U	6.4									
WC-34	11/13/2002			16.9		5.4				0.073		0.0235	U	2	U								
WC-34	5/25/2004	1.7		4		5.2								4		47.4							
WC-34	5/25/2004																	1	U	1	U	2	U
WC-34	11/14/2006	0.68	J	1.9	U	5.1		0.01	U	0.01	U			0.19	J	4.1							
WC-34	11/14/2006																	0.1	U	0.1	U	23	
WC-34	5/6/2008	0.76	J	1.6	U	5.5								0.31		0.62	J						
WC-34	5/6/2008																	0.1	U	0.1	U	0.48	U
WC-34	10/25/2011															0.4	U						
WC-34	12/4/2014															0.4	U						
WC-35	5/25/2004	1.7		13		3.1								0.94		1	U						
WC-35	5/25/2004																	1	U	1	U	2	U
WC-35	11/14/2006	0.5	U	1.9	U	3.5		0.01	U	0.01	U			0.27	J	0.49	J						
WC-35	11/14/2006																	0.1	U	0.1	U	0.3	U
WC-35	10/29/2007															2.9							
WC-35	5/6/2008	0.41	U	21		3.6								0.33	J	0.54							
WC-35	5/6/2008																	0.1	U	0.1	U	0.48	U
WC-35	11/17/2015															0.4	U						

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																					
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-36	11/13/2006							0.2		0.01	U												
WC-39	5/25/2004	0.35	U	1.54	U	4.4								1.2		1	U						
WC-39	5/25/2004																	1	U	1	U	2	U
WC-39	11/14/2006	0.5	U	1.9	U	7.9		0.01	U	0.01	U			0.16	U	0.6	J						
WC-39	11/14/2006																	0.1	U	0.1	U	1.9	
WC-39	5/6/2008	0.43	J	1.6	U	8.7								0.3	J	0.61	J						
WC-39	5/6/2008																	0.1	U	0.1	U	2.3	
WC-39	10/21/2008															0.38	U						
WC-40	4/3/2002			18		1.6	U			0.02	U	1.24		2.2	U								
WC-40	5/13/2002			19		1.6	U			0.02	U	1.5		2.2	U								
WC-40	11/11/2002			25.3		0.82	U			0.017	U	1.62		2	U								
WC-40	5/28/2004	3.1		11		2.9								1.3		5.44							
WC-40	5/28/2004																	1	U	1	U	2	U
WC-40	11/16/2006	2.4		1.9	U	4.6		1.64		0.01	U			9.9		0.38	U						
WC-40	11/16/2006																	0.1	U	0.1	U	15	
WC-40	5/7/2007	2.9		1.6	U	4.5								1.3		0.38	U						
WC-40	5/7/2007																	0.1	U	0.1	U	20	
WC-40	7/9/2007	2.1		20		4.2								1.4		0.48	J						
WC-40	7/9/2007																	0.1	U	0.1	U	21	
WC-40	8/20/2007	2.5		12		4.5								1.3		1.3	J						
WC-40	8/20/2007																	0.1	U	0.1	U	28	
WC-40	11/1/2007	2.4		14		4.9								1.1		0.55							
WC-40	11/1/2007																	0.1	U	0.1	U	26	
WC-40	1/8/2008	1.4		23		4.9								1.1		0.52	J						
WC-40	1/8/2008																	0.1	U	0.1	U	44	
WC-40	2/27/2008	1.1		30		4.6								0.77		0.4	J						
WC-40	2/27/2008																	0.1	U	0.1	U	24	
WC-40	5/7/2008	1.2		11		4.8								4.8		1.4	J						
WC-40	5/7/2008																	0.1	U	0.1	U	25	
WC-40	10/23/2008	2.1		1.6	U	5.8								30		0.38	U						
WC-40	10/23/2008																	0.11	U	0.19	U	27	
WC-40	6/3/2009	0.56		5.1		5.7								2.4		0.43							
WC-40	6/3/2009																	0.11		0.19		18	
WC-40	10/26/2011	4				5.34								3.36		0.4	U						
WC-40	10/26/2011																					38	
WC-40	2/14/2012	4.3				5.7								4.62		0.4	U						
WC-40	2/14/2012																					7.3	

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																							
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-40	5/16/2012	4.1				6.01								4.76		0.4	U						
WC-40	5/16/2012																					47	
WC-40	8/22/2012	4.1				5.99								5.18		0.4	U						
WC-40	8/22/2012																					49	
WC-40	11/9/2012	36.7				5.66								6.18		0.4	U						
WC-40	11/9/2012																					44	
WC-40	5/14/2013	6				5.26								7.06		0.4	U						
WC-40	5/14/2013																					38	
WC-40	11/19/2013	6.6				6.34								9.68		0.4	U						
WC-40	11/19/2013																					43	
WC-40	11/11/2014	6.1				6.2								8.2		0.4	U						
WC-40	11/11/2014																					45	
WC-40	11/18/2015	6.5																					
WC-40	11/18/2015																	0.2	U	0.13	J	37	
WC-40	11/16/2016	3.5																					
WC-40	11/16/2016																	0.17	U	2.2		17	
WC-41	5/26/2004	0.35	U	4		4.84								0.63		1	U						
WC-41	5/26/2004																	1	U	1	U	2	U
WC-41	11/14/2006	0.5	U	12		5.4		0.01		1				0.16	J	1.1	J						
WC-41	11/14/2006																	0.1	U	0.1	U	0.44	J
WC-41	5/7/2008	0.41	U	3	J	5.5								0.32		0.38	U						
WC-41	5/7/2008																	0.1	U	0.1	U	0.48	U
WC-42	11/14/2006	0.66	J	7		5		0.2		0.01	U			0.27	J	1	J						
WC-42	11/14/2006																	0.1	U	0.1	U	0.5	
WC-43	4/4/2002			2.5	U	1.6	U			0.4		24	U	2.2	U								
WC-43	5/14/2002			2.5	U	1.6	U			0.4		24	U	2.2	U								
WC-43	11/12/2002			2.5	U	0.82	U			0.41		0.0235	U	2	U								
WC-43	11/16/2006	0.5	U	4	J	3.1		0.04		0.01	U			0.36	J	1.8	J						
WC-43	11/16/2006																	0.1	U	0.1	U	0.71	
WC-43	2/14/2012	0.8	J			2.76								0.61		0.4	U						
WC-43	2/14/2012																					0.3	U
WC-43	5/16/2012	0.5	J			2.96								0.54		0.4	U						
WC-43	5/16/2012																					0.3	U
WC-43	8/21/2012	0.5	J			2.83								0.59		0.4	U						
WC-43	8/21/2012																					1	U
WC-43	11/6/2012	12.1				2.95								0.64		0.4	U						
WC-43	11/6/2012																					0.3	U

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

														Laboratory parameters									
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-43	5/14/2013	0.3	J			2.56								0.6		0.4	U						
WC-43	5/14/2013																					0.3	U
WC-43	11/20/2013	0.1	J			2.79								0.57		0.4	U						
WC-43	11/20/2013																					0.3	U
WC-43	11/12/2014	1.6				3								0.8	J	0.4	J						
WC-43	11/12/2014																					0.21	U
WC-43	11/18/2015	1.3																					
WC-43	11/18/2015																	0.2	U	0.11	U	0.21	U
WC-43	11/16/2016	0.3	J																				
WC-43	11/16/2016																	0.17	U	0.14	U	0.12	U
WC-44	11/15/2006	0.5	U	7		4.8		0.13		0.01	U			0.94		0.42	J						
WC-44	11/15/2006																	0.1	U	0.1	U	0.49	J
WC-44	5/6/2008	0.41	U	1.6	U	3.8								0.31	J	7.9							
WC-44	5/6/2008																	0.1	U	0.1	U	0.48	U
WC-45	10/4/2006	140																					
WC-45	10/5/2006	380																					
WC-45	11/16/2006	1.7		240		13		0.09		1.2				63		0.38	U						
WC-45	11/16/2006																	0.1	U	0.44	J	2.1	
WC-45	10/26/2011	4.8				3.56								27.3		0.4	U						
WC-45	10/26/2011																					15	
WC-45	2/14/2012	5.2				3.76								25.2		0.4	U						
WC-45	2/14/2012																					21	
WC-45	5/15/2012	5.8				3.98								24.9		0.4	U						
WC-45	5/15/2012																					18	
WC-45	8/22/2012	4.2				3.73								22.6		0.4	U						
WC-45	8/22/2012																					13	
WC-45	11/6/2012	13.6				3.88								19.6		0.5	J						
WC-45	11/6/2012																					15	
WC-45	5/14/2013	4.3				3.57								18.1		0.4	U						
WC-45	5/14/2013																					18	
WC-45	11/20/2013	3.2				3.99								16.4		0.4	J						
WC-45	11/20/2013																					8.8	
WC-45	11/12/2014	11.1				4.6								1		0.4	U						
WC-45	11/12/2014																					3.8	
WC-45	11/18/2015	19.3																					
WC-45	11/18/2015																	0.2	U	0.16	J	1.3	
WC-45	11/16/2016	10.1																					

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																							
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-45	11/16/2016																	26		22		990	
WC-46	10/4/2006	92	J																				
WC-46	11/16/2006	1		42		6.1		3.07		0.1				5.3		3.3							
WC-46	11/16/2006																	0.1	U	0.43	J	56	
WC-46	5/7/2007	1.3		46		6.1								4.4		0.38	U						
WC-46	5/7/2007																	0.1	U	0.3	J	20	
WC-46	7/9/2007	1.5		60		4.7								4		1.7	J						
WC-46	7/9/2007																	0.1	U	0.2	J	7.2	
WC-46	8/20/2007	2.7		110		4.5								4.5		2.1							
WC-46	8/20/2007																	0.1	U	0.33	J	9.4	
WC-46	11/1/2007	3.5		22		4.4								1.7		0.38	U						
WC-46	11/1/2007																	0.1	U	0.28	J	7.9	
WC-46	1/8/2008	3.5		32		8.1								1.9		6							
WC-46	1/8/2008																	0.1	U	0.43	J	4.7	
WC-46	2/27/2008	2.2		52		8.7								150		0.63	J						
WC-46	2/27/2008																	0.1	U	0.1	U	6.1	
WC-46	5/8/2008	1.7		30		5.5								3.7		0.38	U						
WC-46	5/8/2008																	0.1	U	0.31	J	12	
WC-46	10/23/2008	2.1		50		6.1								4.2		0.38	U						
WC-46	10/23/2008																	0.11	U	0.25	J	1.3	U
WC-46	6/4/2009	6.3	J	50		6.1								3.3		0.53	J						
WC-46	6/4/2009																	0.11	U	0.95	J	9.3	
WC-46	10/26/2011	1.4				4.88								1.78		0.4	U						
WC-46	10/26/2011																					1.1	J
WC-46	2/14/2012	1.6				4.3								1.8		0.4	U						
WC-46	2/14/2012																					0.94	J
WC-46	5/15/2012	0.9	J			3.97								0.85		0.4	U						
WC-46	5/15/2012																					0.3	U
WC-46	8/21/2012	0.6	J			5.22								0.92		0.4	U						
WC-46	8/21/2012																					0.3	U
WC-46	11/6/2012	32.9				5.37								1.8		0.4	U						
WC-46	11/6/2012																					1	U
WC-46	5/14/2013	4.4				4.89								1.77		0.4	U						
WC-46	5/14/2013																					1.1	U
WC-46	11/19/2013	3.7				5.46								2.74		0.4	U						
WC-46	11/19/2013																					1.1	
WC-46	11/11/2014	4.3				6.2								2.2		0.4	U						

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																							
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-46	11/11/2014																					0.86	J
WC-46	11/18/2015	1.8																					
WC-46	11/18/2015																	0.2	U	0.11	J	1.1	
WC-46	11/16/2016	1.2																					
WC-46	11/16/2016																	0.17	U	0.39	J	1.8	
WC-47	11/16/2006	39		210		28		-9		-9				42		200							
WC-47	11/16/2006																	0.1	U	0.35	J	0.71	
WC-47	5/8/2007	1.7		52		5.3								17		0.38	U						
WC-47	5/8/2007																	0.26	J	9.5		9.6	
WC-47	7/9/2007	1.7		70		7.3								4.2		1.9	J						
WC-47	7/9/2007																	0.1	J	3		23	
WC-47	8/20/2007	2.3		50		6								3.4		0.38	U						
WC-47	8/20/2007																	0.1	U	0.67	J	8.6	
WC-47	11/1/2007	4.1		37		3.4								1.9		0.38	U						
WC-47	11/1/2007																	0.1	U	6.4		13	
WC-47	1/8/2008	1.8		39		7.2								0.95		1	J						
WC-47	1/8/2008																	0.1	U	7.4		26	
WC-47	2/27/2008	1.5		70		5.7								0.56		3.1							
WC-47	2/27/2008																	0.1	U	1.4		4.1	
WC-47	5/8/2008	1.7		24		4								0.81		0.45	J						
WC-47	5/8/2008																	0.1	U	7.2		38	
WC-47	10/23/2008	1.9		23		4.7								0.55		0.38	U						
WC-47	10/23/2008																	0.11	U	19		41	
WC-47	6/4/2009	3.3	J	17		6.5								0.92		0.38	U						
WC-47	6/4/2009																	0.11	U	7		61	
WC-47	10/26/2011	1.1				4.7								1.05		0.4	U						
WC-47	10/26/2011																					62	
WC-47	2/14/2012	1.5				5.51								1.07		0.4	U						
WC-47	2/14/2012																					65	
WC-47	5/15/2012	1				6.06								1.24		0.4	U						
WC-47	5/15/2012																					50	
WC-47	8/22/2012	0.8	J			6.01								1.09		0.4	U						
WC-47	8/22/2012																					53	
WC-47	11/6/2012	23.4				6								1.34		0.4	U						
WC-47	11/6/2012																					61	
WC-47	5/14/2013	2.5				6.15								1.09		0.4	U						
WC-47	5/14/2013																					43	

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																					
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-47	11/20/2013	2.4				6.58								0.97		0.4	U						
WC-47	11/20/2013																					23	
WC-47	11/12/2014	1.6				6.7								1.2		0.4	U						
WC-47	11/12/2014																					2.9	
WC-47	11/18/2015	0.7	J																				
WC-47	11/18/2015																	0.2	U	1.4		8.3	
WC-47	11/16/2016	0.8	J																				
WC-47	11/16/2016																	0.17	U	3.2		2.5	
WC-48	11/15/2006	0.5	U	46		7.7		0.16		0.01	U			2.5		0.76	J						
WC-48	11/15/2006																	0.1	U	0.1	U	0.69	
WC-49i	10/28/2011	4.9				9								113		0.4	U						
WC-49i	10/28/2011																					1.9	J
WC-49i	2/15/2012	18.5				8.7								709		0.4	U						
WC-49i	2/15/2012																					0.76	J
WC-49i	5/17/2012	14.1				8.15								533		0.4	U						
WC-49i	5/17/2012																					0.67	J
WC-49i	8/22/2012	11.7				7.17								445		0.4	U						
WC-49i	8/22/2012																					1.1	U
WC-49i	11/7/2012	34.5				7.4								325		0.8	J						
WC-49i	11/7/2012																					1	U
WC-49i	5/15/2013	5.1				6.92								144		0.4	U						
WC-49i	5/15/2013																					1	U
WC-49i	11/21/2013	3.7				7.61								121		0.4	U						
WC-49i	11/21/2013																					0.3	U
WC-49i	11/12/2014	3.6				7.7								67.6		0.4	U						
WC-49i	11/12/2014																					1	U
WC-49i	11/19/2015	2.7																					
WC-49i	11/19/2015																	0.2	U	0.57	J	0.24	J
WC-49i	11/17/2016	1.5																					
WC-49i	11/17/2016																	0.17	U	0.26	J	0.7	J
WC-49s	10/28/2011	8.6				6.2								9.79		0.4	U						
WC-49s	10/28/2011																					5.9	
WC-49s	2/15/2012	14.7				2.4								286		0.4	U						
WC-49s	2/15/2012																					18	
WC-49s	5/17/2012	9.9				1.78								56		0.4	U						
WC-49s	5/17/2012																					7.1	
WC-49s	8/23/2012	4.8				1.69								54.4		0.4	U						

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																							
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-49s	8/23/2012																					3.2	
WC-49s	11/7/2012	80.2				1.5	B							30		0.4	U						
WC-49s	11/7/2012																					5.5	
WC-49s	5/15/2013	1.4				1.62								26.4		0.4	U						
WC-49s	5/15/2013																					1	U
WC-49s	11/21/2013	6.7				1.25								43.6		0.4	U						
WC-49s	11/21/2013																					3	
WC-49s	11/13/2014	5.4				1.6								42.1		0.4	U						
WC-49s	11/13/2014																					16	
WC-49s	11/19/2015	2.1																					
WC-49s	11/19/2015																	0.2	U	0.11	U	2.7	
WC-49s	11/17/2016	4.1																					
WC-49s	11/17/2016																	0.17	U	0.36	J	16	
WC-50i	10/28/2011	2				6.55								1.46		0.4	U						
WC-50i	10/28/2011																					2	J
WC-50i	2/16/2012	21.2				12								3400		0.4	U						
WC-50i	2/16/2012																					0.4	J
WC-50i	5/16/2012	16.3				8.35								1660		0.4	U						
WC-50i	5/16/2012																					0.3	U
WC-50i	8/22/2012	13.4				6.49								1020		0.4	U						
WC-50i	8/22/2012																					0.51	J
WC-50i	11/7/2012	23.8				7.2								812		0.4	U						
WC-50i	11/7/2012																					1	U
WC-50i	5/15/2013	9				6.53								442		0.4	U						
WC-50i	5/15/2013																					0.3	U
WC-50i	11/20/2013	4.6				5.7								288		0.4	U						
WC-50i	11/20/2013																					0.3	U
WC-50i	11/12/2014	0.09	U			6.4								175		0.4	U						
WC-50i	11/12/2014																					1	U
WC-50s	10/31/2011	10.7				5.02								9.71		0.4	U						
WC-50s	10/31/2011																					1.8	J
WC-50s	2/16/2012	18.8				2.7								498		0.4	U						
WC-50s	2/16/2012																					6.2	
WC-50s	5/16/2012	25				2.66								88.6		0.4	U						
WC-50s	5/16/2012																					13	
WC-50s	8/22/2012	20.6				2								111		0.4	U						
WC-50s	8/22/2012																					7.5	

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

														Laboratory parameters											
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-50s	11/7/2012	74.8				1.77								161		0.4	U								
WC-50s	11/7/2012																							2.7	
WC-50s	5/15/2013	14				2.61								61.4		0.5	J								
WC-50s	5/15/2013																							4.8	
WC-50s	11/20/2013	9.2				4.6								155		0.4	U								
WC-50s	11/20/2013																							2	
WC-50s	11/12/2014	9.7				4								148		0.4	U								
WC-50s	11/12/2014																							1.8	U
WC-51i	10/31/2011	2.4				9.36								17.2		0.4	U								
WC-51i	10/31/2011																							2.8	
WC-51i	2/16/2012	4.6				6.89								1.64		0.4	U								
WC-51i	2/16/2012																							1.8	J
WC-51i	5/16/2012	6.5				6.14								0.47	J	0.4	U								
WC-51i	5/16/2012																							25	
WC-51i	8/22/2012	4.1				8.47								22.6		0.4	U								
WC-51i	8/22/2012																							410	
WC-51i	11/7/2012	34.9				10.3								54.5		0.4	U								
WC-51i	11/7/2012																							270	
WC-51i	5/15/2013	3				11.2								67.1		0.4	U								
WC-51i	5/15/2013																							140	
WC-51i	11/20/2013	1.4				8.91								87.2		0.4	J								
WC-51i	11/20/2013																							8.7	
WC-51i	11/12/2014	2.6				7.5								91.7		0.4	J								
WC-51i	11/12/2014																							1.4	U
WC-51i	11/19/2015	1.2																							
WC-51i	11/19/2015																	0.2	U	0.32	J	6.8			
WC-51i	11/17/2016	1.3																							
WC-51i	11/17/2016																	0.17	U	0.4	J	6.8			
WC-51s	10/31/2011	50.5				8.2								21.7		0.4	U								
WC-51s	10/31/2011																							9.7	
WC-51s	2/16/2012	1.3				4.26								12		0.4	U								
WC-51s	2/16/2012																							3.8	
WC-51s	5/16/2012	1.2				3.92								4.84		0.4	U								
WC-51s	5/16/2012																							8.8	
WC-51s	8/22/2012	0.5	J			3.33								3.12		0.4	U								
WC-51s	8/22/2012																							0.52	J
WC-51s	11/7/2012	7.1				4.94								4.19	B	0.4	J								

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																							
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-51s	11/7/2012																					1	U
WC-51s	5/15/2013	0.7	J			4.27								14.1		0.4	U						
WC-51s	5/15/2013																					2.4	
WC-51s	11/20/2013	0.4	J			3.22								8.76		0.4	U						
WC-51s	11/20/2013																					2.3	
WC-51s	11/12/2014	0.5	J			3.3								3.2		0.4	J						
WC-51s	11/12/2014																					1	U
WC-52i	10/27/2011	6				12.4								1.48		0.4	U						
WC-52i	10/27/2011																					2.3	
WC-52i	2/15/2012	6.5				12.9								0.97		0.4	U						
WC-52i	2/15/2012																					22	
WC-52i	5/17/2012	8.2				13.7								0.44	J	0.4	U						
WC-52i	5/17/2012																					190	R
WC-52i	8/23/2012	7.9				12.6								0.6		0.4	U						
WC-52i	8/23/2012																					930	
WC-52i	11/8/2012	37				12.1								0.55	B	0.4	U						
WC-52i	11/8/2012																					1100	
WC-52i	5/15/2013	9.4				11.3								0.59		0.4	U						
WC-52i	5/15/2013																					1200	
WC-52i	11/21/2013	6.3				11.4								0.48	J	0.4	U						
WC-52i	11/21/2013																					900	
WC-52i	11/13/2014	0.09	U			11.7								0.7	J	0.4	U						
WC-52i	11/13/2014																					690	
WC-52i	11/19/2015	6																					
WC-52i	11/19/2015																	0.49	U	0.77	J	210	
WC-52i	11/17/2016	5.7																					
WC-52i	11/17/2016																	0.17	U	3		49	
WC-52s	10/27/2011	10.1				7.1								1.02		0.4	U						
WC-52s	10/27/2011																					43	
WC-52s	2/15/2012	9.2				6.32								0.88		0.4	U						
WC-52s	2/15/2012																					12	
WC-52s	5/17/2012	8				6.44								0.81		0.4	U						
WC-52s	5/17/2012																					27	
WC-52s	8/23/2012	6.6				6.37								0.83		0.4	U						
WC-52s	8/23/2012																					12	
WC-52s	11/8/2012	45.7				6.45								0.92	B	0.4	U						
WC-52s	11/8/2012																					24	

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																			
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-52s	5/16/2013	13				6.39								0.93		0.5	J						
WC-52s	5/16/2013																					29	
WC-52s	11/21/2013	8.8				6.55								0.81		0.4	U						
WC-52s	11/21/2013																					20	
WC-52s	11/13/2014	8.6				6.8								1		0.4	U						
WC-52s	11/13/2014																					17	
WC-52s	11/19/2015	9.7																					
WC-52s	11/19/2015																	0.2	U	0.11	U	4.7	
WC-52s	11/17/2016	8.2																					
WC-52s	11/17/2016																	0.17	U	0.14	U	7.7	
WC-53i	11/2/2011	9.6				16.1								95.1		0.4	U						
WC-53i	11/2/2011																					3.5	
WC-53i	2/15/2012	28.8				13								48.4		0.5	J						
WC-53i	2/15/2012																					6	
WC-53i	5/17/2012	20.3				10.1								3.52		0.4	U						
WC-53i	5/17/2012																					25	
WC-53i	8/23/2012	21.8				9.09								1.71		0.4	U						
WC-53i	8/23/2012																					1000	
WC-53i	11/8/2012	73.9				8.77								3.02	B	0.5	J						
WC-53i	11/8/2012																					1200	
WC-53i	5/15/2013	15.1				7.7								1.87		0.4	J						
WC-53i	5/15/2013																					1100	
WC-53i	11/21/2013	15.9				8.38								2.94		0.4	U						
WC-53i	11/21/2013																					1200	
WC-53i	11/13/2014	0.09	U			9.5								2.4		0.4	U						
WC-53i	11/13/2014																					690	
WC-53i	11/19/2015	9.7																					
WC-53i	11/19/2015																	0.98	U	0.76	J	410	
WC-53i	11/17/2016	7.8																					
WC-53i	11/17/2016																	0.17	U	13		650	
WC-53s	11/1/2011	12.3				5.93								4.6		0.4	U						
WC-53s	11/1/2011																					16	
WC-53s	2/15/2012	38.6				4.16								0.71		0.4	U						
WC-53s	2/15/2012																					42	
WC-53s	5/17/2012	45.3				4.71								0.63		0.4	U						
WC-53s	5/17/2012																					330	
WC-53s	8/23/2012	26.8				3.68								0.63		0.4	U						

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																							
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-53s	8/23/2012																					1000	
WC-53s	11/8/2012	86.6				4.05								0.77	B	0.4	U						
WC-53s	11/8/2012																					570	
WC-53s	5/16/2013	20.5				3.39								1.2		0.7	J						
WC-53s	5/16/2013																					280	
WC-53s	11/21/2013	11.8				2.66								0.84		0.4	U						
WC-53s	11/21/2013																					290	
WC-53s	11/13/2014	0.09	U			1.9								1.5		0.4	U						
WC-53s	11/13/2014																					23	
WC-54s	10/27/2011	8				9.02								1.84		0.4	U						
WC-54s	10/27/2011																					67	
WC-54s	2/15/2012	15.9				10								0.96		0.4	U						
WC-54s	2/15/2012																					910	
WC-54s	5/17/2012	18				13.3								0.66		0.4	U						
WC-54s	5/17/2012																					1400	R
WC-54s	8/23/2012	11.8				10.3								0.81		0.4	U						
WC-54s	8/23/2012																					1500	
WC-54s	11/8/2012	55				11.1								0.99	B	0.4	U						
WC-54s	11/8/2012																					520	
WC-54s	5/15/2013	15.5				9.99								0.94		1.3	J						
WC-54s	5/15/2013																					990	
WC-54s	11/21/2013	10.5				10.2								0.85		0.4	U						
WC-54s	11/21/2013																					1000	
WC-54s	11/13/2014	0.09	U			16.8								1.2		0.4	U						
WC-54s	11/13/2014																					990	
WC-54s	11/19/2015	9.3																					
WC-54s	11/19/2015																	2	U	1.1	U	690	
WC-54s	11/16/2016	10.8																					
WC-54s	11/16/2016																	0.17	U	0.14	U	990	
WC-55i	11/1/2011	4				8.88								1.77		0.4	U						
WC-55i	11/1/2011																					7.4	
WC-55i	2/14/2012	16.2				7.59								2.98		0.4	U						
WC-55i	2/14/2012																					32	
WC-55i	5/17/2012	16.6				5.95								0.63		0.4	U						
WC-55i	5/17/2012																					340	
WC-55i	8/23/2012	21.3				5.2								0.8		0.4	U						
WC-55i	8/23/2012																					890	

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																							
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WC-55i	11/7/2012	81.2				4.34								1.53	B	0.4	U						
WC-55i	11/7/2012																					760	
WC-55i	5/15/2013	11				3.94								0.95		0.7	J						
WC-55i	5/15/2013																					110	
WC-55i	11/20/2013	11.7				18.7								2.85		0.4	U						
WC-55i	11/20/2013																					59	
WC-55i	11/12/2014	0.09	U			8.6								2.3		0.4	U						
WC-55i	11/12/2014																					58	
WC-55i	11/16/2016	26.7																					
WC-55i	11/16/2016																	0.17	U	0.6	J	62	
WC-55s	11/1/2011	2.4				5.13								3.8		0.4	U						
WC-55s	11/1/2011																					8.1	
WC-55s	2/14/2012	24.8				2.96								1.14		0.4	U						
WC-55s	2/14/2012																					10	
WC-55s	5/17/2012	46.6				3.25								1.81		0.4	U						
WC-55s	5/17/2012																					97	
WC-55s	8/23/2012	25.6				3.32								1.38		0.4	U						
WC-55s	8/23/2012																					86	
WC-55s	11/7/2012	84.3				3.72								1.73	B	0.4	U						
WC-55s	11/7/2012																					48	
WC-55s	5/15/2013	32.8				3.46								1.95		1.4	J						
WC-55s	5/15/2013																					55	
WC-55s	11/20/2013	15.1				2.81								1.45		0.4	U						
WC-55s	11/20/2013																					18	
WC-55s	11/12/2014	15.2				2.5								2.4		0.4	U						
WC-55s	11/12/2014																					17	
WCP-01	11/17/2006	0.57	J	4	J	4.1		0.01	U	0.01	U			2.4		0.52	J						
WCP-01	11/17/2006																	0.1	U	0.1	U	0.82	
WCP-01	10/26/2010	0.4	J									0.02	J	1.01									
WCP-01	10/27/2011	0.9	J			4.6								1.62		0.4	U						
WCP-01	10/27/2011																					0.3	U
WCP-01	2/16/2012	36.6				12								9950		23.2							
WCP-01	2/16/2012																					0.58	J
WCP-01	5/15/2012	9				8.25								1040		1.9	J						
WCP-01	5/15/2012																					0.3	U
WCP-01	8/21/2012	8.8				6.97								586		0.9	J						
WCP-01	8/21/2012																					1	U

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

														Laboratory parameters									
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WCP-01	11/6/2012	10.1				5.6								543		1.3	J						
WCP-01	11/6/2012																					1	U
WCP-01	5/14/2013	1.9				2.9								113		0.8	J						
WCP-01	5/14/2013																					0.3	U
WCP-01	11/20/2013	3.4				3.2								213		0.4	U						
WCP-01	11/20/2013																					0.39	J
WCP-01	11/12/2014	1.7				3.7	B							80		0.4	U						
WCP-01	11/12/2014																					0.5	J
WCP-02	11/17/2006	11		22		8.7		37.83		2.3				0.52		3.1							
WCP-02	11/17/2006																	0.1	U	0.12	J	49	
WCP-02	10/26/2010	10										17		0.69									
WCP-02	10/27/2011	12.1				6.17								0.48	J	0.4	U						
WCP-02	10/27/2011																					910	
WCP-02	2/15/2012	11.1				6.28								0.54		0.4	U						
WCP-02	2/15/2012																					980	
WCP-02	5/16/2012	9.1				6.46								0.59		0.4	U						
WCP-02	5/16/2012																					840	
WCP-02	8/23/2012	8.9				6.17								0.56		0.4	U						
WCP-02	8/23/2012																					780	
WCP-02	11/7/2012	51.7				5.93								0.6		0.4	U						
WCP-02	11/7/2012																					500	
WCP-02	5/15/2013	10.7				5.81								0.64		0.7	J						
WCP-02	5/15/2013																					890	
WCP-02	11/20/2013	7.5				5.65								0.6		0.4	U						
WCP-02	11/20/2013																					500	
WCP-02	11/12/2014	0.09	U			5.9								0.7	J	0.4	U						
WCP-02	11/12/2014																					430	
WCP-03	11/17/2006	19		13		13		29.78		0.01	U			20		12							
WCP-03	11/17/2006																	0.2	J	0.36	J	1500	
WCP-04	11/17/2006	4.3		14		13		5.1		0.4				0.93		0.38	U						
WCP-04	11/17/2006																	0.1	U	0.19	J	110	
WCP-04	2/14/2012	2				18.6								0.96		0.4	U						
WCP-04	2/14/2012																					35	
WCP-04	5/16/2012	0.9	J			15.1								0.93		0.4	U						
WCP-04	5/16/2012																					100	
WCP-04	8/21/2012	0.7	J			14								0.77		0.4	U						
WCP-04	8/21/2012																					89	
WCP-04	11/7/2012	40.9				18.3								1.25		0.5	J						

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																					
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WCP-04	11/7/2012																					520	
WCP-04	5/14/2013	1	J			13.4								0.88		0.4	U						
WCP-04	5/14/2013																					40	
WCP-04	11/20/2013	1.9				16								1.36		0.4	U						
WCP-04	11/20/2013																					110	
WCP-04	11/12/2014	0.09	U			19.7								1.9		0.4	U						
WCP-04	11/12/2014																					180	
WCP-04	11/18/2015	3																					
WCP-04	11/18/2015																	0.2	U	0.11	U	41	
WCP-04	11/16/2016	4.7																					
WCP-04	11/16/2016																	0.17	U	0.39	J	240	
WCP-05	10/27/2011	0.7	J			8.15								0.77		0.4	U						
WCP-05	10/27/2011																					0.3	U
WCP-05	2/15/2012	0.9	J			3.94								0.87		0.4	U						
WCP-05	2/15/2012																					0.49	J
WCP-05	5/14/2012	0.5	J			4.08								0.77		0.4	U						
WCP-05	5/14/2012																					2.5	J
WCP-05	8/21/2012	0.3	J			3.61								0.73		0.4	U						
WCP-05	8/21/2012																					0.44	J
WCP-05	11/6/2012	20.5				3.93								0.92		0.4	U						
WCP-05	11/6/2012																					11	
WCP-05	5/14/2013	0.5	J			3.64								1.9		0.4	U						
WCP-05	5/14/2013																					2.5	U
WCP-05	11/19/2013	0.5	J			5.14								0.66		0.4	U						
WCP-05	11/19/2013																					4.9	
WCP-05	11/12/2014	2.6				7.1								1.4		0.4	U						
WCP-05	11/12/2014																					0.21	U
WCP-05	11/18/2015	0.8	J																				
WCP-05	11/18/2015																	0.2	U	0.11	U	0.21	U
WCP-05	11/16/2016	0.3	J																				
WCP-05	11/16/2016																	0.17	U	0.14	U	0.12	U
WCP-09	10/26/2011	2.8				7.57								0.57		0.4	U						
WCP-09	10/26/2011																					0.9	J
WCP-09	2/13/2012	20.3				13								15		1.6	U						
WCP-09	2/13/2012																					0.3	U
WCP-09	5/14/2012	25.7				11								1.28		0.8	U						
WCP-09	5/14/2012																					0.3	UJ
WCP-09	8/21/2012	19.9				7.98								1.1		0.4	U						
WCP-09	8/21/2012																					1	U
WCP-09	11/6/2012	20.7				6.64								6.3		0.4	U						
WCP-09	11/6/2012																					1	U
WCP-09	5/14/2013	16.4				4.65								5		14.2							
WCP-09	5/14/2013																					0.3	U

Appendix E-3. MNA Indicator Results

Wiggins Treated Wood Products Facility
Wiggins, Mississippi

		Laboratory parameters																							
Well Number	Date	Total Organic Carbon (TOC) (mg/L)		Alkalinity (mg/L)		Chloride (mg/L)		Ferrous Iron (mg/L)		Nitrate (mg/L)		Dissolved Iron (mg/L)		Sulfate (mg/L)		Sulfide (mg/L)		Ethane (µg/L)		Ethene (µg/L)		Methane (µg/L)	
WCP-09	11/19/2013	14				4.9								4.6		1.8	J						
WCP-09	11/19/2013																					0.3	U
WCP-09	11/12/2014	0.09	U			5.9								6.8		51.5							
WCP-09	11/12/2014																					0.21	U

U - Not Detected
J - Estimated Value

APPENDIX E-4

GROUNDWATER MONITORING PLAN/

SAMPLING AND ANALYSIS PLAN

Prepared for

Mississippi Department of Environmental Quality
Jackson, Mississippi

GROUNDWATER MONITORING PLAN
SAMPLING AND ANALYSIS PLAN

Wiggins Treated Wood Products Facility
Wiggins, Mississippi
MSD 980 600 084

Prepared by

INTERNATIONAL PAPER
6400 Poplar Avenue
Memphis, TN 38197

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TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 GROUNDWATER MONITORING PLAN 3

2.1 Monitoring Wells 3
2.2 Sampling Parameters 5
2.2.1 GWPS and Appendix IX Monitoring 5
2.2.2 MNA Monitoring 6

3.0 SAMPLING AND ANALYSIS PLAN 7

3.1 Equipment Assembly and Preparation 7
3.1.1 Equipment Assembly 7
3.1.2 Equipment Inspection 7
3.1.3 Equipment Calibration 8
3.1.4 Equipment Cleaning 8
3.2 Groundwater Sampling 9
3.2.1 Water Level Measurement 10
3.2.2 Total Well Depth Measurement 10
3.2.3 Visual Inspection of Well Water 10
3.2.4 Well Purging 11
3.2.5 Management of Investigation-Derived Wastes 13
3.2.6 Sample Collection 13
3.2.7 Quality Control Samples 14
3.2.8 Sample Containers, Preservation and Holding Times 15
3.2.9 On-Site Parameter Measurement 15
3.2.10 Container Labeling 15
3.2.11 Sample Shipment 16
3.2.12 Sample Recordkeeping 16
3.3 Analytical Procedures 17
3.4 Chain of Custody Control 18

3.5 Laboratory Quality Assurance and Quality Control 19
3.5.1 QA/QC Program Components 19
3.5.2 Chemical Laboratory Sample Custody Procedures 19
3.5.3 Reporting and Evaluation of Laboratory Analysis Results..... 20

TABLES

Table 1 Well Completion Data
Table 2 Groundwater Sampling Network
Table 3 Sample Containers, Preservation and Holding Times
Table 4 Appendix IX Analytical Methods and Associated PQLs

FIGURE

Figure 1 Well Location Map

APPENDIX

Appendix A - Field Forms

1.0 INTRODUCTION

This Groundwater Monitoring Plan/Sampling and Analysis Plan (GMP/SAP) is being submitted with the Hazardous Waste Permit Application for renewal of International Paper's Corrective Action Program (CAP) at the Wiggins Treated Wood Products Facility in Wiggins, Mississippi. This GMP/SAP will govern the sampling and analysis of groundwater from the facility's groundwater monitoring wells.

The former International Paper Treated Wood Products Facility in Stone County, Mississippi is located approximately 2 miles south of the town of Wiggins, just east of U.S. Highway 49. The wood treating facility was sold to Baldwin Pole Mississippi LLC (Baldwin Pole) on January 31, 2007. At the time of the sale, the property was sub-divided and a 92-acre portion containing the closed regulated units was retained by International Paper (IP) (IP property). The remaining 88 acres containing the active manufacturing portion of the facility was sold to Baldwin Pole (Baldwin Pole property).

The closed units on IP property covered under the CAP include:

- Four Closed Surface Impoundments – Old Cellon Recovery Pond, Pentachlorophenol (PCP) Recovery Pond, Creosote Recovery Pond, Contact Cooling Water Pond;
- Five Closed Sludge Pits - Sludge Pits SL-1 through SL-5; and
- One Closed Land Treatment Demonstration Unit.

IP submitted permit applications dated November 27, 1984, and November 8, 1985 for the operation, closure and post-closure care of the four surface impoundments. MDEQ issued the initial operating permit on March 5, 1987 (Permit No. HW 87-084-01). The MDEQ permit was modified on September 3, 1987 to include the Land Treatment Demonstration Unit and subsequently the closed sludge pits. The Permit was renewed as State of Mississippi Hazardous Waste Management Permit HW-980-600-084 on July 9, 1998 (modified March 28, 2002). The permit was subsequently renewed on May 4, 2010 and expires on April 30, 2020. This GMP/SAP has been revised in connection with the 2020 permit renewal application.

This GMP/SAP was prepared to support the existing CAP, which is comprised of the following two components:

- Natural Attenuation with long-term groundwater monitoring (MNA); and
- Long-Term Remediation Contingencies.

2.0 GROUNDWATER MONITORING PLAN

Shallow groundwater in the Citronelle Formation beneath the IP property has been found to be affected by wood-treating chemicals from the closed surface impoundments. Groundwater monitoring is conducted to measure the effectiveness of the CAP in achieving the groundwater protection standards (GWPS) identified in the Permit.

2.1 Monitoring Wells

As part of the groundwater monitoring program, 23 of the facility monitoring wells, 22 screened in the Citronelle Formation and 1 screened in the Pascagoula Formation, will be sampled and analyzed for the constituents identified as the GWPS. Periodically, select wells will be sampled and analyzed for MNA parameters. Well locations are shown on Figure 1. Table 1 provides a summary of the well construction details. Table 2 presents the groundwater sampling network and frequency of sampling.

The 22 monitoring wells that will be sampled are grouped based on their location and intended function. Monitoring well designations include the following:

- Background well;
- Point of compliance (POC) monitoring wells;
- Corrective action effectiveness monitoring wells within the area of groundwater impact (effectiveness monitoring wells); and
- Corrective action monitoring wells downgradient of the area of groundwater impact (boundary control wells).

<u>Background Well</u>

Well WC-13 is the designated background monitoring well for the Wiggins facility. It is located north, hydraulically upgradient of the Closed Contact Cooling Pond.

POC Wells

Monitoring wells WC-22, WC-25, WC-28, WC-29, WC-30, WC-31, WC-33, WC-34, and WC-35 are designated as POC monitoring wells. Monitoring wells WC-33, WC-34 and WC-35 are located south and downgradient of the Closed Contact Cooling Water Pond. Monitoring wells WC-22, WC-25, WC-28, WC-29, WC-30, and WC-31 are located hydraulically downgradient of the Closed Ponds and Sludge Pits Area. Data from these monitoring wells will be used to monitor for new or continued releases from the closed units as well as monitor the effectiveness of the CAP in reducing groundwater impacts.

Effectiveness Monitoring Wells

Monitoring well WC-33 (Closed Contact Cooling Water Pond), and wells WC-5, WC-14, WC-23, WC-24, and WC-40 (Closed Ponds and Sludge Pits Area), are designated as effectiveness monitoring wells. Monitoring well WC-33 replaced WC-19 as an effectiveness monitoring well and is also designated as a POC well.

Monitoring well WC-33 is located south of the Closed Cooling Water Pond area, and monitoring wells WC-5, WC-14, WC-23, WC-24, and WC-40, are located south and east of Closed Ponds and Sludge Pits area. These wells will be used to monitor concentration changes within the groundwater plume and the effectiveness of the groundwater CAP in reducing groundwater impacts.

Boundary Control Monitoring Wells

Monitoring wells WC-26 (Closed Contact Cooling Water Pond) and WC-8, WC-11, WC-39, WC-41, and WC-44 (Closed Pits and Ponds Area) are designated as boundary control monitoring wells. These wells are located downgradient of the currently identified area of impacted groundwater and will be used to monitor the location and extent of the groundwater plume under the Monitored Natural Attenuation remedy..

Pascagoula Well

Well WP-3 is the designated Pascagoula Formation monitoring well. This well is located downgradient of the closed units.

2.2 Sampling Parameters

Groundwater monitoring will be conducted for GWPS and Appendix IX parameters at the frequency shown on Table 2 and described in the following sections. Select MNA parameters will also be analyzed periodically at IP's discretion. Concentration limits for the GWPS are presented in Section V.D. of the Permit. Table 3 provides a list of the monitoring parameters and associated sampling methods, containers, preservatives and holding times.

2.2.1 GWPS and Appendix IX Monitoring

The boundary control wells will be sampled on a semi-annual basis while the upgradient, POC and effectiveness monitoring wells will be sampled annually. The Pascagoula Formation monitoring well will be sampled biennially. The samples will be analyzed for only those GWPS constituents denoted by an asterisk in the following table. In years 4 and 9 of the permit, the samples will be analyzed for all of the listed GWPS constituents.

Constituent	GWPS Concentration Limits (µg/L)	Basis
2,3,4,6-Tetrachlorophenol	1,100	ACL
2,4,6-Trichlorophenol	3.6	ACL
2,4-Dichlorophenol	110	ACL
2,4-Dimethylphenol	730	ACL
2-Methylnaphthalene	122	MDL
2-Methylphenol (o Cresol)	1,800	ACL
3 Methylphenol (m Cresol)*	1,800	ACL
4-Methylphenol (p Cresol)*	180	ACL
Acenaphthene	370	ACL
Acenaphthylene	2,190	MDL
Anthracene	1,800	ACL
Benzo(b)fluoranthene	0.092	ACL
Benzo(k)fluoranthene	0.92	ACL
Carbazole	3.4	ACL
Chrysene	9.2	ACL
Dibenzofuran	12	ACL
Fluoranthene	1,500	ACL
Fluorene*	240	ACL
Naphthalene*	6.2	ACL
Pentachlorophenol*	1.0	MCL
Phenanthrene*	1,100	MDL
Phenol	11,000	ACL

Constituent	GWPS Concentration Limits (µg/L)	Basis
Pyrene	180	ACL
Ethylbenzene	700	MCL
Xylene	10,000	MCL

NOTE: MCL = Maximum Contaminant Level
ACL = Alternate Concentration Limits

In addition, in accordance with the permit, one POC well will be monitored annually for all constituents contained in MHWMR 261, Appendix IX, to determine if additional hazardous constituents are present in shallow groundwater. Table 4 provides the full Appendix IX constituent list.

The POC well to be sampled for the Appendix IX analysis will be rotated on an annual basis. If the presence of one or more Appendix IX constituents is confirmed, then that constituent(s) will be added to the GWPS listed in the permit.

2.2.2 MNA Monitoring

MNA monitoring will be conducted periodically at the discretion of IP. Field and laboratory MNA and geochemical parameter samples will be collected from select wells chosen for the GWPS events as shown on Table 2. MNA parameters may include dissolved oxygen, nitrate, ferrous iron, sulfate, alkalinity, oxygen-reduction potential (ORP), dissolved gases, pH, temperature, conductivity and/or chloride, at IP's discretion.

3.0 SAMPLING AND ANALYSIS PLAN

Sampling and analysis of groundwater samples from the groundwater monitoring wells will be conducted in accordance with the methods described in this plan. Field activities will consist of collecting groundwater samples from select onsite groundwater monitoring wells. Sampling will be conducted in accordance with the most recent versions of applicable US EPA Region 4 Science and Ecosystem Support Division (SESD) Field Branches Quality System and Technical Procedures guidance documents.

The field forms provided in Appendix A will be used to document field sample results and data collection activities. Table 3 describes the sample containers, preservation methods and holding times required for each laboratory analytical method.

3.1 Equipment Assembly and Preparation

Prior to each sampling event, all equipment to be used will be assembled and its operating condition verified, calibrated (if required), and properly cleaned (if required). In addition, forms for recording sampling data will be prepared.

3.1.1 Equipment Assembly

The procedures for assembly of the equipment needed for sampling are:

- Identify equipment required;
- Obtain equipment available at facility; and
- Obtain equipment and supplies to be rented or purchased from commercial sources.

3.1.2 Equipment Inspection

This activity includes the verification that all equipment is in proper operating condition. Arrangements for repair or replacement of any equipment which is inoperative will be made at this time.

3.1.3 Equipment Calibration

Where appropriate, equipment will be calibrated according to the manufacturer's specifications on a daily basis. This applies to the instruments for on-site measurements of pH, specific conductance, ORP, dissolved oxygen, temperature, and turbidity which will be calibrated to standard solutions, or as prescribed by the manufacturer. Instruments that fail to calibrate or that do not hold the calibrated values will be repaired or replaced prior to the start of sampling.

3.1.4 Equipment Cleaning

All parts of the sampling and test equipment that come in contact with the water to be sampled will be thoroughly cleaned before sampling. This includes water level tapes or probes, pumps, tubing, re-useable bailers, test equipment for on-site use, and other equipment or portions thereof which are to be immersed in groundwater to be sampled. The procedure for equipment cleaning is detailed in EPA Operating Procedure SESDPROC-205, Field Equipment Cleaning and Decontamination. The general procedure is as follows:

- Clean with tap water and phosphate-free laboratory detergent, brush if necessary;
- Rinse thoroughly with tap water; and,
- Rinse thoroughly with organic-free water and allow to air dry.

Equipment used in sampling should be chemically compatible with the constituents present at the site. Sampling equipment materials that are compatible with cresols include fluoropolymer materials (FEP, PTFE, PVDF), silicon and Kel-F (D. R. McCaulou, D. G. Jewett, and S. G. Huling, 1995, *Nonaqueous Phase Liquids Compatibility with Materials Used in Well Construction, Sampling, and Remediation,* U.S. EPA Office of Solid Waste and Emergency Response, EPA/540/S-95/503). Other materials that may be used include HDPE, stainless steel, carbon steel, and aluminum.

Any necessary deviation from these procedures will be documented on the Groundwater Sampling Record (Appendix A) or similar form. Sample containers will be obtained pre-cleaned from the analytical laboratory.

3.2 Groundwater Sampling

This section describes the procedures for collecting groundwater samples from the facility's monitoring wells. The procedures include water level measurement, total well depth measurement, inspection of well water [including nonaqueous phase liquid (NAPL) in wells showing the presence of constituents in previous sampling events], well purging, purge water disposal, sample collection, quality control sampling, sample preservation, on-site parameter measurement, container labeling, sample shipment, and sample recordkeeping. Each well also will be inspected for mechanical integrity during the sampling event including condition of the locking cover and of the inner and outer casings. The results of these activities will be documented on the Groundwater Sampling Report Form and provided in the Annual Groundwater Monitoring Report. The well inspection will be completed on the Well Inspection Report Form provided in Appendix A.

Special care will be exercised to prevent contamination of the groundwater and extracted samples during the sampling activities. Two primary ways in which such contamination can occur are:

- Contamination of a sample through contact with improperly cleaned equipment; and,
- Contamination of a sample through contact with potentially contaminated surfaces (e.g., sampler's hands) or media.

To prevent such contamination, sampling equipment will be thoroughly cleaned before and after field use and between uses at different sampling locations. In addition to the use of properly cleaned equipment, the following precautions will be followed:

- Samples will be poured or pumped directly into the sample containers;
- A clean pair of new, disposable nitrile (or similar) gloves will be worn each time a different well is sampled and as needed during sampling of each well;

- Sample collection activities will progress from the least affected area to the most affected area; and,
- Wells described as up-gradient, background or otherwise unaffected wells will be sampled first.

The following paragraphs present procedures for groundwater sample acquisition. These activities will be performed in the same order as presented below. Exceptions to this procedure will be noted in the permanent sampling record.

3.2.1 Water Level Measurement

Water level measurements will be collected according to EPA Operating Procedure SESDPROC-105, Groundwater Level and Well Depth Measurement. Special care should be taken to allow the water level to equilibrate after removing sealing caps and the same measuring device should be used for all measurements, if possible. Using an electronic water level indicator, the sampling team will measure and record the depth to groundwater below the datum to the nearest 0.01-foot. The datum, usually the top of the well casing (inside and below the protective steel cover), will be described in monitoring well records. A permanent mark or scribe has been placed to be visible on inspection of the well casing to indicate the datum. The water level measurements will be summarized on the Water Level Data Sheet included in Appendix A.

3.2.2 Total Well Depth Measurement

On an annual basis, once the water level has been measured and recorded, the depth to the bottom of the monitoring well will be measured and recorded on the Water Level Data Sheet (Appendix A) or similar form to the nearest 0.01-foot from the top of the well casing. If there is any indication of the presence of NAPL on the water level indicator, the well will be inspected for the presence of NAPL in accordance with the procedures described in Section 3.2.3 prior to collecting the total well depth measurement.

3.2.3 Observations for Evidence of Product

Separate-phase product has not been observed in the monitoring wells at the site since at least 2008; however, observations will continue to be made for evidence of the potential presence of

NAPL. Such evidence would be a strong odor consistent with creosote or naphthalene or discoloration of the well casing. If such evidence is observed, an interface probe and/or a bailer may be used to determine if NAPL exists in the well. The presence NAPL, if observed will be recorded on the Groundwater Sampling Field Form included in Appendix A. The thickness of the NAPL layer, if present, will be measured with an oil/water interface probe or weighted cotton string and recorded on the Groundwater Sampling Field Form. Wells that contain NAPL will not be sampled.

3.2.4 Well Purging

Groundwater purging and sampling will be conducted according to EPA Operating Procedure SESDPROC-301. The primary method used at the site will be the low-flow method; however, alternate sampling methods may be used if recharge is slow or there is insufficient water, or if other methods (e.g. minimum purge or no-purge sampling) are demonstrated to provide representative results. A summary of the primary purging methods is provided in the following sections.

Low-Flow Purging Method

The sampling team may purge and sample the wells using the low-flow method. Purging and sampling by this method will be conducted using a stainless steel bladder pump or a peristaltic pump with dedicated low-density polyethylene or Teflon discharge tubing. Purging and sampling will follow the guidelines for low-flow sampling as described in the US-EPA report EPA/S-95/504, from the Office of Research and Development titled *"Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures*" by Robert W. Puls and Michael J. Barcelona, April 1996.

With the "low-flow" purging technique, the pump intake or tubing will be placed in the middle or slightly above the middle of the screened interval. The objective is to pump in a manner that minimizes the drawdown in the well. Typical flow rates are on the order of 0.1 – 0.5 L/min but can be higher depending on the groundwater recharge rate. Flow from the purge water will be directed into a water quality flow-through cell. Field parameter measurements for pH, specific

conductance, dissolved oxygen, ORP, temperature and turbidity will be collected during the purging. Readings will be noted on field sheets following each liter of purge water removed. Purging will be considered complete when the water quality parameters have stabilized (+ or – 10% between consecutive measurements). Turbidity is typically the last parameter to stabilize. An effort will be made to purge groundwater until turbidity readings are below 10 nephelometric turbidity units (NTUs) with the understanding that some groundwater may naturally exceed 10 NTUs and therefore this may be an overly stringent stabilization criterion.

Multiple-Volume Purge Method

The multiple-volume purge method may be used if there is insufficient recharge or water column to use a bladder pump and the depth of the water exceeds the limits of a peristaltic pump. This method will involve removal of standing water within the well casing prior to well sampling. The volume of water contained within the well casing at the time of sampling will be calculated from the height of the water column in the well. Each well volume is calculated as follows:

$$V = 0.041\ d^2\ h$$

Where:
h = length of water column in feet
d = diameter of well in inches
V = one well volume in gallons

Three to five times the calculated well water volume will be removed from the well. The gallons of water removed will be recorded in the sampling record and reported in the annual monitoring report. Either a bailer or a pump can be used for well evacuation. If a pump is used to evacuate the well, the pumping rate will be determined by timing the inflow to a container of known volume. The well will be pumped long enough at the measured rate to remove the required volume of water.

Wells Purged to Dryness

In the event that a well is evacuated to a dry state, groundwater samples for laboratory analysis will be collected as soon as sufficient groundwater accumulates in the well, regardless of field

parameters or total volume purged. Samples will be collected within 24 hours of well evacuation.

3.2.5 Management of Investigation-Derived Wastes

Purge water will be collected at each well location and containerized in 55-gallon drums. The drums will be stored in an on-site accumulation/storage area and will be disposed of appropriately. Purge water will be managed according to the guidelines outlined in the EPA Region 4 guidance document titled "Management of Contaminated Media", dated September 7, 1999. Nonhazardous solid wastes generated during the investigation will be placed in plastic garbage bags, double-bagged, and disposed of in the municipal landfill.

3.2.6 Sample Collection

Samples will be collected using the same equipment used for purging. If a pump is used, the immersed portion of the pump or suction line will be inserted gently into the water and the sample directed into the appropriate container(s). The discharge line will be placed within the container to prevent significant aeration of the sample. New or dedicated tubing will be used for sampling of each well.

When a bailer is used, it will be lowered into and removed from the water gently to prevent splashing. The sample will then be poured directly into the appropriate container(s). While pouring water from a bailer, the water will be carefully poured down the inside of the sample bottle to prevent significant aeration of the sample. If a bottom discharge bailer is used then the discharge will be placed within the container to prevent significant aeration of the sample container. The bailers will be dedicated to each well for sampling.

The sampled groundwater will be poured first into 40-mL glass vials with Teflon-lined lids for the analysis of volatile organic compounds (VOCs), as required. The vials will be filled and capped so that no headspace or gas bubbles are present. If a pump is used to collect the groundwater samples for analysis of VOCs, the flow rate will be maintained at less than 100 milliliters per minute during sample collection. The sampled groundwater will then be poured into 1-liter amber glass bottles for the analysis of polynuclear aromatic hydrocarbons (PAHs),

pentachlorophenol (PCP), cresols, and chlorophenols. Following the GWPS constituents, samples may be collected for MNA parameters, at IP's discretion.

3.2.7 Quality Control Samples

Quality Assurance/Quality Control (QA/QC) sampling will be conducted during each sampling event in accordance with the latest edition of Test Methods for Evaluating Solid Waste (U.S. EPA SW-846). The following table indicates the frequency of the QC samples to be collected for the GWPS analyses:

Field Duplicate	Equipment Blank (Rinsate)	Trip Blank	Matrix Spike	Matrix Spike Duplicate
1 per 20 samples collected	1 per non-dedicated equipment	1 per VOC sampling event or 1 per VOC shipment to lab	1 per 20 samples collected	1 per 20 samples collected

Groundwater samples will include one split (duplicate) sample for each 20 samples collected per sampling event. The duplicate sample will be collected at the same time as the primary sample and split into separate containers.

For non-dedicated sampling equipment, one equipment blank (rinsate) will be prepared from each pump or other down well equipment per sampling event. The sample will be prepared by pouring distilled water over the field-cleaned sampling equipment at the location of one of the monitoring wells. The rinsate will then be used to fill the sample containers. [Note: equipment blanks should be numbered and identified on field notes if multiple equipment blanks are collected].

Each sample shipment for VOC analyses will include a trip blank sample sent from the laboratory to the facility to be shipped with the groundwater samples to the laboratory for analysis. The trip blank will not be opened in the field.

The sampling team will also collect additional groundwater from a sampled well and designate it as the matrix spike (MS) and matrix-spike duplicate (MSD) samples. These samples will be spiked by the analytical laboratory to evaluate analytical accuracy.

Only GWPS constituents will be collected for field QC samples. QC samples are not required for MNA constituents. Please see Table 3 for the list of GWPS and MNA constituents. Laboratory batch QA/QC will be as specified in the analytical method.

3.2.8 Sample Containers, Preservation and Holding Times

Sample containers, preservation and holding times for the laboratory analyses are listed in Table 3 for the GWPS, Appendix IX and MNA monitoring parameters.

3.2.9 Field Parameter Measurement

The following parameters will be measured on-site during each sampling event to characterize the sampled well water:

- Temperature;
- pH;
- Specific conductance;
- Turbidity;
- Dissolved oxygen; and
- Oxidation-reduction potential (ORP or Eh).

These parameters will be measured with the appropriate calibrated meter in unfiltered, unpreserved well water. The measurements will be performed using a flow-through cell and will be recorded after the values have stabilized. The measured values will be recorded on the Groundwater Sampling Field Form (Appendix A) and reported in the annual monitoring reports.

3.2.10 Container Labeling

A label will be firmly attached to each container. The following information will be legibly and indelibly written on the label:

- Facility name or identifier;
- Monitoring well number;
- Sampling date;
- Sampling time;
- Preservatives added (if any); and
- Sample collector's initials.

3.2.11 Sample Shipment

The following packaging and labeling requirements for the sample materials will be followed for shipping:

- Pack sample so as to reduce the possibility of leakage, spills, or vaporization ;
- Seal ice in gallon-size ziploc bags; and
- Place chain-of-custody form inside package including the following:
  - sample collector's name, address, and telephone number
  - laboratory's name, address, and telephone number
  - description of sample
  - quantity of sample
  - date of shipment.

To comply with packaging regulations and to take measures to prevent damage to expensive groundwater samples, additional packaging and shipping instructions supplied by the analytical laboratory will be followed.

3.2.12 Sample Recordkeeping

To provide complete documentation of the sampling event, the sampler will complete detailed sampling records for each monitoring well sampled. These records will include the information listed below:

- Sample location (facility name and well number);
- Date and time of sampling;
- Depth to water;
- Depth of well (at least once annually);
- Sampling method;
- Well evacuation method and water volume evacuated;

- Field observations and measurements of:
  - sample appearance (color, presence of oil film, presence of NAPL, and other observations)
  - Temperature
  - pH
  - conductivity (specific conductance)
  - turbidity
  - dissolved oxygen
  - oxidation-reduction potential
- Sample preservation;
- Significant weather conditions;
- Sampler's identity; and
- Any other information which is significant.

A copy of the Groundwater Sampling Field Form, which may be used for this purpose is included in Appendix A. This form may be modified during subsequent sampling events to incorporate additional information.

3.3 Analytical Procedures

The samples from the wells will be analyzed to determine the presence and concentrations of the GWPS constituents. The GWPS analyses will be conducted according to EPA test methods using the latest edition of the U.S. Environmental Protection Agency, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, U.S. Environmental Protection Agency SW-846. VOCs will be analyzed by Method 8260B while the SVOCs will be analyzed using Method 8270C. The SVOCs benzo(b)fluoranthene and benzo(k)fluoranthene will be analyzed using Method 8270C SIM or equivalent to achieve the required lower detection limits.

Groundwater samples collected from wells designated for Appendix IX sampling will be analyzed for the constituents listed in Table 4. Table 4 also presents the analytical methods and associated practical quantitation limits (PQLs) for these constituents. The SVOCs benzo(a)pyrene, benzo(b)fluoranthene and benzo(k)fluoranthene will be analyzed using Method 8270C SIM or equivalent to achieve the required lower detection limits. The required analyses will be listed on the chain-of-custody form.

Groundwater samples may be collected for periodic MNA evaluation. The analytes and laboratory methods will be determined prior to sample collection.

Groundwater samples that contain a proportion of NAPL such that they cannot be adequately extracted for analysis by the laboratory will be properly disposed of by the laboratory and this will be noted on the chain of custody form and the cover letter for the transmittal of the analytical data.

3.4 Chain of Custody Control

After samples have been obtained, chain-of-custody procedures will be followed to establish a written record concerning sample collection, handling and transport to the laboratory facilities, and acceptance by authorized laboratory personnel. Each sample container will be labeled with the date and time of sample collection, well number, preservative, and analysis. Each shipping package will have a chain-of-custody form completed by the site sampling personnel packing the samples. The chain-of-custody form for each package will be completed in duplicate. The duplicate of this form will be maintained at the site and the original copy will accompany the sample shipment to the laboratory. A copy of this form will be retained in the laboratory archives and the original form will be sent with the laboratory data package and will become a part of the permanent record for the samples.

An example chain-of-custody form that will be used in the groundwater monitoring programs is included in Appendix A. The form will list, at a minimum, the following information:

- Facility Identification: Name of the facility;
- Laboratory Identification: Name and address of the laboratory;
- Sample Collection Information: Well number, date and time of collection, number of sample containers, and preservatives, if any;
- Analyses Requested: Analytical test parameters which are required for each individual sample; and
- Transfer Information: Signatures to document the handling of samples by all persons involved, from sampling personnel to the laboratory representative.

Additional information may be added to the chain-of-custody form as necessary.

3.5 Laboratory Quality Assurance and Quality Control

3.5.1 QA/QC Program Components

The laboratory performing the analyses will have a QA/QC program, which specifies procedures and references to be used. The QA/QC program will be in accordance with the requirements of SW-846. At a minimum, the program will contain:

- Specification of adherence to accepted test methods;
- Laboratory instrument calibration procedures and schedules;
- Equipment inspection and servicing schedules;
- The regular use of duplicate or split sample analyses;
- The regular use of matrix spike and matrix spike duplicate sample analyses;
- QA objectives for measurement of data in terms of precision, accuracy, representativeness, completeness, and comparability;
- Operator or analyst training procedures and schedules;
- A program of continuous review of results, procedures, and compliance with the QA/QC program;
- Sample custody procedures; and
- Documentation of compliance with the program.

The QA/QC program documentation will be maintained at the laboratory but will be available for review by International Paper and the regulatory agency.

3.5.2 Chemical Laboratory Sample Custody Procedures

A sample custodian in the chemical analysis laboratory will be assigned to receive the samples. Upon receipt of a sample, the custodian will inspect the condition of the sample and the sample seal, reconcile the information on the sample label against that on the chain-of-custody record, assign a laboratory number and mark this number on the sample, log in the sample in the laboratory log book, and store the sample in a secured, refrigerated sample storage room or

cabinet until assigned to an analyst for analysis. Any discrepancies between the information on the sample label and the chain-of-custody record will be transmitted to the sample collecting personnel before the sample is assigned for analysis.

The laboratory portion of the chain-of-custody record will be completed by the laboratory personnel and include:

- Name of person receiving the sample;
- Laboratory sample number;
- Date of sample receipt;
- Analyses to be performed; and
- Sample allocation.

Any groundwater samples that are discarded by the laboratory because of the presence of NAPL will be noted on the chain-of-custody record and on the cover letter accompanying the transmittal of the data package.

3.5.3 Reporting and Evaluation of Laboratory Analysis Results

Copies of original laboratory analysis reports will be included in the annual monitoring reports. In addition to data for well samples, the data for all QA/QC blanks (trip blanks and equipment blanks), duplicates, method blanks, and matrix spike recoveries will be included in the monitoring reports. The laboratory analysis reports will be accompanied by a cover letter describing any problems or significant issues concerning the groundwater samples.

The data will be evaluated with respect to conformance to the analytical method for the following as applicable:

- Holding times;
- Blanks;
- Surrogate spikes;
- Matrix spike and matrix spike duplicates;
- Laboratory control samples; and
- Duplicate samples.

An overall assessment will be conducted to evaluate whether the data quality is sufficient for the intended use.

Tables

Table 1. Monitoring Well Completion Data

Well	Coordinates		Well Installation		Elevation[1]		Screen Top		Screen Bottom		Screen Length
Number	East	North	By	Date	Ground	TOC[2]	Depth	Elevation	Depth	Elevation	(feet)
MONITORING WELLS											
WC-05	51798.58	9782.7	HET[3]	Sep-81	204.71	204.73	15	187.9	25	177.9	10
WC-06	N/A	N/A	LAW[4]	May-83	225.31	226.63	28.1	197.21	47.3	178.01	19.2
WC-08	51919.91	9570.82	LAW	May-83	223.52	224.86	28.2	195.5	47	176.7	18.8
WC-08A	N/A	N/A	JLGA[5]	Aug-84	223.24	224.43	89	134.24	109	114.24	20
WC-09P	52021	9754	JLGA	Dec-85	206.1	208.13	83	123.1	93	113.1	10
WC-10	N/A	N/A	LAW	May-83	202.04	204	6.2	195.84	25.4	176.64	19.2
WC-11	51894.09	9820.14	LAW	May-83	201.18	202.58	6.2	195	25	176.2	18.8
WC-13	50577.54	9593.83	LAW	Apr-83	239.39	241.17	41	198.5	60.2	179.3	19.2
WC-14	51690.28	9316.19	LAW	Aug-83	236.04	238.04	40.9	195.2	60.3	175.8	19.4
WC-16	N/A	N/A	JLGA	Aug-84	232.93	234.4	45	187.93	65	167.93	20
WC-17	N/A	N/A	JLGA	Jul-84	238.99	239.68	39	199.99	59	179.99	20
WC-18	N/A	N/A	JLGA	Jul-84	243.5	245.24	46	197.5	56	187.5	10
WC-19	50715.63	9290.66	JLGA	Jul-84	244.51	247.27	55	189.5	65	179.5	10
WC-20	N/A	N/A	JLGA	Jul-84	238.96	240.19	39	199.96	59	179.96	20
WC-22	51236.24	9373.88	JLGA	Dec-85	243.13	244.68	48.9	194.4	63.9	179.4	15
WC-23	51247.08	9181.39	JLGA	Dec-85	246.33	248.1	48.7	197.7	63.7	182.7	15
WC-24	51349.14	9025.66	JLGA	Dec-85	247.08	249.64	50	197	65	182	15
WC-25	51584.65	9031.57	JLGA	Dec-85	242.85	245.75	49.7	193.1	64.7	178.1	15
WC-26	50741	9019	JLGA	Dec-85	245.9	247.8	48.9	197	63.9	182	15
WC-28	51884.38	9018.1	JLGA	Jun-87	236.23	238.22	50.9	185.6	70.9	165.6	20
WC-29	51811.17	9105.67	JLGA	Jun-87	240.95	241.59	46.3	192.7	66.3	172.7	20
WC-30	51759.47	9172.77	JLGA	Jun-87	242.02	243.27	42.8	198.1	62.8	178.1	20
WC-31	51445.5	9403.94	JLGA	Jun-87	236.08	237.7	35.7	200.7	55.8	180.6	20.1
WC-33	50712.96	9342.4	JLGA	Jun-87	244.6	247.03	41.1	203.4	61.1	183.4	20
WC-34	50599	9349.59	JLGA	Jun-87	242.7	243.83	49.6	191.7	69.6	171.7	20
WC-35	50542.87	9435.24	JLGA	Jun-87	241.44	242.69	50.2	189	70.2	169	20
WC-36	50746	9924	JLGA	Jun-87	232.5	234.38	40	194.38	60	174.38	20
WC-39	51803.03	8720.38	WCC[6]	Sep-91	239.94	242.1	95	144.52	105	134.52	10
WC-40	51277.55	8698.61	WCC	Sep-91	248.42	250.71	95	153.42	105	143.42	10
WC-41	51593.77	8100.28	WCC	Feb-93	248.92	251.43	122.5	126.56	132.5	116.56	10
WC-42	51939.85	7489.57	WCC	Feb-93	249.04	252.21	117	132.36	127	122.36	10
WC-43	51595.42	9320.68	WCC	Feb-93	235.81	238.33	106	129.23	116	119.23	10
WC-44	50976.95	8081.22	Premier	Jun-05	240.18	240.03	44	196.13	64	176.3	20
WC-45	51262.94	8722.78	Premier	Oct-06	248.48	248.15	98	150.48	108	141.48	10

Table 1. Monitoring Well Completion Data

Well	Coordinates		Well Installation		Elevation[1]		Screen Top		Screen Bottom		Screen Length
Number	East	North	By	Date	Ground	TOC[2]	Depth	Elevation	Depth	Elevation	(feet)
WC-46	51285.86	8679.64	Premier	Oct-06	248.30	247.93	65	183.3	75	173.3	10
WC-47	51289.65	8669.40	Premier	Oct-06	248.21	247.77	95	153.21	105	143.21	10
WC-48	51906.05	8265.80	Premier	Oct-06	241.32	240.79	55	186.32	65	176.32	10
PILOT STUDY WELLS											
WC-48i	486188.63	892433.67	EarthCon	Oct-11	214.84	217.84	15	202.84	50	187.84	15
WC-49s	486190.91	892428.82	EarthCon	Oct-11	214.41	217.71	15	202.71	30	187.71	15
WC-49i	486188.63	892433.67	EarthCon	Oct-11	214.84	217.84	35	182.84	50	167.84	15
WC-50i	486156.64	892458.70	EarthCon	Oct-11	218.4	221.41	10	211.41	50	171.41	10
WC-50s	486161.68	892454.71	EarthCon	Oct-11	217.6	221.10	20	201.1	35	186.1	15
WC-51i	486128.34	892490.22	EarthCon	Oct-11	220.79	223.64	45	178.64	55	168.64	10
WC-51s	486132.99	892485.81	EarthCon	Oct-11	219.17	222.97	25	197.97	40	182.97	15
WC-52i	486063.92	892338.52	EarthCon	Oct-11	221.41	224.76	55	169.76	65	159.76	10
WC-52s	486066.83	892332.92	EarthCon	Oct-11	221.43	224.93	30	194.93	40	184.93	10
WC-53i	4865051.28	892406.53	EarthCon	Oct-11	225.21	228.21	55	173.21	65	163.21	10
WC-53s	486057.38	892403.78	EarthCon	Oct-11	224.81	228.01	35	193.01	50	178.01	15
WC-54s	485908.37	892197.81	EarthCon	Oct-11	228.92	232.52	35	197.52	50	182.52	15
WC-55i	485902.31	892361.63	EarthCon	Oct-11	230.8	234.23	55	179.23	65	169.23	10
WC-55s	485908.45	892354.82	EarthCon	Oct-11	230.84	234.09	35	199.09	50	180.84	15
RECOVERY WELLS											
WCP-1	51852.92	9753.23	JLGA	Nov-88	205.47	208.35	15.5	189.7	40.5	164.7	25
WCP-2	51721.74	9566.54	JLGA	Nov-88	223.14	225.67	32.8	190	57.9	165	25.1
WCP-3	51602.79	9410.99	JLGA	Nov-88	229.59	231.85	45.7	183.3	70.7	158.3	25
WCP-4	51388.16	9340.05	JLGA	Nov-88	239.43	242.26	50	189.1	75	164.1	25
WCP-5	51786.76	9403.72	JLGA	Nov-88	230.57	233.36	35	195.3	60	170.3	25
WCP-6	51551.46	9267.35	JLGA	Nov-88	238.25	241.38	45.6	193.1	70.6	168.1	25
WCP-7	51748.16	9105.31	JLGA	Nov-88	240.65	244.21	52	188.7	77	163.7	25
WCP-8	51485.87	9091.15	JLGA	Nov-88	244.09	247.24	56.5	187.5	81.5	162.5	25
WCP-9	50669.18	9325.18	JLGA	Nov-88	243.32	245.62	57	186.4	82	161.4	25

Table 1. Monitoring Well Completion Data

Well	Coordinates		Well Installation		Elevation[1]		Screen Top		Screen Bottom		Screen Length
Number	East	North	By	Date	Ground	TOC[2]	Depth	Elevation	Depth	Elevation	(feet)
PASCAGOULA WELLS											
WP-1	N/A	N/A	LAW	May-83	205.79	207.52	135	N/A	144.4	N/A	9.4
WP-2	N/A	N/A	JLGA	Aug-84	238.6	239.39	169	N/A	189	N/A	20
WP-3	N/A	N/A	JLGA	Aug-84	239.54	242.59	159	N/A	169	N/A	10
WP-4P	52049	9683	JLGA	Dec-85	205.4	207.55	167	N/A	217	N/A	50

Notes:

[1] All depths and elevations are in feet, screen depth is measured below ground surface.

[2] **TOC** = Top of Casing

[3] **HET** = Harmon Engineering and Testing Company

[4] **LAW** = Law Engineering Testing Company

[5] **JLGA** = James L. Grant and Associates

[6] **WCC** = Woodward-Clyde Consultants

N/A Information not available.

Table 2. Groundwater Sampling Network
International Paper - Wiggins, Mississippi

Well Number	Purpose of Monitoring Well	Sampling Frequency	Parameters	Contamination Area
WC-22	POC	Annual	GWPS Appendix IX*	Closed Pits and Ponds Area
WC-25	POC	Annual	GWPS Appendix IX*	Closed Pits and Ponds Area
WC-28	POC	Annual	GWPS Appendix IX*	Closed Pits and Ponds Area
WC-29	POC	Annual	GWPS Appendix IX*	Closed Pits and Ponds Area
WC-30	POC	Annual	GWPS Appendix IX*	Closed Pits and Ponds Area
WC-31	POC	Annual	GWPS Appendix IX*	Closed Pits and Ponds Area
WC-34	POC	Annual	GWPS Appendix IX*	Closed Contact Cooling Water Pond
WC-35	POC	Annual	GWPS Appendix IX*	Closed Contact Cooling Water Pond
WC-13	Background	Annual	GWPS	Up-gradient/Background Well
WC-5	Effectiveness	Annual	GWPS	Closed Pits and Ponds Area
WC-14	Effectiveness	Annual	GWPS	Closed Pits and Ponds Area
WC-23	Effectiveness	Annual	GWPS	Closed Pits and Ponds Area
WC-24	Effectiveness	Annual	GWPS	Closed Pits and Ponds Area
WC-33	Effectiveness and POC	Annual	GWPS	Closed Contact Cooling Water Pond
WC-40	Effectiveness	Annual	GWPS	Closed Pits and Ponds Area
WC-8	Boundary Control	Semi-Annual	GWPS	Closed Pits and Ponds Area
WC-11	Boundary Control	Semi-Annual	GWPS	Closed Pits and Ponds Area
WC-26	Boundary Control	Semi-Annual	GWPS	Closed Contact Cooling Water Pond
WC-39	Boundary Control	Semi-Annual	GWPS	Closed Pits and Ponds Area
WC-41	Boundary Control	Semi-Annual	GWPS	Closed Pits and Ponds Area
WC-44	Boundary Control	Semi-Annual	GWPS	Closed Pits and Ponds Area
WP-3	Pascagoula	Biennially	GWPS	Downgradient

NOTES:
GWPS = Groundwater Protection Standard constituents listed with an asterisk (*) on Table E-2; all GWPS listed on Table E-2 during year 4 and year 9 of the permit
POC = Point of Compliance
*Appendix IX collected annually from only one of the designated wells on a rotating basis.
Samples for MNA parameters will be collected periodically from selected wells

Table 3. Sample Containers, Preservation and Holding Times
International Paper - Wiggins, Mississippi

Parameter	Sampling Requirement	Method	Container Type	Preservative	Holding Time
Groundwater Protection Standard (GWPS) Monitoring					
Volatile Organic Compounds (VOCs)*	GWPS	8260B	Glass, 3-40 ml vials with Teflon lined septum	HCL	7 days prior to analysis
Polynuclear Aromatic Hydrocarbon (PAHs), cresols, & chlorophenols	GWPS	8270C	2-1 L Amber Glass	none	7 days prior to analysis 40 days after extraction
Select PAHs*	GWPS	8270C SIM	2-1 L Amber Glass	none	7 days prior to analysis 40 days after extraction
Annual Appendix IX Monitoring					
Sulfide	Appendix IX	376.1	1-250ml plastic	NaOH and zinc acetate	7 days prior to analysis
Metals, Total	Appendix IX	6020	125ml plastic	HNO3	6 Months
Metals, Dissolved	Appendix IX	6020	125ml plastic	HNO3	6 months
Mercury, Total	Appendix IX	7470	125ml plastic	HNO3	28 days
Mercury, Dissolved	Appendix IX	7470	125ml plastic	HNO3	28 days
Cyanide	Appendix IX	9012A	250ml plastic	NaOH	14 days
Pesticides	Appendix IX	8081A	2-1 L Amber Glass	none	7 days prior to analysis 40 days after extraction
PCBs	Appendix IX	8082	2-1 L Amber Glass	none	7 days prior to analysis 40 days after extraction
Herbicides	Appendix IX	8141	2-1 L Amber Glass	none	7 days prior to analysis 40 days after extraction
VOCs	Appendix IX	8260B	Glass, 3-40 ml vials with Teflon lined septum	HCL	7 days prior to analysis
Semi-volatile Organic Compounds (SVOCs)	Appendix IX	8270C/8270C SIM	2-1 L Amber Glass	none	7 days prior to analysis 40 days after extraction
Dioxins	Appendix IX	8290	2-1 L Amber Glass	none	30 days prior to analysis 40 days after extraction
Monitored Natural Attenuation (MNA) Monitoring					
Alkalinity (as Calcium Carbonate)	MNA	310.1	250ml plastic	none	14 days
Chlorides	MNA	300	250ml plastic	none	28 days
Dissolved Gasses (Ethane, Ethene, Methane)	MNA	RSK 175	Glass, 3-40 ml vials with Teflon lined septum	HCL	14 days
Nitrate (as Nitrogen)	MNA	300	250ml plastic	none	48 hours
Sulfate	MNA	300	250ml plastic	none	28 days
Sulfide	MNA	376.1	1-250ml plastic	NaOH and zinc acetate	7 days prior to analysis
Total Organic Carbon (TOC)	MNA	415.1	1-125ml plastic	HCL	28 days

Note: All samples with the exceptions of metals and mercury will be cooled to 4°C
*Analyzed in Permit years 4 and 9 only

Table 4. Appendix IX
Analytical Methods and Associated PQLs
International Paper - Wiggins, Mississippi

Constiuent (units)	Practical Quantitation Limit	USEPA SW-846 Method
VOCs (ug/L)		
1,1,1,2-Tetrachloroethane	1	8260B
1,1,1-Trichloroethane (TCA)	1	8260B
1,1,2,2-Tetrachloroethane	1	8260B
1,1,2-Trichloroethane	1	8260B
1,1-Dichloroethane (1,1-DCA)	1	8260B
1,1-Dichloroethene (1,1-DCE)	1	8260B
1,2,3-Trichloropropane	1	8260B
1,2-Dibromo-3-chloropropane (DBCP)	2	8260B
1,2-Dibromoethane (EDB)	1	8260B
1,2-Dichlorobenzene	1	8260B
1,2-Dichloroethane (EDC)	1	8260B
1,2-Dichloropropane	1	8260B
1,3-Dichlorobenzene	1	8260B
1,4-Dichlorobenzene	1	8260B
1,4-Dioxane	100	8260B
2-Butanone (MEK)	10	8260B
2-Chloro-1,3-butadiene (Chloroprene)	1	8260B
2-Hexanone	25	8260B
2-Methyl-1-propanol (Isobutyl Alcohol)	50	8260B
3-Chloro-1-propene (Allyl Chloride)	5	8260B
4-Methyl-2-pentanone (MIBK)	25	8260B
Acetone	50	8260B
Acetonitrile	25	8260B
Acrolein	50	8260B
Acrylonitrile	10	8260B
Benzene	1	8260B
Bromodichloromethane	1	8260B
Bromoform	1	8260B
Bromomethane	1	8260B
Carbon Disulfide	10	8260B
Carbon Tetrachloride	1	8260B
Chlorobenzene	1	8260B
Chloroethane	1	8260B
Chloroform	1	8260B
Chloromethane	1	8260B
cis-1,3-Dichloropropene	1	8260B
Dibromochloromethane	1	8260B
Dibromomethane	1	8260B
Dichlorodifluoromethane (CFC 12)	5	8260B
Dichloromethane (Methylene Chloride)	5	8260B
Ethyl Methacrylate	1	8260B
Ethylbenzene	1	8260B
Iodomethane (Methyl Iodide)	5	8260B
m,p-Xylenes	2	8260B
Methacrylonitrile	2	8260B
Methyl Methacrylate	1	8260B
o-Xylene	1	8260B
Propionitrile	10	8260B
Styrene	1	8260B

Table 4. Appendix IX
Analytical Methods and Associated PQLs
International Paper - Wiggins, Mississippi

Constiuent (units)	Practical Quantitation Limit	USEPA SW-846 Method
Tetrachloroethene (PCE)	1	8260B
Toluene	1	8260B
trans-1,2-Dichloroethene	1	8260B
trans-1,3-Dichloropropene	1	8260B
trans-1,4-Dichloro-2-butene	20	8260B
Trichloroethene (TCE)	1	8260B
Trichlorofluoromethane (CFC 11)	1	8260B
Vinyl Acetate	10	8260B
Vinyl Chloride	1	8260B
SVOCs (ug/L)		
1,2,4,5-Tetrachlorobenzene	5	8270C
1,2,4-Trichlorobenzene	5	8270C
1,2-Dichlorobenzene	5	8270C
1,3,5-Trinitrobenzene	5	8270C
1,3-Dichlorobenzene	5	8270C
1,3-Dinitrobenzene	10	8270C
1,4-Dichlorobenzene	5	8270C
1,4-Naphthoquinone	10	8270C
1,4-Phenylenediamine	20	8270C
1-Naphthylamine	5	8270C
2,3,4,6-Tetrachlorophenol	5	8270C
2,4,5-Trichlorophenol	5	8270C
2,4,6-Trichlorophenol	5	8270C
2,4-Dichlorophenol	5	8270C
2,4-Dimethylphenol	5	8270C
2,4-Dinitrophenol	20	8270C
2,4-Dinitrotoluene	5	8270C
2,6-Dichlorophenol	10	8270C
2,6-Dinitrotoluene	5	8270C
2-Acetylaminofluorene	5	8270C
2-Chloronaphthalene	5	8270C
2-Chlorophenol	5	8270C
2-Methyl-5-nitroaniline (5-Nitro-o-toluidine)	5	8270C
2-Methylnaphthalene	5	8270C
2-Methylphenol	5	8270C
2-Naphthylamine	5	8270C
2-Nitroaniline	5	8270C
2-Nitrophenol	20	8270C
2-Picoline	5	8270C
3,3'-Dichlorobenzidine	20	8270C
3,3'-Dimethylbenzidine	20	8270C
3-Methylcholanthrene	5	8270C
3-Nitroaniline	5	8270C
4,6-Dinitro-2-methylphenol	20	8270C
4-Aminobiphenyl	5	8270C
4-Bromophenyl Phenyl Ether	5	8270C
4-Chloro-3-methylphenol	5	8270C
4-Chloroaniline	5	8270C
4-Chlorophenyl Phenyl Ether	5	8270C
4-Methylphenol	5	8270C

Table 4. Appendix IX
Analytical Methods and Associated PQLs
International Paper - Wiggins, Mississippi

Constiuent (units)	Practical Quantitation Limit	USEPA SW-846 Method
4-Nitroaniline	5	8270C
4-Nitrophenol	20	8270C
4-Nitroquinoline N-Oxide	5	8270C
7,12-Dimethylbenz(a)anthracene	5	8270C
a,a-Dimethylphenethylamine	20	8270C
Acenaphthene	5	8270C
Acenaphthylene	5	8270C
Acetophenone	10	8270C
Aniline	5	8270C
Anthracene	5	8270C
Aramite, Total	20	8270C
Benz(a)anthracene	5	8270C
Benzo(a)pyrene	0.1	8270C SIM
Benzo(b)fluoranthene	0.1	8270C SIM
Benzo(g,h,i)perylene	5	8270C
Benzo(k)fluoranthene	0.1	8270C SIM
Benzyl Alcohol	5	8270C
Bis(2-chloroethoxy)methane	5	8270C
Bis(2-chloroethyl) Ether	5	8270C
Bis(2-chloroisopropyl) Ether	5	8270C
Bis(2-ethylhexyl) Phthalate	5	8270C
Butyl Benzyl Phthalate	10	8270C
Chlorobenzilate	10	8270C
Chrysene	5	8270C
Diallate	5	8270C
Dibenz(a,h)anthracene	5	8270C
Dibenzofuran	5	8270C
Diethyl Phthalate	5	8270C
Dimethoate	5	8270C
Dimethyl Phthalate	5	8270C
Di-n-butyl Phthalate	5	8270C
Di-n-octyl Phthalate	5	8270C
Dinoseb	5	8270C
Disulfoton	5	8270C
Ethyl Methanesulfonate	5	8270C
Famphur	10	8270C
Fluoranthene	5	8270C
Fluorene	5	8270C
Hexachlorobenzene	5	8270C
Hexachlorobutadiene	5	8270C
Hexachlorocyclopentadiene	5	8270C
Hexachloroethane	5	8270C
Hexachlorophene	5	8270C
Hexachloropropene	5	8270C
Indeno(1,2,3-cd)pyrene	5	8270C
Isodrin	10	8270C
Isophorone	5	8270C
Isosafrole	5	8270C
Kepone	50	8270C
Methapyrilene	5	8270C

Table 4. Appendix IX
Analytical Methods and Associated PQLs
International Paper - Wiggins, Mississippi

Constiuent (units)	Practical Quantitation Limit	USEPA SW-846 Method
Methyl Methanesulfonate	5	8270C
Methyl Parathion	10	8270C
Naphthalene	5	8270C
Nitrobenzene	5	8270C
N-Nitrosodiethylamine	5	8270C
N-Nitrosodimethylamine	5	8270C
N-Nitrosodi-n-butylamine	5	8270C
N-Nitrosodi-n-propylamine	5	8270C
N-Nitrosodiphenylamine	5	8270C
N-Nitrosomethylethylamine	5	8270C
N-Nitrosomorpholine	5	8270C
N-Nitrosopiperidine	5	8270C
N-Nitrosopyrrolidine	5	8270C
O,O,O-Triethyl Phosphorothioate	20	8270C
o-Toluidine	5	8270C
Parathion	20	8270C
p-Dimethylaminoazobenzene	5	8270C
Pentachlorobenzene	5	8270C
Pentachloroethane	20	8270C
Pentachloronitrobenzene (PCNB)	5	8270C
Pentachlorophenol (PCP)	1	8270C
Phenacetin	5	8270C
Phenanthrene	5	8270C
Phenol	5	8270C
Phorate	5	8270C
Pronamide	20	8270C
Pyrene	5	8270C
Pyridine	20	8270C
Safrole	5	8270C
Sulfotep	10	8270C
Thionazin	10	8270C
Metals, Dissolved (mg/L)		
Antimony, Dissolved	0.002	6020
Arsenic, Dissolved	0.0005	6020
Barium, Dissolved	0.002	6020
Beryllium, Dissolved	0.001	6020
Cadmium, Dissolved	0.0005	6020
Chromium, Dissolved	0.002	6020
Cobalt, Dissolved	0.001	6020
Copper, Dissolved	0.002	6020
Lead, Dissolved	0.001	6020
Mercury, Dissolved	0.0005	7470
Nickel, Dissolved	0.002	6020
Silver, Dissolved	0.0005	6020
Selenium, Dissolved	0.002	6020
Thallium, Dissolved	0.001	6020
Tin, Dissolved	0.005	6020
Vanadium, Dissolved	0.002	6020
Zinc, Dissolved	0.01	6020
Metals, Total (mg/L)		

Table 4. Appendix IX
Analytical Methods and Associated PQLs
International Paper - Wiggins, Mississippi

Constiuent (units)	Practical Quantitation Limit	USEPA SW-846 Method
Cyanide, Total	0.01	9012A
Antimony, Total	0.002	6020
Arsenic, Total	0.0005	6020
Barium, Total	0.002	6020
Beryllium, Total	0.001	6020
Cadmium, Total	0.0005	6020
Chromium, Total	0.002	6020
Cobalt, Total	0.001	6020
Copper, Total	0.002	6020
Lead, Total	0.001	6020
Mercury, Total	0.0005	7470
Nickel, Total	0.002	6020
Selenium, Total	0.0005	6020
Silver, Total	0.002	6020
Thallium, Total	0.001	6020
Tin, Total	0.005	6020
Vanadium, Total	0.002	6020
Zinc, Total	0.01	6020
PCBs (ug/L)		
Aroclor 1016	0.5	8082
Aroclor 1221	0.5	8082
Aroclor 1232	0.5	8082
Aroclor 1242	0.5	8082
Aroclor 1248	0.5	8082
Aroclor 1254	0.5	8082
Aroclor 1260	0.5	8082
Pesticides (ug/L)		
4,4'-DDD	0.02	8081A
4,4'-DDE	0.02	8081A
4,4'-DDT	0.02	8081A
Aldrin	0.02	8081A
alpha-BHC	0.02	8081A
alpha-Chlordane	0.02	8081A
beta-BHC	0.02	8081A
delta-BHC	0.02	8081A
Dieldrin	0.02	8081A
Endosulfan I	0.02	8081A
Endosulfan II	0.02	8081A
Endosulfan Sulfate	0.02	8081A
Endrin	0.02	8081A
Endrin Aldehyde	0.02	8081A
Endrin Ketone	0.02	8081A
gamma-BHC (Lindane)	0.02	8081A
gamma-Chlordane	0.02	8081A
Heptachlor	0.02	8081A
Heptachlor Epoxide	0.02	8081A
Methoxychlor	0.04	8081A
Toxaphene	0.5	8081A
Herbicides (ug/L)		
Azinphos ethyl	0.2	8141

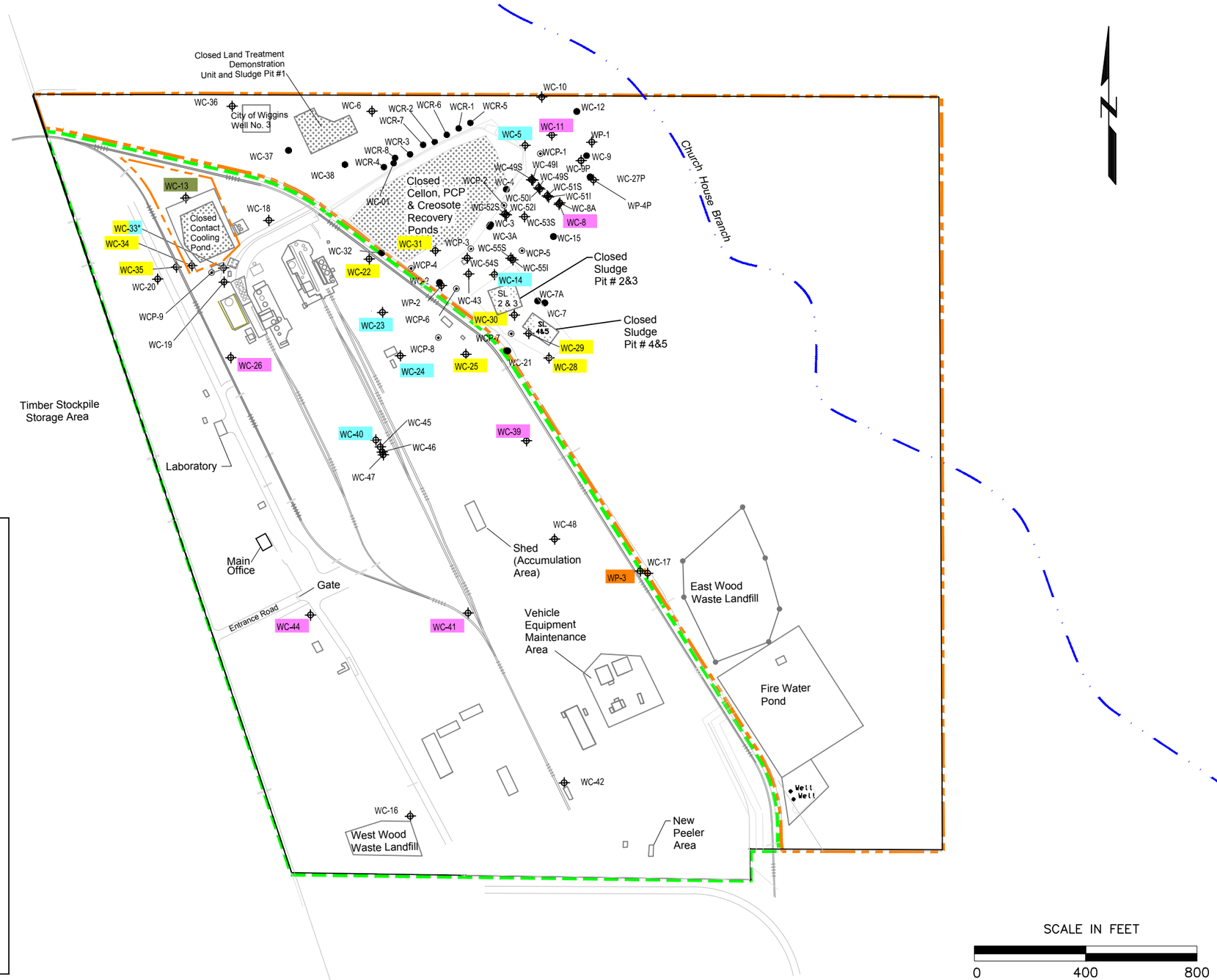
Table 4. Appendix IX
Analytical Methods and Associated PQLs
International Paper - Wiggins, Mississippi

Constiuent (units)	Practical Quantitation Limit	USEPA SW-846 Method
Azinphos methyl	0.2	8141
Bolstar	0.2	8141
Carbophenothion	0.2	8141
Chlorfenvinphos	0.2	8141
Chlorpyrifos	0.1	8141
Coumaphos	0.2	8141
Demeton-O	0.2	8141
Demeton-S	0.2	8141
Diazinon	0.1	8141
Dichlorvos	0.1	8141
Dimethoate	0.2	8141
Disulfoton	0.2	8141
EPN	0.2	8141
Ethion	0.2	8141
Ethoprop	0.3	8141
Famphur	0.3	8141
Fensulfothion	0.2	8141
Fenthion	0.1	8141
Leptophos	0.3	8141
Malathion	0.2	8141
Merphos	0.1	8141
Mevinphos	0.1	8141
Monocrotophos	0.1	8141
Parathion, Ethyl	0.2	8141
Parathion, Methyl	0.2	8141
Phorate	0.3	8141
Phosmet	0.3	8141
Phosphamidon	0.3	8141
Ronnel	0.3	8141
Stirophos	0.1	8141
Sulfotepp	0.1	8141
Terbufos	0.3	8141
Tokuthion	0.2	8141
Trichloronate	0.3	8141
2,4,5-T	0.3	8151
2,4,5-TP (Silvex)	0.3	8151
2,4-D	0.3	8151
2,4-DB	0.3	8151
Dalapon	0.3	8151
Dicamba	0.3	8151
Dichloroprop	0.3	8151
Dinoseb	0.3	8151
MCPA	15	8151
MCPP (Mecoprop)	15	8151
Pentachlorophenol	0.3	8151
Picloram	0.3	8151
Dioxins/Furans (pg/L)		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	10	8290
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	25	8290
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	25	8290

Table 4. Appendix IX
Analytical Methods and Associated PQLs
International Paper - Wiggins, Mississippi

Constiuent (units)	Practical Quantitation Limit	USEPA SW-846 Method
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	25	8290
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	25	8290
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	10	8290
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	25	8290
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	25	8290
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	25	8290
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	25	8290
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	25	8290
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	25	8290
Tetrachlorodibenzo-p-dioxins (TCDD), Total	10	8290
Pentachlorodibenzo-p-dioxin (PeCDD), Total	25	8290
Hexachlorodibenzo-p-dioxins (HxCDD), Total	25	8290
Tetrachlorodibenzofurans (TCDF), Total	10	8290
Pentachlorodibenzofurans (PeCDF), Total	25	8290
Hexachlorodibenzofurans (HxCDF), Total	25	8290

Figures



LEGEND

- Groundwater monitoring well
- Background Well
- POC Well
- Effectiveness Monitoring Well
- Boundary Control Well
- Pascagoula Monitoring Well
- Groundwater extraction well (no longer in use)
- Abandoned well
- Closed RCRA - regulated units
- Railroad tracks
- International Paper Boundary
- Baldwin Pole Boundary

INTERNATIONAL PAPER

FORMER TREATED WOOD PRODUCTS FACILITY
WIGGINS, MISSISSIPPI
PROJECT NO. 20000006.90

EARTHCON®

EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

GROUNDWATER WELL NETWORK

DRAWN:	CHECKED:	DATE:	FIGURE:
HVP	DCA	SEPT 2019	1

FILE NAME: S:\Premier\Projects\International Paper – SMP\Wiggins 2019 MDEQ Permit Renewal\Permit Application Files\Part B Permit\Part B Renewal 2008\Revised Figures\202008 FIG E-1 GR.dwg (11x17-HORZ) 10/09/19 11:39 – hpbarn

Appendix A
Field Forms

WATER LEVELS

International Paper - Wiggins Facility

DATE: _____

WELL NO.	DATE	TO WATER	TOTAL DEPTH
WC-5			
WC-6			
WC-8			
WC-8A			
WC-9P			
WC-10			
WC-11			
WC-13			
WC-14			
WC-16			
WC-17			
WC-18			
WC-19			
WC-20			
WC-22			
WC-23			
WC-24			
WC-25			
WC-26			
WC-28			
WC-29			
WC-30			
WC-31			
WC-33			
WC-34			
WC-35			
WC-36			
WC-39			
WC-40			
WC-41			
WC-42			

WELL NO.	DATE	TO WATER	TOTAL DEPTH
WC-43			
WC-44			
WC-45			
WC-46			
WC-47			
WC-49i			
WC-49s			
WC-50i			
WC-50s			
WC-51i			
WC-51s			
WC-52i			
WC-52s			
WC-53i			
WC-53s			
WC-54s			
WC-55i			
WC-55s			
WP-1			
WP-2			
WP-3			
WP-4P			
WCP-1			
WCP-2			
WCP-3			
WCP-4			
WCP-5			
WCP-6			
WCP-7			
WCP-8			
WCP-9			

INTERNATIONAL PAPER – WIGGINS, MS
WELL INSPECTION REPORT

Inspection Item	**WC-1**		**WC-5**		**WC-6**		**WC-8**		**WC-8A**		**WC-9P**		**WC-10**		**WC-11**		**WC-13**		**WC-14**	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Well Security																				
✓ Lock latched																				
✓ Lock lubricated																				
✓ Evidence of tampering																				
Surface Condition																				
✓ Pad condition good																				
✓ Ponded water near well																				
✓ Ground subsidence																				
✓ Photograph taken																				
Steel Outer Casing																				
✓ Casing condition good																				
✓ Well number legible																				
✓ Lid/latch condition good																				
✓ Drain hole open																				
PVC Inner Casing																				
✓ Casing good condition																				
✓ Cap in place																				
Well Repairs Made																				
Well Repairs Needed																				
Other Observations																				

Date_____

INTERNATIONAL PAPER – WIGGINS, MS
WELL INSPECTION REPORT

Inspection Item	**WC-16**		**WC-17**		**WC-18**		**WC-19**		**WC-20**		**WC-22**		**WC-23**		**WC-24**		**WC-25**		**WC-26**	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Well Security																				
✓ Lock latched																				
✓ Lock lubricated																				
✓ Evidence of tampering																				
Surface Condition																				
✓ Pad condition good																				
✓ Ponded water near well																				
✓ Ground subsidence																				
✓ Photograph taken																				
Steel Outer Casing																				
✓ Casing condition good																				
✓ Well number legible																				
✓ Lid/latch condition good																				
✓ Drain hole open																				
PVC Inner Casing																				
✓ Casing good condition																				
✓ Cap in place																				
Well Repairs Made																				
Well Repairs Needed																				
Other Observations																				

Date_____

INTERNATIONAL PAPER – WIGGINS, MS
WELL INSPECTION REPORT

Inspection Item	**WC-27P**		**WC-28**		**WC-29**		**WC-30**		**WC-31**		**WC-33**		**WC-34**		**WC-35**		**WC-36**		**WC-39**	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Well Security																				
✓ Lock latched																				
✓ Lock lubricated																				
✓ Evidence of tampering																				
Surface Condition																				
✓ Pad condition good																				
✓ Ponded water near well																				
✓ Ground subsidence																				
✓ Photograph taken																				
Steel Outer Casing																				
✓ Casing condition good																				
✓ Well number legible																				
✓ Lid/latch condition good																				
✓ Drain hole open																				
PVC Inner Casing																				
✓ Casing good condition																				
✓ Cap in place																				
Well Repairs Made																				
Well Repairs Needed																				
Other Observations																				

Date_____

INTERNATIONAL PAPER – WIGGINS, MS
WELL INSPECTION REPORT

Inspection Item	**WC-40**		**WC-41**		**WC-42**		**WC-43**		**WC-44**		**WC-45**		**WC-46**		**WC-47**		**WP-1**		**WP-2**	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Well Security																				
✓ Lock latched																				
✓ Lock lubricated																				
✓ Evidence of tampering																				
Surface Condition																				
✓ Pad condition good																				
✓ Ponded water near well																				
✓ Ground subsidence																				
✓ Photograph taken																				
Steel Outer Casing																				
✓ Casing condition good																				
✓ Well number legible																				
✓ Lid/latch condition good																				
✓ Drain hole open																				
PVC Inner Casing																				
✓ Casing good condition																				
✓ Cap in place																				
Well Repairs Made																				
Well Repairs Needed																				
Other Observations																				

Date_____

INTERNATIONAL PAPER – WIGGINS, MS
WELL INSPECTION REPORT

Inspection Item	**WP-3**		**WP-4P**		**WCP-1**		**WCP-2**		**WCP-3**		**WCP-4**		**WCP-5**		**WCP-6**		**WCP-7**		**WCP-8**	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Well Security																				
✓ Lock latched																				
✓ Lock lubricated																				
✓ Evidence of tampering																				
Surface Condition																				
✓ Pad condition good																				
✓ Ponded water near well																				
✓ Ground subsidence																				
✓ Photograph taken																				
Steel Outer Casing																				
✓ Casing condition good																				
✓ Well number legible																				
✓ Lid/latch condition good																				
✓ Drain hole open																				
PVC Inner Casing																				
✓ Casing good condition																				
✓ Cap in place																				
Well Repairs Made																				
Well Repairs Needed																				
Other Observations																				

Date_____

INTERNATIONAL PAPER – WIGGINS, MS
WELL INSPECTION REPORT

Inspection Item	**WCP-9**																			
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No										
Well Security																				
✓ Lock latched																				
✓ Lock lubricated																				
✓ Evidence of tampering																				
Surface Condition																				
✓ Pad condition good																				
✓ Ponded water near well																				
✓ Ground subsidence																				
✓ Photograph taken																				
Steel Outer Casing																				
✓ Casing condition good																				
✓ Well number legible																				
✓ Lid/latch condition good																				
✓ Drain hole open																				
PVC Inner Casing																				
✓ Casing good condition																				
✓ Cap in place																				
Well Repairs Made																				
Well Repairs Needed																				
Other Observations																				

Date_____

EARTHCON®

Environmental Challenges
BUSINESS SOLUTIONS®

International Paper **Groundwater Sampling Record**

WELL No.	PROJECT #	LOCATION	DATE
SAMPLE No.	PROJECT NAME	FIELD PERSONNEL/COMPANY	
SAMPLE TIME:	SITE	FIELD CONDITIONS/WEATHER	

Well Condition Inspection (circle one)

cover: locked not locked
number: legible not legible
outer casing: good fair poor
inner casing: good fair poor
well photographed: yes no

Equipment Cleaning Procedures

- potable water and phosphate-free soap
- potable water rinse
- water rinse: distilled deionized
- solvent rinse: acetone hexane
- air dry

Casing Diameter:
(circle one)
2" 4"
6" Other:____

Casing Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$
Casing Volume (gallons/ft) for: 2" = 0.163; 4" = 0.653; 6" = 1.47

Depth to Water (feet): _____
Depth of Well (feet): _____
Water Column (feet): _____
Casing Volume (gallons): _____
Calculated Purge Volume (gallons): _____
Actual Purge Volume (gallons): _____

Measuring Point Elevation (feet): _____
Groundwater Surface Elevation: _____
LNAPL present: _____ thickness: _____
DNAPL present: _____ thickness: _____
Remarks: _____

Well Evacuation
Water level recovery is: very slow slow moderate fast Bailed dry: yes no

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMP (°C)	pH	CONDUCTIVITY (µs/cm, 25°C)	DISSOLVED OXYGEN (mg/L)	Eh (mV)	TURBIDITY (NTU)	ODOR/COLOR/ REMARKS
	0							PURGE START

Measurement and Sampling Equipment

Type	Manufacturer	Model #	Calibration Date
pH/ORP/Cond/DO/Temp			
Turbidity			
SS Bladder Pump			

SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Pace Analytical®
www.pacelabs.com

Page:	of

Section A **Required** Client Information:	Section B **Required** Project Information:	Section C Invoice Information:
Company:	Report To:	Attention:
Address:	Copy To:	Company Name:
		Address:
Email To:	Purchase Order No.:	Pace Quote Reference:
Phone: / Fax:	Project Name:	Pace Project Manager:
Requested Due Date/TAT:	Project Number:	Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location
STATE: _____

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes
MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COLLECTED: COMPOSITE START TIME	COLLECTED: COMPOSITE END/GRAB DATE	COLLECTED: COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)												Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1																															
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:					
SIGNATURE of SAMPLER:	DATE Signed (MM/DD/YY):				

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Instructions for completing Chain of Custody (COC)

1. **Section A and B:** Complete all Client information at top of sheet: company name, address, phone, fax, contact (the person to contact if there are questions, and who will receive the final report.), e-mail address (if available), PO#, Project Name and/or Project Number as you would like to see it appear on the report.

2. **Section C:** Invoice Information: Billing information is included in this section. This information should include the name and address of the person receiving the invoice.

3. Quote Reference should be completed if a quotation was provided by Pace Analytical. The Project Manager, and Profile No. will be completed by Pace Analytical Services.

4. **Site Location:** A separate COC must be filled out for each day of sample collection. Record the two letter postal code for the US state in which the samples were collected.

5. **Regulatory Agency:** List the program that is guiding the work to ensure proper regulations are followed.

6. **Section D:** Complete a Sample Description in the "SAMPLE ID' section as you would like it to appear on the laboratory report. The following information should also be included: the sample matrix, sample type (G (grab) or C (composite). When collecting a composite, the start time and end time should be documented in the respective boxes. The collection time for a grab (G) sample should be entered in the boxes marked 'Composite End/Grab'), Sample temp at collection (if required by state), the total number of containers, and preservative used.

7. Mark if the sample was filtered in the field by marking Y or N in 'Filtered' row by the Analysis requested.

8. Requested Analysis: List the required analysis and methods on the lines provided and place a check in the column for the samples requiring the analysis. Additional comments should be referenced in the bottom left hand corner or include attachments for extended lists of parameters.

9. The sampler should print their name in the space provided and sign their name followed by the date of the sampling event at the bottom of the COC in the spaces designated for 'SAMPLER NAME AND SIGNATURE'.

10. When relinquishing custody of the samples to a representative of the laboratory or other organization, indicate the Item Numbers of those samples being transferred; sign relinquished by, date and time, and include your affiliation.

***Important Note:**

Standard Turnaround Time is 2 Weeks/10 business days. Results will be delivered by end of business on the date due unless other arrangements have been made with your project manager.

Special Project Requirements such as Low Level Detection Limits or level of QC reported must be included on the chain of custody in the Additional Comments section.

APPENDIX I-1

CLOSURE CERTIFICATION

CLOSURE CERTIFICATION
HAZARDOUS WASTE FACILITY

INTERNATIONAL PAPER
WIGGINS TREATED WOOD PRODUCTS PLANT
WIGGINS, MISSISSIPPI

PREPARED FOR:

INTERNATIONAL PAPER
WIGGINS TREATED WOOD PRODUCTS PLANT
WIGGINS, MISSISSIPPI

BATSON AND BROWN, INC.
CONSULTING ENGINEERS
WIGGINS, MISSISSIPPI

OCTOBER 31, 1990

CLOSURE CERTIFICATION
HAZARDOUS WASTE FACILITY

INTERNATIONAL PAPER
WIGGINS TREATED WOOD PRODUCTS PLANT
WIGGINS, MISSISSIPPI

Prepared for:

INTERNATIONAL PAPER
WIGGINS TREATED WOOD PRODUCTS PLANT
WIGGINS, MISSISSIPPI

BATSON & BROWN, INC.
Consulting Engineers
Wiggins, Mississippi

OCTOBER 31, 1990

BRAX H. BATSON
REGISTERED PROFESSIONAL
ENGINEER
AND
P.E. 3522
L.S. 1877
LAND SURVEYOR
STATE OF MISSISSIPPI

TABLE OF CONTENTS

PART I - CERTIFICATION LETTER

PART II - DOCUMENTATION

1. INTRODUCTION
   - 1.1 Purpose
   - 1.2 Background
   - 1.3 Closure Plan
   - 1.4 Closure Objectives

2. PRECLOSURE ACTIVITIES
   - 2.1 Preservative Recovery
   - 2.2 Wastewater Removal
   - 2.3 Unusable Preservatives and Heavily Contaminated Soil
   - 2.4 Moderately Contaminated Soil

3. CLOSURE ACTIVITIES
   - 3.1 Specifications
   - 3.2 Backfill
     - 3.2.1 Recovery Ponds Site (Cellon, Penta, Creosote)
     - 3.2.2 Contact Cooling Pond
     - 3.2.3 Solid Waste Management Units
     - 3.2.4 MSUFPL - Land Treatment Demonstration Units
   - 3.3 Low Permeable Cover
     - 3.3.1 Contact Cooling Water Pond
     - 3.3.2 Solid Waste Management Units
     - 3.3.3 Cellon, Penta Creosote Recovery Ponds
     - 3.3.4 MSUFPL - Land Treatment Demonstration Unit
   - 3.4 Equipment Cleaning

4. POST CLOSURE ACTIVITIES
   - 4.1 Grassing
   - 4.2 Fence
   - 4.3 Survey Plat

TABLE OF CONTENTS
PAGE TWO

EXHIBITS

A. Photographs

B. Map - Wiggins Facility Layout

C. Manifest to Allied Corporation

D. Manifest to Marine Shale Processors

E. Grading Plan for Contact Cooling Water Pond

F. Revised Grading and Drainage Plan for Cellon/Penta/Creosote Pond Site

G. Grading and Drainage Plan for Closure of the Land Treatment Demonstration Unit and Solid Waste Management Units (Pre-RCRA Sludge Pits)

H. Test Results of K001 Constituent Levels in the Various Pond Bottoms Prior to Backfill

I. Test Results - Contaminated Soil Remaining at Recovery Ponds Site

J. Test Reports - Permeability, Density

K. Certification of Equipment Cleaning

L. Survey Plats of Hazardous Waste Sites and Solid Waste Management Units

PART I

CERTIFICATION LETTER

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 3957
601/928-7263

December 5, 1990

Mr. Charles H. Chisolm, Director
Bureau of Pollution Control
Mississippi Department of Environmental Quality
P. O. Box 10385
Jackson, MS 39209

RE: CLOSURE CERTIFICATION
MSD 980600084
INTERNATIONAL PAPER
TREATED WOOD PRODUCTS PLANT
WIGGINS, MISSISSIPPI

Dear Mr. Chisolm:

I, Brax H. Batson, a Registered Professional Engineer and Registered Land Surveyor in the State of Mississippi, do hereby certify that on October 31, 1990, the Hazardous Waste Facility (MSD 980600084) at the Wiggins Treated Wood Products Plant consisting of four surface impoundments, five small sludge disposal pits, and the Mississippi State University Land Treatment Demonstration Unit were closed in essential compliance with the "Amended Closure Plan for Hazardous Waste Management Facilities, Treated Wood Products Plant, Wiggins, Mississippi", dated October 30, 1989, as prepared by International Paper and James L. Grant and Associates, Incorporated, Englewood, Colorado, and as revised by letters dated November 29, 1989, and December 5, 1989, from International Paper to Louis Crawford, Mississippi Bureau of Pollution Control.

The non-essential variations from the Closure Plan were:

1. Bio-remediation was discontinued in November, 1989, due to excessive rainfall which prevented effective treatment.

2. Grading and Drainage Plan as shown in Fig. 5.1 of the Closure Plan for the Creosote, Penta, Cellon, Recovery Pond Site was modified to accommodate volume of soil within site at the time of closure. The drainage plan was also modified to use concrete and vegetation rather than rubble check dams in the ditches for erosion control.

3. The number of laboratory permeability verification tests of the clay barrier material was reduced due to time necessary to run the permeability test. Continuous visual inspection of the clay material by the Engineer along with the periodic laboratory tests were used to insure essential compliance.

4. Clay barrier thickness and thickness of other elements of the cap were controlled by setting grade stakes before and after placement of clay, sand or soil layers.

5. On the effective date of closure, the sites had been seeded and mulched to establish a native grass cover, but sufficient time has not elapsed to establish a stand of native grass.

6. On the date of closure, the sites had not been fenced and posted although the work was under contract.

BATSON & BROWN, INC.
Consulting Engineers

BY: _____
Brax H. Batson, P.E., R.L.S.
(SEAL)

This closure certification is true and correct to the best of my knowledge and belief.

INTERNATIONAL PAPER

BY: _____

Title: Gen Mgr WPD

DATE: 12-14-90

bcc: w/o enc.
B. Funkhouser
H. Hamilton
A. Lindsey
D. Russell

1226MDEQ.WIG

PART II

DOCUMENTATION

1. INTRODUCTION

1.1 Purpose

This report has been prepared to document the activities related to closure of the Hazardous Waste Facility at the International Paper Treated Wood Products Plant at Wiggins, Mississippi (MSD 980600084) in compliance with 40 CFR 265.115 which paragraph requires documentation if requested by the Administrator.

1.2 Background

The Hazardous Waste Facility at the Wiggins Treated Wood Products Plant consists of four surface impoundments identified as: Contact Cooling Water Pond, Cellon Recovery Pond, Penta Recovery Pond and Creosote Recovery Pond. In addition, there are five Solid Waste Management Units which were pre-RCRA as sludge disposal pits and are identified as SL-1 through SL-5 (See Exhibit B for Wiggins Facility Layout). The four surface impoundments contained the EPA-listed hazardous waste No. K001 (i.e. bottom sediment sludges from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol). The Contact Cooling Water Pond was included as a hazardous waste management facility because in the past it has received process wastewaters. The four impoundments

continued to receive wastes generated at the plant after January 26, 1983, and are, therefore, "regulated units" as defined in 40 C.F.R. Section 264.90. The five sludge disposal pits were filled and covered during the period 1972 to 1976. Consequently, the sludge disposal pits technically are not hazardous waste facilities and are classified as Solid Waste Management Units (SWMU). Because the presence of sludge pits SL-1 through SL-5 would complicate the monitoring and post-closure care of the waste management facility, International Paper has elected to close these SWMU sludge pits with the regulated units.

From June, 1987, to June, 1990, during the preclosure and closure activities, Mississippi State University-Forest Products Laboratory was allowed to construct and operate a Land Treatment Demonstration Unit on the Wiggins Plant Site to document bio-remediation of soils contaminated with wood preserving chemicals through use of biological techniques. During construction of the Land Treatment Demonstration Unit, the site of Sludge Pit No. 1 (See Exhibit B for map showing location), which prior to this time was unknown, was located within the Land Treatment Demonstration Unit limits. After completion of the land treatment demonstration, the decision was made to close

the site by placing a low permeable engineered cover over all of the Land Treatment Demonstration Unit; therefore, the closure activities also include the Land Treatment Demonstration Unit site. See Exhibit A-67 for photograph of abandoned Land Treatment Demonstration Unit site before closure was begun.

1.3 Closure Plan

The closure activities were performed in essential compliance with the "Amended Closure Plan for Hazardous Waste Management Facilities, Treated Wood Products Plant, Wiggins, Mississippi", dated October 30, 1989, and as amended by letters dated November 22, 1989, December 1, 1989, and December 5, 1989.

1.4 Closure Objectives

Part 265 of the Mississippi Hazardous Waste Regulations sets the following standards for the closure of a hazardous waste management facility:

(a) the facility must be closed in a manner that minimizes the need for further maintenance, and

(b) The facility must be closed in a manner that controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition

products to the ground or surface waters or to the atmosphere.

Closure of the Wiggins Treated Wood Products hazardous waste surface impoundments minimizes the need for future maintenance by the removal or detoxification of K001 sludges and affected soils utilizing a combination of off-site waste processing, biological degradation stabilization, and the use of low permeable engineered covers over the surface impoundments.

Post-closure escape of hazardous waste constituents will be minimized by: (1) reducing the overall mass of waste left in place, (2) stabilization of selected contaminated soils; and (3) constructing a low permeable engineered cover over the waste site. This combination of activities will eliminate escape of hazardous components to the atmosphere or to surface waters via overland routes. Reducing the concentration of waste constituents remaining in the ground and precluding rainwater infiltration through the waste site should minimize escape of hazardous waste components to the ground water.

2. PRECLOSURE ACTIVITIES

2.1 Preservative Recovery

Recoverable preservatives were recovered for reuse as a matter of practice during the time the wastewater ponds were in use. In addition, during the closure process, light creosote sludges were salvaged and shipped to Allied Corporation, Birmingham, AL, for refining. A total of 964.85 tons were shipped during 1986, 1987, and 1988. These shipments are documented with copies of 51 manifests included as Exhibit C. A photograph of a truck being loaded on 5/13/88 is included as Exhibit A-36.

2.2 Wastewater Removal

Wastewater was pumped from the wastewater ponds to Flocculation Tanks where the water was treated with chemicals which caused the oil to separate from the water, flocculate and settle to the bottom of the tank. The sludge or settlings were then removed to LWD, Inc., Calvert City, KY, for incineration or shipped in liquid form to GSX Corp., Crowley, LA, or American Resource Recovery, Memphis, TN, for fuel blending.

The supernatant from the flocculation process with oil and grease contents of less than 100 ppm were then passed through carbon columns to further cleanse the water prior to discharge to the Wiggins POTW. The

discharge to the Wiggins POTW was permitted under Pretreatment Permit No. PT90033. See Photographs of Flocculation Tanks (Exhibit A-76). See photographs of carbon columns (Exhibit A-75). Quarterly Reports of the testing performed on water discharged to the Wiggins POTW are filed with the Bureau of Pollution Control of MSDEQ.

In addition to the water in the ponds at the beginning of the process, all of the rainwater which fell in the ponds over the course the closure was treated and sent to the Wiggins POTW.

In 1989 after discontinuing the operation of the biological reactors, it was discovered that the water from the bio-reactors (ASB) was not treatable by flocculation, nor was water that accumulated on the bio-remediation area. This became a major problem as the closure schedule was impacted negatively. The remediation could not continue until the water was removed from the area. The water could not be removed until it was treated to pretreatment limits for discharge to the POTW.

The first effort was the use of a filter press operated by Tricil Environmental Response, Inc., of Baton Rouge, Louisiana (See Exhibit A-59 for photographs). This process was very slow, thus was

later supplemented with a Reverse Osmosis process (See Exhibits A-66) operated by Environmental Consulting & Design, Shreveport, LA. While effective in reducing contaminants in the water, this process was plagued with breakdowns and was too slow to meet the closure schedule. A centrifuge operated by GDC Engineering, Baton Rouge, LA, was set up (See Exhibit A-84). This equipment proved to be effective and finally in August of 1990, the last of the water was removed from the Cellon/Penta/Creosote site.

2.3 Unusable Preservatives and Heavily Contaminated Soil

Heavy sludges which could not be refined and heavily contaminated soils were shipped off site in lined dump trucks to Marine Shales Processors, Inc., at Morgan City, Louisiana. A total of 1833.61 tons were shipped to Marine Shales during 1986. Each of 67 loads was manifested, copies of which are included in this report as Exhibit D. Also included as a part of Exhibit D is a "Certificate of Materials Recycled" from Marine Shales Processors, Inc.

2.4 Moderately Contaminated Soil

The closure plan dictated that the moderately contaminated soil would be subjected to bio-remediation. Before bio-remediation could take place, the remediation sites had to be created within the Cellon/

Penta/Creosote Pond site (See Exhibit B). In order to accomplish this without enlarging the contaminated area, a plan was developed to remove contaminated material and dirt from the ponds one at a time, then to backfill each pond with imported clay material. The Cellon Pond was cleaned first and the moderately contaminated soil was deposited in the Penta Pond which had been partially dewatered. The cellon pond bottom was tested in March, 1986. The results showed total contaminant constituents remaining were in excess of 1000 ppm; therefore, the bottom was disked for four weeks after which a subsequent test in April, 1986, established that levels were below 1000 ppm. See Exhibits A-1 & 3 for photographs of the bottoms and testing of bottom soil. See Exhibit H for test results. After satisfactory residuals test, the pond was backfilled with clean soil. After the Cellon Pond was backfilled, two biological reactor cells, each 120 ft. x 70 ft. and 13 feet deep with 1 on 2.2 slopes were created within the confines of the old Cellon Pond. The bio-cells were lined with a 40 mil HDPE liner. The cells were filled with water and moderately contaminated soil (See Exhibit A-4). Each cell was aerated with two 25 HP aerators (See Exhibit A-4 and 47).

The Creosote Pond was the second pond to be cleaned. Heavily contaminated materials and sludges were removed. See Exhibit C and D for copies of manifest. Moderately contaminated soil was stockpiled in the Penta Pond. The clean bottom soils in the Creosote Pond in May, 1987, were tested (See Exhibit A-5 and 6 for photograph) to assure that contaminant constituent levels were less than 1000 ppm (See Exhibit H dated May 8, 1987, for test report). The Creosote Pond was backfilled with low permeability imported soil (See Exhibit A-7 and 11). Levees were constructed around the closed Creosote Pond site. Moderately contaminated soil was removed from the Penta Pond and stockpiled on the closed Creosote Pond.

The Contact Cooling Pond was the next pond to be cleaned. Pumpable liquids were pumped (See Exhibit A-13) via pipeline to the Penta Recovery Pond. Next a vacuum truck was used to remove liquids to the Penta Pond (See Exhibit A-12). The liquids and sludges were moved, using a bulldozer, to a point the vacuum truck can reach the liquids (See Exhibit A-14). The vacuum truck transported liquids and sludges to the Penta Pond. Moderately contaminated soils were hauled by truck to the Penta Pond. See Exhibit A-15 for truck unloading in the Penta Pond. The clean-appearing bottom soils were

checked for hazardous waste constituents. The first test in June, 1987, tested over 1000 ppm (See Exhibit A-18). After bio-remediation for two months, it was retested in July, 1987, (See Exhibit A-19). The residual contaminants were found to be below 100 ppm (See Exhibit H 6/26/87 and 8/3/87). The Contact Cooling Pond was backfilled with low permeability clay (See Exhibit A-20 & A-21).

The Penta Pond was closed in two sections with the north one-third being closed first. Sludges and oils were removed to a sludge pit and to the Bio-Reactors (See Exhibit A-22). The sludge pit was dug in the northwest corner of the Penta Pond for holding liquids and sludges (See Exhibit A-23, 24 & 25). Contaminated soil in the north one-third of the Penta Pond was removed to south two-thirds and the north bottom was tested. See Exhibit A-27 for photographs and Exhibit H for test report dated November 16, 1987, which shows the residual contaminants were less than 100 ppm. Photographs show temporary retaining wall used to separate the Penta Pond into two parts. The north one-third was then backfilled to the retaining wall (See Exhibits A-28, 29) with local clay.

Contaminated soil was then moved out of south two-thirds to the contaminated dirt stockpile located on the

closed Creosote Pond. See Exhibit A-30, 31, & 32. Careful examination of Photo A-31 shows clam bucket transferring contaminated soil and Photo A-32 shows trackhoe spreading onto stockpile located on the closed Creosote Pond. Photo A-33 shows bottom of old Penta Pond when sampled on December 4, 1987. See test report in Exhibit H dated December 8, 1987. After the south two-thirds of the Penta Pond was backfilled making the whole pond available (See Exhibit A-34), it was used for bio-remediation (Enhanced Biological Detoxification). Soil from the stockpile on the creosote pond was placed on the area (former Penta Pond) in twelve-inch lifts beginning in February, 1988.

After completion of the remediation area, the sludge pit in the northwest corner of the Penta Pond was cleaned up beginning in May, 1988. Pumpable sludges were shipped to Allied Corporation, Birmingham, AL, for recovery. See Exhibit C for copy of manifest. See Exhibit A-36 for photograph of truck being loaded from the sludge pit. Non-pumpable sludges were removed from the sludge pits with a trackhoe and placed on the remediation area (See Exhibits A-37 & A-38). The remaining liquids were mixed with dirt and loaded onto a truck (See Exhibit A-39) and hauled to the stockpile on the former Creosote Pond. The sludge pit bottom was

tested for residual contamination on June 8, 1988 (See Exhibit A-40 for photograph of bottom when tested). The sludge pit was backfilled with a silty clay (See Exhibit A-42) and the area was incorporated into the remediation area. With closure of the sludge pits, all hazardous waste sites and solid waste management units had been cleaned to less than 1000 ppm residual and backfilled with clean clayey soil leaving only the Bio-Reactor to be backfilled after completion of its function.

The remediation area was operated from February, 1988, to November, 1989. See Exhibit A-35, 43, 44, 46, 48, 49 & 55. Tests taken periodically during the operation gave erratic results making it difficult to measure the efficiency of operation; however, reductions were attained. Good moisture control appears to be essential to efficient detoxification; however, the maintenance of optimum moisture level within the area was difficult. Poor drainage plagued the unit in wet weather (See Exhibits A-46, 48 & 49) and irrigation was required in dry weather (See Exhibits A-44). In wet weather dewatering was slowed by having to treat many thousands of gallons of water before the water could be discharged to the POTW. During the summer of 1988, the remediation area was extended to the stockpile of contaminated soil stored on the old Creosote Pond by

disking the slopes of the dirt pile (See Exhibit A-35). The stockpile was well drained, thus effective farming appeared to take place.

The Bio-Reactor (ASB) was operated from April, 1987, until November, 1989, by Mo-Tech, Inc. Periodic lab tests run on the liquids in the Bio-Reactor indicated good results were being obtained and that contaminant levels were being reduced.

Bio-remediation efforts were discontinued in November, 1989, after the Bio-Reactors were shut down and efforts were begun to dewater them. The heavy winter rains overwhelmed the water treatment facilities and created a large backlog of water which was not treatable through conventional flocculation; therefore, it was necessary to utilize more expensive and slower treatment processes. As discussed earlier, three processes were used - filter press, reverse osmosis and centrifuge. Finally in August, 1990, all of the water was removed. Closure of the Recovery Ponds site was begun even before all of the water was removed.

After the contaminated soil on the Recovery Ponds site was spread across the former pond areas prior to placing the engineered cover, some thirty-six samples were collected from the layer of contaminated soil, at regular intervals across the entire ponds site, and composited for testing. The results of that test are

included in this report as Exhibit I. The tests show that the average contaminant levels are between 4000-4500 ppm. This is a significant reduction from the initial levels placed on the remediation area which ran up to 10,500 ppm and possibly even higher when sludges from the last sludge pit were spread on the area for degradation.

3. CLOSURE ACTIVITIES

3.1 Specifications

The specifications for closure of the hazardous waste sites and solid waste management units are set out in the Closure Plan in paragraph 4.1.4. For ease of reference this paragraph is copied herewith:

> 4.1.4 Fill and Cover.
>
> After biodegradation of soil and/or disposal of these soils off-site, the remaining dike material will be collapsed inward as necessary to attain final closure grade. Where necessary, native soil will be used to fill the ponds to the proper sub-cover grade. Grades during the construction period will be maintained to provide for drainage of rainfall away from the pond areas being closed.
>
> A cover will be placed over the pond excavation and disposal pit excavation areas to minimize future infiltration through any residual preservation compounds which are left in-place after closure. The cover will consist of the following components:
>
> o Soil and topsoil layer: 1.5 foot of native soil capped by 0.5 feet of topsoil
>
> o Drainage/capillary break layer: 0.5 feet of coarse sand with a permeability of about 10^{-3} cm/sec.
>
> o Low-permeability clay layer: 2.0 feet of silt and clay with a maximum permeability of 10^{-7} cm/sec.
>
> The completed cover will be graded to an approximate maximum slope of between three and five percent to promote natural drainage while minimizing soil erosion. The topsoil surface

will be mulched and seeded to establish a native grass cover which will further stabilize the final cover.

3.2 Backfill

3.2.1 Recovery Ponds Site (Cellon, Penta, Creosote)

As discussed earlier, in 1986 and 1987 each of the impoundments were cleaned to contaminant constituent level less than 1000 ppm in the soil and backfilled to near natural grade with clean imported low permeability soil, mostly clay. In the case of the Creosote Pond and Penta Pond sites, contaminated soils were placed over the clean clay backfill during the bio-remediation process. In 1986, the Cellon Pond was cleaned and backfilled. Then the holes for the Bio-Reactors were excavated on the site. The Bio-Reactors were lined with a 40-mil HDPE liner. The Bio-Reactors were closed in 1990 by dewatering and then stabilizing the remaining sludges with lime kiln dust (See Exhibit A-64). The South Cell of the Bio-Reactor stabilized easily. Due to excess water caused by heavy rains in the spring of 1990, 282 tons of lime kiln dust was not adequate to stabilize the north cell (See Exhibit A-63). Clean soil was then

imported and mixed in to provide enough solids to stabilize the site (See Exhibit A-65).

After stabilizing both cells, the site was graded to establish positive slope (See Exhibit A-62), after which a 40-mil HDPE liner was placed over the former bio-cell site (See Exhibit A-68). The liner was set out in the Closure Plan in anticipation of using this site for expanding the bio-remediation area. After the long delay required to dewater the Bio-Reactors and the remediation area, there was not enough time remaining in the closure schedule for additional bio-remediation. The contaminated soil from the remediation area was spread onto the former Cellon Pond Site as the entire Recovery Ponds area was shaped for placement of the low permeable cover during August, 1990.

3.2.2 Contact Cooling Pond

The Contact Cooling Pond was cleaned as previously described and backfilled with a white clay material of low permeability in September, 1987.

3.2.3 Solid Waste Management Units

The Sludge Pits 2, 3, 4 & 5 had been cleaned of sludges in 1986. These sites were tested for

contaminants in April, 1987, and found to contain less than 1000 ppm contamination. See test reports in Exhibit H. Before placing the engineered cover over these sites, they were backfilled with clean silty clay material, shaped and graded to provide drainage for the cover.

3.2.4 Land Treatment Demonstration Unit

See Exhibit A-17 for picture of Demonstration site before construction of the Treatment Unit by the Mississippi State University Forest Products Laboratory. After Mississippi State University FPL completed their bio-remediation demonstration, the decision was made to close the site as a hazardous waste site with waste in place. The necessary site preparation was minimal. See Exhibit A-67 for a photograph of the site in June, 1990. Preparation included establishing the area to be covered, removal of all underground piping, removal of the boards, and grading the site to a subgrade that would provide drainage of the cover.

3.3 Low Permeable Engineered Cover

3.3.1 Contact Cooling Water Pond

The first site to be covered was the Contact Cooling Pond. This was begun in January, 1990,

with shaping of the subgrade, placement of two feet of low permeable white clay (See Test Report as Exhibit J), six inches of concrete sand, eighteen inches of imported native soil, six inches of topsoil, and seeding with common bermuda grass. For a typical section of the cover see Exhibit F which is similar. The grading plan for this site is shown in the revised 1984 Closure Plan Grading and Drainage which is included in the Closure Plan as Figure 5.1. A photocopy of the revised Grading Plan is included in this report as Exhibit E.

Exhibit A-50 shows the Cooling Pond area in November, 1989, after backfilling the pond and prior to grading for placement of the cover. Exhibit A-58 is a photograph taken in March, 1990, which shows the graded site and the first lift of the clay layer being placed. Exhibit A-60 shows the complete clay cover with a laboratory technician running density test and thickness check of the clay. Exhibit A-80 is a photograph taken in November, 1990, showing the completed cover with vegetation. Close control was maintained on the thickness and slope of each element of the cover by setting accurate grade

stakes for each layer of the cover. (Note grade stakes in Exhibit A-60.)

3.3.2 Solid Waste Management Units

A grading plan for the sludge pits was not dictated in the Closure Plan. Based on topographic surveys made of the backfilled sites, a grading plan was developed. This plan is included as Exhibit G. The photograph included as Exhibit A-9 shows the site of Sludge Pits 2, 3, 4 & 5 after the site was backfilled in 1987. Exhibit A-53 shows the site as graded in November, 1989, in preparation for the low permeable cover. Sludge Pits 2 & 3 were covered as one unit and Pits 4 & 5 were covered as a separate unit. Each unit received two feet of low permeable clay (10^{-9})six inches of concrete sand, eighteen inches of imported clean soil, and six inches of top soil. The site was seeded to common bermuda grass. See Exhibit G for typical section of the low permeable engineered cover. See Exhibit A-81 for photograph of completed Sludge Pits 4 & 5. The cover over Pits 2 & 3 is similar. The southwest corner of the cover over Pits 2 & 3 is shown in Exhibit A-81.

Close grade control was maintained by setting grade stakes for each layer of the cover.

3.3.3 Cellon, Penta, Creosote Recovery Ponds

These ponds were all closed as one unit. As discussed earlier, these ponds were each cleaned to less than 1000 ppm constituents in the soil, and then backfilled with an imported clay material. Subsequently these pond sites were converted into the bio-remediation area and the Biological-Reactor site (ASB). The bio-remediation was discontinued in November, 1989, and efforts were begun to dewater both the Bio-Cells and later the rainwater collected on the remediation area. The dewatering was much slower than had been anticipated as the water remaining could not be flocculated without raising the pH above 12. The high pH water was not acceptable at the POTW; therefore, a filter press, later on reverse osmosis, and even later a centrifuge were employed to completely dewater the site. The dewatering was completed in August, 1990. In the face of an October 31, 1990, completion date, it was necessary to start the closure before dewatering was complete. The water was confined to area on the north side.

The size of the ponded water was continually reduced as water was treated and sent to the POTW. At the same time, beginning in July, 1990, contaminated soil was moved from east to west on the south side. The westward movement of the contaminated soil was necessary to establish slopes and grades specified in the Closure Plan (regraded to an approximate maximum slope of between three and five percent). Relocating the contaminated soil was begun on July 17, 1990 and completed a month later.

Placement of the low permeable engineered cover was begun immediately thereafter. Reference is made to Exhibit F for typical section of the cover as it was constructed. Exhibit F also shows the "As-Built" Grading and Drainage Plan.

Close grade control was maintained on each lift or layer of the cover. Reference is made to Exhibit A-73 in which photograph can be seen multiple tall stakes which were guarding a "blue top" hub, driven to the desired grade, grade stakes were set by a survey party similar to that shown in Exhibit A-72. Exhibit A-69 shows the first lift of white low permeable clay being spread on the Recovery Ponds Site. Exhibit A-70

shows the sand layer being spread. Exhibit A-73 shows the top soil being spread and Exhibit A-76 shows the Recovery Ponds site after being seeded with a seed mixture which included winter grasses and summer grasses. Exhibit A-78 shows the site during the middle of November, 1990, after the winter grasses had started to come up.

The Recovery Ponds site and the Land Treatment Demonstration Unit were closed at the same time. The seeding and mulching on both of these sites was completed on October 31, 1990. Exhibits A-77, 78 and 79 are photographs of the Recovery Ponds sites taken after closure on or about November 15, 1990. Exhibit A-79 also shows the stilling basin for the diversion ditches.

3.3.4 Land Treatment Demonstration Unit

The Grading and Drainage Plan for the Demonstration Unit is shown on Exhibit G. The typical section which shows how the low permeable cover was constructed is also shown on Exhibit G. These drawings are the "As-Built" drawings for the cover (cap) over the Demonstration Unit which includes Sludge Pit No. 1.

3.4 Equipment Cleaning

The following contractors provided equipment to perform the work involved in preclosure and closure activities.

Mid Coast Construction Company
P. O. Box 2385
Gulfport, MS 39505

R. D. Herring Contracting Company
P. O. Box 646
Petal, MS 39465

MOTEC, Inc.
1301 West 25th Street
Suite 406
Austin, TX 78705

TRICIL Environmental Response, Inc.
16016 Perkins Road
Baton Rouge, LA 70810

Reverse Osmosis Process
Environmental Consulting & Design
P. O. Box 38083
Shreveport, LA 71133

GDC Engineering, Inc.
822 Neosho Avenue
Baton Rouge, LA 70802

Enclosed as Exhibit K is letter certifying that their equipment was cleaned before leaving the site.

R. D. Herring Contracting Company
MOTEC, Inc.
TRICIL Environmental Response

Mid Coast Construction Company is no longer in business and neither pictures nor a letter of certification is available. Mr. Douglas Owens and Mr. Will Fiveash, both Supervisors at Wiggins Wood Treating Plant, were witnesses to the cleaning of Mid Coast

equipment with high pressure water hose prior to Mid Coast departure from the site.

Exhibit A-83 is a picture of part of the Reverse Osmosis equipment owned by Environmental Consulting & Design as it was leaving the site.

Exhibit A-84 is a picture of part of the centrifuge equipment owned by GDC Engineering, Inc., as it was leaving the plant.

Exhibits A-85, 86, 87, 88 are pictures of equipment used by MOTEC, Inc., in the bio-remediation efforts as their equipment was leaving the plant.

3.5 Survey Plats

In accordance with Part 265.116 of the Hazardous Waste Regulations, surveys of each of the hazardous waste sites and solid waste management units have been made in accordance with the Minimum Standards for Land Surveying in the State of Mississippi and survey plats depicting these surveys have been prepared. Copies of these plats and the legal descriptions are included in this report as Exhibit L.

4. POST CLOSURE ACTIVITIES

4.1 Grassing

The closure of the hazardous waste facility and solid waste management units at the Wiggins Treated Wood Products Plant was certified as of October 31, 1990, with non-essential exception of the lack of a stand of grass on some of the individual units and the lack of a fence around each of the individual units. Both of these deficiencies have subsequently been corrected. Exhibits A-78 and A-79 show the winter grass cover in November, 1990. Summer grass seed was planted along with the Winter grass with germination expected in the Spring of 1991.

4.2 Fence

The same exhibits show fence post and braced bays under construction. With the exception of the Contact Cooling Pond site, the fencing was completed and posted during the first week in December, 1990.

EXHIBIT A

PHOTOGRAPHS

1 - Cellon Pond - 3/5/87

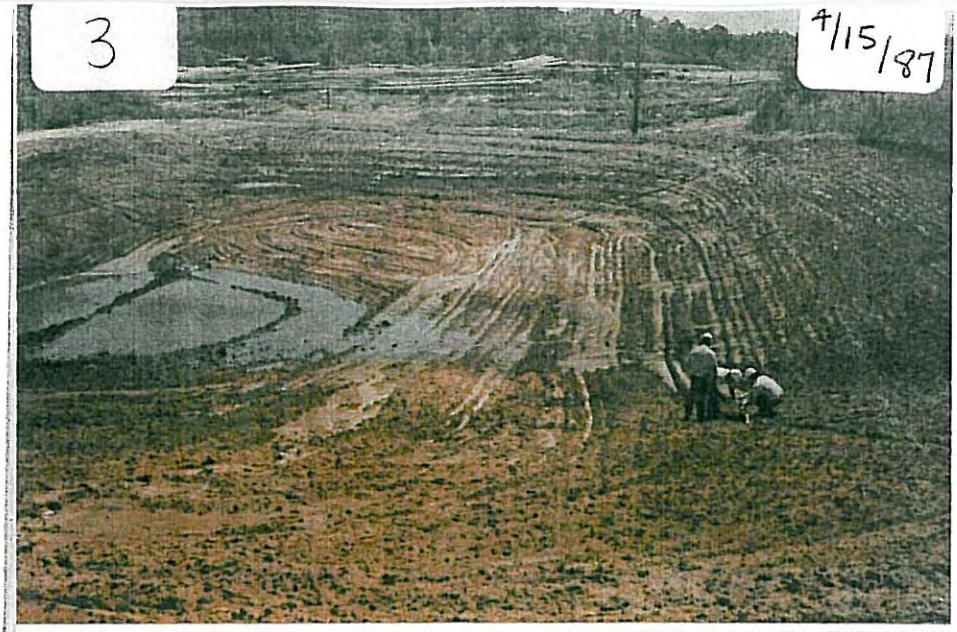
2 - Sludge Pits 2 & 3 (Solid Waste Management Unit) - 4/11/87
Taking soil samples to determine residual hazardous constituents remaining.

3 - Cellon Pond - 4/15/87
Retest for residual constituents of K001.

4 - Biological Reactors (ASB) - 5/7/87
Note aerators and pond liner. Photo taken where liquid level in Cell No. 1 was down to make a repair to the liner.

5 - Soil Sampling Tool - 5/7/87

1


3
4/15/87

4
5/7/87

7

5
5/7/87

8
5/28/87

7
5/28/87

6
5/17/87

10
6/3/87

9
6/3/87

6 - Creosote Recovery Pond - 5/7/87
Laying out grid for purpose of taking three random samples to be composited for testing for residual constituents of K001.

7 - Creosote Pond - 5/28/87
Backfill of old Creosote Pond site.

8 - Four Carbon Columns - 5/28/87
Used in treatment of wastewater prior to discharge to Wiggins, Mississippi, POTW.

9 - Sludge Pits 2 & 3 (Solid Waste Management Unit) - 6/3/87
Sludge Pits after backfill. Typical treatment in Sludge Pits 4 & 5.

10 - Penta Recovery Pond Site - 6/3/87
Consolidated sludge in north half of Penta Pond. South half has been backfilled. Shows backfilled Creosote Pond.

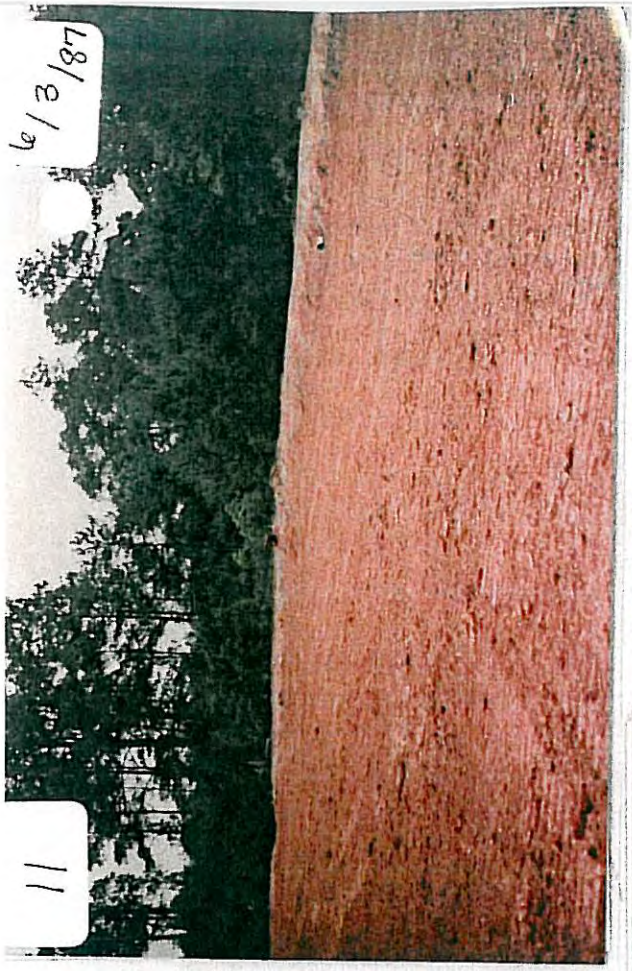
11 - Creosote Recovery Pond - 6/3/87
Backfilled with levee and drain through levee.

12 - Contact Cooling Pond - 6/15/87
Removing sludge from Contact Cooling Pond using a Vacuum Truck. Sludge transported to Penta Pond.

13 - Contact Cooling Pond - 6/15/87
Pump removing liquids from Contact Cooling Pond to temporary storage in the holding pond located in the north half of Penta Recovery Pond.

14 - Contact Cooling Pond - 6/15/87
Reducing size of pond while increasing depth for ease of pumping.

15 - Penta Pond - South Side - 6/19/87
Contaminated soil from Cooling Pond being placed in Penta Recovery Pond for subsequent transfer to stockpile to be made on closed Creosote Pond.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6/15/87

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7/28/87

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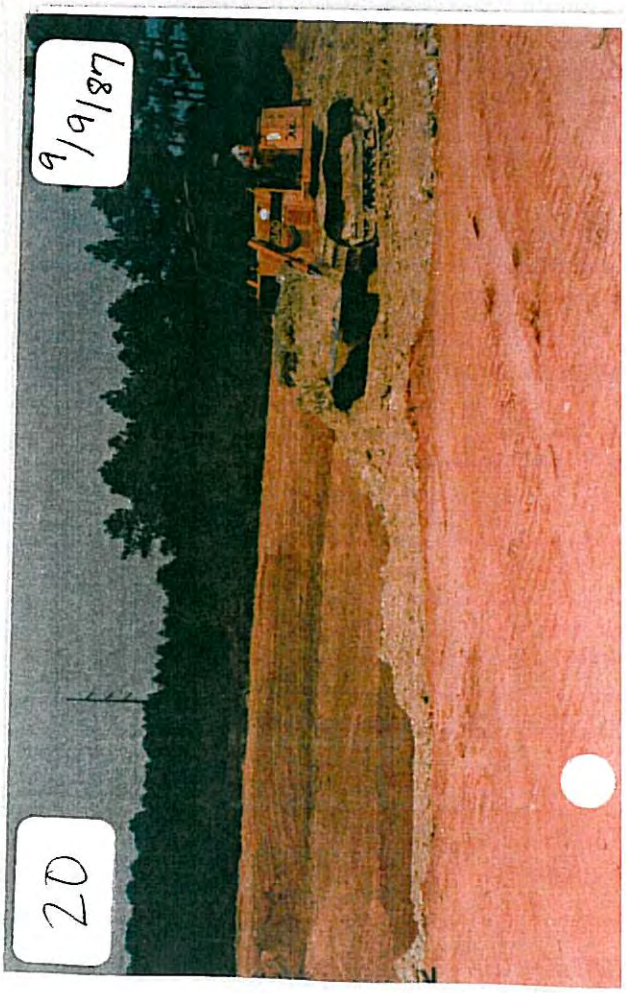
9/9/87



16 - Contact Cooling Pond - 6/19/87
Removing contaminated soil from Contact Cooling Pond. Trucked to Penta Pond for temporary storage.

17 - Land Treatment Demonstration Site - 6/19/87
Site being prepared to construct Experimental Land Treatment Unit (Mississippi State University Forest Products Laboratory Project).

18 - Contact Cooling Pond - 6/23/87
Taking random smaples to test for residual hazardous constituents.

19 - Contact Cooling Pond - 7/28/87
Contact Cooling Pond after bioremediation to lower residual hazardous constituents below 1000 ppm.

20 - Contact Cooling Pond - 9/9/87
Backfill of Contact Cooling Pond with white clay material.

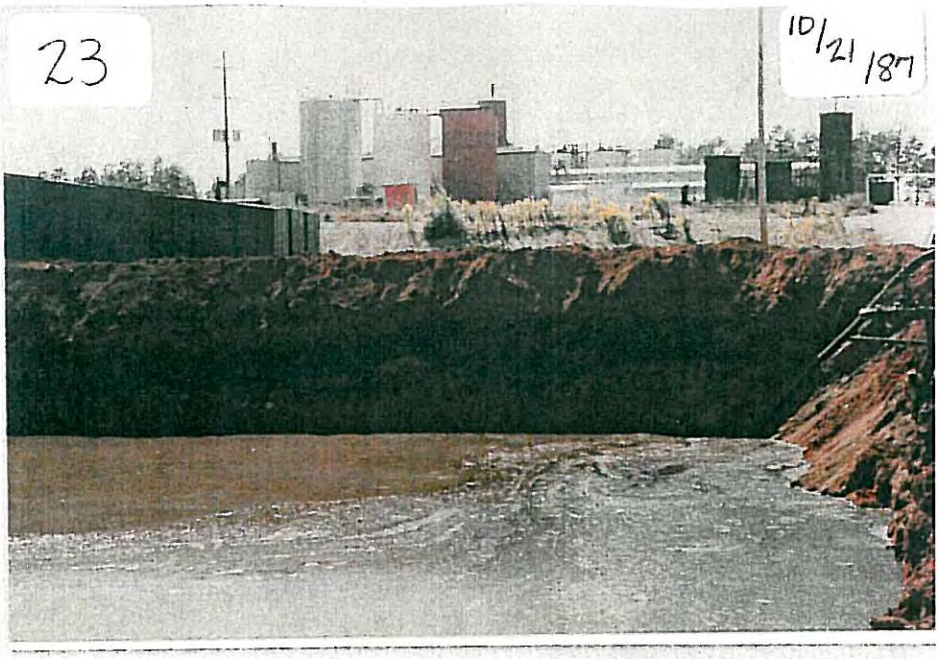
26 - Penta Pond - 11/2/87
Looking east across temporary holding pond and Penta Pond to backfilled Creosote Pond. Note stockpile of contaminated soil in Penta Pond about to be transferred to closed Creosote Pond. Note dragline.

27 - Penta Pond - North One-third - 11/13/87
Taking soil samples from north one-third of Penta Recovery Pond site. Sample locations selected randomly.

28 - North One-third of Penta Pond - 11/18/87
Backfill of north part of Penta Pond with white clay.

29 - Contaminated Soil Stockpile - 11/18/87
Photo looking north northeast across open Penta Pond at the stockpile of contaminated material stored on backfilled Creosote Pond site.

30 - Penta Pond - South Two-thirds - 11/30/87
Looking west southwest across open Penta Pond (south two-thirds). Contaminated soil being bulldozed to east wall for removal to stockpile on closed Creosote Pond.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10/21/87

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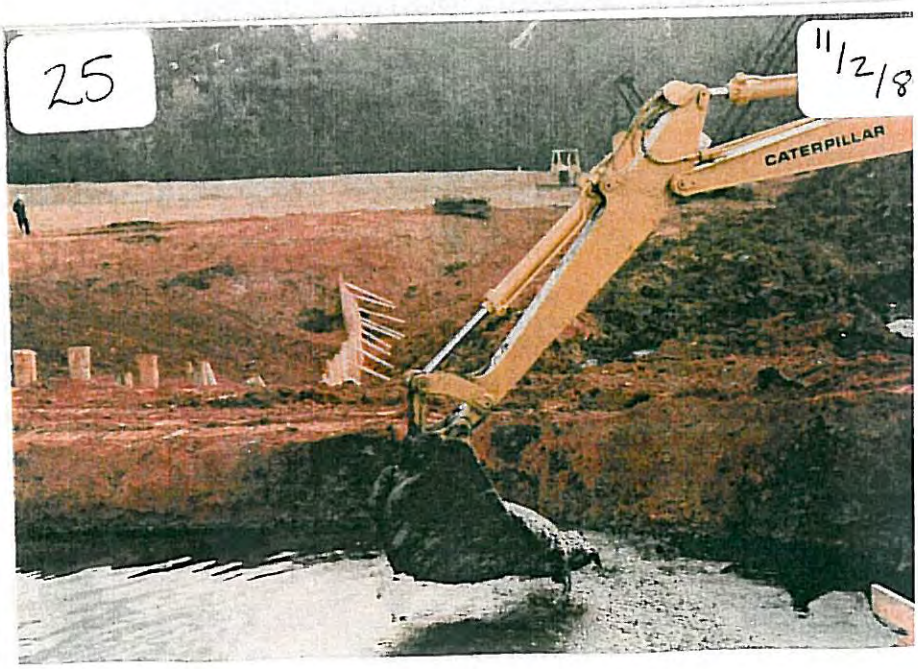
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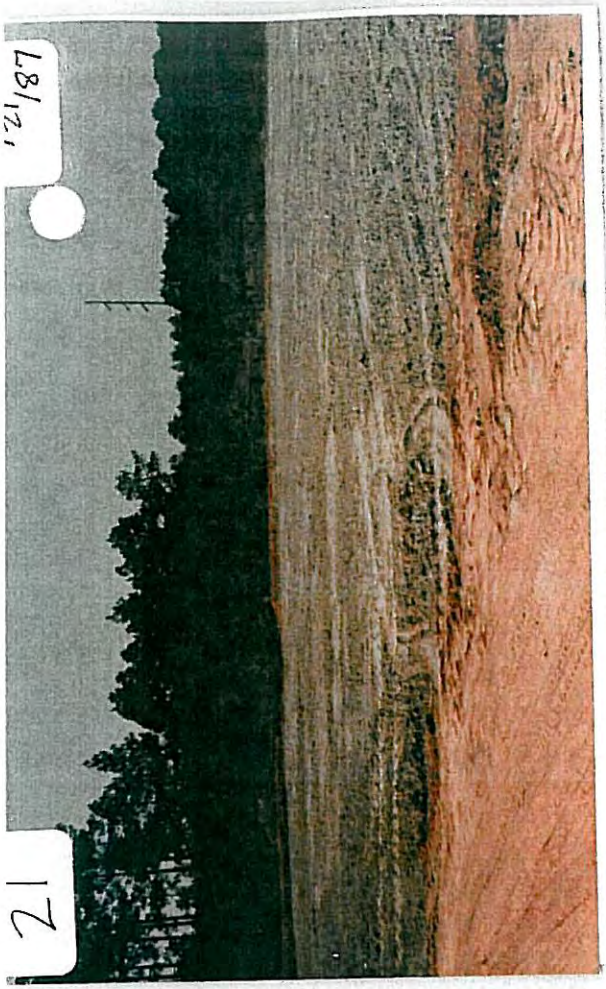
11/2/8
CATERPILLAR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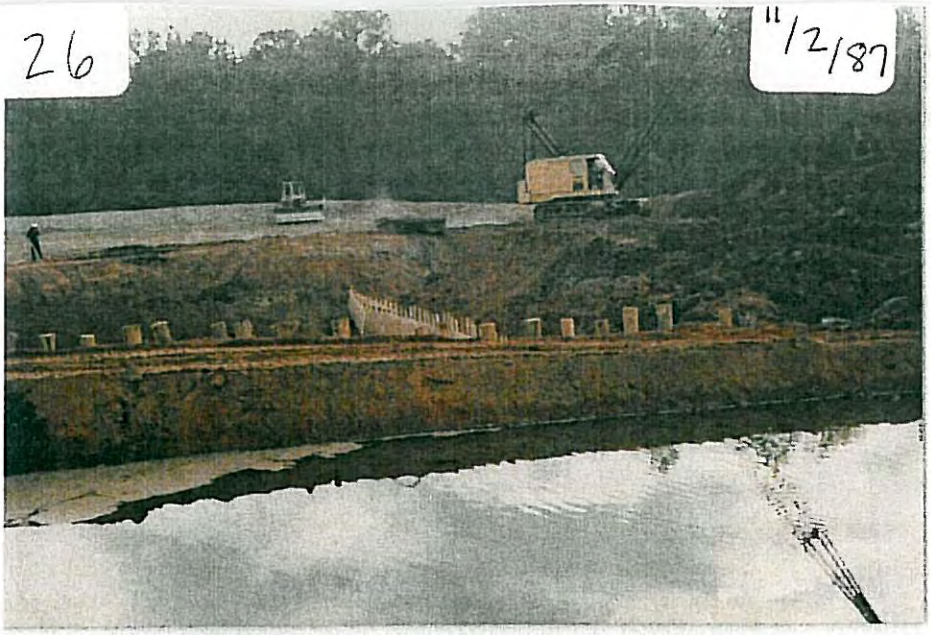

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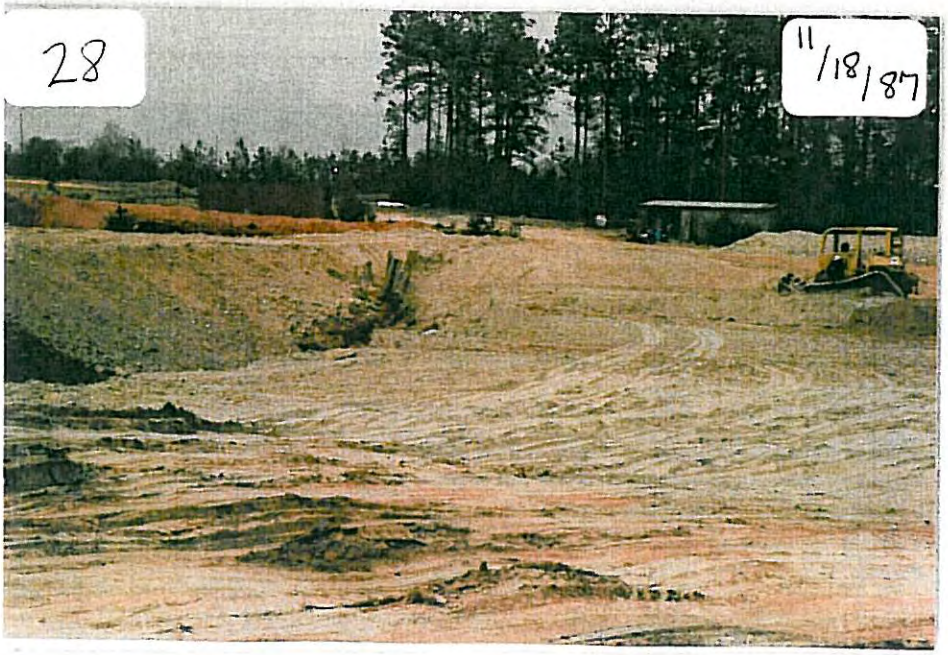

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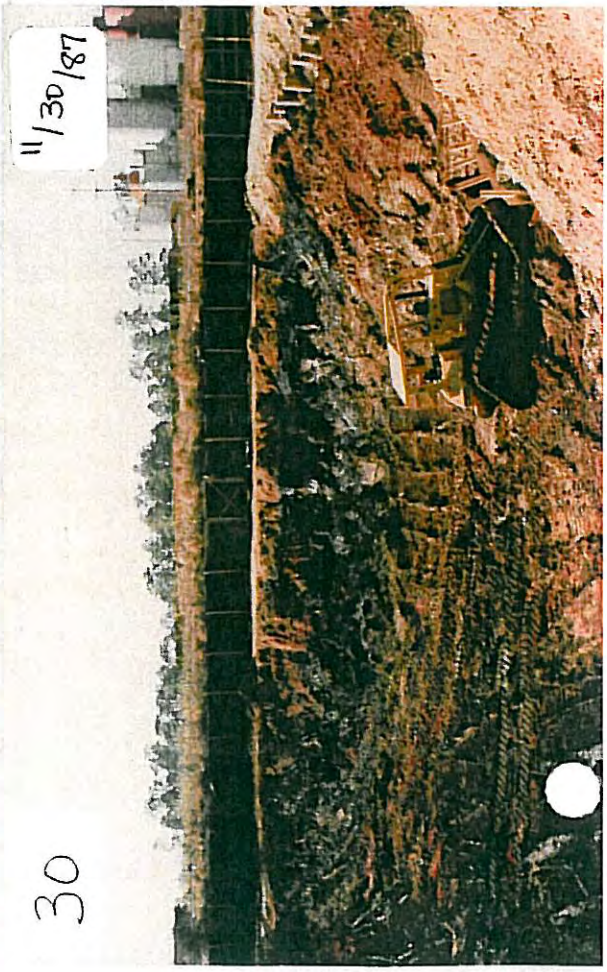


26 - Penta Pond - 11/2/87
Looking east across temporary holding pond and Penta Pond to backfilled Creosote Pond. Note stockpile of contaminated soil in Penta Pond about to be transferred to closed Creosote Pond. Note dragline.

27 - Penta Pond - North One-third - 11/13/87
Taking soil samples from north one-third of Penta Recovery Pond site. Sample locations selected randomly.

28 - North One-third of Penta Pond - 11/18/87
Backfill of north part of Penta Pond with white clay.

29 - Contaminated Soil Stockpile - 11/18/87
Photo looking north northeast across open Penta Pond at the stockpile of contaminated material stored on backfilled Creosote Pond site.

30 - Penta Pond - South Two-thirds - 11/30/87
Looking west southwest across open Penta Pond (south two-thirds). Contaminated soil being bulldozed to east wall for removal to stockpile on closed Creosote Pond.

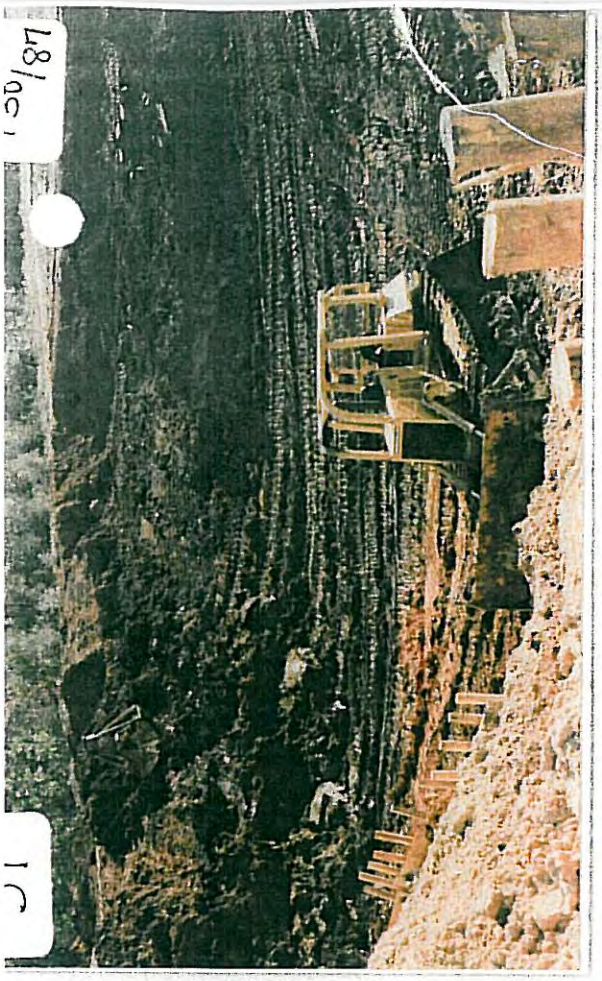
31 - Penta Pond - South Two-thirds - 11/30/87
Dragline removing contaminated soil from south part of Penta Pond (note clamshell). Bulldozer used to move soil to within reach of clamshell bucket on dragline. See photo for dragline.

32 - Stockpile of Contaminated Soil - 11/30/87
Looking east across temporary sludge pit and closed Penta Pond to the dragline removing contaminated soil from Penta Pond. Placing on old Creosote Pond. Note backhoe spreading material.

33 - Penta Pond - South Two-thirds - 12/4/87
Laying off south part of Penta Pond for random samples after removal of contaminated material. Random samples composited to test for K001 constituents.

34 - Closed Penta Pond - 1/21/88
Old Penta Pond prepared as bio-remediation area. Note pile of contaminated material on the old Creosote Recovery Pond. Note levees around bio-remediation area.

35 - Bio-remediation Area - 5/11/88
Looking northeast across bio-remediation area (old Penta Pond) to stockpile of contaminated material on the closed Creosote Pond. Note cultivation of the area and also stockpile.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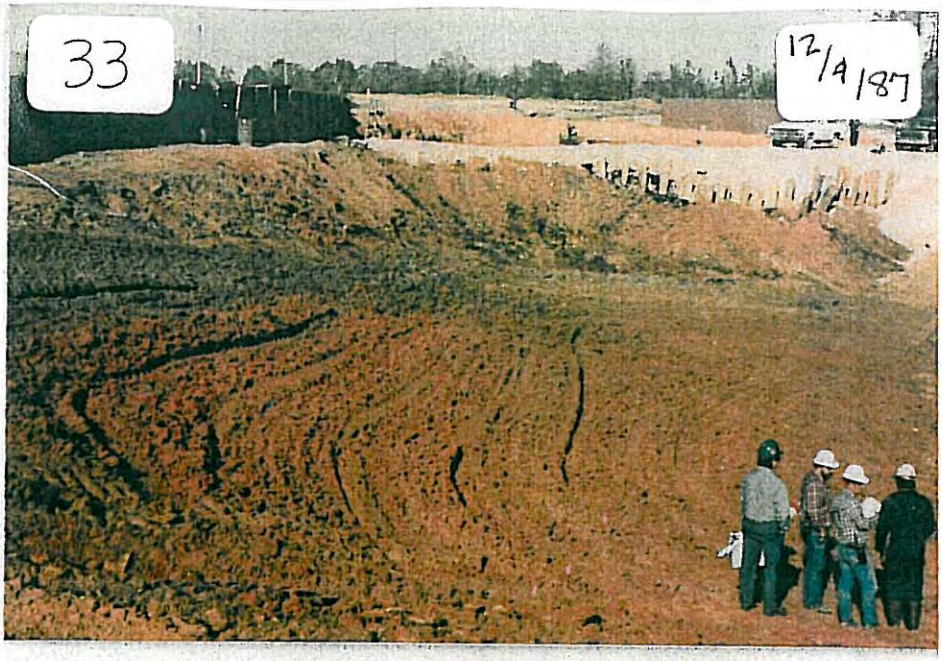
1C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12/9/87

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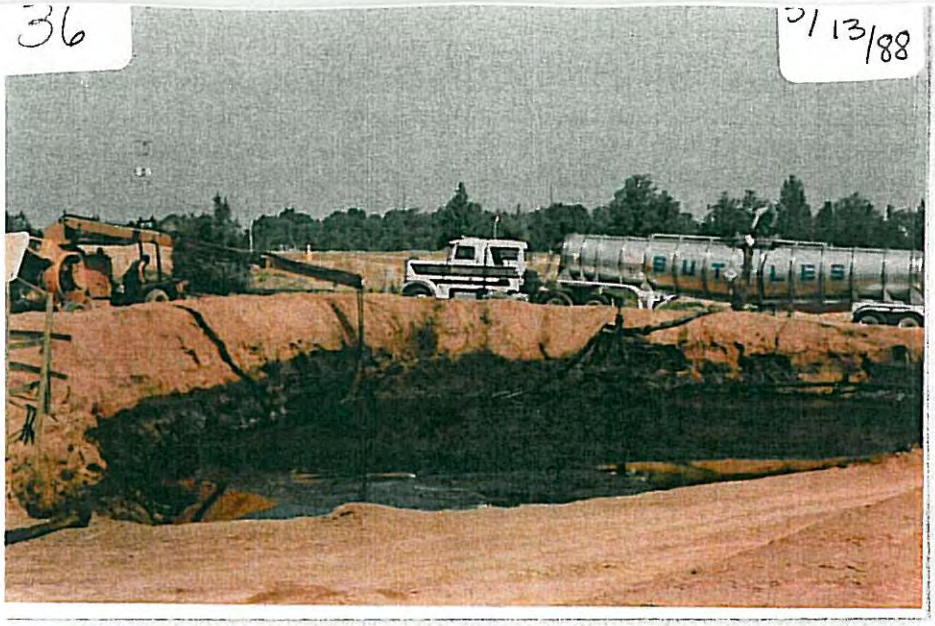

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36 - Temporary Sludge Pit - 5/13/88
Removing lighter sludges to tank truck for transport to Allied Chemicals for reclamation.

37 - West Side of Bio-remediation Area - 6/2/88
Wet contaminated soil from sludge pit being spread on bio-remediation area as second lift.

38 - Sludge Pit - 6/2/88
Wet contaminated soil being transferred to bio-remediation area as second lift.

39 - Sludge Pit - 6/3/88
Truck moving contaminated material to bio-remediation area as second lift.

40 - Sludge Pit - 6/8/88
Sludge pit from east side facing westerly after removal of all contaminated soil. Ready for residual test for K001 contstituents.

41 - Recovery Ponds Site - 6/10/88
Overall view of bio-remediation facility from on top of contaminated soil storage looking westerly. Intermediate view is of bio-remediation area. Dozer is backfilling sludge pit. Aerated Cells (ASB) units behind fence in left center.

42 - Sludge Pit - 6/10/88
Backfilling sludge pit.

43 - Bio-remediation Area - 6/17/88
Tilling contaminated soil on bio-remediation unit. Photo facing westerly from northeast corner of area.

44 - Bio-remediation Area - 8/31/88
Irrigation of area. Note stockpile of contaminated soil stored on closed Creosote Pond.

45 - Water Treatment Plant - 12/21/88
Treatment Plant for recycling ground water. Note levees around Recovery Ponds site.

41
1/10/88

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6/17/88

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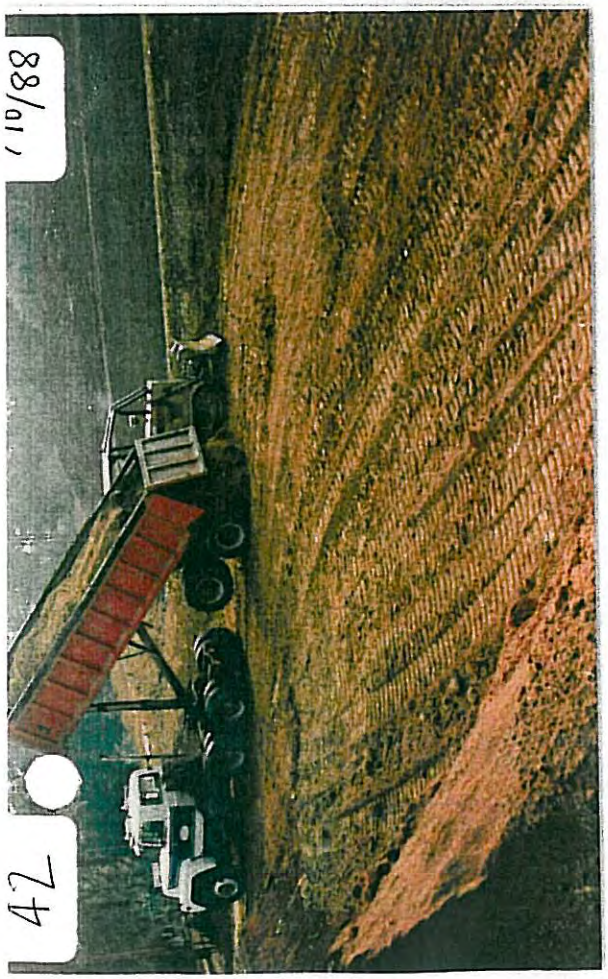
8/31/88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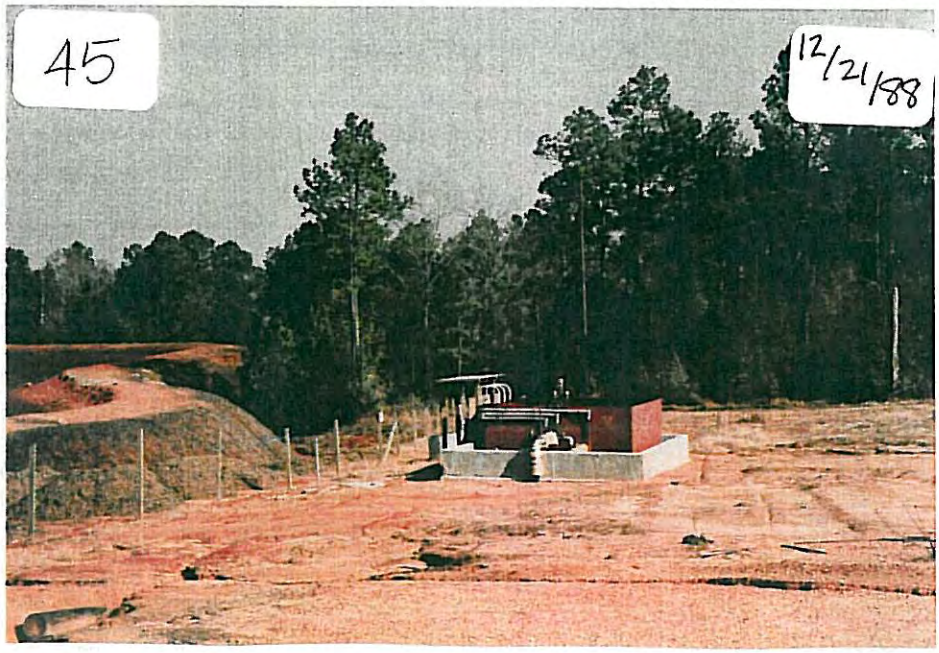
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12/21/88

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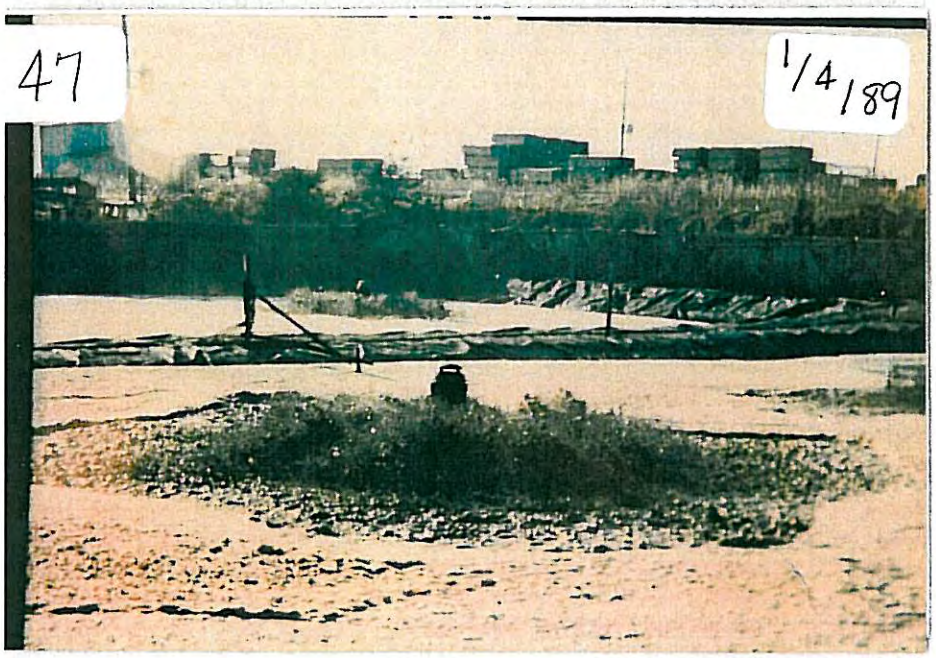
1/4/89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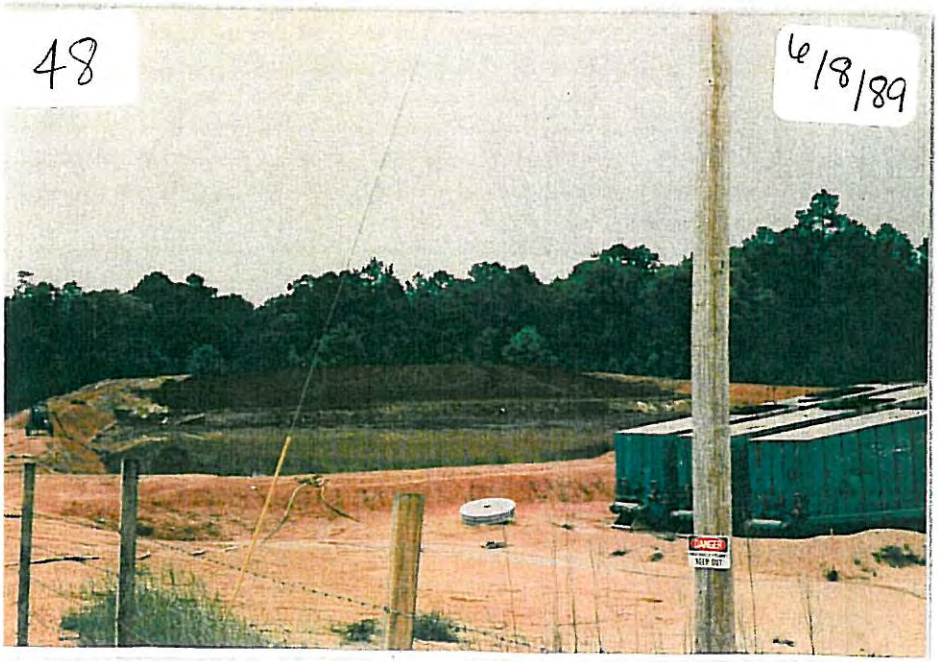
1/4/89


48
6/18/89
DANGER
KEEP OUT

8/24/89
49

11/16/89
50

46 - Bio-remediation Area - 1/4/89
A wet bio-remediation area in foreground.

47 - Biological Reactors (ASB) - 1/4/89
Aerators in Bio-Cells. Photo facing south.

48 - Bio-remediation Area - 6/8/89
Note water on bio-remediation area. Note stockpile of contaminated soil on old Creosote Pond site.

49 - Bio-remediation Area - 8/24/89

50 - Contact Cooling Pond Site - 11/16/89
Photo facing northwest from southeast corner of Cooling Pond.

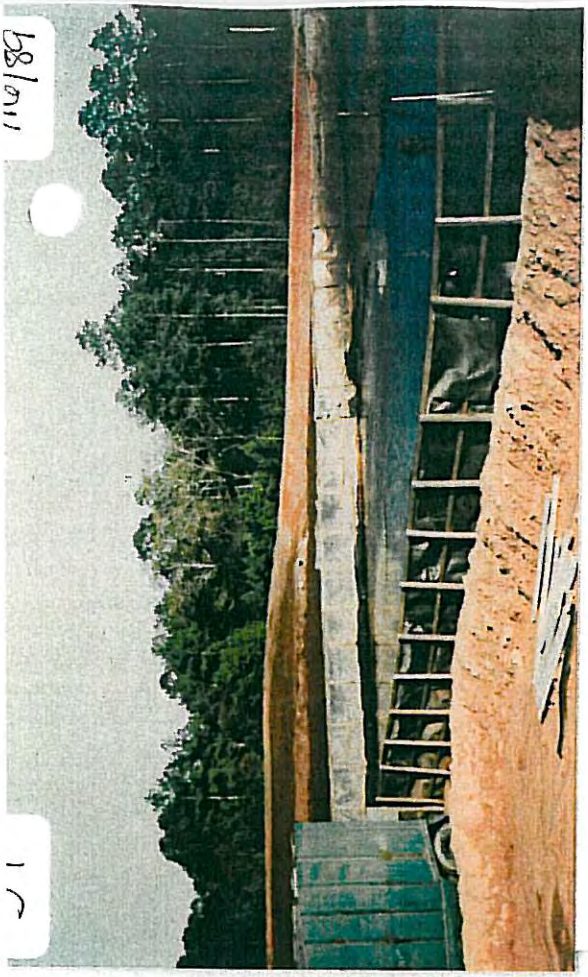
51 - Biological Reactors (ASB) - 11/16/89
Operation discontinued.

52 - Biological Reactors (ASB) - 11/16/89
Operation discontinued.

53 - Sludge Pits 2, 3, 4 & 5 (Solid Waste Management Unit)
11/16/89
Prior to placement of the engineered cover.

54 - Bio-remediation Area - 12/21/89
Note stockpile has been converted to part of unit.

55 - Bio-remediation Area - 1/23/90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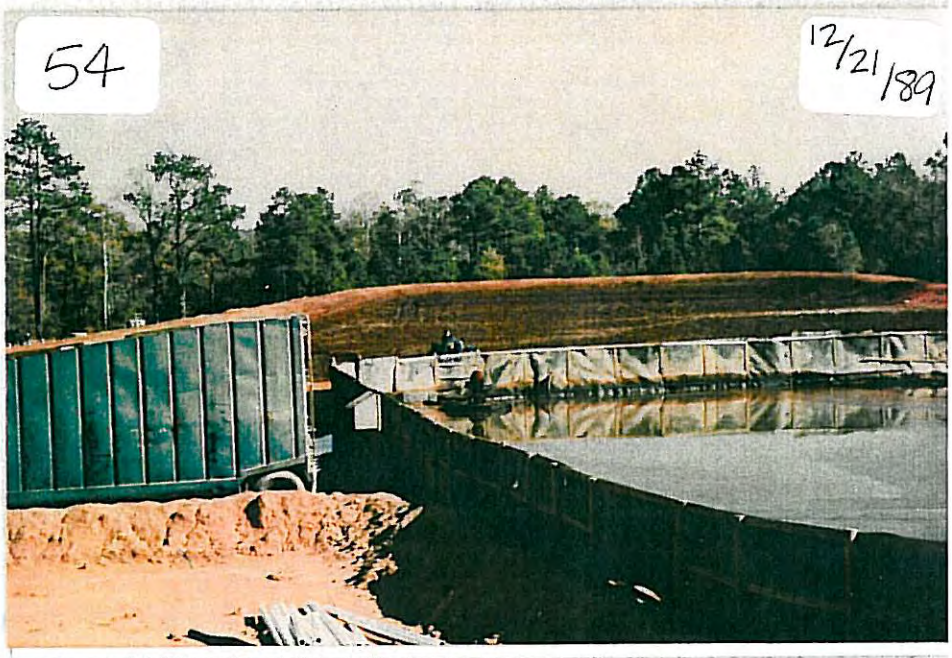
11/16/89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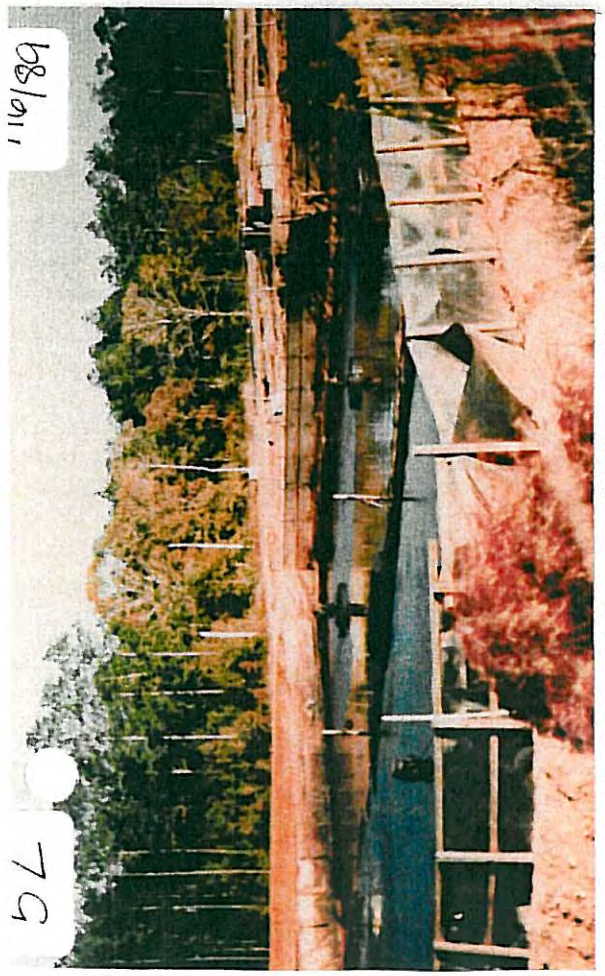
11/16/89

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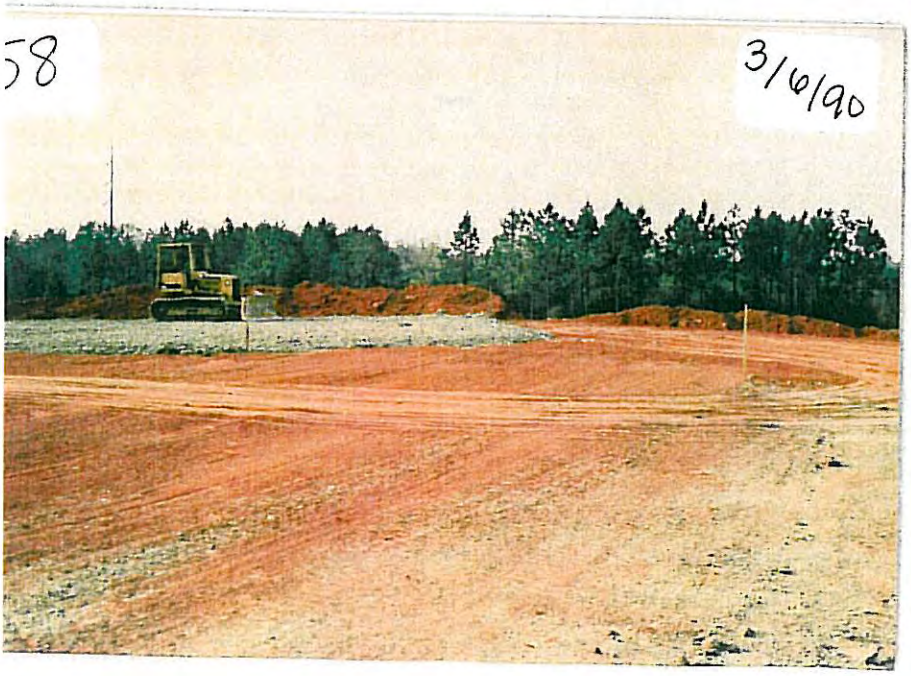
1/23/90

56
3/6/90

57
3/6/90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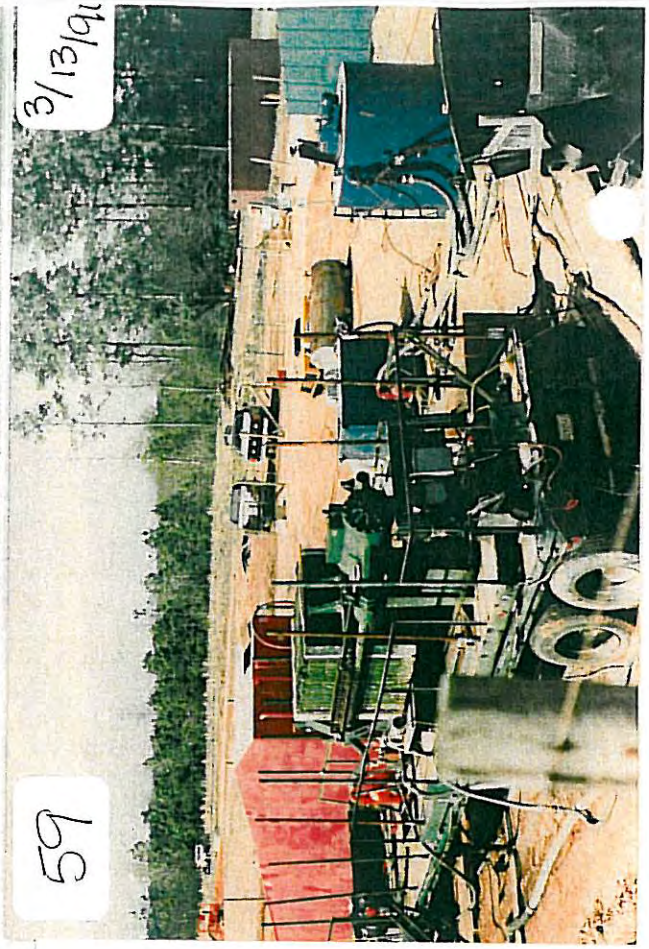
3/6/90


59
3/13/90

60
3/13/90

56 - Additional Aeration Tanks - 3/6/90
Part of effort to treat water in Bio-cells and on the bio-remediation area.

57 - Bio-remediation Area - 3/6/90
Water on area from dewatered south cell of Bio-reactor.

58 - Contact Cooling Pond - 3/6/90
First lift of clay cover (low permeable clay less than 1×10^{-7} permeability).

59 - Filter Press - 3/13/90
Used to remove solids in dewatering effort.

60 - Contact Cooling Pond - 3/13/90
Photo facing northwesterly across Contact Cooling Pond. View is of completed clay cover. Note Lab Technician checking density and thickness.

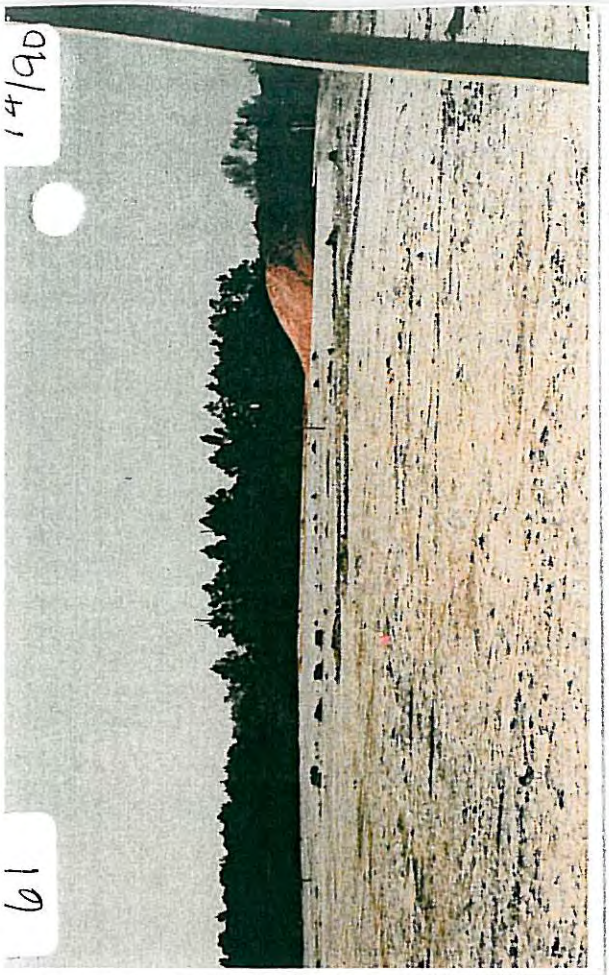
61 - Contact Cooling Pond - 4/4/90
Note load of sand for sand layer. Note grade stakes.

62 - Biological Reactor (ASB) - 4/23/90
Closed south cell. Note filter press dewatering north cell.

63 - Biological Reactor (ASB) - North Cell - 5/4/90
Note liquid level compare to liquid level in Photo 62.

64 - Biological Reactor (ASB) - 5/11/90
Mixing lime kiln dust in north cell in stabilization effort. Note transport truck.

65 - Biological Reactor - North Cell - 5/31/90
Clean soil being mixed into sludge for stabilization.


14/90
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63
5/4/90

64
5/11/90

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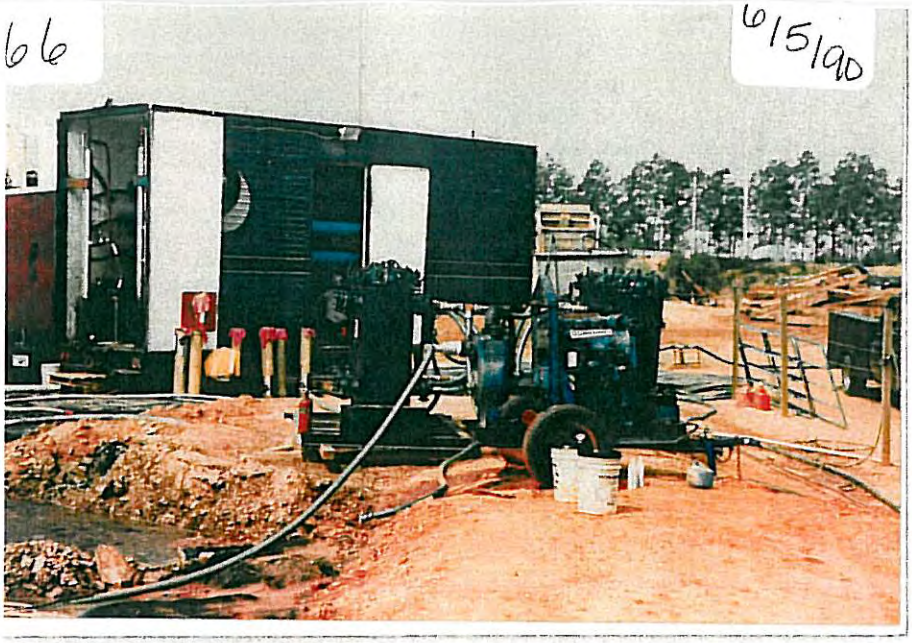
6/15/90



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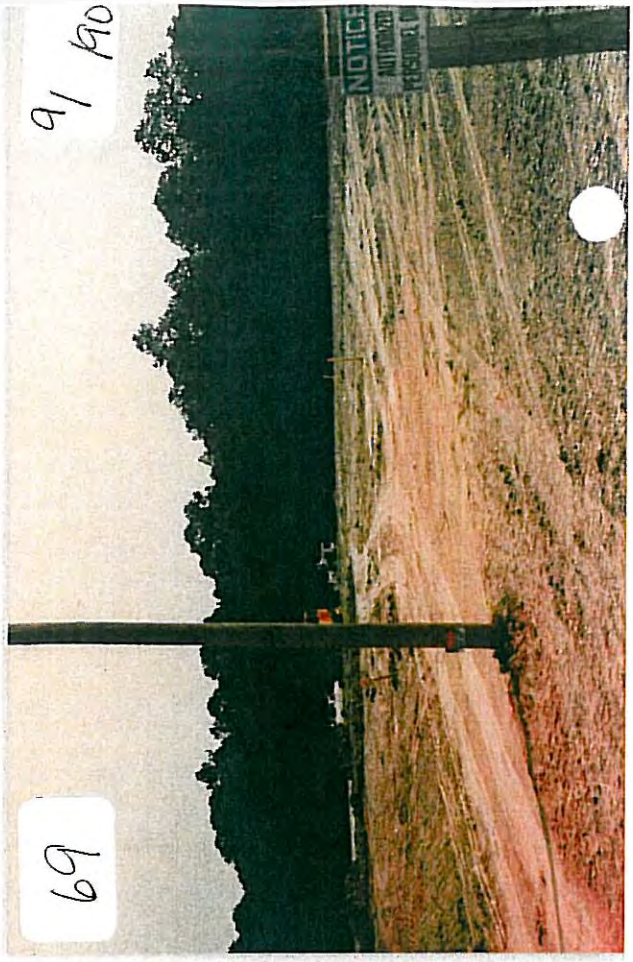
6/16/90

68

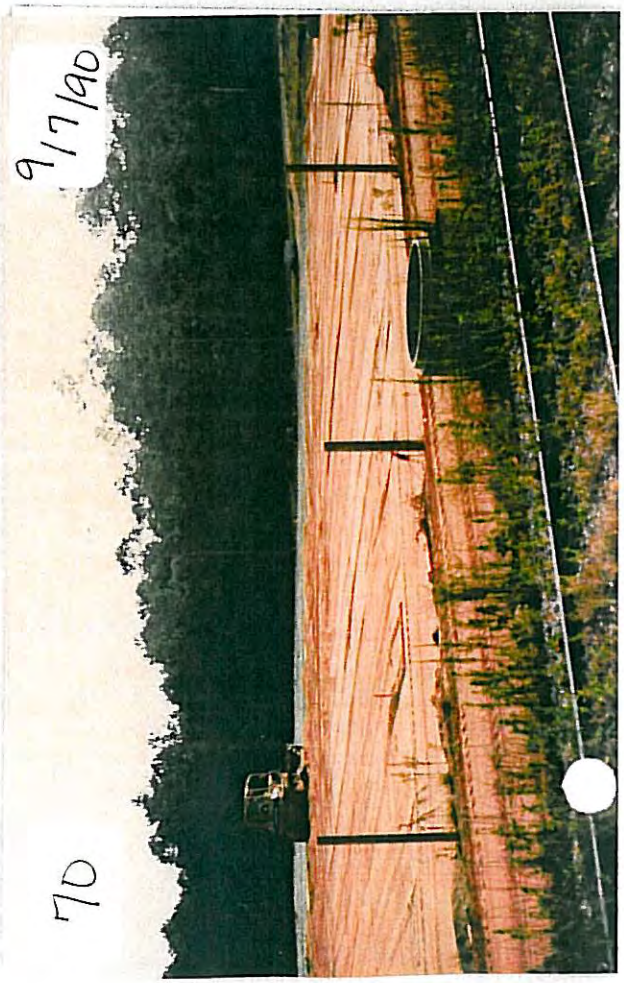
7/25/90

9/1/90



69

9/7/90



66 - Dewatering Equipment - 6/5/90
Reverse osmosis equipment being used to dewater bio-remediation area.

67 - Land Treatment Demonstration Unit - 6/6/90
Facing northeast across the abandoned treatment area Mississippi State University has completed their occupancy of the site. Decision has been made to close as hazardous waste site.

68 - Biological Reactor (ASB) Site - 7/25/90
Photo shows HDPE liner used to cover the two Bio-cells.

69 - Recovery Ponds Site - 9/3/90
Shows clay cover being placed. Note survey truck and survey markers used for grade control. Note self-propelled vibratory sheep foot roller. Picture taken at northwest corner facing southeasterly.

70 - Recovery Ponds Site - 9/7/90
Shows sand layer being placed over clay cover.

71 - Recovery Ponds Site - 9/19/90
Shows first lift of eighteen inch lift of earth fill over the sand layer. Photo facing north.

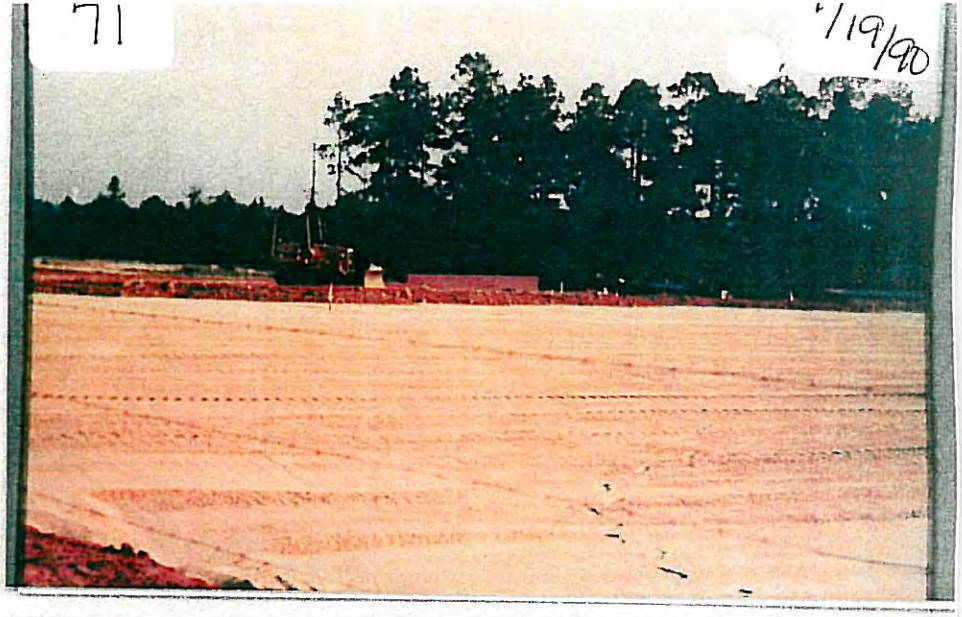
72 - Land Treatment Demonstration Unit - 9/19/90
Shows clay cover in place, survey party setting grade stakes for placement of sand layer.

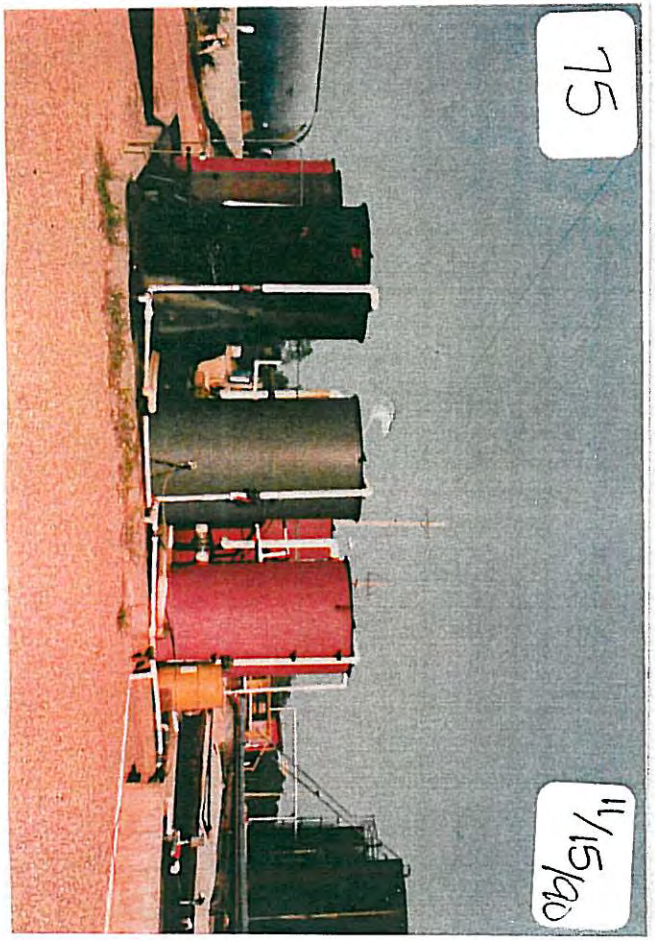
73 - Recovery Ponds Site - 10/ /90
Placing top siol, grading to final grades. Note concrete flat bottom ditch.

74 - Recovery Ponds Site - 11/1/90
After grassing of slopes. Note vestiges of grass coming up on top of the cover. Top had been seeded a week earlier.

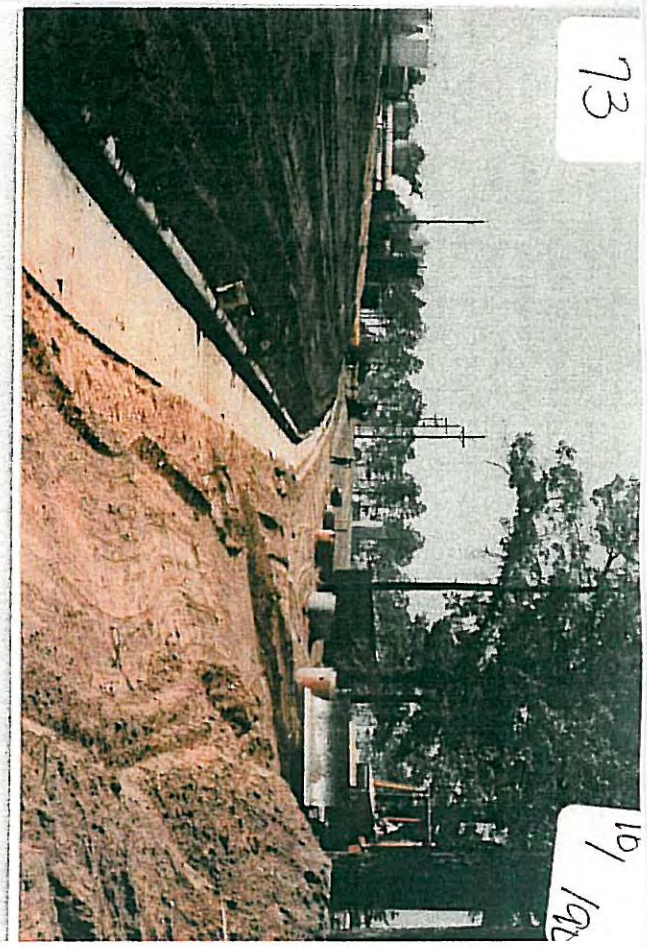
75 - Carbon Columns - 11/15/90
Used as polishing before water is discharged to POTW.

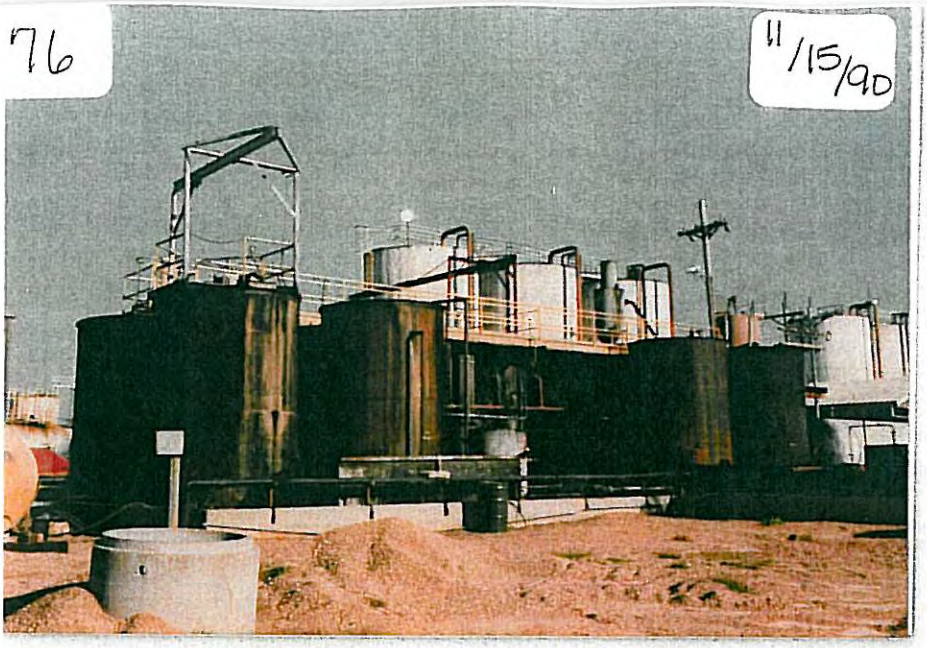
72
'/19/90
BIOREMEDIATION
FIELD DEMONSTRATION
AND RESEARCH UNIT
A COOPERATIVE PROJECT OF
MISSISSIPPI FOREST PRODUCTS
UTILIZATION LABORATORY
ENVIRONMENTAL PROTECTION AGENCY
PROJECT OFFICER-JOHN MATTHEWS
SOUTHERN PRESSURE
TREATERS ASSOCIATION
SITE DONATED BY
INTERNATIONAL PAPER COMPANY
PLANT MANAGER-HOWARD HAMILTON


71
'/19/90


75
11/15/90

74
11/ /90


73
10/ /90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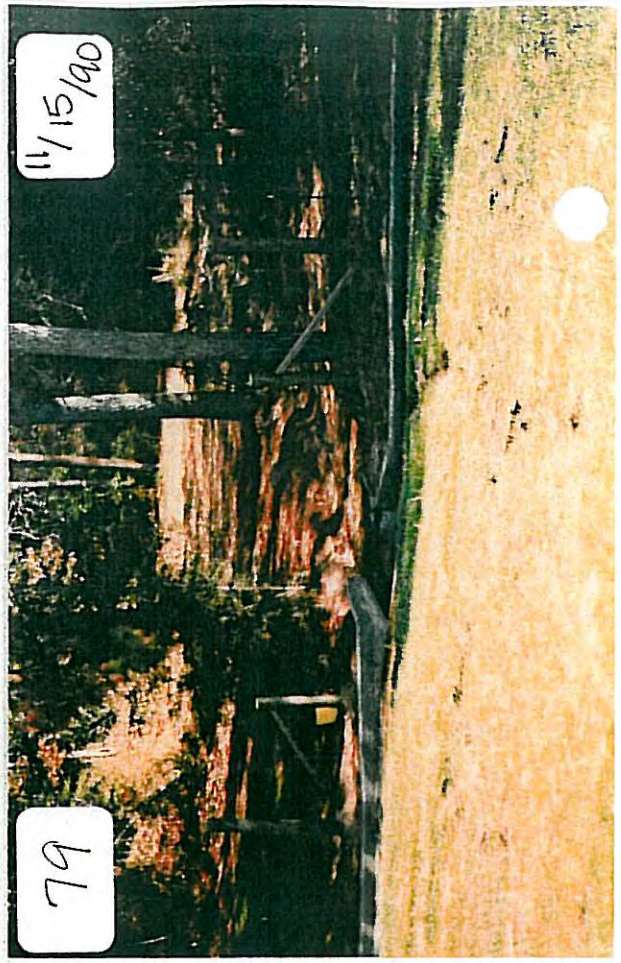
11/15/90


79
11/15/90

77
11/15/90

78
11/15/90

80
11/15/90

76 - Flocculation Tanks - 11/15/90
Used in treatment of water waste.

77 - Recovery Ponds Site - 11/15/90
View from southwest corner facing northeast.

78 - Recovery Ponds Site - 11/15/90
View from northwest corner facing easterly. Note power pole is one foot north of the edge of hazardous waste area.

79 - Recovery Ponds Site - 11/15/90
Stilling basin at confluence of the two diversion ditches on either side of Recovery Ponds Site. Photo taken from eastern slope facing east towards Churchhouse Creek.

80 - Contact Cooling Pond - 11/15/90
Shows grass cover over site and fence.

81 - Solid Waste Management Units 4 & 5 - 11/15/90
Photo taken from Sludge Pits 2 & 3 facing south-easterly. Slope of cover for Sludge Pits 2 & 3 is in the foreground.

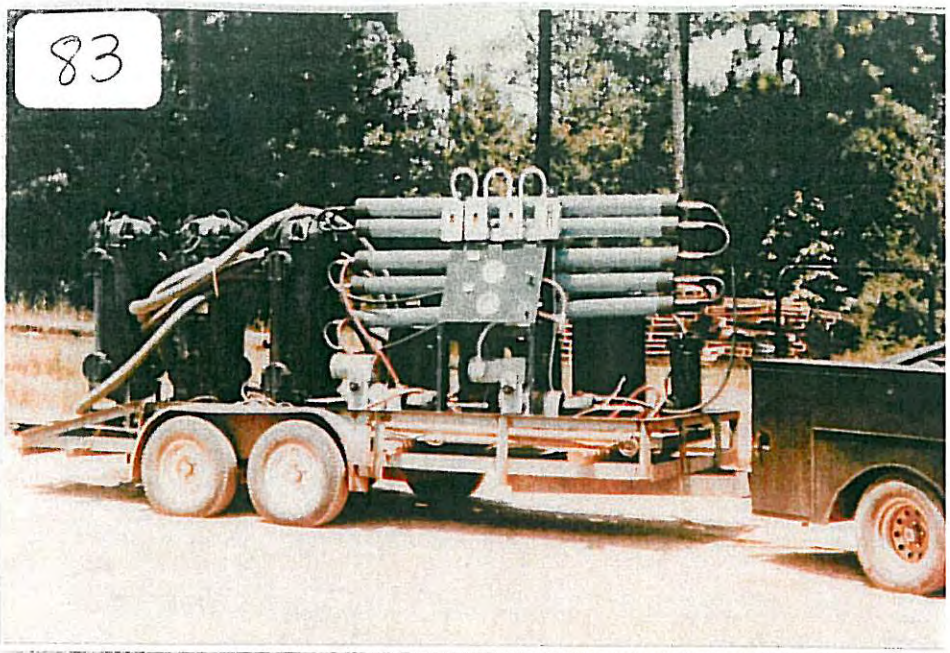
82 - Reverse Osmosis Equipment - date unknown
Departing from site after cleaning.

83 - Reverse Osmosis Equipment - date unknown

84 - Centrifuge Equipment - date unknown
Departing site after cleanup.

85 - MoTec, Inc. Equipment - date unknown
Departing site after cleanup.

18
11/15/90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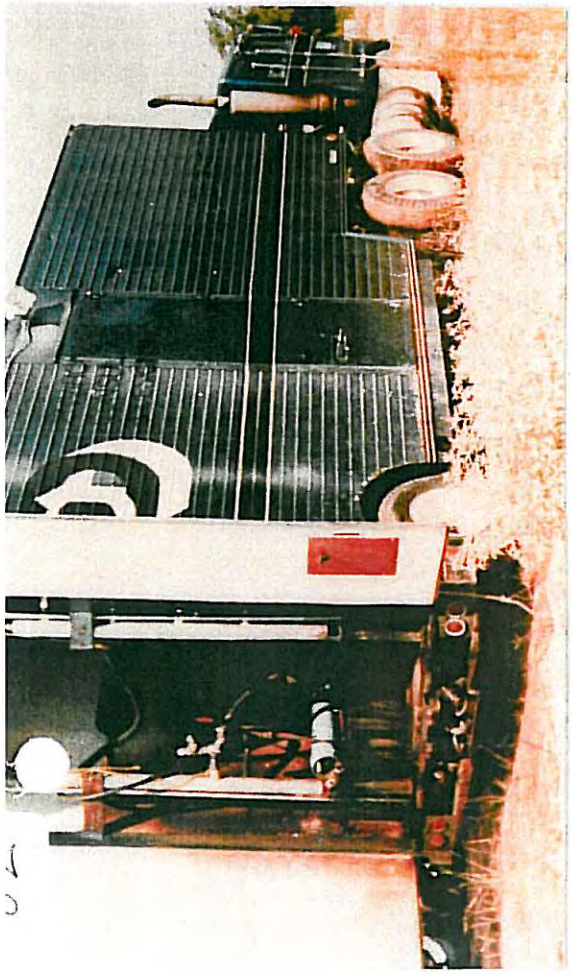
84



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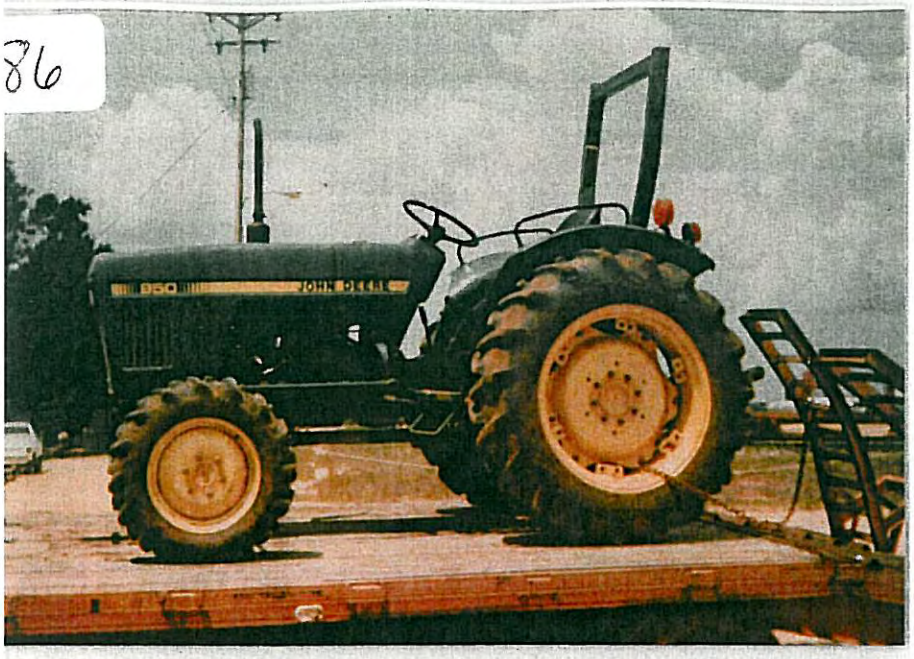
86



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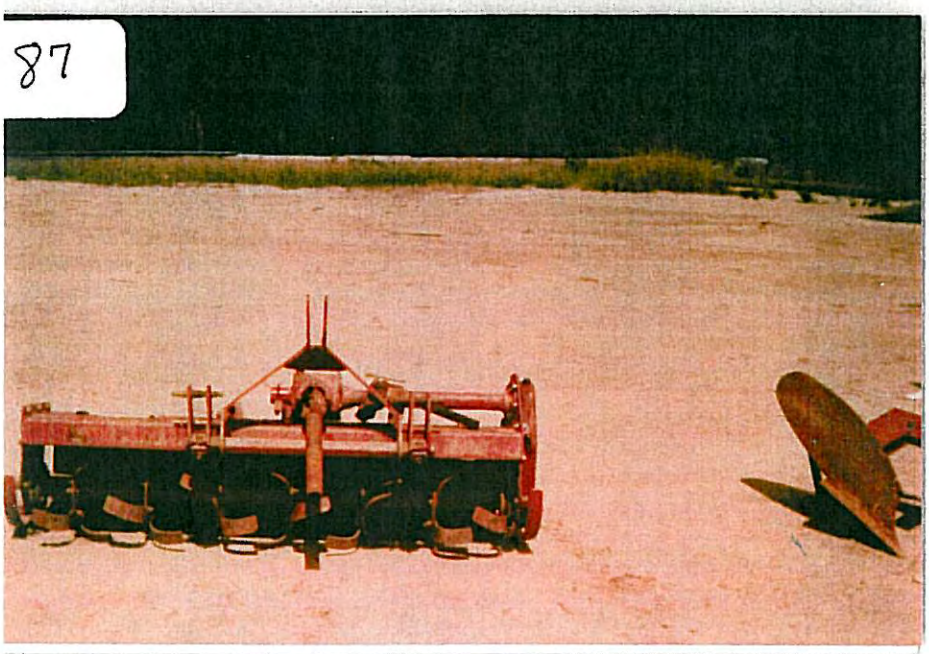


88

86 - MoTec, Inc. Equipment - date unknown
Departing site after cleanup.

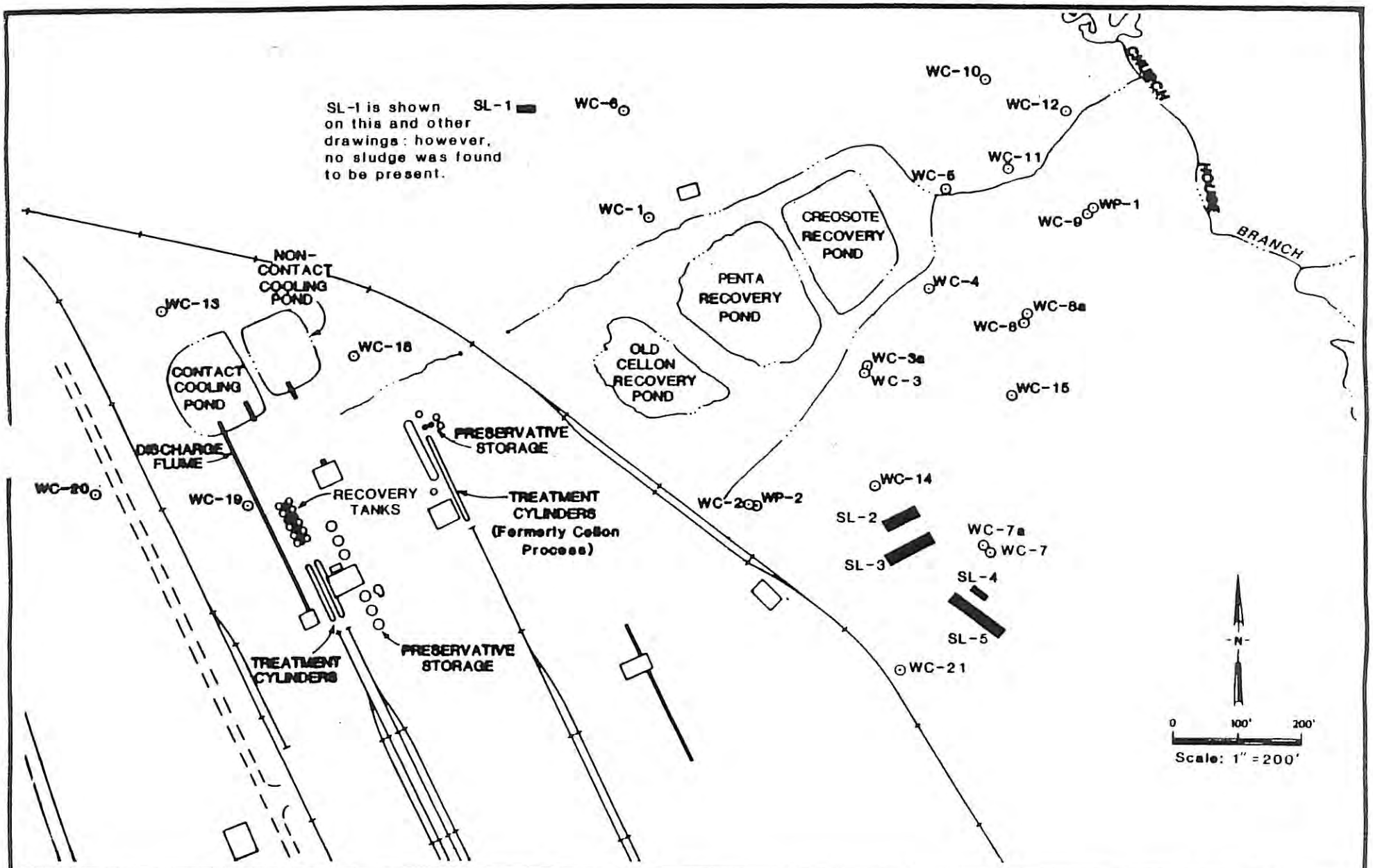
87 - MoTec, Inc. Equipment - date unknown
Departing site after cleanup.

88 - MoTec, Inc. Equipment - date unknown
Departing site after cleanup.

Tab B

EXHIBIT B

MAP OF WIGGINS FACILITY LAYOUT



JAMES L. GRANT & ASSOCIATES
geotechnical engineering • management • computer science
ENGLEWOOD, COLORADO

LEGEND
SL-1: Sludge Pit
WC-1: Citronelle Well
WD-1: Pascagoula Well

Figure: 1.1
WIGGINS FACILITY LAYOUT

EXHIBIT C

CREOSOTE SLUDGES TO ALLIED

Brax

Center Impoundment
FTU Value
Creo Sludge 16,5
BTU pa

Manifest - Creosote Sludges To Allied

DATE	MANIFEST DOCUMENT #	State Manifest Document	Return	Weight
5/4/88	00001	FTP1987939	✓	43,500
5/5/88	00002	FTP1987940	✓	32,420
5/6/88	00003	FTP1987941	✓	43640
5/12/88	00004	FTP1987942	✓	45,260
5/13/88	00005	FTP1987943	✓	43,960
				208,780

800-424-8802 | 3 = 100 LBS. | DOT = 202-426-1830

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-30-8

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] | Manifest Document No. [illegible] | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

A. State Manifest Document Number [redacted]
B. State Transporter's ID
C. Transporter's Phone
D. State Transporter's ID
E. Transporter's Phone
F. State Facility's ID
G. Facility's Phone (205) 787-8605

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges	1	T-T	43,5[illegible]	P	K001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Glove and Eye Protection when Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature | Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials | Date

Printed/Typed Name: Suttles Truck Leasing, Inc. | Signature | Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials | Date

Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Allied Corporation | Signature | Date Month Day Year

GENERATOR

TRANSPORTER

FACILITY

EPA Form 8700-22 (3-84)

#6 - GENERATOR #2 (MUST ACCOMPANY SHIPMENT)

24-8802	3 = 100 LBS.	DOT	= 202-426-1830

(Form designed for use on elite (12-pitch) typewriter.)

FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] | Manifest Document No. [illegible] | 2. Page 1 of [illegible] | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
[illegible]
[illegible] 39577

4. Generator's Phone (601) 918-5[illegible]

5. Transporter 1 Company Name: Sutton Truck Leasing, Inc.
6. US EPA ID Number: [illegible]

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: ALD031499833

A. State Manifest Document Number
B. State Transporter's ID
C. Transporter's Phone
D. State Transporter's ID
E. Transporter's Phone
F. State Facility's ID
G. Facility's Phone (205) 787-8605

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. [illegible]	[illegible]	[illegible]	32420	1	K001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
[illegible]

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: [illegible] PAPER COMPANY | Signature | Month Day Year [illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name: [illegible] | Signature | Month Day Year [illegible]

18. Transporter 2 Acknowledgement or Receipt of Materials | Date
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. | Date
Printed/Typed Name | Signature | Month Day Year

GENERATOR

TRANSPORTER

FAC

EPA Form 8700-22 (3-84)

#6 - GENERATOR #2 (MUST ACCOMPANY SHIPMENT)

...ONAL RESPONSE
...424-8802

1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.

EPA HOTLINE = 800-424-9346
CDC POISON CENTER = 404-635-5313
DOT = 202-426-1830

PROVIDED

...pe. (Form designed for use on elite (12-pitch) typewriter.)

FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-3...

...NIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MSD 9 0 0 6 0 0 0 8 4
Manifest Document No.: 0000 3
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: ALD 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: ALD 0 3 1 4 9 9 8 3 3

[redacted]

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges	1	T-T	43,640	P	K001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY
Signature:
Month Day Year: 05 [illegible] [illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Suttles Truck Leasing, Inc.
Signature:
Date: Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Allied Corporation
Signature:
Date: Month Day Year

GENERATOR

TRANSPORTER

FACILITY

EPA Form 8700-22 (3-84)

...ESS OF ...ASSIGNED ...AL RESPONSE ...24-8802	1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830	PLACARDS PROVIDED

(Form designed for use on elite (12-pitch) typewriter.)

FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-30-8...

...IFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] | Manifest Document No. [illegible] | 2. Page 1 of | Information in the shaded areas is not required by Fe... law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORM, NA9189 Creosote Sludges	[illegible]	[illegible]	[illegible]	[illegible]
b.				
c.				
d.				

GENERATOR

Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

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16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature: | Month Day Year: [illegible]

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Suttles Truck Leasing, Inc. | Signature: [illegible] | Date: Month Day Year: [illegible]

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name: | Signature: | Date: Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Allied Corporation | Signature: | Date: Month Day Year:

...ONAL RESPONSE | 2 = 1000 LBS. 5 = 1 LB. 3 = 100 LBS. | CDC POISON CENTER = 404-635-5313
...-424-8802 | DOT = 202-426-1830

...type. (Form designed for use on elite (12-pitch) typewriter.)

FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-30-8...

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] | Manifest Document No. [illegible] | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: [illegible]

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: ALD031499833

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges	1	T-T	43.60	
b.				
c.				
d.				

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, wear Impervious Gloves and Eye Protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature: | Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Suttles Truck Leasing, Inc. | Signature: [illegible] | Date: Month Day Year 5 [illegible] 8

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name: | Signature: | Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Allied Corporation | Signature: | Date: Month Day Year

GENERATOR

TRANSPORTER

FACILITY

EPA Form 8700-22 (3-84)

#6 - GENERATOR #2 (MUST ACCOMPANY SHIPMENT)

Pinta Impoundment

Manifest - Creosote Sludges To Allied

Use in sequential order
FTP1987918 - FTP1987927

DATE	MANIFEST DOCUMENT#	State Manifest Document#	Return #	Weight
3/29/88	001	FTP 1987918	✓	43,220
3/30/88	✓ 002	FTP 1987919	✓	43,980
4/4/88	✓ 003	FTP 1987920	✓	43,780
4/5/88	✓ 004	FTP 1987921	✓	40,100
4/12/88	005	FTP 1987922	✓	42,340
4/13/88	006	FTP 1987923	✓	39,580
4/14/88	007	FTP 1987924	✓	45,880
4/15/88	008	FTP 1987925	✓	37,500
4/18/88	009	FTP 1987926	✓	46,120
4/19/88	010	FTP 1987927	✓	38,140
				420,540

Keep Copy # 4 of Manifest for our records

NATIONAL RESPONSE 800—424-8802	2 = 1000 LBS. 3 = 100 LBS.	5 = 1 LB.	EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-30-8

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.
Manifest Document No.
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
[illegible] PAPER COMPANY
P.O. BOX 57
[illegible]
4. Generator's Phone ([illegible]) [illegible]

5. Transporter 1 Company Name
6. US EPA ID Number

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number
ALD031499833

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
b.				
c.				
d.				

Additional Descriptions for Materials Listed Above
K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
[illegible]

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: [illegible]
Signature
Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible]
Signature
Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Date: Month Day Year

EPA Form 8700-22 (3-84) #6 - GENERATOR #2 (MUST ACCOMPANY SHIPMENT)

Print or Type. (Form designed for use on elite (12-pitch) typewriter.)

DOT ☎ 202-426-1830

FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-30-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible]

Manifest Document No.

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
[illegible]
P. O. [illegible]
[illegible], AL 36577

4. Generator's Phone (251) 926-5475

5. Transporter 1 Company Name
Sullivan Truck Leasing, Inc.

6. US EPA ID Number
[illegible]

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number
ALD031499833

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. [illegible] Solid Non, [illegible] Geosorb Studge	1	TT	43,000	P
b.				
c.				
d.				

APR 988 INT. PAPER CO. TREATED WOOD PRODUCTS WIGGINS

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
[illegible]

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name [illegible] PAPER COMPANY | Signature | Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name [illegible] Truck Leasing Inc. | Signature | Date Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name | Signature | Date Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Date Month Day Year

EPA Form 8700-22 (3-84)

#6 - GENERATOR #2 (MUST ACCOMPANY SHIPMENT)

800-424-8802 | 3 = 100 LBS. | DOT | = 202-426-1830

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

FORM APPROVED. OMB NO. [illegible]

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: M S D 9 8 0 6 0 0 0 8 4 | Manifest Document No.: 0 0 3 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
[illegible]

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 3 7 0 4 0 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORMX, NA9189 Creosote Sludges	1	T-T	43,780	P
b.				
c.				
d.				

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature: [signature] | Month Day Year: 4 4 88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Suttles Truck Leasing, Inc. | Signature: [signature] | Date: Month Day Year: 4 4 88

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name: | Signature: | Date: Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Allied Corporation [signature] | Signature: [signature] | Date: Month Day Year: 4 4 88

EPA Form 8700-22 (3-84)

#6 - GENERATOR #2 (MUST ACCOMPANY SHIPMENT)

24-8802 | 3 = 100 LBS. | DOT = 202-426-1830

(Form designed for use on elite (12-pitch) typewriter.)

FORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600034 | Manifest Document No. 000 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
VICKSBURG, MS 39177

4. Generator's Phone (601) 638-3475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc. | 6. US EPA ID Number: ALD095704011

7. Transporter 2 Company Name | 8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: ALD031499833

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges	1	T-T	40,100	P
b.				
c.				
d.				

GENERATOR

15. Special Handling Instructions and Additional Information
Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature | Date: Month 4 Day 15 Year 88

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Suttles Truck Leasing, Inc. | Signature | Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Allied Corporation ROBERT LaLine | Signature | Date: Month 4 Day 15 Year 88

EPA Form 8700-22 (3-84)

#6 - GENERATOR #2 (MUST ACCOMPANY SHIPMENT)

S WASTE ASSIGNED
O NATIONAL RESPONSE
800-424-8802

1 = 5000 LBS. 4 = 10 LBS.
2 = 1000 LBS. 5 = 1 LB.
3 = 100 LBS.

EPA HOTLINE = 800-424-9346
CDC POISON CENTER = 404-636-5313
DOT = 202-426-1830

s print or type. (Form designed for use on elite (12-pitch) typewriter.)

FORM APPROVED, OMB NO. [illegible] EXPIRES [illegible]

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. K S D 9 8 0 6 0 0 0 4
Manifest Document No. 0 0 0 0 5
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P. O. BOX 37
WIGGINS, MS 39577
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name
Suttles Truck Leasing, Inc.
6. US EPA ID Number
A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number
A L D 0 3 1 4 9 9 8 3 3

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges	1	TT	4 2 3 4 0	P
b.				
c.				
d.				

[redacted]

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY
Signature:
Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Suttles Truck Leasing, Inc. Alexander Brooks
Signature: Alexander Brooks
Date: Month 7 Day 12 Year 88

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name: Alexander Brooks
Signature:
Date: Month Day Year

FA

19. Discrepancy Indication Space

ITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Allied Corporation
Signature:
Date: Month Day Year

EPA Form 8700-22 (9-84)

-424-8802 | 3 = 100 LBS. | CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830

type. (Form designed for use on elite (12-pitch) typewriter.)

FORM APPROVED, OMB NO. [illegible], EXPIRES [illegible]

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: M S D 9 8 0 6 0 0 0 8 4 | Manifest Document No.: 0 0 6 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges	1	TT	3 9 5 8 0	P
b.				
c.				
d.				

[illegible]

15. Special Handling Instructions and Additional Information

Avoid Sk[illegible] Contact, Wear Impervious Gloves and Eye Protection when Handling.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature: | Month Day Year: [illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Suttles Truck Leasing, Inc. Alexander Brooks | Signature: [illegible] | Date: Month Day Year: [illegible]

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name: | Signature: | Date: Month Day Year:

19. Discrepancy Indication Space

[illegible]. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Allied Corporation | Signature: | Date: Month Day Year: [illegible]

GENERATOR

TRANSPORTER

FAC

EPA Form 8700-22 (3-84)

#6 - GENERATOR #2 (MUST ACCOMPANY SHIPMENT)

424-8802 | 3 = 100 LBS. | DOT | = 202-426-1830

Type. (Form designed for use on elite (12-pitch) typewriter.)

FORM APPROVED, OMB NO. [illegible]

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: K S D 9 8 0 6 0 0 0 8 4 | Manifest Document No.: 0 0 0 0 7 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges	1	T-T	45,880	P
b.				
c.				
d.				

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature: [illegible] | Month Day Year: 4 14 88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Alexander Brooks
Suttles Truck Leasing, Inc. | Signature: [illegible] | Date: Month Day Year: 4 14 88

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name: | Signature: | Date: Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Allied Corporation | Signature: | Date: Month Day Year:

GENERATOR

TRANSPORTER

FAC

EPA Form 8700-22 (3-84)

#6 - GENERATOR #2 (MUST ACCOMPANY SHIPMENT)

800-424-8802 | 3 = 100 LBS. | DOT | = 202-426-1830

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

FORM APPROVED. OMB NO. 2050-0039. Expires 3-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N.S.D.9.8.0.6.0.0.0.8.4 | Manifest Document No. 0.0.0.0.0 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A.L.D.0.9.5.7.0.4.0.1.1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORMX, NA9189 Creosote Sludges	1	T-T	37,500.	P
b.				
c.				
d.				

GENERATOR

15. Special Handling Instructions and Additional Information
Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name: Alexander Sicks, Suttles Truck Leasing, Inc. | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name | Signature | Month Day Year

FA

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Allied Corporation | Signature | Date Month Day Year

EPA Form 8700-22 (3-84) #6 - GENERATOR #2 (MUST ACCOMPANY SHIPMENT)

[redacted]-424-8802

2 = 1000 LBS. 3 = 100 LBS. 5 = 1 LB.

CDC POISON CENTER = 404-635-5313
DOT = 202-426-1830

[redacted]r type. (Form designed for use on elite (12-pitch) typewriter.)

FORM APPROVED, OMB NO. [redacted]

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. K S D 9 8 0 6 0 0 0 8 4
Manifest Document No. 0 0 0 0 9
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
[redacted]

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges	1	T-T	46,020	P
b.				
c.				
d.				

J. Additional Descriptions for Materials Listed Above

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY
Signature
Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Suttles Truck Leasing, Inc.
Signature
Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: ROBERT LOLLIN
Allied Corporation
Signature
Date: Month Day Year

EPA Form 8700-22 (3-84)

#6 - GENERATOR #2 (MUST ACCOMPANY SHIPMENT)

NATIONAL RESPONSE 800-424-8802 | 2 = 1000 LBS. 3 = 100 LBS. | CDC POISON CENTER = 404-[illegible]-6313 DOT = 202-426-1830

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

FORM APPROVED, OMB NO. [illegible], EXPIRES [illegible]

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M [illegible] 9 8 0 6 0 0 0 8 4 | Manifest Document No. [illegible] | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 17
[illegible]

4. Generator's Phone ( )

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids N[illegible] ORHE, NA9189 Creosote Sludges	1	T-T	38,140	P
b.				
c.				
d.				

GENERATOR

Additional Descriptions for Materials Listed Above

15. Special Handling Instructions and Additional Information

Avoid Skin Contact. Wear Impervious Gloves and Eye Protection when Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name: Suttles Truck Leasing, Inc. H/[illegible] Brooks | Signature [illegible] | Month Day Year 6 19 88

18. Transporter 2 Acknowledgement or Receipt of Materials | Date
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Allied Corporation [illegible] | Signature [illegible] | Date Month Day Year 4 11 [illegible]

EPA Form 8700-22 (3-84)

#6 - GENERATOR #2 (MUST ACCOMPANY SHIPMENT)

Contact Cooling Pond

Manifest - Creo Sludge To Allied

Date	Manifest Document #	State Manifest Document #	Return	Weight
7/6/87	001	FTP 1987440	✓	38,400P
7/7/87	002	FTP 1987441	✓	49,200
7/8/87	003	FTP 1987442	✓	29,860
7/9/87	004	FTP 1987443	✓	28,740
7/13/87	005	FTP 1987444	✓	30,660
7/14/87	006	FTP 1987445	✓	38,120
7/15/87	007	FTP 1987446	✓	31,460
7/16/87	008	FTP 1987447	✓	35,180
7/17/87	009	FTP 1987448	✓	31,400
7/20/87	010	FTP 1987449	✓	34,580
				347,600

1738 Tons

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D [illegible] 6 0 0 0 8 4 — Manifest Document No. [illegible] — 2. Page 1 of [illegible] — Information in the shaded areas is not required by Fe[illegible]

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone (601) 926-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges			18.460	P
b.				
c.				
d.				

[illegible]

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: INTERNATIONAL PAPER COMPANY — Signature: X — Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: Suttles Truck Leasing, Inc. — Signature — Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials — Date
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Date
Printed/Typed Name — Signature — Month Day Year

GENERATOR — TRANSPORTER — FACILITY

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800-424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 1 LB.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600084 Manifest Document No. 2. Page 1 Information in the shaded areas is not required by Federal

GENERATOR

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: ALD057040111

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: ALD031499833

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORHE, NA9189 Creosote Sludges	1	T-T		P
b.				
c.				
d.				

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name: Suttles Truck Leasing, Inc. | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. | Date
Printed/Typed Name | Signature | Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800-424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-30-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. K S D 9 8 0 6 0 0 0 8 4 — Manifest Document No. 003 — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone ( )

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc — 6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name — 8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids ! .S. ONE. NA9189 Creosote Sludges	1	T-T	4800	P
b.				
c.				
d.				

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY — Signature — Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: Suttles Truck Leasing, Inc. — Signature — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Date
Printed/Typed Name — Signature — Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800-424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-6313 DOT = 202-426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) FORM APPROVED, OMB NO. 2050-0039, EXPIRES 9-30-8

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 | Manifest Document No. 0 0 4 | 2. Page 1 | Information in the shaded areas is not required by Federal

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, RA9189 Creosote Sludges	1	T-T	28.740	P
b.				
c.				
d.				

GENERATOR

JUL 1987 INT. PAPER CO. TREATED WOOD PRODUCTS WIGGINS

15. Special Handling Instructions and Additional Information
Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name: Suttles Truck Leasing, Inc. | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. | Date
Printed/Typed Name | Signature | Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 4 = 10 LBS. 2 = 1000 LBS. 5 = 1 LB. 3 = 100 LBS.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-30-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M·S·D·9·8·0·6·0·0·0·8·4 Manifest Document No. 0·0·5 2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A·L·D·0·9·5·7·0·4·0·1·1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A·L·D·0·3·1·4·9·9·8·3·3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges	1	T-T	30,660	P
b.				
c.				
d.				

[redacted]

15. Special Handling Instructions and Additional Information
Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature | Month Day Year: 0 7 2 3 8 7

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name: Suttles Truck Leasing, Inc. | Signature | Month Day Year: 0 7 2 3 8 7

18. Transporter 2 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. | Date
Printed/Typed Name | Signature | Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800-424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-30-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 — Manifest Document No. 0 0 8 — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc. — 6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name — 8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges	1	T-T	38,120	P
b.				
c.				

[redacted]

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY — Signature — Date (Month Day Year): 0 7 1 4 8 7

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: Suttles Truck Leasing, Inc. — Signature — Date (Month Day Year): 07 14 8 7

18. Transporter 2 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name — Signature — Date (Month Day Year)

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name — Signature — Date (Month Day Year)

GENERATOR — TRANSPORTER — FACILITY

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800-424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830	PLACARDS PROVIDED

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 A — Manifest Document No. 0 0 7 — 2. Page 1 of 1 — Information in the shaded a[illegible] is not required by Fe[illegible]

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creonote Sludges	1	T-T	31,460	P
b.				
c.				
d.				

[illegible]

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY — Signature: — Month Day Year: 0 7 1 5 8 7

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: Suttles Truck Leasing, Inc. — Signature: — Month Day Year: 0 7 1 5 8 7

18. Transporter 2 Acknowledgement or Receipt of Materials — Date

Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Date

Printed/Typed Name: [illegible] — Signature: — Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4
Manifest Document No. 0 0 8
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone ( )

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges	1	T-T	35,180	P
b.				
c.				
d.				

[redacted]

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY
Signature
Month Day Year: 0 7 1 6 8 7

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Suttles Truck Leasing, Inc.
Signature
Date — Month Day Year: 0 7 1 6 8 7

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Date — Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-30-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 | Manifest Document No. 0 0 9 | 2. Page 1 | Information in the shaded area is not required by Federal law.

[redacted]

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges	1	T-T	31,400	P
b.				
c.				
d.				

[redacted]

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature | Month Day Year: 0 7 1 7 8 7

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name: Suttles Truck Leasing, Inc. | Signature | Month Day Year: 0 7 1 7 8 7

18. Transporter 2 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. | Date
Printed/Typed Name | Signature | Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—636-8313 DOT = 202—426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) FORM APPROVED. OMB NO. 2050-0039. EXPIRES 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 4 4 8 0 8 4

Manifest Document No. [illegible] Information in the shaded areas [illegible] required by Federal [illegible]

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA5189 Creosote Sludges	1	T-T	34,580	P
b.				
c.				

JUL 1987 INT. PAPER CO. TREATED WOOD PRODUCTS WIGGINS

[redacted]

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection when Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name	Signature	Month Day Year
INTERNATIONAL PAPER COMPANY		7 20 87

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials		Date
Printed/Typed Name: Suttles Truck Leasing, Inc.	Signature	Month Day Year 7 10 7
18. Transporter 2 Acknowledgement of Receipt of Materials		**Date**
Printed/Typed Name	Signature	Month Day Year

FACILITY

Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date Month Day Year

Manifest - Creo Sludge To Allied

Date	Manifest Document #	State Manifest Document #	Weight
4-30-86	00001	FTP 1986123	27,040
7-1-86	00002	FTP 1986124	29,800
7/2/86	00003	FTP 1986125	44,920
7/3/86	00004	FTP 1986126	44,400
7/7/86	00005	FTP 1986127	44,660
7/8/86	00006	FTP 1986128	44,900
7/9/86	00007	FTP 1986129	36,860
7/10/86	00008	FTP 1986130	36,580
7/11/86	00009	FTP 1986131	36,200
/14/86	00010	FTP 1986132	32,880
7/15/86	00011	FTP 1986133	36,080
. /86	00012	FTP 1986134	36,440
/17/86	00013	FTP 1986135	36,000
/18/86	00014	FTP 1986136	37,320
/21/86	00015	FTP 1986137	37,127
/22/86	00016	FTP 1986138	36,880
/23/86	00017	FTP 1986139	36,880
/24/86	00018	FTP 1986140	36,500
/25/86	00019	FTP 1986141	36,520
/29/86	00020	FTP 1986142	35,840
/30/86	00021	FTP 1986143	37,280
/31/86	00022	FTP 1986144	37,640
/1/86	00023	FTP 1986145	37,620
. /86	00024	FTP 1986146	37,180
/5/86	00025	FTP 1986147	37,300
/6/86 26	00026	FTP 1986148	21,920

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M.S.D.9.8.0.6.0.0.0.8.4 Manifest Document No. 001
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577
4. Generator's Phone (601) [illegible]-2475

5. Transporter 1 Company Name: Suttles Trucking, Inc
6. US EPA ID Number: A.L.[illegible].0.9.5.7.0.4.0.1.1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A.L.D.0.3.1.4.9.9.8.3.3

A. State Generator's ID
B. State Transporter's ID
C. Transporter's Phone
D. State Transporter's ID
E. Transporter's Phone
F. State Facility's ID
G. Facility's Phone (205) 787-8605

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solid, [illegible] NOS (Chromate Sludge)				P	K001
b.					
c.					

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid [illegible] and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name [illegible] | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name [illegible] | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. | Date
Printed/Typed Name | Signature | Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800–424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800–424-9300 EPA HOTLINE = 800–424-9346 CDC POISON CENTER = 404–635-5313 DOT = 202–426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] | Manifest Document No. | 2. Page 1 of 1 | Information in the shaded is not required by Fe law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) [illegible]

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: [illegible]
7. Transporter 2 Company Name
8. US EPA ID Number
9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: ALD031499833

A. [illegible]
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone (205) 787-8605

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids NOS, OHMS, NA9100 Creosote Sludges				P	K001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid Skin Contact, Wear Impervious Gloves and Use Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: International Paper Company [illegible] | Signature | Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name: [illegible] | Signature | Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials | Date
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. | Date
Printed/Typed Name | Signature | Month Day Year

GENERATOR

TRANSPORTER

FACILITY

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 — Manifest Document No.
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) [illegible]

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 3 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

A. State Manifest Document Number: [illegible]
B. State Generator's ID:
C. State Transporter's ID:
D. Transporter's Phone:
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone: (205) 787-8605

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids NOS, [illegible], NA9189 Creosote Sludges			[illegible]	P	K001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid Skin Contact, Wear Impervious Gloves and Eye Protection [illegible] handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company [illegible] — Signature: — Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: Suttles Truck Leasing, Inc. — Signature: — Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials — Date
Printed/Typed Name: — Signature: — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Date
Printed/Typed Name: — Signature: — Month Day Year

GENERATOR

TRANSPORTER

FACILITY

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800-424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 4 = 10 LBS. 2 = 1000 LBS. 5 = 1 LB. 3 = 100 LBS.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] Manifest Document No.
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Pigeon, MS 39577
4. Generator's Phone ([illegible]) [illegible]

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: [illegible]

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: ALD031499833

A. State Generator's ID
B. State Generator's Site Address
C. State Transporter's ID
D. Transporter's Phone
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone (205) 787-8605

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous waste solids n.o.s. (R.P., Naphtha) Creosote Sludge			[illegible]	P	K001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid discharge, use impervious water and spill [illegible] handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
International Paper Company		

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials		Date
Printed/Typed Name: Suttles Truck Leasing, Inc	Signature	Month Day Year
18. Transporter 2 Acknowledgement of Receipt of Materials		**Date**
Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800--424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 4 = 10 LBS. 2 = 1000 LBS. 5 = 1 LB. 3 = 100 LBS.	CHEM TREC = 800--424-9300 EPA HOTLINE = 800--424-9346 CDC POISON CENTER = 404--636-5313 DOT = 202--426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. K S D 9 8 0 6 0 0 0 8 4 | Manifest Document No. | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORMI, NA9189 Creosote Sludges			4	P
b.				
c.				
d.				

[redacted]

15. Special Handling Instructions and Additional Information
Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name: Suttles Truck Leasing, Inc. | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. | Date
Printed/Typed Name | Signature | Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800-424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M8D98060008 4 — Manifest Document No. [illegible] — 2. Page 1 of 2 — Information in the shaded [illegible] is not required by Fe[illegible] law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: ALD095704011

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: ALD031499833

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, RA9189 Creosote Sludges			[illegible]	P
b.				
c.				
d.				

[redacted]

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: International Paper Company Internationa — Signature: — Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: Suttles Truck Leasing, Inc — Signature: — Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials — Date

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Date

Printed/Typed Name — Signature — Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 4 = 10 LBS. 2 = 1000 LBS. 5 = 1 LB. 3 = 100 LBS.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 — Manifest Document No. — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 3 7 0 4 0 1 1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORMF, NA9189 Creosote Sludges			24,546	P
b.				
c.				

[redacted]

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: International Paper Company — Signature — Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: Suttles Truck Leasing, Inc. — Signature — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Date Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 4 = 10 LBS. 2 = 1000 LBS. 5 = 1 LB. 3 = 100 LBS.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M.S.D.9.8.0.6.0.0.0.8.4 — Manifest Document No.
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577
4. Generator's Phone (601) 928-5475
5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A.L.D.0.9.5.7.0.4.0.1.1
7. Transporter 2 Company Name
8. US EPA ID Number
9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A.L.D.0.3.1.4.9.9.8.3.3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges				P
b.				
c.				
d.				

JUL 1986 INT. PAPER CO/ TREATED WOOD PRODUCTS WIGGINS

15. Special Handling Instructions and Additional Information
Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company — Signature — Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: Suttles Truck Leasing, Inc. — Signature — Month Day Year
18. Transporter 2 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Date
Printed/Typed Name — Signature — Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800-424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830	PLACARDS PROVIDED

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 0 8 4 — Manifest Document No. — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc. — 6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name — 8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORMC, NA9189 Creosote Sludges				P
b.				
c.				
d.				

JUL 1986 INT. PAPER CO. TREATED WOOD PRODUCTS

15. Special Handling Instructions and Additional Information

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Printed/Typed Name: International Paper Company — Signature — Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: Suttles Truck Leasing, Inc. — Signature — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 — Manifest Document No.
2. Page 1 of 1 — Information in the shaded [illegible] is not required by Fe[illegible] law.

GENERATOR

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges				P
b.				
c.				
d.				

JUL 1986
INT. PAPER CO.
TREATED WOOD PRODUCTS
WIGGINS

15. Special Handling Instructions and Additional Information
Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

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Printed/Typed Name: International Paper Company — Signature — Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: Suttles Truck Leasing, Inc. — Signature — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Date Month Day Year

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600084 Manifest Document No. 0011
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: ALD095704011

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: ALD031499833

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges				P
b.				
c.				
d.				

GENERATOR

JUL 1986 INT. PAPER CO. TREATED WOOD PRODUCTS WIGGINS

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: Garvis Moore | Signature: | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials | Date

Printed/Typed Name: Gene Sammons | Signature: | Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials | Date

Printed/Typed Name: | Signature: | Month Day Year

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. | Date

Printed/Typed Name: | Signature: | Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800-424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830	PLACARDS PROVIDED

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600084 — Manifest Document No. [illegible]
2. Page 1 of 1
Information in the shaded [illegible] is not required by F[illegible]l law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: ALD095704011

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: ALD031499833

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges			76 4[illegible]	P
b.				
c.				
d.				

JUL 1986
INT. PAPER CO.
TREATED WOOD PRODUCTS

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

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Printed/Typed Name: Garvis Moore — Signature: [illegible] — Month Day Year [illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: Gene Sammons — Signature: [illegible] — Month Day Year [illegible]

18. Transporter 2 Acknowledgement or Receipt of Materials — Date

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Date

Printed/Typed Name — Signature — Month Day Year

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. X S D 9 8 0 6 0 0 0 8 4 Manifest Document No. 0075
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges				P
b.				
c.				
d.				

GENERATOR

JUL 1986 INT. PAPER CO. WOOD

15. Special Handling Instructions and Additional Information
Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

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Printed/Typed Name: Carvis Moore | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name: Gene Sammons | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. | Date
Printed/Typed Name | Signature | Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED RQ VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830	PLACARDS PROVIDED

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 0 8 4 — Manifest Document No. 77 — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc. — 6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name — 8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORNE, NA9189 Creosote Sludges			37-20	P
b.				
c.				
d.				

GENERATOR

JUL 1986 INT. PAPER CO. TREATED WOOD PRODUCTS WIGGINS

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

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Printed/Typed Name: Garvis Moore — Signature — Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: Gene Sammons — Signature — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

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Printed/Typed Name — Signature — Month Day Year

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 0 8 4 — Manifest Document No. — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Buttles Truck Leasing, Inc. — 6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name — 8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges			7/12	P
b.				
c.				
d.				

JUL 1986 INT. PAPER CO. TREATED WOOD PRODUCTS WIGGINS

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Printed/Typed Name: Garvie Moore — Signature — Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: Gene Sammons — Signature — Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials — Date

Printed/Typed Name — Signature — Month Day Year

FACILITY

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 — Manifest Document No. [illegible]
2. Page 1 of 1 — Information in the shaded area is not required by Fed. law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone ( )

5. Transporter 1 Company Name: Buttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges			34,55	P
b.				
c.				
d.				

GENERATOR

JUL 1986 INT. PAPER CO. TREATED WOOD PRODUCTS WIGGINS

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Printed/Typed Name	Signature	Month Day Year
Garvis Moore		[illegible]

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name	Signature	Month Day Year
Gene Sammons		

18. Transporter 2 Acknowledgement or Receipt of Materials — Date

Printed/Typed Name	Signature	Month Day Year

FACILITY

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20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Date

Printed/Typed Name	Signature	Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800-424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 4 0 0 0 8 4 — Manifest Document No. — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone ( )

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges				P
b.				
c.				
d.				

JUL 1986 INT. PAPER CO. TREATED WOOD PRODUCTS WIGGINS

15. Special Handling Instructions and Additional Information
Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: Garvis Moore — Signature — Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: Gene Sammons — Signature — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Date
Printed/Typed Name — Signature — Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800-424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 4 = 10 LBS. 2 = 1000 LBS. 5 = 1 LB. 3 = 100 LBS.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 — Manifest Document No. — 2. Page 1 of 2 — Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone ( )

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc. — 6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name — 8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
— 10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, MA9189 Creosote Sludges	1			P
b.				
c.				
d.				

JUL 1986 INT. PAPER CO. TREATED WOOD PRODUCTS WIGGINS

15. Special Handling Instructions and Additional Information
Avoid Skin Contact. Wear Impervious Gloves and Eye Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: Garvis Moore — Signature — Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: Gene Sammons — Signature — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Date Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 4 = 10 LBS. 2 = 1000 LBS. 5 = 1 LB. 3 = 100 LBS.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830	PLACARDS PROVIDED

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 4 9 0 0 8 4 — Manifest Document No. — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone ( )

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc. — 6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name — 8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges			1.52	P
b.				
c.				
d.				

JUL 1986 INT. PAPER CO. TREATED WOOD PRODUCTS WIGGINS

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: Garvis Moore — Signature — Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: Gene Sammons — Signature — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Date Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 4 = 10 LBS. 2 = 1000 LBS. 5 = 1 LB. 3 = 100 LBS.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 — Manifest Document No.
2. Page 1 of 1
Information in the shaded [redacted] is not required by Fe[redacted] law.

GENERATOR

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone ( )

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges	1	TK	[illegible]	P
b.				
c.				
d.				

[redacted]

15. Special Handling Instructions and Additional Information
Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: Garvis Moore | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name: Gene Simmons | Signature | Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials | Date
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: JAMES W. [illegible] | Signature | Date Month Day Year

AUG 1986 INT. PAPER CO. TREATED WOOD PRODUCTS WIGGINS

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800-424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2060-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 — Manifest Document No. — 2. Page 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone ( )

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, KA9189 Creosote Sludges	1	FA	72	P
b.				
c.				
d.				

[redacted]

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: Garvis Moore — Signature: — Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: Gene Sammons — Signature: — Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials — Date

Printed/Typed Name: — Signature: — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Date

Printed/Typed Name: — Signature: — Month Day Year

GENERATOR — TRANSPORTER — FACILITY

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039 9-30-8 Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 — Manifest Document No. [illegible]
2. Page 1 of 1 — Information in the shaded [illegible] is not required by Fe[illegible] law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone ( )

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, NA9189 Creosote Sludges	1	[illegible]	[illegible]	P
b.				
c.				
d.				

GENERATOR

[redacted]

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: Garvis Moore — Signature: — Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: Gene Simmons — Signature: — Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials — Date

Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Date

Printed/Typed Name — Signature — Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800-424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 4 = 10 LBS. 2 = 1000 LBS. 5 = 1 LB. 3 = 100 LBS.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0404. Expires 7-01-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. K S D 9 8 0 6 0 0 8 8 4 — Manifest Document No. — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal Law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone ( )

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc. — 6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name — 8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORM-E, NA9189 Creosote Sludges	1	TK	7K#	P
b.				
c.				
d.				

GENERATOR

[redacted]

15. Special Handling Instructions and Additional Information
Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: Garvis Moore — Signature — Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: Gene Sammons — Signature — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Date
Printed/Typed Name: Allied Corporation — Signature — Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. [illegible]

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. X S D 9 8 0 6 0 0 0 8 4 Manifest Document No. [illegible] 2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224
10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORM-E, NA9189 Creosote Sludges	1	TL	7[illegible]	P
b.				
c.				
d.				

GENERATOR

[illegible]

15. Special Handling Instructions and Additional Information
Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: Garvis Moore | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name: Gene Seamone | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials | Date
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name | Signature | Date Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800-424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800-424-9300 EPA HOTLINE = 800-424-9346 CDC POISON CENTER = 404-635-5313 DOT = 202-426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039 Exp. 9/

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. X S D 9 8 0 6 0 0 0 8 4 | Manifest Document No. | 2. Page 1 of 3 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc. | 6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name | 8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids NOS, ORME, RA9189 Creosote Sludges	1	TK	1	P
b.				
c.				
d.				

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

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Printed/Typed Name: Garvis Moore | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials | Date

Printed/Typed Name: Gene Samons | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials | Date

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Date Month Day Year

REPORT ANY UNRECOVERED DISCHARGE EQUAL TO OR IN EXCESS OF EACH HAZARDOUS WASTE ASSIGNED "RQ" VALUE TO NATIONAL RESPONSE CENTER 800—424-8802	REPORTABLE QUANTITY VALUE 1 = 5000 LBS. 2 = 1000 LBS. 3 = 100 LBS. 4 = 10 LBS. 5 = 1 LB.	CHEM TREC = 800—424-9300 EPA HOTLINE = 800—424-9346 CDC POISON CENTER = 404—635-5313 DOT = 202—426-1830	PLACARDS PROVIDED

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039 Exp. 9/

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 6 4 — Manifest Document No.
2. Page 1 of 1 — Information in the shaded [illegible] is not required by Fe[illegible] law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37
Wiggins, MS 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Suttles Truck Leasing, Inc.
6. US EPA ID Number: A L D 0 9 5 7 0 4 0 1 1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
ALLIED CORPORATION
FAIRFIELD PLANT
1327 ERIE STREET
BIRMINGHAM, AL 35224

10. US EPA ID Number: A L D 0 3 1 4 9 9 8 3 3 — (205) 787-[illegible]

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids NOS, ORM, NA9189 Creosote Sludges	1	[illegible]	[illegible]	P	
b.					
c.					
d.					

AUG 1986 INT. PAPER CO. TREATED WOOD PRODUCTS WIGGINS

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Avoid Skin Contact, Wear Impervious Gloves and Eye Protection When Handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: Garvis Moore — Signature — Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: Gene Sammons — Signature — Month Day Year

18. Transporter 2 Acknowledgement or Receipt of Materials — Date

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Date

Printed/Typed Name — Signature — Month Day Year

GENERATOR — TRANSPORTER — FACILITY

EXHIBIT D

MANIFEST TO MARINE SHALE

1986

1,921.79 Tons

PENTA Sludges

Cellon Impoundment
Sludge Pits ~~2,3~~ 4,5

F	MANIFEST #	TONS	Date
112	0001	27.97	5/3/86
001	0002	27.96	5/3/86
111	0003	27.94	5/3/86
109	0004	27.73	5/3/86
113	0005	29.40	5/3/86
114	0006	28.92	5/3/86
115	0007	26.75	5/3/86
112	0008	29.34	5/4/86
111	0009	29.57	5/4/86
115	0010	27.36	5/4/86
001	011	27.49	5/4/86
9	012	29.95	5/4/86
113	013	29.91	5/4/86
114	014	29.90	5/4/86
112	015	29.07	5/4/86
111	016	29.25	5/4/86
113	017	31.58	5/4/86
109	018	28.91	5/4/86
001	019	28.33	5/4/86
13	020	26.28	5/5/86
109	021	29.33	5/5/86
114	022	26.08	5/5/86
115	023	25.80	5/5/86
1	024	28.49	5/5/86
112	025	25.70	5/5/86
001	026	26.10	5/5/86

Penta Sludges

TK#	Manifest #	Tons	Date
114	027	29.10	5/5/86
111	028	30.53	5/5/86
112	029	26.06	5/5/86
113	030	29.34	5/5/86
109	031	24.48	5/5/86
115	032	29.39	5/5/86
113	033	28.80	5/6/86
001	034	27.46	5/6/86
109	035	30.85	5/6/86
112	036	27.43	5/6/86
115	037	26.09	5/6/86
111	038	26.00	5/6/86
114	039	26.69	5/6/86
113	040	27.12	5/6/86
112	041	27.24	5/6/86
111	042	29.68	5/6/86
001	043	26.91	5/6/86
109	044	25.72	5/7/86
114	045	25.17	5/7/86
115	046	24.94	5/7/86
113	047	28.78	5/7/86
112	048	27.42	5/7/86
111	049	26.69	5/7/86
001	050	26.89	5/7/86
109	051	26.22	5/7/86

709.80

1986

K#	MANIFEST	TONS	DATE
12	054	27.72	5/7/86
14	055	29.85	5/7/86
11	056	27.18	5/7/86
13	057	25.81	5/8/86
15	058	25.75	5/8/86
112	059	29.40	5/8/86
01	060	26.76	5/8/86
14	061	27.94	5/8/86
09	062	29.57	5/8/86
11	063	27.37	5/8/86
3	064	29.92	5/8/86
12	065	26.48	5/8/86
14	066	26.94	5/8/86
001	067	28.01	5/8/86

388.7

№ 01054

Date May 15, 1986

Certificate of Materials Recycling

Whereas, Marine Shale Processors, Inc. is a corporation organized under the laws of the State of Louisiana with its principal place of business in Morgan City, Louisiana, and

Whereas, Marine Shale Processors, Inc. operates a facility which uses, reuses, and recycles various waste materials to manufacture aggregates under the authority of the Louisiana Solid Waste Regulations; the Louisiana Hazardous Waste Regulations, Chapter 22; Louisiana Office of Conservation Statewide Order 29-B; and 40 CFR Part 266;

Now, Therefore, Marine Shale Processors, Inc. does hereby issue this certificate to:

INTERNATIONAL PAPER CO. P. O. BOX 37 WIGGINS, MS. 39577

To evidence the total use, reuse, and recycling of: 28.01 TONS of Penta (Creosote) Sludge -

Manifested As: 00067

Said use, reuse, and recycling has been completed in a manner consistent with acceptable engineering standards and in compliance with applicable rules and regulations set forth by State and Federal authorities on or about the date stated above.

MARINE SHALE PROCESSORS, INC. CORPORATE SEAL SLIDELL, LA.

Marine Shale Processors, Inc.

Charles Bennett

Plant Manager

№ 01051

Date May 15, 1986

Certificate of Materials Recycling

Whereas, Marine Shale Processors, Inc. is a corporation organized under the laws of the State of Louisiana with its principal place of business in Morgan City, Louisiana, and

Whereas, Marine Shale Processors, Inc. operates a facility which uses, reuses, and recycles various waste materials to manufacture aggregates under the authority of the Louisiana Solid Waste Regulations; the Louisiana Hazardous Waste Regulations, Chapter 22; Louisiana Office of Conservation Statewide Order 29-B; and 40 CFR Part 266;

Now, Therefore, Marine Shale Processors, Inc. does hereby issue this certificate to:

INTERNATIONAL PAPER CO. P. O. BOX 37 WIGGINS, MS. 39577

To evidence the total use, reuse, and recycling of: 1,860.71 Tons of Penta (Creosote) Sludge - Manifested As 00001 thru 00066

Said use, reuse, and recycling has been completed in a manner consistent with acceptable engineering standards and in compliance with applicable rules and regulations set forth by State and Federal authorities on or about the date stated above.

MARINE SHALE PROCESSORS, INC. CORPORATE SEAL SLIDELL, LA.

Marine Shale Processors, Inc.

Plant Manager

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 | Information in the shaded areas [illegible]

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P. O. BOX 37
WIGGINS MS 39577

4. Generator's Phone ( ) 601- 928-5475

5. Transporter 1 Company Name: MARINE SHALES PROCESSORA, INC.
6. US EPA ID Number: L A D 981 0 5 7 7 0 6

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
MARINE SHALE PROCESSORS, INC.
HIGHWAY 90 (WEST OF AMELIA)
MORGAN CITY, LA. 70380
10. US EPA ID Number: L A D 981 0 5 7 7 0 6

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. HAZARDOUS WASTE SOLIOS, NOS, ORM-E, NA 9189 (PENTA SLUDGE)	001	DT	27.97 T		K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYLE
These materials are [illegible] fuels by designated facilities [illegible]

15. Special Handling Instructions and Additional Information
Aviod skin contact. Wear impervious gloves add eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature: Dennis Moore | Month Day Year: 05 03 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: MARINE SHALE PROCESSORS, INC | Signature: Floyd Dedeaux TK#112 | Month Day Year: 05 03 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space
m 12366

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: MARINE SHALE PROCESSORS, INC. | Signature: Howard Blanchard | Month Day Year: 05 03 86

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 | Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37 Wiggins, Mississippi 39577

4. Generator's Phone (601)928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name: Marine Shale Processors, Inc
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address
MARINE SHALE PROCESSORS, Inc.
Highway 90 East (West of Amelia)
Morgan City, La. 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste solids, NOS, ORM_E, NA 9189 (Penta Sludges)			2796	T	K001
b.					
c.					
d.					

GENERATOR

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are [illegible]
or fuels by the [illegible]
F..

15. Special Handling Instructions and Additional Information
Avoid skin contact, Wear impervious gloves and eye protection when handling

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company | Signature: Jamie Moore | Month Day Year: 050386

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: SD Jefferson | Month Day Year: 050386

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

FACILITY

19. Discrepancy Indication Space
M-12267

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: Harold Blanchard | Month Day Year: 050386

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P. O. 37
WIGGINS, MS 39577

4. Generator's Phone ( ) 601-928-5475

5. Transporter 1 Company Name: MARINE SHALES PROCESSORS, INC.
6. US EPA ID Number: LAD 981057706

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
MARINE SHALES PROCESSORS, INC.
HIGHWAY 90 (WEST OF AMELIA)
MORGAN CITY, LA 70380
10. US EPA ID Number: LAD 981057706

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. HAZARDOUS WASTE SOLIDS, NOS, ORM-E 9189 (PENTA SLUDGES)	001	DT	2794	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYLE
These materials are [illegible] fuels by designated facilities [illegible]

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
AVIOD SHIN CONTACT. WEAR IMPERVIOUS GLOVES ADD EYE PROTECTION WHEN HANDLING.

M-12271

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name	Signature	Month Day Year
INTERNATIONAL PAPER COMPANY	Darrin Moore	05 03 86

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
MARINE SHALES PROCESSORS, INC	George Mitchell	05 03 86

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
MARINE SHALES PROCESSORS, INC.	Howard Blanchard	05 03 86

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: M SD 9806009 84 | Manifest Document No.: 0 0 0 0 4 | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37 Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD 98 10 5 77 0 6

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
MARINE SHALE PROCESSORS, INC.
HIGHWAY 90 East(West of Amelia)
Morgan City, La. 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. HAZARDOUS WASTE SOLIDS, NOS, ORM-E, NA 9189 (PENTA SLUDGES)	0 0 1	D T	2773	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
REGYCLE
These materials are to be used as [illegible] or fuels by the designated facility. [illegible]

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, Wear impervious gloves and eye protection when handlin

M-12268

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name	Signature	Month Day Year
International Paper Company	Darin Moore	05 03 86

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	Neville Beacon #109	05 03 86

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
	Howard Blanchard	05 03 86

GENERATOR

TRANSPORTER

FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P.O. BOX 37 WIGGINS, MISSISSIPPI 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: MARINE SHALE PROCESSORS, INC. | 6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name | 8. US EPA ID Number

9. Designated Facility Name and Site Address: MARINE SHALE PROCESSORS, INC.
Highway 90 east(West of Amelia)
Morgan City, La. 70380
| 10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
HAZARDOUS WASTE SOLIDS, NOS, ORM_E, NA 9189 (PENTA SLUDGES)			2940	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above | K. Handling Codes for Wastes Listed Above
RECYCLE
These materials are to be [illegible]
or fuels by the designated facility [illegible]
F.

15. Special Handling Instructions and Additional Information
Avoid skin contact, Wear impervious gloves and eye protection when handling.

M-12269

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

GENERATOR

Printed/Typed Name	Signature	Month Day Year
International Paper Company	Dennis Moore	0 5 0 3 8 6

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	Guy Wilson	1 5 0 3 8 6

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
[illegible]	Harold Blanchard	0 5 0 3 8 6

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2000-0404. Expires 7-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37 Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc
6. US EPA ID Number: LAD981105706

7. Transporter 2 Company Name: Marine Shale Processors, Inc
8. US EPA ID Number: LAD981105706

9. Designated Facility Name and Site Address
MARINE SHALE PROCESSORS, INC.
HIGHWAY 90 East (West of Amelia)
Morgan City, La. 70380
10. US EPA ID Number: LAD981105706

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2892 T		K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are being [illegible] as fuels or fuels by the designated [illegible] 40 CFR 261.2.
F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

M-12220

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

GENERATOR

Printed/Typed Name: International Paper Company
Signature: Darrin Moore
Month Day Year: 05 03 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: James T. Lenton
Month Day Year: 05 03 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

TRANSPORTER

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc
Signature: Harold Alan Ford
Month Day Year: 05 03 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INTERNATIONAL PAPER COMPANY
P. O. BOX 37
WIGGINS, MS 39577

4. Generator's Phone ( ) 601-928-5475

5. Transporter 1 Company Name: MARINE PROCESSORS, INC.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
MARINE SHALE PROCESSORS, INC.
HIGHWAY 90 (WEST OF AMELIA)
MORGAN CITY, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. HAZARDOUS WASTE AOLIOS, NOS, ORM-E NA 9189 PENTA SLUDGES	001	DT	26751		K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above | K. Handling Codes for Wastes Listed Above

RECYLE
These materials are to be used as supplemental fuels by the designated facility.

15. Special Handling Instructions and Additional Information

AVOID SKIN CONTACT, WEAR IMPERVIOUS GLOVES AND EYE PROTECTION WHEN HANDLING

M-12272

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: INTERNATIONAL PAPER COMPANY | Signature: Darrin Moore | Month Day Year: 05 03 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: MARINE SHALE PROCESSORS, INC. | Signature: Carl Smallens | Month Day Year: 05 03 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: MARINE SHALE PROCESSORS, INC. | Signature: Harold Blanchard | Month Day Year: 05 03 86

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc. | 6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc. | 8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			29347		K001R
b.					
c.					
d.					

Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as fuel materials and for fuels by the designated facility. No flash at 212° F.

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

M-12278

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA. I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company | Signature: Darwin Moore | Month Day Year: 10 5 0 4 8 6

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: Floyd Nedeau TK#112 | Month Day Year: 10 5 0 4 8 6

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: Howard Blanchard | Month Day Year: 10 5 0 4 8 6

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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Form Approved. OMB No. 2000-0404. Expires 7-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name | 6. US EPA ID Number

Marine Shale Processors, Inc. | L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name | 8. US EPA ID Number

Marine Shale Processors, Inc. | L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address | 10. US EPA ID Number

Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380 | L A D 9 8 1 0 5 7 7 0 6

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			29 57 T		K001R
b.					
c.					
d.					

GENERATOR

J. Additional Descriptions for Materials Listed Above | K. Handling Codes for Wastes Listed Above

RECYCLE
These materials are to be used as [illegible] fuels by the designated facility [illegible]

15. Special Handling Instructions and Additional Information

Avoid skin contact, wear impervious gloves and eye protection when handling.

M-12279

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name	Signature	Month Day Year
International Paper Company	Darrin Moore	10 5 0 4 8 6

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	[illegible] Mitchell	

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	Harold Blanchard	10 5 0 4 8 6

ATE OF LOUISIANA
OF ENVIRONMENTAL QUALITY
RDOUS WASTE DIVISION
P.O. BOX 44307
OUGE, LOUISIANA 70804

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Form Approved. OMB No. 2000-0404. Expires 7-31-86

HAZARDOUS MANIFEST	1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4	Manifest Document No. 0 0 0 / 10	2. Page 1	Information in the shaded areas is not required by Federal law.

Name and Mailing Address

ational Paper Compnay
ox 37, Wiggins, Mississippi 39577
Phone (601) 928-5475

1 Company Name	6. US EPA ID Number
Shale Processors, Inc.	L A D 9 8 1 0 5 7 7 0 6
2 Company Name	8. US EPA ID Number
Shale Processors, Inc.	L A D 9 8 1 0 5 7 7 0 6
Facility Name and Site Address	10. US EPA ID Number
Shale Processors, Inc. y 90 East(West of Amelia) City, LA 70380	L A D 9 8 1 0 5 7 7 0 6

(504) [illegible]-3626

cription (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14 Unit Wt/Vol	Waste No.
ous Waste Solids, NOS, ORM-E, NA 9189 nta Sludges)			2736	T	K001R

Descriptions for Materials Listed Above

aterials are to be used [illegible]
y the designated facility [illegible]

Handling Codes for Wastes Listed Above

dling Instructions and Additional Information

skin contact, wear impervious gloves and eye protection when handling.

M-12283

TOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed ied, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

mall quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA. I also certify that I have a program in place lume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes future threat to human health and the environment.

d Name	Signature	Month Day Year
tional Paper Company	Garvin Moore	05 04 86

1 Acknowledgement of Receipt of Materials

d Name	Signature	Month Day Year
Shale Processors, Inc.	[signature]	05 09 86

2 Acknowledgement of Receipt of Materials

d Name	Signature	Month Day Year

Indication Space

er or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

d Name	Signature	Month Day Year
Shale Processors, Inc.	Howard Blanchard	05 04 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600084 Manifest Document No. 2. Page 1 Information in the shaded areas is not required by Federal

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14 Unit Wt/Vol	
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2749	T	K001R
b.					
c.					
d.					

[illegible]
RECYCLE
These materials [illegible]
fuels by the [illegible]

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

M-12280

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company
Signature: Darwin Moore
Month Day Year: 05 04 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: [illegible] Jefferson
Month Day Year:

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Howard Blanchard
Month Day Year: 05 04 86

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. L A D 9 8 1 0 5 7 7 0 6 Manifest Document No.
2. Page 1 of
Information in the shaded areas is not required by F[illegible]al

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			29957	T
b.				
c.				
d.				

GENERATOR

[illegible]
RECYCLE
These materials [illegible]
fuels by the [illegible]

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

M-12282

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company
Signature: Doris Moon
Month Day Year: 10 5 0 4 8 6

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Melville Pearson #109
Month Day Year: 10 5 0 4 8 6

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Howard Blanchard
Month Day Year: 10 5 0 4 8 6

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 | Information in the shaded areas is not required by Federal

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14 Unit Wt/Vo	
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2991	T	[illegible]001R
b.					
c.					

[illegible]
RECYCLE
These materials [illegible]
fuels by the designated [illegible]

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

M-12281

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company | Signature: Darwin Moore | Month Day Year: 05 04 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: Jerry Utman | Month Day Year: 5 4 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: Howard Blanchard | Month Day Year: 05 04 86

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 | Information in the shaded [illegible]

3. Generator's Name and Mailing Address

International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name — 6. US EPA ID Number
Marine Shale Processors, Inc. — L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name — 8. US EPA ID Number
Marine Shale Processors, Inc. — L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address — 10. US EPA ID Number
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380 — L A D 9 8 1 0 5 7 7 0 6

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14 Unit Wt/Vo
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			29,10 T	
b.				
c.				
d.				

GENERATOR

RECYCLE
Reuse materials
Fuels by the [illegible]

15. Special Handling Instructions and Additional Information

Avoid skin contact, wear impervious gloves and eye protection when handling.

M12284

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company — Signature: Darrin Moore — Month Day Year: 05 04 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. — Signature: David Coffman — Month Day Year: 05 04 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc. — Signature: Pamela M Nauts — Month Day Year: 05 04 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. LSD980600840 — Manifest Document No. 0075 — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc. — 6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc. — 8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2907	T
b.				
c.				
d.				

GENERATOR

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name	Signature	Month Day Year
International Paper Company	Darrin Moore	05 04 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	Floyd Dedeas TK #112	05 04 86

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors	Geoffrey LeBoeuf	05 05 86

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	Geoffrey LeBoeuf	05 05 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 | Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc. | 6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc. | 8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14 Unit Wt/Vo
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2925	T
b.				
c.				
d.				

RECYCLE
These materials
fuels by the

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

M12285

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company | Signature: Darrin Moore | Month Day Year: 05 19 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: Greg Mitchell | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year: 05 04 86

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: Angela McNeil | Month Day Year: 05 04 86

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MSD980600084 — Manifest Document No.: 000177

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

C. State Transporter's ID

D. Transporter's Phone: (504)631-3626

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380

10. US EPA ID Number: LAD981057706

G. State Facility's ID

H. Facility's Phone: [illegible]

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			3158	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for [illegible] Listed Above
RECYCLE
These materials [illegible]
fuels by the [illegible]

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company — Signature: Darwin Moore — Month Day Year: 05 04 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. — Signature: [illegible] — Month Day Year: 5 4 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors — Signature: [illegible] — Month Day Year: 05 05 86

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc. — Signature: Godfrey LeBoeuf — Month Day Year: 05 05 86

GENERATOR

TRANSPORTER

FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 | Information in the shaded areas is not required by

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14 Unit Wt/Vol
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			28917	T
b.				
c.				
d.				

[redacted]

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name	Signature	Month Day Year
International Paper Company	Darrin Moore	10 5 0 4 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	Neville Pearson #104	10 5 0 4 86

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors	Godfrey LeBoeuf	10 5 0 5 86

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	Godfrey LeBoeuf	10 5 0 5 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest | 2. Page 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			28337	
b.				
c.				
d.				

[redacted]

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company | Signature: Darwin Moore | Month Day Year: 10 5 04 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: Lo Jefferson | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors | Signature: Godfrey LeBoeuf | Month Day Year: 10 5 05 86

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: Godfrey LeBoeuf | Month Day Year: 10 5 05 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. LAD980600083 Manifest Document No. 0012

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2628	T
b.				
c.				
d.				

GENERATOR

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Garrison Moore
Month Day Year: 01 05 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Jerry Ultman
Month Day Year: 10 5 05 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

FACILITY

19. Discrepancy Indication Space
M-12896

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Howard Blanchard
Month Day Year: 10 5 05 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 | Information in the shaded areas is not required by Federal

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			29.33	
b.				
c.				
d.				

[illegible]

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company | Signature: Darwin Moore | Month Day Year: 05 05 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: Neville Pearson #109 | Month Day Year: 05 05 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

M-12295

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: Howard Blanchard | Month Day Year: 05 05 86

GENERATOR

TRANSPORTER

FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 | Information in the shaded areas is not required by federal

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14 Unit Wt/Vol
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2608	T
b.				
c.				
d.				

GENERATOR

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company | Signature: Darwin Moore | Month Day Year: 10 5 10 5 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: James T Penton | Month Day Year: 10 6 10 5 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

FACILITY

19. Discrepancy Indication Space
M-12291

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: Howard Blanchard | Month Day Year: 10 5 10 5 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MSD980600084 Manifest Document No.: 00023
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

C. State Transporter's ID

D. Transporter's Phone: (504)631-3626

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380

10. US EPA ID Number: LAD981057706

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2580	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
Phase materials [illegible]
fuels by the [illegible]

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company
Signature: Eva J. Arnold
Month Day Year: 05 05 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: [signature] 115
Month Day Year: 05 05 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Harold Blanchard
Month Day Year: 05 05 86

GENERATOR

TRANSPORTER

FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] Manifest Document No. [illegible]
2. Page 1 [illegible] Information in the shad[illegible] is not required by [illegible]

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			28490	T
b.				
c.				
d.				

[illegible]

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company
Signature: Elva J. Arnold
Month Day Year: 05 05 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Dolan Ausmer #111
Month Day Year: 05 05 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

M-12293

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Howard Blanchard
Month Day Year: 05 05 86

GENERATOR

TRANSPORTER

FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] 0 0 8 4 0 [illegible] Manifest Document No. 2. Page 1 Information in the shaded areas is not required by Federal [illegible]

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2570	T	K001R
b.					
c.					
d.					

[illegible] Description [illegible] Waste Used Above
RECYCLE
These materials are [illegible]
fuels by the desig[illegible]

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company
Signature: Garvin Moore
Month Day Year: 05 05 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Floyd Dedeay TK#112
Month Day Year: 05 05 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

M-12894

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Howard Blanchard
Month Day Year: 05 05 86

GENERATOR

TRANSPORTER

FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600084 Manifest Document No. 00026

2. Page 1 of

Information in the shad[illegible] is not required by [illegible]ral

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2610	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

M12297

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Darwin Moore
Month Day Year: 05 05 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: [illegible] Jefferson
Month Day Year:

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc
Signature: Angela M. Nails
Month Day Year: 05 05 86

GENERATOR

TRANSPORTER

FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MSD980600084 — Manifest Document No.: 00027
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706
7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706
9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

(504)631-3626
(504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2910	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as fuel materials and fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company — Signature: Eva J. Arnold — Month Day Year: 05 05 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. — Signature: James T. Penton — Month Day Year: 05 05 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors — Signature: Godfrey LeBourg — Month Day Year: 05 06 86

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc. — Signature: Godfrey LeBourg — Month Day Year: 05 06 86

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 [illegible] 0 0 0 8 4 0 0 0 [illegible] Manifest Document No.

2. Page 1 of [illegible]

Information in the shaded areas is not required by federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name
Marine Shale Processors, Inc.

6. US EPA ID Number
L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name
Marine Shale Processors, Inc.

8. US EPA ID Number
L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380

10. US EPA ID Number
L A D 9 8 1 0 5 7 7 0 6

(504) 631-362

(504) [illegible] 3626

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			3053	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

RECYCLE
These materials are to be used as raw materials and/or fuels by the designated facility. No flash at 212° F.

15. Special Handling Instructions and Additional Information

Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name	Signature	Month Day Year
International Paper Company	Eva J. Arnold	0 5 0 5 8 6

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	Nolan Ausma #114	0 5 0 5 8 6

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors	Hadley LeBoeuf	0 5 0 6 8 6

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	Hadley LeBoeuf	0 5 0 6 8 6

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MSD980600084 — Manifest Document No.: 00129

2. Page 1 — Information in the shaded areas is not required by Federal

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380

10. US EPA ID Number: LAD981057706

[illegible] 631-3626

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2606	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company — Signature: Elva J. Arnold — Month Day Year: 05 05 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. — Signature: Floyd Dedeaux TK112 — Month Day Year: 05 05 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors — Signature: Godfrey LeBoeuf — Month Day Year: 05 06 86

19. Discrepancy Indication Space

20. Facility Owner or Operator. Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc. — Signature: Godfrey LeBoeuf — Month Day Year: 05 06 86

GENERATOR — TRANSPORTER — FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600084 Manifest Document No. 00032

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

(504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2934	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and as fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company
Signature: Elva J. Arnold
Month Day Year: 05 05 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Neville Pearson #109
Month Day Year: 05 05 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors
Signature: Godfrey LeBoeuf
Month Day Year: 05 06 86

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Godfrey LeBoeuf
Month Day Year: 05 06 86

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: N S D 9 8 0 6 0 0 0 8 4 0 — Manifest Document No.: 0 0 0 3 7

2. Page 1 — Information in the shaded areas is not required by Federal

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

[redacted] 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2448	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name	Signature	Month Day Year
International Paper Company	Elva J. Arnold	05 05 86

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	[signature]	05 05 86

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors	Godfrey LeBoeuf	05 06 86

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	Godfrey LeBoeuf	05 06 86

GENERATOR — TRANSPORTER — FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 0 0 0 3 Manifest Document No.

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name
Marine Shale Processors, Inc.

6. US EPA ID Number L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name
Marine Shale Processors, Inc.

8. US EPA ID Number L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East (West of Amelia)
Morgan City, LA 70380

10. US EPA ID Number L A D 9 8 1 0 5 7 7 0 6

(504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2939	T	K001R
b.					
c.					
d.					

GENERATOR

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and/or fuels by the designated facility. Do flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Elva J. Arnold
Month Day Year: 05 05 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: [illegible]
Month Day Year: 05 05 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors
Signature: Godfrey LeBoeuf
Month Day Year: 05 06 86

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Godfrey LeBoeuf
Month Day Year: 05 05 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] Manifest Document No. [illegible]

2. Page 1 [illegible]

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone 601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

[illegible] (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2880	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and as fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Darwin Moore
Month Day Year: 05 06 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Jerry Uthman
Month Day Year: 05 06 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: SUSAN GULLICK
Marine Shale Processors, Inc.
Signature: Susan Gullick
Month Day Year: 05 06 86

GENERATOR

TRANSPORTER

FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. LSD980600084 Manifest Document No. 34

2. Page 1 of

Information in the shade[illegible] is not required by [illegible]

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone 601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

(504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2746	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and as fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name	Signature	Month Day Year
International Paper Company	Darin Moore	05 06 86

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	S O Jeffries	05 06 86

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19

Printed/Typed Name	Signature	Month Day Year
SUSAN GULLICK Marine Shale Processors, Inc.	Susan Gullick	05 06 86

GENERATOR

TRANSPORTER

FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

Please print or type (Form designed for use on elite (12-pitch) typewriter.) Form Approved OMB No 2000-0404 Expires 7-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No: MSD980600084 Manifest Document No: 00035
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

C. State Transporter's ID

D. Transporter's Phone (504) 631-3626

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380

10. US EPA ID Number: LAD981057706

G. State Facility's ID

H. Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			30.85	T	K001R
b.					
c.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Darin Moore
Month Day Year: 05 06 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Neville Francis #101
Month Day Year: 05 06 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Angela Nails/Marine Shale Processors, Inc.
Signature: Angela M Nails
Month Day Year: 05 06 86

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Angela M Nails
Month Day Year: 05 06 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 0 0 D 9 Manifest Document No.

2. Page 1 Information in the shade[illegible]es is not required by [illegible]al [illegible]

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6 (504) 631-3626

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6 (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2743	T	K001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as [illegible] fuels by the designated facility. No flash at 117° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Elva J. Arnold
Month Day Year: 05 06 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Floyd Dedeaux TK#112
Month Day Year: 05 06 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: SUSAN GULLICK
Marine Shale Processors, Inc.
Signature: Susan Gullick
Month Day Year: 05 06 86

GENERATOR
TRANSPORTER
FACILITY

DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600084 Manifest Document No. [illegible]
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706
7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706
9. Designated Facility Name and Site Address: Marine Shale Processors, Inc.
Highway 90 East (West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

State Manifest Document Number [illegible]
State Transporter's ID [illegible]
Transporter's Phone (504) 631-3626
State Transporter's ID
Transporter's Phone
State Facility's ID [illegible]
Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2609	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as [illegible] fuels by the designated facility [illegible]

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Elva J. Arnold
Month Day Year: 05 06 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: [illegible]
Month Day Year: 05 06 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: SUSAN GULLICK
Marine Shale Processors, Inc.
Signature: Susan Gullick
Month Day Year: 05 [illegible]

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 0 Manifest Document No. 5 3

2. Page 1 Information in the shaded areas is not required by Federal

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name
Marine Shale Processors, Inc.

6. US EPA ID Number
L A D 9 8 1 0 5 7 7 0 6

E. Transporter's Phone (504) 631-3626

7. Transporter 2 Company Name
Marine Shale Processors, Inc.

8. US EPA ID Number
L A D 9 8 1 0 5 7 7 0 6

F. Transporter's Phone

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380

10. US EPA ID Number
L A D 9 8 1 0 5 7 7 0 6

G. Facility's Phone
H. Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2600	T	K001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as fuel materials and as fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

GENERATOR

Printed/Typed Name: International Paper Company
Signature: Elva J. Arnold
Month Day Year: 05 06 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Nolan Arsene #111
Month Day Year: 05 06 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

TRANSPORTER

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19

Printed/Typed Name: SUSAN GULLICK
Marine Shale Processors, Inc.
Signature: Susan Gullick
Month Day Year: 05 06 86

FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 0 0 0 3 9 — Manifest Document No.
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577
A. State Manifest Document Number
B. State Generator's ID
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6
C. State Transporter's ID
D. Transporter's Phone (504) 631-3626

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6
G. State Facility's ID
H. Facility's Phone (504) 631-3626

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2669	T	K001
b.					
c.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

M12317

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Glen J. Arnold
Month Day Year: 1 5 0 6 8 6

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: James T. Penton
Month Day Year: 1 5 0 6 8 6

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Donald M Nails
Month Day Year: 1 5 0 6 8 6

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 0 Manifest Document No. 70
2. Page 1 of 1 Information in the shade[illegible] is not required by [illegible] law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6
C. State Transporter's ID
D. Transporter's Phone (504) 631-3626

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6
G. State Facility's ID
H. Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2712	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as [illegible] fuels by the designated facility, [illegible] at 21[illegible]

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name	Signature	Month Day Year
International Paper Company	Darwin Moore	05 06 86

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	Jerry Utman	05 06 86

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors	Godfrey LeBoeuf	05 07 86

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	Godfrey LeBoeuf	05 07 86

GENERATOR

TRANSPORTER

FACILITY

DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

Please print or type (Form designed for use on elite (12-pitch) typewriter.) Form Approved OMB No 2000-0404 Expires 7

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600084 Manifest Document No. 00041
2. Page 1 of
Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577
4. Generator's Phone (601) 928-5475

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706
C. State Transporter's ID
D. Transporter's Phone (504) 631-3626

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East (West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706
G. State Facility's ID
H. Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2724	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name	Signature	Month Day Year
International Paper Company	Elva J. Arnold	05 06 8

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	Floyd Sedeay TK#112	05 06 8

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors	Godfrey LeBoeuf	05 06

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Marine Shale Processors, Inc.	Godfrey LeBoeuf	05 06 8

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600084 Manifest Document No. 00092

2. Page 1 of 1

Information in the shade[illegible] is not required by F[illegible]

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706
[illegible] Transporter's ID
[illegible] Transporter's Phone (504)631-3626

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706
[illegible] Transporter's ID
[illegible] Transporter's Phone

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706
[illegible] Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2968	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and [illegible] fuels by the designated facility. No flash at 212°

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company
Signature: Eloa J. Arnold
Month Day Year: 050686

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Nolan Aussen #111
Month Day Year: 050686

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors
Signature: Godfrey LeBoeuf
Month Day Year: 050786

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Godfrey LeBoeuf
Month Day Year: 050786

GENERATOR

TRANSPORTER

FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] Manifest Document [illegible]
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706
7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706
9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

D. Transporter's Phone (504)631-3626
F. Transporter's Phone
H. Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2691	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as [illegible] fuels by the designated facility. [illegible]

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3008(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Elva J. Arnold
Month Day Year: 05 06 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: S O Jefferson
Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest, except as noted in Item 19.
Printed/Typed Name: SUSAN GULLICK
Marine Shale Processors, Inc.
Signature: Susan Gullick
Month Day Year: 05 07 86

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MS 0 9 8 0 6 0 0 0 8 4 0 0 0 7 Manifest Document No.

2. Page 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6
7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6
9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

(504)631-3626

(504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2572 T		K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Darwin Moore
Month Day Year: 05 07 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Neville Pearson #109
Month Day Year: 05 07 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: SUSAN GULLICK
Marine Shale Processors, Inc.
Signature: Susan Gullick
Month Day Year: 05 07 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600084 Manifest Document No. 00045
2. Page 1 of
Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706
7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706
9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

(504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2517	1	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and/or fuels by the designated facility. No flash at [illegible]

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Darin Moore
Month Day Year: 05 07 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: James T. Penton
Month Day Year: 05 07 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: SUSAN GULLICK
Marine Shale Processors, Inc.
Signature: Susan Gullick
Month Day Year: 05 07 86

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. LAD981060084 Manifest Document No. 0016
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706
7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706
9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706
H. Facility's Phone: (504) 631-3626

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2494	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used [illegible] and as fuels by the designated facility [illegible] at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Darrin Moore
Month Day Year: 05 07 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature:
Month Day Year: 05 07 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: SUSAN GULLICK
Marine Shale Processors, Inc.
Signature: Susan Gullick
Month Day Year: 05 07 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 0 Manifest Document No. 0 0 0 4 7

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

(504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2878	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used [illegible] fuels by the designated facility. No flash at 212 [illegible]

Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Darin Moore
Month Day Year: 05 07 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Jerry Utman
Month Day Year: 05 07 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator. Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc. SUSAN GULLICK
Signature: Susan Gullick
Month Day Year: 05 07 86

GENERATOR

TRANSPORTER

FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600084 Manifest Document No. 0047

2. Page 1 of

Information in the shaded areas is not required by federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

A. State Manifest Document Number
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone (504)631-3626
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2742	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Elva J Arnold
Month Day Year: 05 07 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Floyd Pedeau TK#112
Month Day Year: 05 07 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: SUSAN GULLICK Marine Shale Processors, Inc.
Signature: Susan Gullick
Month Day Year: 05 07 86

GENERATOR

TRANSPORTER

FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. LSD980500840 Manifest Document No. 0349
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706
7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706
9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

[redacted]
(504)631-3626
[redacted]
(504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2669	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as alternate fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Elva J. Arnold
Month Day Year: 05 07 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Stolan Ausmer #111
Month Day Year: 05 07 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: SUSAN GULLICK Marine Shale Processors, Inc.
Signature: Susan Gullick
Month Day Year: 05 07 86

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600084 Manifest Document No. 00050
2. Page 1 of
Information in the shad[illegible] is not required by [illegible]ral law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706
C. State Transporter's ID
D. Transporter's Phone (504)631-3626

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706
G. State Facility's ID
H. Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2689	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as [illegible] materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

M12330

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Darwin Moore
Month Day Year: 050786

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: J O Jefferson
Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Angela M Neils
Month Day Year: 050786

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc. | 6. US EPA ID Number: LAD981105776

7. Transporter 2 Company Name: Marine Shale Processors, Inc. | 8. US EPA ID Number: LAD981105706

9. Designated Facility Name and Site Address: Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380 | 10. US EPA ID Number: LAD981105706

H. Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2622T		K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as fuel materials and as fuels by the designated facility. No flash at 212°F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

GENERATOR

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company | Signature: Darwin Moore | Month Day Year: 05 07 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: [illegible] #10 | Month Day Year: 05 09 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors | Signature: Godfrey LeBoeuf | Month Day Year: 05 08 86

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: Godfrey LeBoeuf | Month Day Year: 05 08 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. H S D 9 8 0 6 0 0 0 8 4 0 0 0 5 2 — Manifest Document No.

2. Page 1 of 1 — Information in the shad[illegible] is not required by [illegible]ral law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

C. State Transporter's ID
D. Transporter's Phone (504)631-3626
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2480	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and at fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company — Signature: Darin Moore — Month Day Year: 05 07 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. — Signature: [signature] — Month Day Year: 05 07 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors — Signature: Godfrey LeBaum — Month Day Year: 05 08 86

19. Discrepancy Indication Space

20. Facility Owner or Operator. Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processor, Inc. — Signature: Godfrey LeBaum — Month Day Year: 05 08 86

GENERATOR — TRANSPORTER — FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. LAD980600840 Manifest Document No.
2. Page 1 of 1
Information in the shaded areas is not Required by Federal Law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706
7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706
9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

C. State Transporter's ID
D. Transporter's Phone (504)631-3626
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone (504) 631-3626

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2710	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and/or fuels by the designated facility. No flash at 212°F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA. I also certify that: I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Darwin Moore
Month Day Year: 05 07 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: [illegible]
Month Day Year: 05 07 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors
Signature: Godfrey LeBouf
Month Day Year: 05 08 86

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Godfrey LeBouf
Month Day Year: 05 08 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 0 0 0 5 4 — Manifest Document No.

2. Page 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

C. State Transporter's ID
D. Transporter's Phone (504)631-3626
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.	15. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2772	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company — Signature: Darrin Moore — Month Day Year: 05 07 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. — Signature: Floyd Dedeax TK#112 — Month Day Year: 05 07 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors — Signature: Godfrey LeBoeuf — Month Day Year: 05 08 86

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: Marine Shale Processors, Inc. — Signature: [signature] — Month Day Year: 05 08 86

GENERATOR — TRANSPORTER — FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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Form Approved. OMB No. 2000-0404. Expires 7-31-[illegible]

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600084 Manifest Document No. 00055

2. Page 1 — Information in the shaded areas is not required by Federal [illegible]

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

[illegible]
C. State Transporter's ID
D. Transporter's Phone (504)631-3626
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2985	1	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company — Signature: Darrie Moore — Month Day Year: 05 07 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processor, Inc. — Signature: James T. Penton — Month Day Year: 05 07 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors — Signature: Godfrey LeBoeuf — Month Day Year: 05 08 86

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processor, Inc. — Signature: Godfrey LeBoeuf — Month Day Year: 05 08 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M 8 D 9 8 0 6 0 0 0 8 4 0 0 Manifest Document No. 0 1 5 6
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6
7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6
9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

D. Transporter's Phone (504)631-3626
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2718	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Darwin Moore
Month Day Year: 050786

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Nolan Awame #111
Month Day Year: 050786

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors
Signature: Godfrey LeBoeuf
Month Day Year: 050886

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Godfrey LeBoeuf
Month Day Year: 050886

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MSD980600083 Manifest Document No. 2. Page 1 of 1 Information in the shaded areas is not required by Federal

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

(504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			25817	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and [illegible] fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Darwin Moore
Month Day Year: 05 08 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Jerry Ottman #113
Month Day Year: 05 08 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space
M-12339

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Howard Blanchard
Month Day Year: 05 08 86

GENERATOR
TRANSPORTER
FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. Manifest Document No. 2. Page 1 Information in the shad[illegible] is not required by [illegible]

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706
(504)631-3626

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706
(504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2575	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and/or fuels by the designated facility. No flash at 212° F.

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

INT. PAPER CO. TREATED WOOD PRODUCTS WIGGINS

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company
Signature: Darwin Moore
Month Day Year: 05 08 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: [signature] #115
Month Day Year: 05 08 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

M-12343

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Howard Blanchard
Month Day Year: 05 08 86

GENERATOR

TRANSPORTER

FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. L A D 9 8 1 0 5 7 7 0 6 — Manifest Document No.
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6
7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6
9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

Transporter's Phone (504) 631-3626
Facility's Phone (504) 631-3626

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			29907		K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as fuel materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company
Signature: Darin Moon
Month Day Year: 05 08 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Floyd Rodeay TK6112
Month Day Year: 05 10 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

FACILITY

19. Discrepancy Indication Space
M-12340

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Howard Blanchard
Month Day Year: 05 08 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. M S D 9 8 0 6 0 0 0 8 4 0 0 0 0 0 — Manifest Document No.

2. Page 1 — Information in the shad[illegible] is not required by [illegible]

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

H. Facility's Phone: (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2676	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company — Signature: [signature] — Month Day Year: 05 08 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. — Signature: [signature] — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

M-12341

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc. — Signature: [signature] — Month Day Year: 05 08 86

GENERATOR — TRANSPORTER — FACILITY

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

Form Approved. OMB No. 2000-0404. Expires 7-31

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

(504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	Total Quantity	14 Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2794T		K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company | Signature: Darwin Moore | Month Day Year: 050886

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: James T. Penton 114 | Month Day Year: 050886

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space
M-12342

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: Marine Shale Processors, Inc. | Signature: Howard Blanchard | Month Day Year: 050886

GENERATOR

TRANSPORTER

FACILITY

Field Generator 1st

DEQ FORM HW-3 (R 9/

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. LSD 9 8 0 6 0 0 0 8 4 0 0 0 2 Manifest Document No.
2. Page 1 Information in the shaded [illegible] is not required by Fed[illegible]

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706
7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706
9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

[illegible] (504)631-3626
[illegible] (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2957T		K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Darrie Moore
Month Day Year: 05 08 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Neville Pearson #109
Month Day Year: 05 08 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

M-12344

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Howard Blanchard
Month Day Year: 05 08 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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Form Approved. OMB No. 2000-0404. Expires 7-31-8

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. LSD980600084 Manifest Document No. 00063

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

D. Transporter's Phone (504)631-3626

H. Facility's Phone (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2737	T	K001R
b.					
c.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and as fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

M12345

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: International Paper Company
Signature: Darwin Moore
Month Day Year: 05 08 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Nolan Ausme #111
Month Day Year: 05 08 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Anna M Naile
Month Day Year: 05 08 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. LSD980600084 Manifest Document No.
2. Page 1 of
Information in the shaded is not required by Fe law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706
7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706
9. Designated Facility Name and Site Address: Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

A. State Manifest Document Number
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone: (504)631-3626
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone: (504) 631-3626

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2992T		K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as fuel materials and/or fuels by the designated facility. No flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company
Signature: Darwin Moore
Month Day Year: 05 08 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: [illegible]
Month Day Year: 05 08 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors
Signature: Godfrey LeBoeuf
Month Day Year: 05 08 86

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Godfrey LeBoeuf
Month Day Year: 05 08 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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Form Approved. OMB No. 2000-0404. Expires 7-31-8

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. L A D 9 8 1 0 5 7 7 0 6 — Manifest Document No.

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: L A D 9 8 1 0 5 7 7 0 6

Transporter 1 Phone: (504)631-3626

Facility's Phone: (504) 631-3626

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2648	T	K001R
b.					
c.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. [illegible]

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company
Signature: Darrin Moore
Month Day Year: 05 08 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Floyd Dedeaux TR#112
Month Day Year: 10 50 8 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors
Signature: Godfrey LeBoeuf
Month Day Year: 0 5 0 9 86

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: [illegible]
Month Day Year: 0 5 0 9 8 6

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] Manifest Document No. [illegible]

2. Page 1 Information in the shaded [illegible] is not required by Federal [illegible]

3. Generator's Name and Mailing Address
International Paper Compnay
P.O. Box 37, Wiggins, Mississippi 39577

4. Generator's Phone (601)928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706

7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706

9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

[illegible] (504) 631-3626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2694	T	K001R
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as [illegible] and [illegible] fuels by the designated facility. [illegible] at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Avoid skin contact, wear impervious gloves and eye protection when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company
Signature: Darwin Moore
Month Day Year: 05 08 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: James T. Penton
Month Day Year: 05 08 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

M-12350

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: Harold [illegible]
Month Day Year: 05 08 86

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. LSD980600840 Manifest Document No.
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
International Paper Company
P.O. Box 37, Wiggins, Mississippi 39577
4. Generator's Phone (601) 928-5475

5. Transporter 1 Company Name: Marine Shale Processors, Inc.
6. US EPA ID Number: LAD981057706
7. Transporter 2 Company Name: Marine Shale Processors, Inc.
8. US EPA ID Number: LAD981057706
9. Designated Facility Name and Site Address
Marine Shale Processors, Inc.
Highway 90 East(West of Amelia)
Morgan City, LA 70380
10. US EPA ID Number: LAD981057706

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Hazardous Waste Solids, NOS, ORM-E, NA 9189 (Penta Sludges)			2801	1	K001R
b.					
c.					

J. Additional Descriptions for Materials Listed Above
RECYCLE
These materials are to be used as raw materials and or fuels by the designated facility. Flash at 212° F.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
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16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: International Paper Company
Signature: Darrin Moore
Month Day Year: 05 08 86

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: [illegible]
Month Day Year:

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Marine Shale Processors
Signature: [illegible]
Month Day Year: 05 09 86

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marine Shale Processors, Inc.
Signature: [illegible]
Month Day Year: 05 09 86

GENERATOR
TRANSPORTER
FACILITY

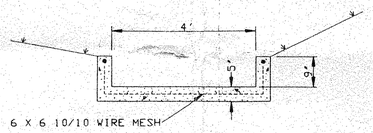
EXHIBIT E

GRADING PLAN FOR CONTACT COOLING POND

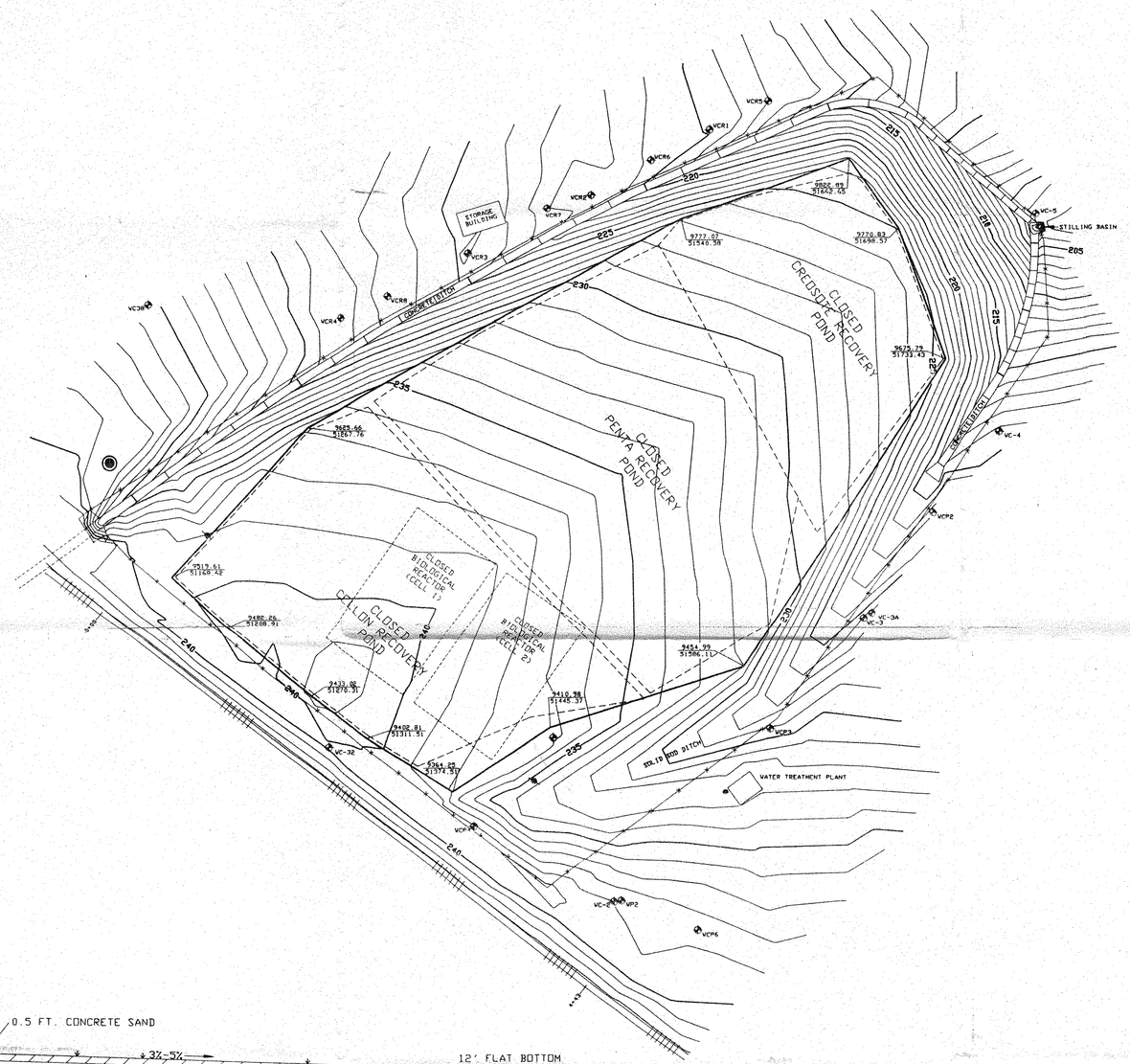
EXHIBIT F

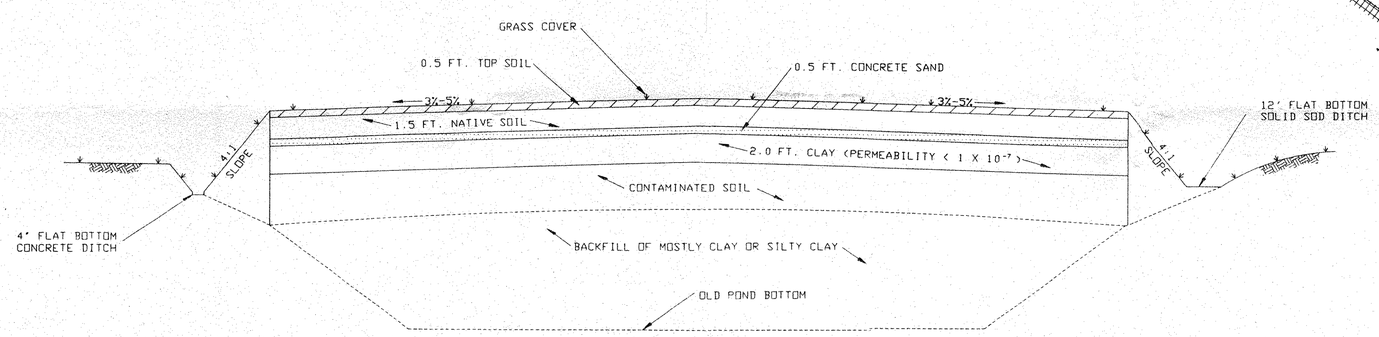
GRADING AND DRAINAGE PLANS
FOR RECOVERY PONDS SITE

T.B.M. #1 ELEV. 239.22
NAIL IN BASE OF POWER POLE



CONCRETE DITCH
TYPICAL SECTION
N.T.S.





TYPICAL SECTION - RECOVERY PONDS SITE
NTS

LEGEND

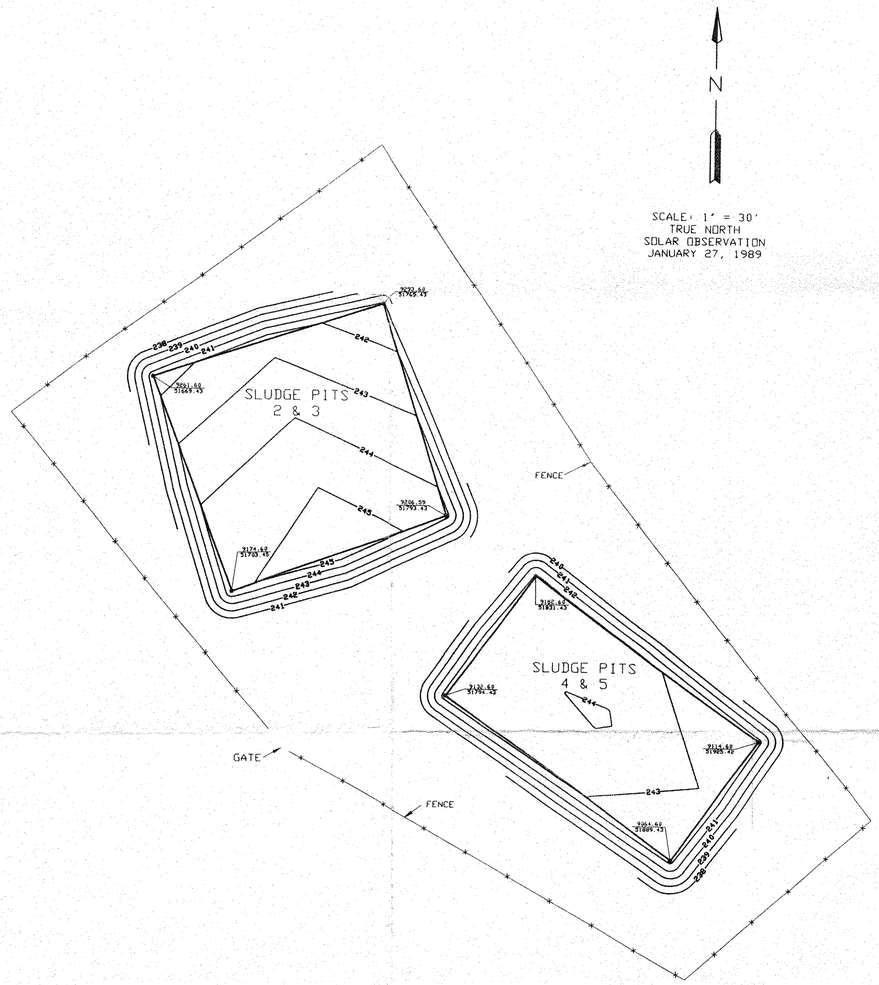
- BENCH MARK
- VC30 MONITORING WELL
- FENCE
- RAILROAD TRACK
- 220 FINISH CONTOUR
- POWER POLE
- 9454.39 / 51586.11 PLANT GRID COORDINATES

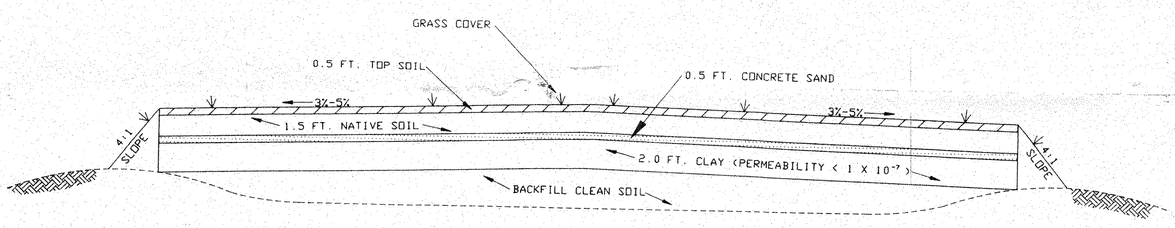
REVISIONS	DATE	INTERNATIONAL PAPER WIGGINS, MS. TREATED WOOD PRODUCTS PLANT CLOSURE OF CELLON, PENTA & CREOSOTE RECOVERY PONDS A HAZARDOUS WASTE MANAGEMENT UNIT
	11/21/90	
	DR. BY ROBERT	
	CHECKED B.H.B.	
	SCALE 1" = 50'	BATSON AND BROWN, INC. CONSULTING ENGINEERS WIGGINS □ LUCEDALE □ PASCAGOULA, MISSISSIPPI

PBD-X1215-14

EXHIBIT G

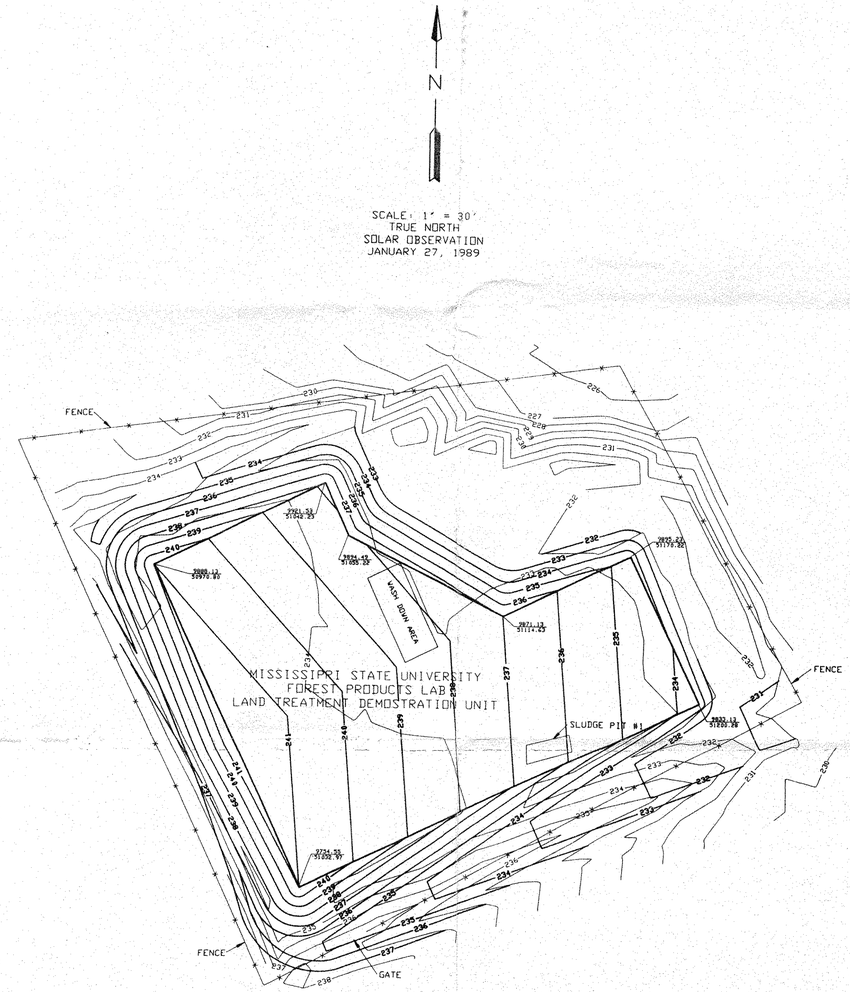
GRADING AND DRAINAGE PLAN
FOR LAND TREATMENT DEMONSTRATION UNIT
AND SOLID WASTE MANAGEMENT UNITS
(Pre-RCRA Sludge Pits)

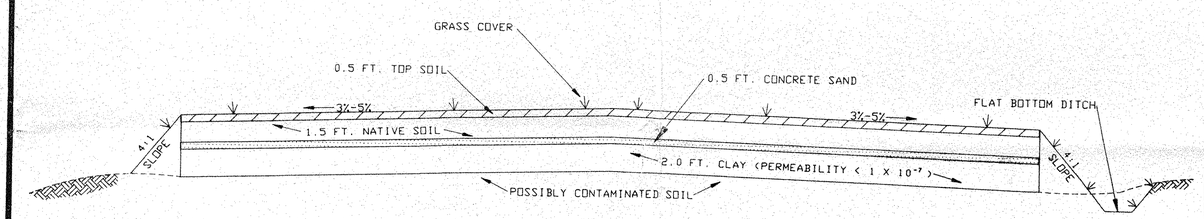




TYPICAL SECTION - SLUDGE PITS

NTS





TYPICAL SECTION - LAND TREATMENT DEMONSTRATION UNIT

NTS

REVISIONS	DATE	INTERNATIONAL PAPER WIGGINS, MS. TREATED WOOD PRODUCTS PLANT CLOSURE OF SLUDGE PITS, A SOLID WASTE MANAGEMENT UNIT & LAND TREATMENT DEMOSTRATION UNIT, A HAZARDOUS WASTE MANAGEMENT UNIT
	12/5/90	
	DR. BY B.H.B.	
	CHECKED ROBERT	
	SCALE 1" = 30'	BATSON AND BROWN, INC. CONSULTING ENGINEERS WIGGINS □ LUCEDALE □ PASCAGOULA, MISSISSIPPI

EXHIBIT H

TEST RESULTS
K001 CONSTITUENT LEVELS IN POND BOTTOMS

GYMNURS LABORATORIES, INC.
1601 N. Glenville Suite 105
Richardson, Texas 75081 • (214) 690-9431

Laboratory Analysis and Field Consultation

2nd section of middle Penta Impoundment

INTERNATIONAL PAPER COMPANY
P.O. Box 809025
Dallas, TX 75380-9025
ATTN: MR. J. AMIN

DATE SAMPLED: 6/8/88
DATE RECEIVED: 6/10/88
DATE REPORTED: 6/16/88
SAMPLE NUMBER: Lake Douglas (PENT.
REPORT NUMBER: 1076
LOCATION: WIGGINS, MISS

DETECTION LIMIT 1.0 ppm

TEST REQUIRED	RESULTS ppm	COMMENTS	ANALYZED BY
Acenaphthene	1.21		NS
Anthracene	0.48		
Chrysene	0.08		
Cresols	<0.01		
2,4-Dichlorophenol	<0.01		
Fluoranthene	1.32		
Fluorene	<0.01		
Naphthalene	2.09		
Pentachlorophenol	1.72		
Phenanthrene	<0.01		
Phenol	<0.01		
Pyrene	<0.01		

N. Shah

Niranjan Shah
GYMNURS LABORATORIES, INC.

GYMNURS LABORATORIES, INC.

1601 N. Glenville Suite 105
Richardson, Texas 75081 • (214) 690-9431

Laboratory Analysis and Field Consultation

INTERNATIONAL PAPER COMPANY
P.O. Box 809025
Dallas, TX 75380-9025
ATTN: J. AMIN

DATE SAMPLED: 5/11/88
DATE RECEIVED: 5/18/88
DATE REPORTED: 5/27/88
SAMPLE NUMBER: Landfarm
REPORT NUMBER: 891
LOCATION: WIGGINS, MISS

1st Take-Up

DETECTION LIMIT 1.0 ppm

TEST REQUIRED	RESULTS ppm	COMMENTS	ANALYZED BY
Acenaphthene	28.51		NS
Anthracene	71.32		
Benzo(a)anthracene	<0.01		
Benzo(a)pyrene	<0.01		
Benzo(b)fluoranthene	<0.01		
Benzo(k)fluoranthene	<0.01		
Carbazole	<0.01		
2-chlorophenol	<0.01		
p-chloro-m-cresol	<0.01		
chrysene	2.42		
Dibenzo(a,h)anthracene	<0.01		
2,4-Dimethylphenol	<0.01		
2,4-Dinitrophenol	<0.01		
Fluoranthene	61.92		
Indeno(1,2,3-cd)pyrene	<0.01		
Naphthalene	42.18		
Pentachlorophenol	42.49		
Phenanthrene	<0.01		
Phenol	<0.01		
Tetrachlorophenol	<0.01		
2,4,6-trichlorophenol	<0.01	TOTAL 298.84PPM	

Niranjan Shah
GYMNURS LABORATORIES, INC.

GYMNURS LABORATORIES, INC.
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Richardson, Texas 75081 • (214) 690-9431

Laboratory Analysis and Field Consultation

1st Lift

INTERNATIONAL PAPER COMPANY
P.O. Box 809025
Dallas, TX 75380-9025
ATTN: MR. J. AMIN

DATE SAMPLED: 5/11/88
DATE RECEIVED: 5/18/88
DATE REPORTED: 6/15/88
SAMPLE NUMBER: Landfarm
REPORT NUMBER: 891-TCLP
LOCATION: WIGGINS, MISS

DETECTION LIMIT 0.01 ppm

TEST REQUIRED	RESULTS ppm	COMMENTS	ANALYZED BY
Acenaphthene	0.81		NS
Anthracene	1.02		
Chrysene	<0.01		
Cresols	<0.01		
2,4-Dichlorophenol	<0.01		
Fluoranthene	0.37		
Fluorene	<0.01		
Naphthalene	1.03		
Pentachlorophenol	<0.01		
Phenanthrene	<0.01		
Phenol	<0.01		
Pyrene	<0.01		

Niranjan Shah
GYMNURS LABORATORIES, INC.

GYMNURS LABORATORIES, INC.
1601 N. Glenville Suite 105
Richardson, Texas 75081 • (214) 690-9431

Laboratory Analysis and
Field Consultation

DATE SAMPLED: 12/4/87
DATE RECEIVED: 12/8/87
DATE REPORTED: 12/11/87
SAMPLE NUMBER: 3,23,38
REPORT NUMBER: 0993
LOCATION: Penta Pond ½
Last Half
Composite of 3 samples

INTERNATIONAL PAPER CO.
P.O.Box 809025
Dallas,Tx 75380-9025
Attn.J.Amin

TEST REQUESTED	RESULTS PPM	COMMENTS
Acenaphthene	12.76	
Anthracene	11.89	
Benzo (a) anthracene	N.D.	
Benzo (a) pyrene	N.D.	
Benzo (b) fluoranthene	N.D.	
Benzo (k) fluoranthene	N.D.	
Carbazole	N.D.	
2-chlorophenol	7.49	
p-chloro-m-cresol	0.98	
chrysene	0.71	
Dibenzo (a,h) anthracene	N.D.	
2,4,Dimethylphenol	N.D.	
2,4-Dinitrophenol	N.D.	
Fluoranthene	N.D.	
Indeno (1,2,3-cd) pyrene	N.D.	
Naphthalene	N.D.	
Pentachlorophenol	21.77	
Phenanthrene	8.31	
Phenol	N.D.	
Tetrachlorophenol	N.D.	
2,4,6-trichlorophenol	N.D.	Total 63.20

Niranjan
Niranjan Shah
Laboratory Manager

1601 N. Glenville Suite 105
Richardson, Texas 75081 • (214) 690-9431

...ABORATORIES, INC.

Laboratory Analysis and Field Consultation

DATE SAMPLED: 12/4/87
DATE RECEIVED: 12/8/87
DATE REPORTED: 12/11/87
SAMPLE NUMBER: 3,23,38
REPORT NUMBER: 0993

Penta Impoundment.
Second Section

INTERNATIONAL PAPER CO.
P.O.Box 809025
Dallas,Tx 75380-9025
Attn.J.Amin

TEST REQUESTED	RESULTS PPM	COMMENTS
Acenaphthene	12.76	
Anthracene	11.89	
Benzo (a) anthracene	N.D.	
Benzo (a) pyrene	N.D.	
Benzo (b) fluoranthene	N.D.	
Benzo (k) fluoranthene	N.D.	
Carbazole	N.D.	
2-chlorophenol	7.49	
p-chloro-m-cresol	0.98	
chrysene	0.71	
Dibenzo (a,h) anthracene	N.D.	
2,4,Dimethylphenol	N.D.	
2,4-Dinitrophenol	N.D.	
Fluoranthene	N.D.	
Indeno (1,2,3-cd) pyrene	N.D.	
Naphthalene	N.D.	
Pentachlorophenol	21.77	
Phenanthrene	8.31	
Phenol	N.D.	
Tetrachlorophenol	N.D.	
2,4,6-trichlorophenol	N.D.	Total 63.20

Niranjan
Niranjan Shah
Laboratory Manager

Howard
Penta Pond 2nd Section
Soil test

DEC 1987
INT. PAPER CO.
TREATED WOOD
PRODUCTS
WIGGINS

1601 N. Glenville Suite 105
Richardson, Texas 75081 • (214) 690-9431

Laboratory Analysis and
Field Consultation

DATE RECEIVED: 11/16/87
DATE REPORTED: 11/18/87
SAMPLE NUMBER: Soil
REPORT NUMBER: 0901
LOCATION: Wiggins,MISS
LOCATION: Penta Pond ½
First Half
Composite of 3 sample

INTERNATIONAL PAPER CO.
P.O.Box 809025
Dallas,Tx 75380-9025
Attn.J.Amin

TEST REQUESTED	RESULTS PPM	COMMENTS
Acenaphthene	8.42	
Anthracene	6.11	
Benzo (a) anthracene	N.D.	
Benzo (a) pyrene	N.D.	
Benzo (b) fluoranthene	N.D.	
Benzo (k) fluoranthene	N.D.	
Carbazole	N.D.	
2-chlorophenol	2.09	
p-chloro-m-cresol	N.D.	
chrysene	N.D.	
Dibenzo (a,h) anthracene	N.D.	
2,4,Dimethylphenol	N.D.	
2,4-Dinitrophenol	N.D.	
Fluoranthene	N.D.	
Indeno (1,2,3-cd) pyrene	N.D.	
Naphthalene	7.49	
Pentachlorophenol	6.92	
Phenanthrene	N.D.	
Phenol	1.09	
Tetrachlorophenol	N.D.	
2,4,6-trichlorophenol	N.D.	Total 32.12

Niranjan Shah
Laboratory Manager

GYMNURS LABORATOR.ES, INC.

1601 N. Glenville Suite 105
Richardson, Texas 75081 • (214) 690-9431

Laboratory Analysis and Field Consultation

Howard,
We are below 1000 ppm
Please plan to fill the
Pond to prepare for biofarm
if necessary.
JCA
8/11/87

DATE RECEIVED: 8/3/87
DATE REPORTED: 8/4/87
SAMPLE NUMBER: Wiggins,MISS
REPORT NUMBER: 0600

INTERNATIONAL PAPER CO.
P.O.Box 809025
Dallas,Tx 75380-9025
Attn.J.Amin

Contact Cooling Pond

Detection Limit 1 ppm

TEST REQUESTED	RESULTS PPM	COMMENTS
Acenaphthene	71.82	
Anthracene	N.D.	
Benzo (a) anthracene	N.D.	
Benzo (a) pyrene	N.D.	
Benzo (b) fluoranthene	N.D.	
Benzo (k) fluoranthene	N.D.	
Carbazole	N.D.	
2-chlorophenol	N.D.	
p-chloro-m-cresol	N.D.	
chrysene	N.D.	
Dibenzo (a,h) anthracene	N.D.	
2,4,Dimethylphenol	N.D.	
2,4-Dinitrophenol	N.D.	
Fluoranthene	115.06	
Indeno (1,2,3-cd) pyrene	N.D.	
Naphthalene	N.D.	
Pentachlorophenol	772.91	
Phenanthrene	N.D.	
Phenol	N.D.	
Tetrachlorophenol	N.D.	
2,4,6-trichlorophenol	N.D.	Total 959.79

Niranjan Shah
Niranjan Shah
Laboratory Manager

GTMINORS LABORATORIES, INC.
1601 N. Glenville Suite 105
Richardson, Texas 75081 • (214) 690-9431

Laboratory Analysis and
Field Consultation

DATE RECEIVED: 8/3/87
DATE REPORTED: 8/4/87
SAMPLE NUMBER: Wiggins,MISS
REPORT NUMBER: D600
LOCATION: Contact Cooling Ponc
Composite of 3 sampl

INTERNATIONAL PAPER CO.
P.O.Box 809025
Dallas,Tx 75380-9025
Attn.J.Amin

Detection Limit 1 ppm

TEST REQUESTED	RESULTS PPM	COMMENTS
Acenaphthene	71.82	
Anthracene	N.D.	
Benzo (a) anthracene	N.D.	
Benzo (a) pyrene	N.D.	
Benzo (b) fluoranthene	N.D.	
Benzo (k) fluoranthene	N.D.	
Carbazole	N.D.	
2-chlorophenol	N.D.	
p-chloro-m-cresol	N.D.	
chrysene	N.D.	
Dibenzo (a,h) anthracene	N.D.	
2,4,Dimethylphenol	N.D.	
2,4-Dinitrophenol	N.D.	
Fluoranthene	115.06	
Indeno (1,2,3-cd) pyrene	N.D.	
Naphthalene	N.D.	
Pentachlorophenol	772.91	
Phenanthrene	N.D.	
Phenol	N.D.	
Tetrachlorophenol	N.D.	
2,4,6-trichlorophenol	N.D.	Total 959.79

Niranjan Shah
Laboratory Manager

RECEIVED
FEB 2? '88
BATSON & BROWN

GYMNURS LABORATORIES, INC.
1601 N. Glenville Suite 105
Richardson, Texas 75081 • (214) 690-9431
Laboratory Analysis and Field Consultation

DATE RECEIVED: 6/26/87
DATE REPORTED: 6/29/87
SAMPLE NUMBER: 6,7,7
REPORT NUMBER: 0532
Wiggins,Miss

INTERNATIONAL PAPER CO.
P.O.Box 809025
Dallas,Tx 75380-9025
Attn.J.Amin

Contact Cooling Pond
1st Test

Detection limit 1.0 mg/l

TEST REQUESTED	RESULTS PPM	COMMENTS
Acenaphthene	93.10	
Anthracene	N.D.	
Benzo (a) anthracene	N.D.	
Benzo (a) pyrene	N.D.	
Benzo (b) fluoranthene	N.D.	
Benzo (k) fluoranthene	N.D.	
Carbazole	N.D.	
2-chlorophenol	N.D.	
p-chloro-m-cresol	N.D.	
chrysene	N.D.	
Dibenzo (a,h) anthracene	N.D.	
2,4,Dimethylphenol	N.D.	
2,4-Dinitrophenol	N.D.	
Fluoranthene	265.02	
Indeno (1,2,3-cd) pyrene	N.D.	
Naphthalene	623.98	
Pentachlorophenol	4903.35	
Phenanthrene	N.D.	
Phenol	N.D.	
Tetrachlorophenol	N.D.	
2,4,6-trichlorophenol	112.15	Total 6032.25

Niranjan Shah
Laboratory Manager

Howard
As per our telecon
Recovery Pond
or Contact cooling Pond
fails the test.
we will biofarm
to reduce
Thanks
Jeff

GYMNURS LABORATORIES, INC.

1601 N. Glenville Suite 105
Richardson, Texas 75081 • (214) 690-9431

Laboratory Analysis and
Field Consultation

DATE RECEIVED: 5/8/87
DATE REPORTED: 5/9/87
SAMPLE NUMBER: 1 Wiggins
REPORT NUMBER: 0471
Creosote Pond -

INTERNATIONAL PAPER CO.
P.O.Box 809025
Dallas,Tx 75380-9025
Attn.J.Amin

Detection Limit 1 ppm

TEST REQUESTED	RESULTS PPM	COMMENTS
Acenaphthene	N.D.	
Anthracene	N.D.	
Benzo (a) anthracene	N.D.	
Benzo (a) pyrene	N.D.	
Benzo (b) fluoranthene	N.D.	
Benzo (k) fluoranthene	N.D.	
Carbazole	N.D.	
2-chlorophenol	N.D.	
p-chloro-m-cresol	N.D.	
chrysene	N.D.	
Dibenzo (a,h) anthracene	N.D.	
2,4,Dimethylphenol	N.D.	
2,4-Dinitrophenol	N.D.	
Fluoranthene	N.D.	
Indeno (1,2,3-cd) pyrene	N.D.	
Naphthalene	N.D.	
Pentachlorophenol	754.79	
Phenanthrene	34.25	
Phenol	N.D.	
Tetrachlorophenol	N.D.	
2,4,6-trichlorophenol	N.D.	

Niranjan Shah
Niranjan Shah
Laboratory Manager

~~Cellar Pond~~ ?

Mr. Brax Batson

Above results are for Creosote Pond which we took on 5/8/87. Total is below 1000 PPM so pond passes. We are going to fill it up wk of 5/11/87 hopefully before rain.

Thanks
Jack

H-10

GYMNURS LABORATORIES, INC.
1601 N. Glenville Suite 105
Richardson, Texas 75081 • (214) 690-9431
Laboratory Analysis and
Field Consultation

DATE RECEIVED: 5/08/87
DATE REPORTED: 5/14/87
SAMPLE NUMBER: 1 Wiggins
REPORT NUMBER: 0471
LOCATION: Creosote Pond
Composite of 3 sampl

INTERNATIONAL PAPER CO.
P.O.Box 809025
Dallas,Tx 75380-9025
Attn.J.Amin

TOXIC CHARACTERIZATION OF LEACHABLE PROCEDURE
Detection Limit 1 ppm

TEST REQUESTED	RESULTS PPM	COMMENTS
Acenaphthene	N.D.	
Anthracene	N.D.	
Benzo (a) anthracene	N.D.	
Benzo (a) pyrene	N.D.	
Benzo (b) fluoranthene	N.D.	
Benzo (k) fluoranthene	N.D.	
Carbazole	N.D.	
2-chlorophenol	N.D.	
p-chloro-m-cresol	N.D.	
chrysene	N.D.	
Dibenzo (a,h) anthracene	N.D.	
2,4,Dimethylphenol	N.D.	
2,4-Dinitrophenol	N.D.	
Fluoranthene	N.D.	
Indeno (1,2,3-cd) pyrene	N.D.	
Naphthalene	N.D.	
Pentachlorophenol	12.88	
Phenanthrene	1.92	
Phenol	N.D.	
Tetrachlorophenol	N.D.	
2,4,6-trichlorophenol	N.D.	

Niranjan Shah
Laboratory Manager

1601 N. Glenville Suite 105
Richardson, Texas 75081 • (214) 690-9431

Laboratory Analysis and
Field Consultation

DATE RECEIVED: 4/08/87
DATE REPORTED: 4/10/87
SAMPLE NUMBER: SMU-2
REPORT NUMBER: 0349
LOCATION: Solid Waste Management
Unit #2
Composite of 3 samples
SLUDGE PIT
4 & 5

INTERNATIONAL PAPER CO.
P.O.Box 809025
Dallas,Tx 75380-9025
Attn.J.Amin

TEST REQUESTED	RESULTS PPM	COMMENTS
Acenaphthene	1.28	
Anthracene	30.20	
Benzo (a) anthracene	29.14	
Benzo (a) pyrene	<1.00	
Benzo (b) fluoranthene	7.01	
Benzo (k) fluoranthene	<1.00	
Carbazole	<1.00	
2-chlorophenol	3.82	
p-chloro-m-cresol	<1.00	
chrysene	4.43	
Dibenzo (a,h) anthracene	<1.00	
2,4,Dimethylphenol	12.85	
2,4-Dinitrophenol	5.12	
Fluoranthene	40.18	
Indeno (1,2,3-cd) pyrene	<1.00	
Naphthalene	63.56	
Pentachlorophenol	7.91	
Phenanthrene	73.98	
Phenol	1.39	
Tetrachlorophenol	1.04	
2,4,6-trichlorophenol	3.21	Total 285.12

Niranjan Shah
Laboratory Manager

1601 N. Glenville Suite 105
Richardson, Texas 75081 • (214) 690-9431

Laboratory Analysis and Field Consultation

Date Received: 4/08/87
Date Reported: 4/10/87
Sample Number: SMU-1
Lab Number: 0348
LOCATION: Solid Waste Managem
Unit #1
Composite of 3 samp

SLUDGE PIT
2 & 3

INTERNATIONAL PAPER CO.
P.O.Box809025
Dallas,Tx 75380-9025
Attn.J.Amin

TEST REQUESTED	RESULTS PPM	COMMENTS
Anthracene	55.03	
Benzo(a) Anthracene	<1.00	
Benzo(b) Fluorenthene	10.09	
Benzo(a) Pyrene	<1.00	
Benzo(k) Fluorenthene	<1.00	
Benzo thiophene	<1.00	
Carbamates	<1.00	
Chrycene	21.37	
Cresols	<1.00	
Dibenzofuran	<1.00	
Dibenzo(ah)Anthracene	<1.00	
Dichlorophenol	<1.00	
Ethyl Naphthalene	7.43	
Fluorene	7.65	
Fluorenthene	<1.00	
Indino(1,2,3)-c-d Pyrene	<1.00	
Methyl Naphthalene	<1.00	
Naphthalene	<1.00	
Phenanthrene	7.90	
Phenol	8.38	
Pyrene	64.91	
Tetrachloroethane	<1.00	
Xylenol	<1.00	Total 182.76

Niranjan Shah
Laboratory Manager

Collins Impoundment

UNIVERSITY HYGIENIC LABORATORY
Analytical Report

Client: International Paper Co., ATTN: Bill Roberson
Client Address: 3101 International Drive, East
Mobile, AL 36606

Client Sample Identification: CRW-1 (1-3) Composite
Date Sample Collected: 4-15-86
Date Sample Received: 4-17-86

ANALYTICAL RESULTS

UHL Lab No. Composite 8602715 thru 8602717

Analyte	Concentration (mg/kg)	Detection Limit (mg/kg)*
naphthalene	ND	1
acenaphthene	ND	1
fluorene	ND	1
pentachlorophenol	130	1
phenanthrene	ND	1
methyl anthracenes	ND	1
fluoranthene	ND	1
pyrene	ND	1
chrysene	ND	1

Analytical Method: EPA Method 8270

Analyst: C. Maw/K. Kline
Verified:
Date Reported: 5-12-86

ND = Below detection limit.

* = Client Specified Detection Limit

UNIVERSITY HYGIENIC LABORATORY
Analytical Report

Client: International Paper Co., ATTN: Bill Roberson
Client Address: 3101 International Drive, East
Mobile, AL 36606

Client Sample Identification: CRW-2
Date Sample Collected: 4-15-86
Date Sample Received: 4-17-86

ANALYTICAL RESULTS

UHL Lab No. 8602718

Analyte	Concentration (mg/kg)	Detection Limit (mg/kg)*
naphthalene	ND	1
acenaphthene	ND	1
fluorene	ND	1
pentachlorophenol	4.6	1
phenanthrene	ND	1
methyl anthracenes	ND	1
fluoranthene	ND	1
pyrene	ND	1
chrysene	ND	1

Analytical Method: EPA Method 8270

Analyst: C. Maw/R. Kline
Verified:
Date Reported: 5-12-86

ND = Below detection limit.

* = Client Specified Detection Limit

UNIVERSITY HYGIENIC LABORATORY
ANALYTICAL REPORT
Finnigan 1020

Client: International Paper Co. ATTN: Bill Roberson
Client Address: 3101 International Drive, East
Mobile, AL 36606
Client Sample Location: CRW-1 (1-3) Composite
Date Sample Collected: 4-15-86
Date Sample Received: 4-16-86

ANALYTICAL RESULTS

UHL Lab No. Composite 8602715 thru 8602717

Analyte	Concentration (ug/Kg)	Quantitation Limit (ug/Kg)
PHENOL	ND	85
2-CHLOROPHENOL	ND	85
2,4-DIMETHYLPHENOL	ND	85
4-CHLORO-3-METHYLPHENOL	ND	110
2,4,6-TRICHLOROPHENOL	ND	85
2,4-DINITROPHENOL	ND	85
1,2,4-TRICHLOROBENZENE	ND	42
ANTHRACENE	1300	150
BENZO(A)ANTHRACENE	ND	85
BENZO(B)FLUORANTHENE	ND	42
BENZO(K)FLUORANTHENE	ND	130
BENZO(A)PYRENE	ND	42
INDENO(1,2,3-CD)PYRENE	NA	64*
DIBENZ(A,H)ANTHRACENE	NA	130*
2,3,4,6-TETRACHLOROPHENOL	ND	210**
CARBAZOLE	NA	210*

Analytical Method: USEPA Method 8270.

Analyst: T. Dain
Verified: [illegible]
Date Reported: 2-17-87

ND Not detected above the quantitation limit.
NA Not analyzed.
* Data acquisition terminated prior to elution.
** Standard not analyzed. Estimated quantitation limit.

The University of Iowa

Iowa City, Iowa 52242

Hygienic Laboratory
Office of the Director

(319) 335-4500

1847

20 February 1987

Mr. William Roberson
International Paper Products
P. O. Box 160707
3101 International Drive
Mobile, Alabama 36616

RE: Nine Additional Compounds Done on Finnigan 1020
Reanalysis of UHL Sample Composite 8602715-8602717

Dear Mr. Roberson:

The attached reports complete the response to International Paper's request for additional data on samples from the Wiggins Site (Dr. Cherryholmes' memo to Dr. Breuer, 10/10/86). Computer problems associated with the transfer of data from disk storage to archival tape storage resulted in loss of data for UHL samples #8509103-8509108 which were collected 11/15/85, and reexamination of the data from those samples is not possible.

Also enclosed is a report for the reexamination of composite sample #8602715 thru 8602717 for the additional compounds requested. As noted on the report, the conditions of the analysis were not suitable for determination of three of the requested compounds.

The University Hygienic Laboratory appreciates the opportunity to assist you in this analytical project. If you have any questions about the analytical data, please contact Mr. Dennis Seeger of our GC/MS Department. If you need to schedule additional work or have questions on the analytical fee, please feel free to contact Dr. Keith Cherryholmes.

The fee for UHL sample #8601286-8601293, 8601297-8601301, 8606080-8606082, 8606088-8606091, 8606095 is $145 per sample for a total $3,045 and $200 for UHL composite sample #8602715 thru 8602717. The total for the attached analytical data is $3,245. You will be receiving a statement of your charges following the end of the month.

Sincerely,

George M Breuer

George M. Breuer, Ph.D., CIH
Chief, Organic Analysis

KLC/bjs
Enclosure
cc: Mr. M. Sullivan
Mr. D. Seeger
Dr. J. R. Grant
DCO

UNIVERSITY HYGIENIC LABORATORY
"Iowa's Environmental and Public Health Laboratory"

MEMORANDUM

FROM: Dennis Seeger

DATE: 2/5/88

TO: Jay Amin, International Paper

SUBJECT: CRW-1 Composite Sample Data

The results of the reexamination of the sample that you requested are enclosed. A copy of the the letter that was included with these results last February is also attached. Let me know if any further information is required.

RECEIVED
FEB 9 1988

EXHIBIT I

TEST RESULTS CONTAMINATED SOIL
REMAINING AT RECOVERY PONDS SITE

MISSISSIPPI FOREST PRODUCTS LABORATORY

Telex 785045
Fax (601) 325-8126

P.O. Drawer FP
Mississippi State, MS 39762-57
Phone (601) 325-2116

September 4, 1990

Mr. Howard Hamilton
International Paper Company
P. O. Box 37
Wiggins, MS 39577

Dear Howard:

Please find enclosed the results on your soil samples identified as composite soil taken below clay cap received 8/17/90.

Please call if you have any questions on these data.

Sincerely,

Hamid Borazjani
Research Scientist
(601) 325-3106

HB/dg

enclosure

SEP 1990
INT. PAPER CO.
TREATED WOOD
PRODUCTS
WIGGINS

Mississippi State Forest Products Laboratory
Analytical Report

LANDFARM Area Prior To Cap Work

Client: International Paper Company

Client Address: Mr. Stephen Carter
P.O. Box 809024
Dallas, Texas 75380-9024

Client Sample Location: WIGG COM-S-SAMP

Date Sample Collected: 08/01/90
Date sample Received: 08/17/90
Date Analyzed (GC/ECD): 08/23/90
Date Analyzed (GC/FID): 08/24/90
MSFPL Lab. Number: 10745

Analytical Results

Analyte	Concentration (ug/g)	Method Detection Limit (ug/g)
Acenapthene	359	0.69
Anthracene	391	0.79
Benzo(a)anthracene	63	1.3
Benzo(a)pyrene	17	2.3
Benzo(b)fluoranthene	29	1.7
Benzo(k)fluoranthene	33	1.6
Carbazole	150	1.1
4-Chloro-3-methylphenol	ND	1.1
2-Chlorophenol	ND	2.0
Chrysene	80	1.2
Dibenzo(ah)anthracene	ND	3.1
2,4-Dimethylphenol	ND	1.2
2,4-Dinitrophenol	ND	2.7
Fluoranthene	420	0.89
Indeno(123cd)pyrene	ND	3.7
Naphthalene	153	0.69
Pentachlorophenol	1780	0.26
Phenol	2	1.9
Phenanthrene	942	0.74
2,3,4,6-Tetrachlorophenol	61	1.4
2,4,6-Trichlorophenol	ND	0.31

4,1 CD

Analytical Methods. Extraction: Soxhlet
Gas Chromatography: GC/ECD and GC/FID

ND-Not Detected above the specified detection limit.

Analyst: M. Hannigan
Verified: [signature]
Report Date: 8/31/90

Mississippi State Forest Products Laboratory
Analytical Report

LAND FARM AREA
Prior To cap work

Client: International Paper Company

Client Address: Mr. Stephen Carter
P.O. Box 809024
Dallas, Texas 75380-9024

Client Sample Location: WIGG COM-S-SAMP

Date Sample Collected: 08/15/90
Date sample Received: 08/17/90
Date Analyzed (GC/ECD): 08/23/90
Date Analyzed (GC/FID): 08/25/90
MSFPL Lab. Number: 10746

Analytical Results

Analyte	Concentration (ug/g)	Method Detection Limit (ug/g)
Acenapthene	332	0.69
Anthracene	319	0.79
Benzo(a)anthracene	57	1.3
Benzo(a)pyrene	28	2.3
Benzo(b)fluoranthene	23	1.7
Benzo(k)fluoranthene	32	1.6
Carbazole	126	1.1
4-Chloro-3-methylphenol	ND	1.1
2-Chlorophenol	ND	2.0
Chrysene	85	1.2
Dibenzo(ah)anthracene	ND	3.1
2,4-Dimethylphenol	ND	1.2
2,4-Dinitrophenol	ND	2.7
Fluoranthene	387	0.89
Indeno(123cd)pyrene	ND	3.7
Naphthalene	122	0.69
Pentachlorophenol	1840	0.26
Phenol	ND	1.9
Phenanthrene	863	0.74
2,3,4,6-Tetrachlorophenol	66	1.4
2,4,6-Trichlorophenol	ND	0.31

Analytical Methods. Extraction: Soxhlet
Gas Chromatography: GC/ECD and GC/FID

ND-Not Detected above the specified detection limit.

Analyst: M. Hannigan
Verified:
Report Date: 8/31/90

EXHIBIT J

SOIL TEST REPORTS

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 39577
601/928-7263

PROJECT: Ms. State Land Farm at IPCO (Soil Layer)

DATE: 10/5/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: Final Grade
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
1	12"	0 + 28/71' RT C.L.	14.8	109.6	18.4	93.5	85.4
2	12"	0 + 25/3' RT C.L.	14.8	109.6	17.8	97.9	89.4
3	12"	0 + 62/52' RT C.L.	14.8	109.6	18.0	98.6	90.0
4	12"	0 + 62/48' RT C.L.	14.8	109.6	20.2	97.6	89.1
5	12"	0 + 24/69' RT C.L.	14.8	109.6	16.8	97.6	89.1
6	12"	1 + 00/18' RT C.L.	14.8	109.6	21.4	93.7	85.5
		AFTER ADDITIONAL COMPACTION					
7	12"	0 + 29/69' RT C.L.	14.8	109.6	15.6	100.4	91.6
8	12"	0 + 75/40' RT C.L.	14.8	109.6	16.0	98.7	90.0
9	12"	1 + 12/46' RT C.L.	14.8	109.6	14.9	99.2	90.5
10	12"	1 + 52/45' RT C.L.	14.8	109.6	14.1	103.4	94.3
11	12"	1 + 21/12' RT C.L.	14.8	109.6	16.3	104.1	95.0
12	12"	0 + 63/10' RT C.L.	14.8	109.6	17.2	98.6	90.0
13	12"	0 + 58/37' LT C.L.	14.8	109.6	19.0	102.3	93.4
14	12"	0 + 27/19' LT C.L.	14.8	109.6	18.9	99.7	90.9
15	12"	0 + 40/54' LT C.L.	14.8	109.6	21.0	102.9	93.9

Note:

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO
P O BOX 68
WIGGINS MS 39577
601/928-7263

PROJECT: IPCO Ponds (Soil Layer) DATE: 10/3/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: Final Grade
Reported to:

Retest of 10/2/90 after additional compaction

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
1	12	3 + 00/101' RT C.L.	14.8	109.6	13.6	100.2	91.4
2	12	3 + 00/49' RT C.L.	14.8	109.6	16.3	102.5	93.5
3	12	3 + 00/50' LT C.L.	14.8	109.6	13.4	105.7	96.4
4	12	3 + 00/100' LT C.L.	14.8	109.6	12.7	103.6	94.5
5	12	3 + 50/91' LT C.L.	14.8	109.6	13.6	102.1	93.2
6	12	3 + 50/49' LT C.L.	14.8	109.6	15.3	102.0	93.1
7	12	3 + 50/7' RT C.L.	14.8	109.6	11.3	102.2	93.2
8	12	3 + 50/50' RT C.L.	14.8	109.6	14.5	101.6	92.7
9	12	3 + 50/95' RT C.L.	14.8	109.6	15.5	103.4	94.4
10	12	4 + 00/90' RT C.L.	14.8	109.6	16.4	100.5	91.7
11	12	4 + 00/50' RT C.L.	14.8	109.6	13.1	103.6	94.5
12	12	4 + 00/6' RT C.L.	14.8	109.6	12.2	100.1	91.3
13	12	4 + 00/50' LT C.L.	14.8	109.6	14.0	101.6	92.7
14	12	4 + 00/90' LT C.L.	14.8	109.6	12.6	103.5	94.5
15	12	4 + 50/90' LT C.L.	14.8	109.6	12.9	101.0	92.1
16	12	4 + 50/45' LT C.L.	14.8	109.6	14.2	103.0	94.0
17	12	4 + 50/4' LT C.L.	14.8	109.6	15.8	98.7	90.1
18	12	4 + 50/40' RT C.L.	14.8	109.6	12.8	105.7	96.4
19	12	4 + 50/75' RT C.L.	14.8	109.6	11.7	101.8	92.8
20	12	5 + 00/40' RT C.L.	14.8	109.6	14.1	97.9	89.3
21	12	5 + 00/7'LT C.L.	14.8	109.6	11.6	102.9	93.9
22	12	5 + 00/50' LT C.L.	14.8	109.6	15.2	100.3	91.5

Note:

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 39577
601/928-7263

PROJECT: IPCO Ponds (Soil Layer) DATE: 10/2/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: Final Grade
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
1	12	2 + 48/87' RT C.L.	13.2	112.9	14.3	103.5	91.7
2	12	2 + 49/47' RT C.L.	13.2	112.9	13.6	101.2	89.7
3	12	3 + 02/95' LT C.L.	13.2	112.9	14.0	99.6	88.2
4	12	2 + 98/49' LT C.L.	13.2	112.9	15.6	102.8	91.0
5	12	3 + 03/50' RT C.L.	13.2	112.9	13.4	102.5	90.8
6	12	3 + 03/10' RT C.L.	13.2	112.9	15.3	96.9	85.9
7	12	3 + 50/92' RT C.L.	13.2	112.9	17.3	100.7	89.2
8	12	3 + 45/91' RT C.L.	13.2	112.9	20.4	97.4	86.3
9	12	3 + 45/45' RT C.L.	13.2	112.9	17.9	95.9	85.0
10	12	3 + 50/91' LT C.L.	13.2	112.9	16.4	98.3	87.1
11	12	3 + 50/50' LT C.L.	13.2	112.9	17.2	100.3	88.9
12	12	3 + 50/7' RT C.L.	13.2	112.9	16.2	96.4	85.4
13	12	3 + 97/5' RT C.L.	13.2	112.9	14.4	97.3	86.2
14	12	4 +48/7' LT C.L.	13.2	112.9	15.8	100.6	89.1
		AFTER ADDITIONAL COMPACTION					
15	12	2 + 50/90' RT C.L.	13.2	112.9	13.9	100.8	92.0
16	12	2 + 50/45' RT C.L.	13.2	112.9	15.5	104.2	95.1
17	12	2 + 50/7' LT C.L.	13.2	112.9	14.1	102.0	93.1
18	12	2 + 50/83' LT C.L.	13.2	112.9	16.2	105.7	96.4

Note:

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 39577
601/928-7263

PROJECT: IPCO Ponds (Soil Layer) DATE: 10/1/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: Final Grade
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
1	12	2 + 50/85' RT C.L.	13.2	112.9	18.9	94.6	83.8
2	12	2 + 47/90' RT C.L.	13.2	112.9	18.9	99.2	87.9
3	12	2 + 50/48' RT C.L.	13.2	112.9	18.6	97.8	86.6
4	12	2 + 50/53' LT C.L.	13.2	112.9	17.0	105.3	93.3
5	12	2 + 50/102' LT C.L.	13.2	112.9	15.9	102.9	91.1
6	12	3 + 05/93' LT C.L.	13.2	112.9	16.4	98.5	87.3
7	12	3 + 05/49' LT C.L.	13.2	112.9	18.6	98.8	87.6
8	12	3 + 00/12' RT C.L.	13.2	112.9	13.2	105.9	93.9
9	12	3 + 00/50' RT C.L.	13.2	112.9	14.4	98.9	87.6
10	12	3 + 00/100' RT C.L.	13.2	112.9	17.8	95.0	84.2

Note: General indication is that AREA from STA 2 + 00 increasing requires more compaction.

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 77
601/928-7263

PROJECT: IPCO Ponds (Soil Layer) DATE: 9/28/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: Final Grade
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
1	12	STA 1 + 100/5' LT C.L.	13.2	112.9	16.2	103.8	91.9
1a	6	STA 1 + 100/5' LT C.L.	13.2	112.9	16.9	98.0	86.8
2	12	STA 0 + 78/9' LT C.L.	13.2	112.9	17.4	98.8	87.5
3	12	STA 0 + 78/50' LT C.L.	13.2	112.9	14.7	102.0	90.4
4	12	STA 0 + 78/52' LT C.L.	13.2	112.9	16.0	103.8	92.0
5	12	STA 0 + 78/97' LT C.L.	13.2	112.9	19.6	101.8	90.2
6	12	STA 1 + 12/101' LT C.L.	13.2	112.9	15.5	104.4	92.5
7	12	STA 1 + 12/58' LT C.L.	13.2	112.9	17.1	103.5	91.7
8	12	STA 1 + 12/6' LT C.L.	13.2	112.9	15.4	107.4	95.5
9	12	STA 1 + 55/6' LT C.L.	13.2	112.9	16.6	105.2	93.2
10	12	STA 1 + 55/66' LT C.L.	13.2	112.9	15.4	104.0	92.1
11	12	STA 1 + 55/112' LT C.L.	13.2	112.9	15.3	106.6	94.4
12	12	STA 1 + 88/107' LT C.L.	13.2	112.9	15.6	107.8	95.5
13	12	STA 1 + 88/63' LT C.L.	13.2	112.9	15.4	110.5	97.8
14	12	STA 1 + 85/8' LT C.L.	13.2	112.9	17.1	103.4	91.6
* 15	12	STA 0 + 77/4' LT C.L.	13.2	112.9	16.0	103.7	91.9
16	12	STA 0 + 82/50' RT C.L.	13.2	112.9	14.6	107.6	95.3
17	12	STA 0 + 88/96' RT C.L.	13.2	112.9	14.8	104.1	92.2
18	12	STA 1 + 24/72' RT C.L.	13.2	112.9	17.8	104.0	92.2
19	12	STA 1 + 24/24' RT C.L.	13.2	112.9	15.4	107.1	94.9
20	12	STA 1 + 74/24' RT C.L.	13.2	112.9	14.6	103.7	91.9
21	12	STA 1 + 74/84' RT C.L.	13.2	112.9	15.9	101.4	89.9
22	12	STA 2 + 00/78' RT C.L.	13.2	112.9	12.4	106.2	94.1
23	12	STA 2 + 00/31' RT C.L.	13.2	112.9	16.6	103.0	91.2

Note: * Retest of test #1 & #2 after additional compaction of area

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 39577
601/928-7263

PROJECT: Ms State Land Farm (IPCO)
(Clay Cap)

DATE: 9/24/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: Finish Grade
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs Per Cu Ft.	% Max Density Obtained
1	12"	STA 0 + 22/35' LT C.L.	22.0	93.6	22.8	91.1	97.3
2	12"	STA 0 + 20/48' LT C.L.	22.0	93.6	22.5	92.4	98.6
3	12"	STA 0 + 51/54' LT C.L.	22.0	93.6	21.0	93.5	99.8
4	12"	STA 0 + 33/18' RT C.L.	22.0	93.6	24.2	93.6	99.9
5	12"	STA 0 + 79/49' RT C.L.	22.0	93.6	23.1	92.7	99.0
6	12"	STA 1 + 27/17' RT C.L.	22.0	93.6	24.7	93.7	100.1
7	12"	STA 1 + 55/48' RT C.L.	22.0	93.6	20.7	95.5	102.0

Note:

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 77
601/928-7263

PROJECT: Ms State Land Farm (IPCO)
(Clay Cap)

DATE: 9/17/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: Second
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
1	10"	STA 0 + 57/51' LT C.L.	22.5	98.4	24.4	95.7	97.3
2	10"	STA 0 + 19/34' LT C.L.	22.5	98.4	24.3	96.5	98.0
3	10"	STA 0 + 76/12' LT C.L.	22.5	98.4	26.8	93.6	95.1

Note:

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 39577
601/928-7263

PROJECT: Ms State Land Farm (IPCO)
(Clay Cap)

DATE: 9/15/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: First - except where noted Final Grade - 6"
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
1	6"	STA 0 + 27/41' RT C.L.	22.5	98.4	21.5	95.7	97.2
2	8"	STA 0 + 45/44' RT C.L.	22.5	98.4	24.7	94.9	96.4
3	12"	STA 1 + 72/13' RT C.L.**	22.5	98.4	24.5	92.4	93.9
4	8"	STA 1 + 66/49' RT C.L.**	22.5	98.4	26.6	91.2	92.7
5	6"	STA 0 + 36/28' LT C.L.	22.5	98.4	24.1	96.1	97.7
6	6"	STA 0 + 67/57' LT C.L.	22.5	98.4	27.5	90.5	92.0
7	6"	STA 0 + 70/41' LT C.L.	22.5	98.4	24.8	90.6	92.1
8	6"	STA 0 + 62/30' RT C.L.	22.5	98.4	24.0	94.2	95.8
9	10"	STA 2 + 05/49' RT C.L.**	22.5	98.4	25.0	93.5	95.0
10	10"	STA 2 + 05/20' RT C.L.**	22.5	98.4	27.1	94.3	95.9
11	10"	STA 2 + 05/14' RT C.L.**	22.5	98.4	24.6	94.4	95.9
12	6"	STA 0 + 75/39' LT C.L.	22.5	98.4	23.8	97.4	99.0
13	6"	STA 0 + 31/40' LT C.L.	22.5	98.4	24.5	95.9	97.5

Note: ** Final Grade - 6"

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 77
601/928-7263

PROJECT: Ms. State Land Farm (IPCO)
(Clay Cap)

DATE: 9/14/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: First
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
1	10"	STA 1 + 50/50' RT C.L.	22.5	98.4	24.9	93.9	95.4
2	10	STA 1 + 50/15' RT C.L.	22.5	98.4	24.4	98.7	100.3
3	6"	STA 0 + 32/42' RT C.L.	22.5	98.4	26.5	92.2	93.6
4	6	STA 0 + 32/17' RT C.L.	22.5	98.4	25.9	93.0	94.5
5	10"	STA 0 + 75/20' RT C.L.	22.5	98.4	28.6	94.6	96.1
6	6"	STA 0 + 27/48' LT C.L.	22.5	98.4	25.8	91.2	92.6

Note: Request additional compaction of first 100 feet.

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 395
601/928-7263

PROJECT: IPCO Ponds Site
(Clay Cap)

DATE: 9/10/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: Final Grade
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt. Lbs. Per Cu. Ft.	% Max Density Obtained
1	12"	STA 1+05/62' RT C.L.	22.5	98.4	17.8	96.8	98.3
2	12"	STA 1+43/76' RT C.L.	"	"	21.2	95.5	97.1
3	12"	STA 2+11/42' RT C.L.	"	"	17.8	96.8	98.4
4	12"	STA 0+93/60' LT C.L.	"	"	15.2	105.0	106.9
5	12"	STA 1+33/98' LT C.L.	"	"	20.2	96.3	97.9
6	12"	STA 1+92/94' LT C.L.	"	"	21.2	93.9	95.5
7	12"	STA 2+33/49' LT C.L.	"	"	18.6	97.0	98.5
8	12"	STA 1+82/4' RT C.L.	"	"	22.1	96.3	97.9
9	12"	STA 2+57/106' LT C.L.	"	"	19.2	97.1	98.7
10	12"	STA 2+92/76' LT C.L.	"	"	21.5	97.6	99.2
11	12"	STA 2+66/6' LT C.L.	"	"	20.2	97.2	98.8
12	12"	STA 2+77/83' RT C.L.	"	"	20.8	93.5	95.1
13	12"	STA 3+07/93' RT C.L.	"	"	18.8	95.8	97.4
*14	12"	STA 3+44/64' RT C.L.	"	"	21.9	92.1	93.6
15	12"	STA 3+19/71' LT C.L.	"	"	19.0	97.9	99.5
16	12"	STA 3+59/91' LT C.L.	"	"	19.8	94.4	95.9
17	12"	STA 3+59/52' RT C.L.	"	"	21.4	95.3	96.9
18	12"	STA 3+59/98' RT C.L.	"	"	23.2	93.6	95.1
*19	12"	STA 3+46/66' RT C.L.	"	"	20.3	92.8	94.3
20	12"	STA 3+94/70' RT C.L.	"	"	20.7	94.8	96.3
21	12"	STA 3+34/73' RT C.L.	"	"	20.1	96.5	98.1
22	12"	STA 4+34/15' RT C.L.	"	"	22.5	93.6	95.1
22	12"	STA 4+36/69' LT C.L.	"	"	20.7	94.3	95.8
**22	12"	STA 3+40/69' RT C.L.	"	"	19.7	96.3	97.8
23	12"	STA 4+89/64' RT C.L.	"	"	21.4	95.3	96.9
24	12"	STA 5+03/35' LT C.L.	"	"	19.6	96.1	97.6

Note: * Required Additional Compaction

** Retest of #14 & #19 area after re-compaction of a 50' strip running north & south over area.

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 3957
601/928-7263

PROJECT: IPCO Ponds Site (Clay Cap)

DATE: 9/7/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: 2nd
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
1	12"	STA 4+50/81' LT C.L.	22.5	98.4	26.5	92.6	94.1
1a	6"	" "	"	"	26.0	94.8	96.0
2	12"	STA 5+22/33' LT C.L.	"	"	25.7	92.3	93.8
2a	6"	" "	"	"	24.6	96.5	98.1
3	12"	STA 4+80/58' RT C.L.	"	"	26.8	87.9	89.3
3a	8"	" "	"	"	27.4	89.8	91.3
4	10"	STA 3+94/63' RT C.L.	"	"	26.0	92.3	93.8
5	12"	STA 3+62/47' LT C.L.	"	"	24.1	94.2	95.8
AFTER ADDITIONAL COMPACTION, THE FOLLOWING DENSITIES WERE MEASURED							
6	12"	STA 3+88/77' RT C.L.	"	"	21.4	93.7	95.2
7	12"	STA 4+08/54' RT C.L.	"	"	24.6	93.8	95.4
8	12"	STA 4+50/76' LT C.L.	"	"	25.9	92.6	94.2
9	12"	STA 5+25/33' LT C.L.	"	"	24.7	93.3	94.8
10	12"	STA 4+82/59' RT C.L.	"	"	24.9	89.8	91.2
*11	12"	STA 0+92/41' RT C.L.	"	"	24.5	92.4	93.9
AFTER ADDITIONAL COMPACTION, THE FOLLOWING DENSITIES WERE MEASURED							
12	12"	STA 4+68/59' RT C.L.	"	"	23.9	94.7	96.3
13	10"	STA 4+50/63' RT C.L.	"	"	24.3	94.2	95.7

Note: * Not finished compaction

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 3957
601/928-7263

PROJECT: IPCO Ponds Site
(Clay Cap)

DATE: 9/6/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift:
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs Per Cu. Ft.	% Max Density Obtained
1	8"	STA 5+18/47' LT of C.L. 1st Lift	22.5	98.4	23.7	96.3	97.8
2	8"	STA 5+15/26.5' RT of C.L. 1st Lift	"	"	24.4	94.8	96.3
3	12"	STA 2+61/80' LT of C.L. 2nd Lift	"	"	30.3	85.3	86.7
3a	8"	STA 2+61/80' LT of C.L. 2nd Lift	"	"	29.4	87.1	88.5
4	12"	STA 2+61/75' LT of C.L. 2nd Lift	"	"	29.1	85.8	87.2
5	12"	STA 2+89/99' RT of C.L. 2nd Lift	"	"	28.5	89.0	90.5
6	12"	STA 1+40/50' RT of C.L. 2nd + ½ Lift	"	"	23.7	90.1	91.6
7	12"	STA 1+67/40' RT of C.L. 2nd + ½ Lift	"	"	23.1	93.5	95.0

Note:

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 39577
601/928-7263

PROJECT: IPCO Ponds Site
(Clay Cap)

DATE: 9/5/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: First
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
1	8"	STA 3+08/18' RT of C.L.	22.5	98.4	23	100.7	102.4
1a	10"	" "	"	"	22.5	99.0	100.7
2	10"	STA 4+10/64' RT of C.L.	"	"	22.0	98.7	100.4
3	10"	STA 3+90/94' LT of C.L.	"	"	19.3	103.1	104.8
4	10"	STA 4+93/77' LT of C.L.	"	"	28.4	91.1	92.5
5	10"	STA 4+97/77' LT of C.L.	"	"	27.6	91.7	93.2
6	10"	STA 4+85/13' RT of C.L.	"	"	26.4	91.5	93.0

Note:

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 3957
601/928-7263

PROJECT: IPCO Ponds Site
(Clay Cap)

DATE: 9/4/90
12:15 p.m.

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: First
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max Density Obtained
1	8"	STA 4+00/95' RT of C.L.	22.5	98.4	22.3	97.7	99.2
2	8"	STA 3+77/34' LT of C.L.	"	"	24.8	94.5	96.0
3	8"	STA 4+30/70' LT of C.L.	"	"	25.1	89.5	90.0

Note:

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 39577
601/928-7263

PROJECT: IPCO Ponds Site
(Clay Cap)

DATE: 9/4/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: First
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu Ft.	% Max Density Obtained
1	12"	STA 3+38/-49 LT C.L.	22.5	98.4	27.0	92.1	93.6
2	8"	" "	"	"	26.4	94.2	95.7
3	2"	" "	"	"	25.5	95.4	96.9
4	12"	STA 3+09/+12 RT C.L.	"	"	23.8	92.5	94.0
5	8"	" "	"	"	23.1	93.0	94.5
6	4"	" "	"	"	23.9	90.7	92.2
7	10"	STA 3+23/+92.5 RT C.L.	"	"	24.5	87.6	89.0
8	8"	" "	"	"	25.6	86.0	87.4
9	10"	STA 3+38/-40 LT C.L.	"	"	28.9	89.5	90.9
10	8"	" "	"	"	29.0	90.8	92.2
11	6"	" "	"	"	26.9	93.2	94.7

Note:

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-5421
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782
2960 20TH AVENUE/GULFPORT, MISSISSIPPI 39505 / (601) 863-9657

PROJECT: International Paper Company
Wiggins, Mississippi
Recovery Ponds Site
Clay Cap

DATE September 4, 1990

LAB. NO. 109-491-0

Analysis of Field Density Tests: Gray Clay
Contractor: Batson & Brown, Inc.
Inspector: Wayne C. Harbour, Jr.
Lift:
Reported to: Batson & Brown, Inc. (1)

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
19	6"	Sta. 3 + 23, 92½' Rt.	14.5	100.2	22.1	87.0	86.8
20	6"	Sta. 4 + 00, 95' Rt.	14.5	100.2	19.7	99.7	99.5
21	6"	Sta. 3 + 77, 34'1", Lt.	14.5	100.2	22.3	95.0	94.8
22	6"	Sta. 4 + 30, 70' Lt.	14.5	100.2	23.3	90.2	90.0
23	6"	Sta. 1 + 94, 75' Lt.	14.5	100.2	21.8	92.9	92.7
24	6"	Sta. 1 + 00, 94' Rt.	14.5	100.2	21.6	95.1	94.9

Note:

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 39577
601/928-7263

PROJECT: IPCO Ponds Site
(Clay Cap)

DATE: 8/30/90

Analysis of Field Density Tests: See Below
Contractor:
Inspector: Keith Daymond
Lift: First
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max Density Obtained
1	8"	STA 2+50/-47 LT of C.L. 1st Lift	22.5	98.4	22.0	94.8	96.3
2	8"	STA 2+59/+64 RT of C.L.	"	"	20.9	96.3	97.6

CONTRACTOR WAS NOT FINISHED WITH COMPACTION OF 2nd LIFT

Note:

BATSON AND BROWN, INC.
CONSULTING ENGINEERS

REPLY TO:
P O BOX 68
WIGGINS MS 39577
601/928-7263

DATE: August 27, 1990

PROJECT: International Paper Company
Wiggins, MS
Recovery Ponds Closure
Clay Cap

Analysis of Field Density Tests: See Results Below
Contractor: R. D. Herring
Inspector: Keith Daymond
Lift: 1st Clay
Reported to:

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
1	6"	Sta. 0+84/C_L	14.5%	100.2	24.8	92.1	91.9
2	6"	Sta. 1+14/30 ft. left of C_L	14.5%	100.2	25.4	96.5	96.3
3	6"	Sta. 1+14/C_L	14.5%	100.2	23.2	96.5	96.3
4	6"	Sta. 1+14/50 ft. right of C_L	14.5%	100.2	24.4	98.4	98.2
5	6"	Sta. 00+90/50 ft. right of C_L	14.5%	100.2	22.7	100.7	100.5

Note:

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-[illegible]21
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782
2960 20TH AVENUE/GULFPORT, MISSISSIPPI 39505 / (601) 863-9657

PROJECT: International Paper Company
Wiggins, Mississippi

DATE June 18, 1990

LAB. NO. 109-491-I

Analysis of Field Density Tests See Below For Materials Tested
Contractor: R.D. Herring Construction Co.
Inspector: Mike R. Sherman
Lift:
Reported to: Batson & Brown, Inc. (1)

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
		CONTACT COOLING POND					
		Tan Silty Clay Fill under Topsoil					
11	8"	50' North of South Edge and 50' East of West Edge	13.2	112.9	6.6	120.4	106.6
12	8"	50' East of West Edge and 50' South of North Edge	13.2	112.9	9.4	119.6	105.9
13	8"	50' South of North Edge and 50' West of East Edge	13.2	112.9	9.9	121.5	107.6
14	8"	50' North of South Edge and 50' West of East Edge	13.2	112.9	9.0	119.4	105.7
		SLUDGE PITS					
		Brown Sandy Clay Fill under topsoil					
15	8"	Center of SL-2	15.4	112.2	14.6	108.5	96.7
16	8"	Center of SL-3	15.4	112.2	12.7	113.1	100.8
17	8"	Center of SL-4	15.4	112.2	14.3	113.9	101.5
18	8"	Center of SL-5	15.4	112.2	16.3	113.0	100.7

Note:

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-5421
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782
2960 20TH AVENUE / GULFPORT, MISSISSIPPI 39501-6006 / (601) 863-9657

PROJECT: International Paper Company
Wiggins, Ms.

DATE March 12, 1990

LAB. NO. 281-491-K

Analysis of Gray clay Proctor for clay Cap (Mertz Bond Pit)

Received from Jobsite

Contractor R. D. Herring Construction Co.

Producer

Inspector Mike A. Cameron

Reported to: International Paper Company (1) Batson & Brown, Inc. (1)

SIEVE ANALYSIS

Sieve Size	Percent Retained	Percent Passing
#10	0.0	100
#40	0.7	99
#60	1.7	98
#200	9.8	90

ATTERBERG LIMITS

Liquid Limit	60
Plastic Limit	21
Plasticity Index	39
ASTM Soil Classification	CH

NOTE:

ladner testing laboratories, inc.
3040 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39209 / (601) 362-5
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782

PROJECT: International Paper Company
Wiggins, Ms.

DATE March 20, 1990

LAB. NO. 109-491-H

SAMPLED FROM: Jobsite

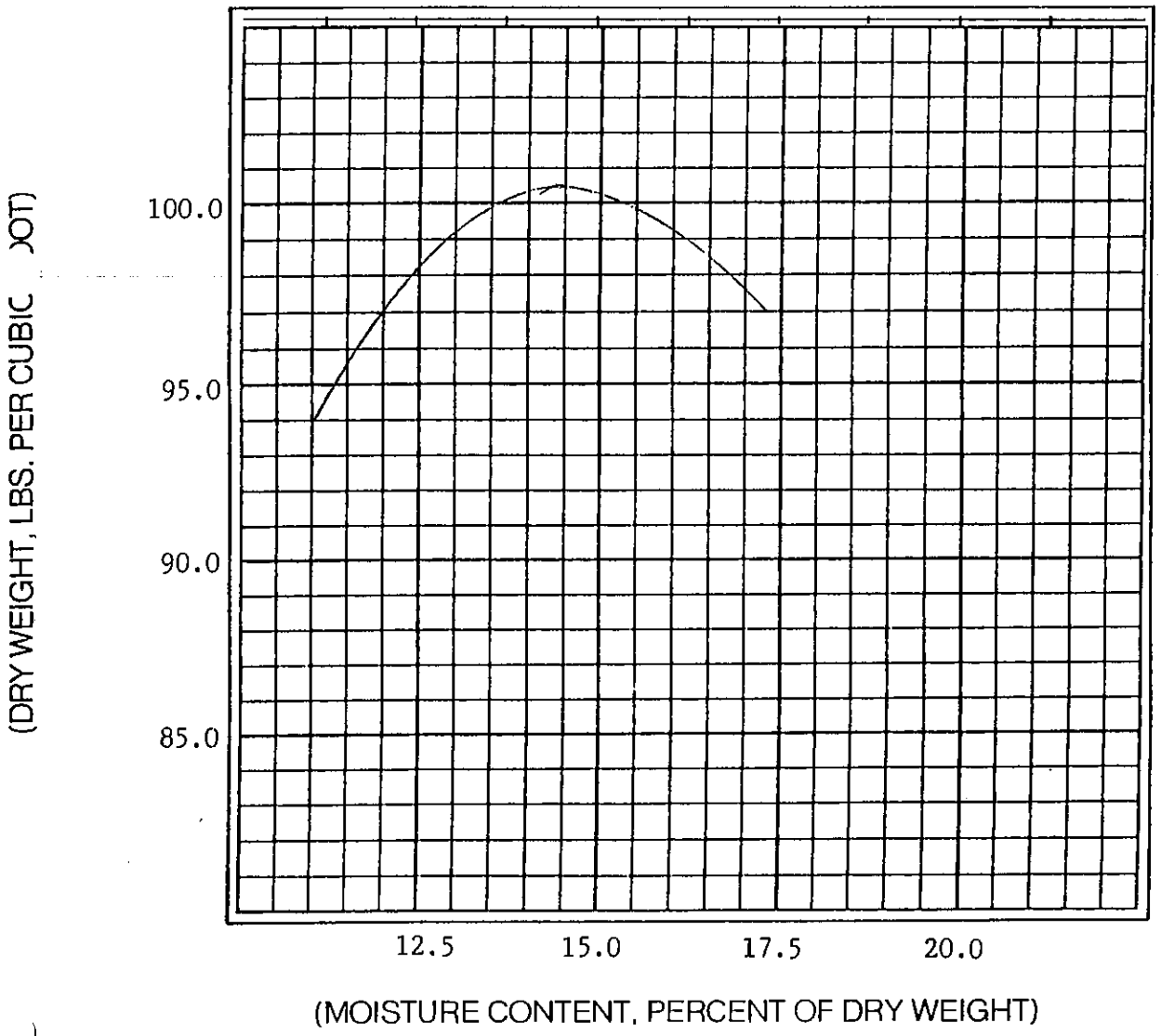
Sample #90-034

TYPE OF MATERIAL: Gray clay
Mertz Bond Pit

TYPE PROCTOR ASTM D 698
Method A

REPORTED TO: Batson & Brown (1)

MOISTURE-DENSITY CURVE:



MAXIMUM DRY DENSITY, LBS. PER CUBIC FOOT 100.2

OPTIMUM MOISTURE CONTENT, PERCENT 14.5

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-5421
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782

PROJECT: International Paper Company
Wiggins, Mississippi

DATE October 2, 1990

LAB. NO. 109-491-Q

SAMPLED FROM: Batson & Brown, Inc.

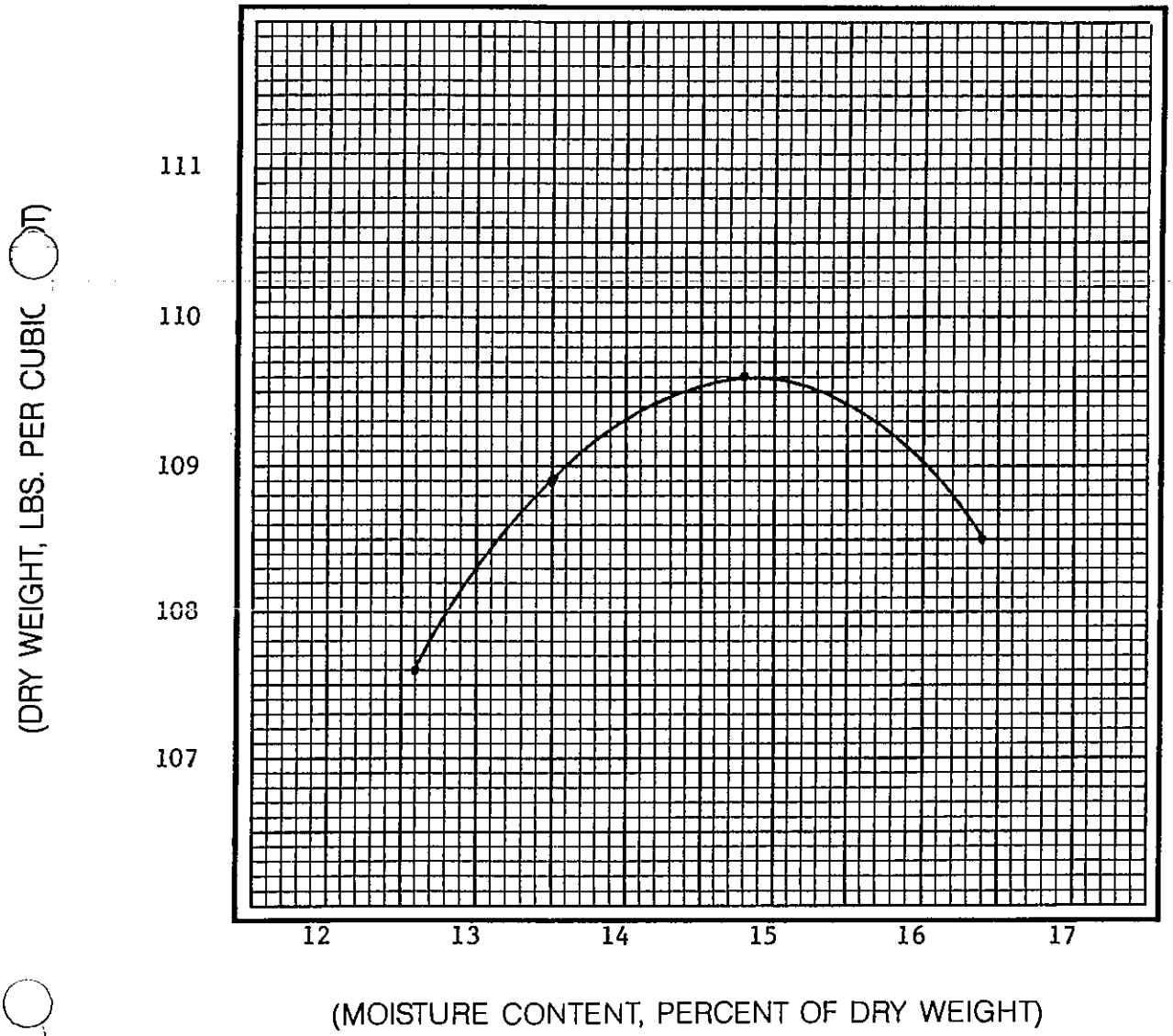
SAMPLE NO: 90-164

TYPE OF MATERIAL: Tan Silty Lean Clay

TYPE PROCTOR ASTM D-698 (Standard-Method A)

REPORTED TO: Batson & Brown, Inc. (1) EARTH FILL - LAND FARM

MOISTURE-DENSITY CURVE:



MAXIMUM DRY DENSITY, LBS. PER CUBIC FOOT 109.6

OPTIMUM MOISTURE CONTENT, PERCENT 14.8

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-5421
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782

PROJECT: International Paper Company
Wiggins, Mississippi

DATE September 24, 1990

LAB. NO. 109-491-P

SAMPLED FROM: R.D. Herring

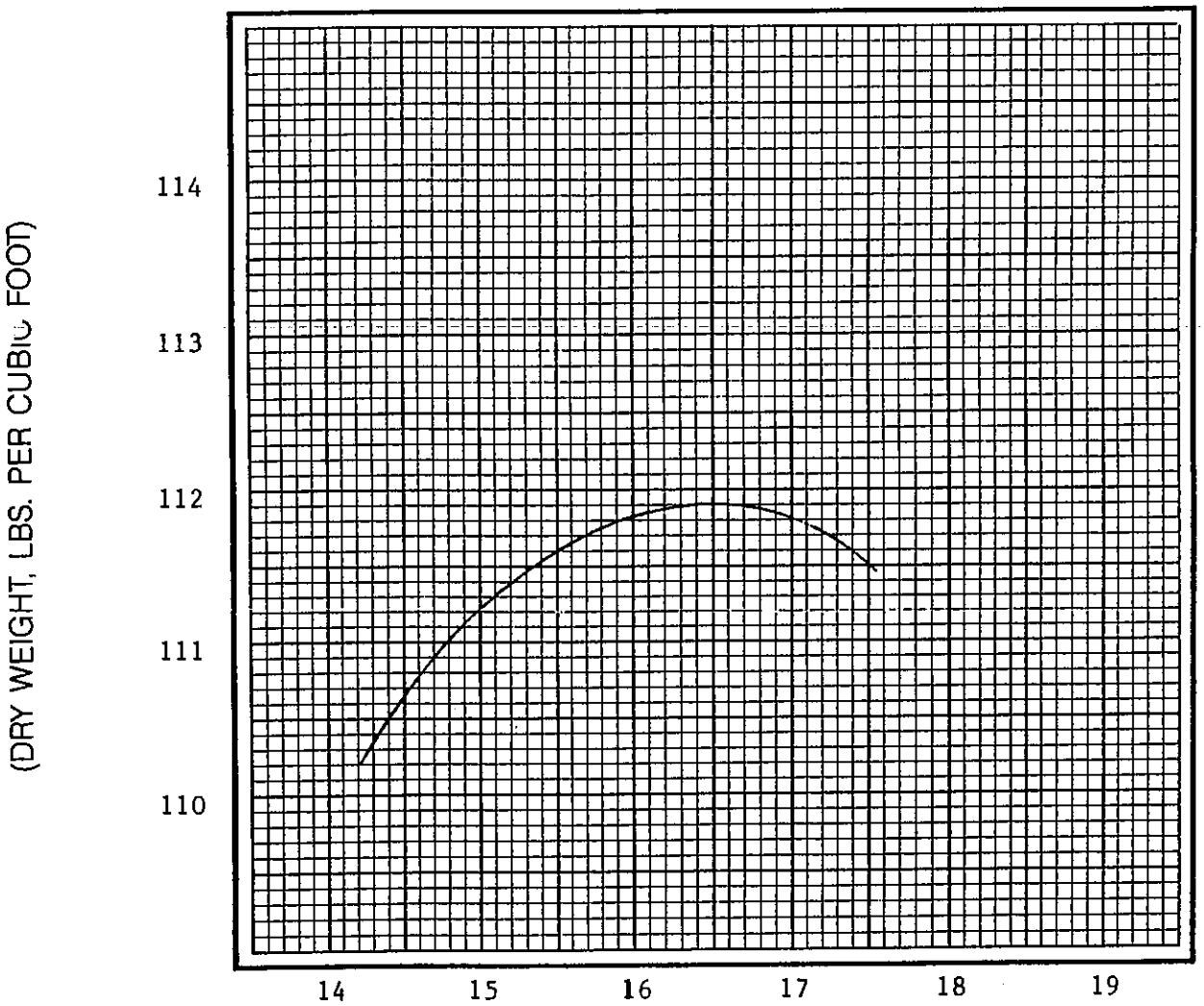
SAMPLE NO: 90-152

TYPE OF MATERIAL: Brown Clay w/Gravel

TYPE PROCTOR ASTM D-698 (Standard-Method C)

REPORTED TO: Batson & Brown, Inc. (1)

MOISTURE-DENSITY CURVE:



MAXIMUM DRY DENSITY, LBS. PER CUBIC FOOT 111.9

OPTIMUM MOISTURE CONTENT, PERCENT 16.5

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-5421
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782

PROJECT: International Paper Company
Wiggins, Mississippi
(Contact Cooling Pond)

DATE June 19, 1990

LAB. NO. 109-491-J

SAMPLED FROM: Jobsite

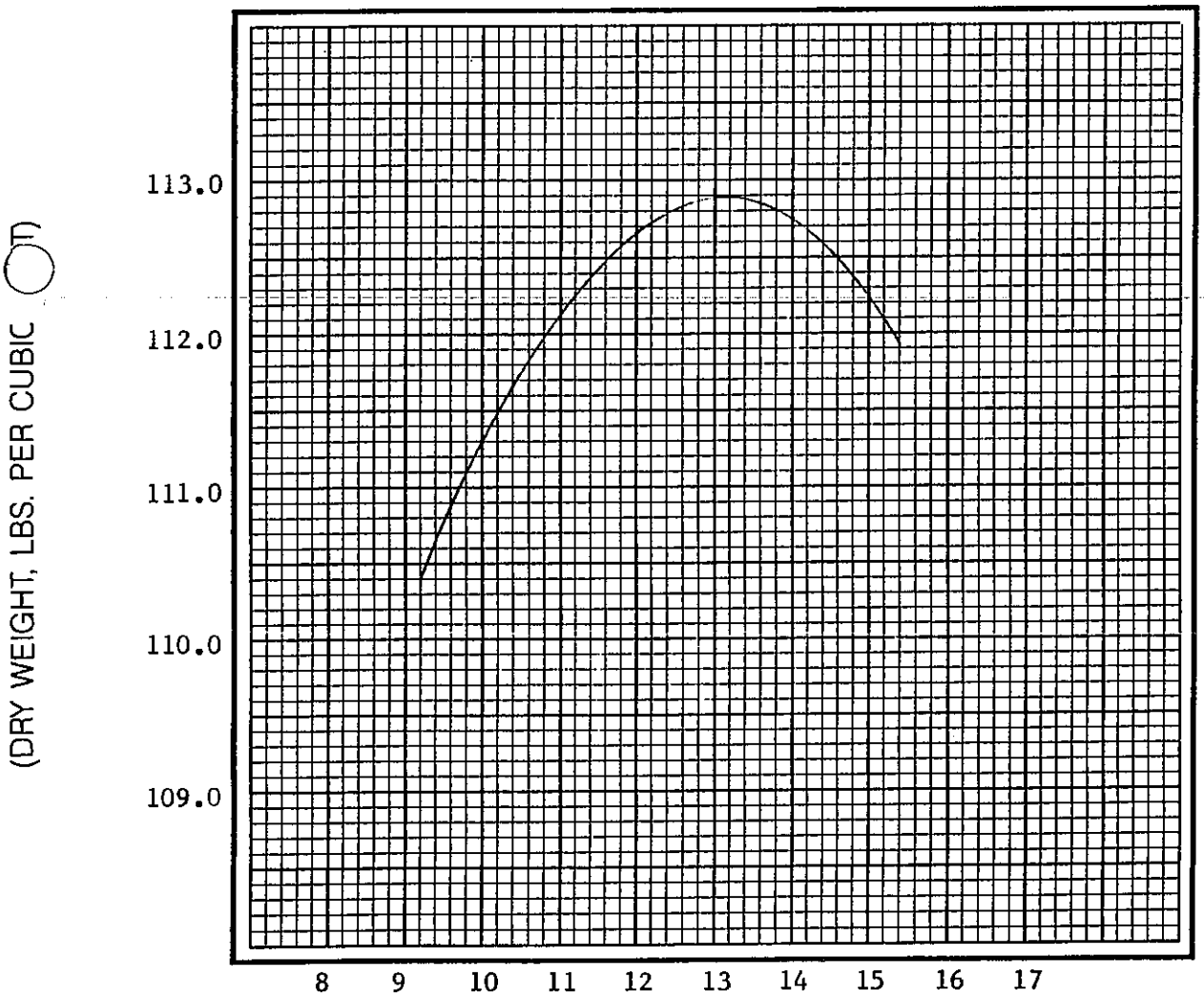
SAMPLE NO: 90-098

TYPE OF MATERIAL: Tan Silty Clay

TYPE PROCTOR ASTM D-698 (Standard - Method A)

REPORTED TO: Batson & Brown, Inc. (1)

MOISTURE-DENSITY CURVE:



MAXIMUM DRY DENSITY, LBS. PER CUBIC FOOT 112.9

OPTIMUM MOISTURE CONTENT, PERCENT 13.2

ladner testing laboratories, inc.
3040 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39209 / (601) 362-5421
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782

PROJECT: International Paper Company
Wiggins, Ms.

DATE March 20, 1990

LAB. NO. 109-491-H

SAMPLED FROM: Jobsite

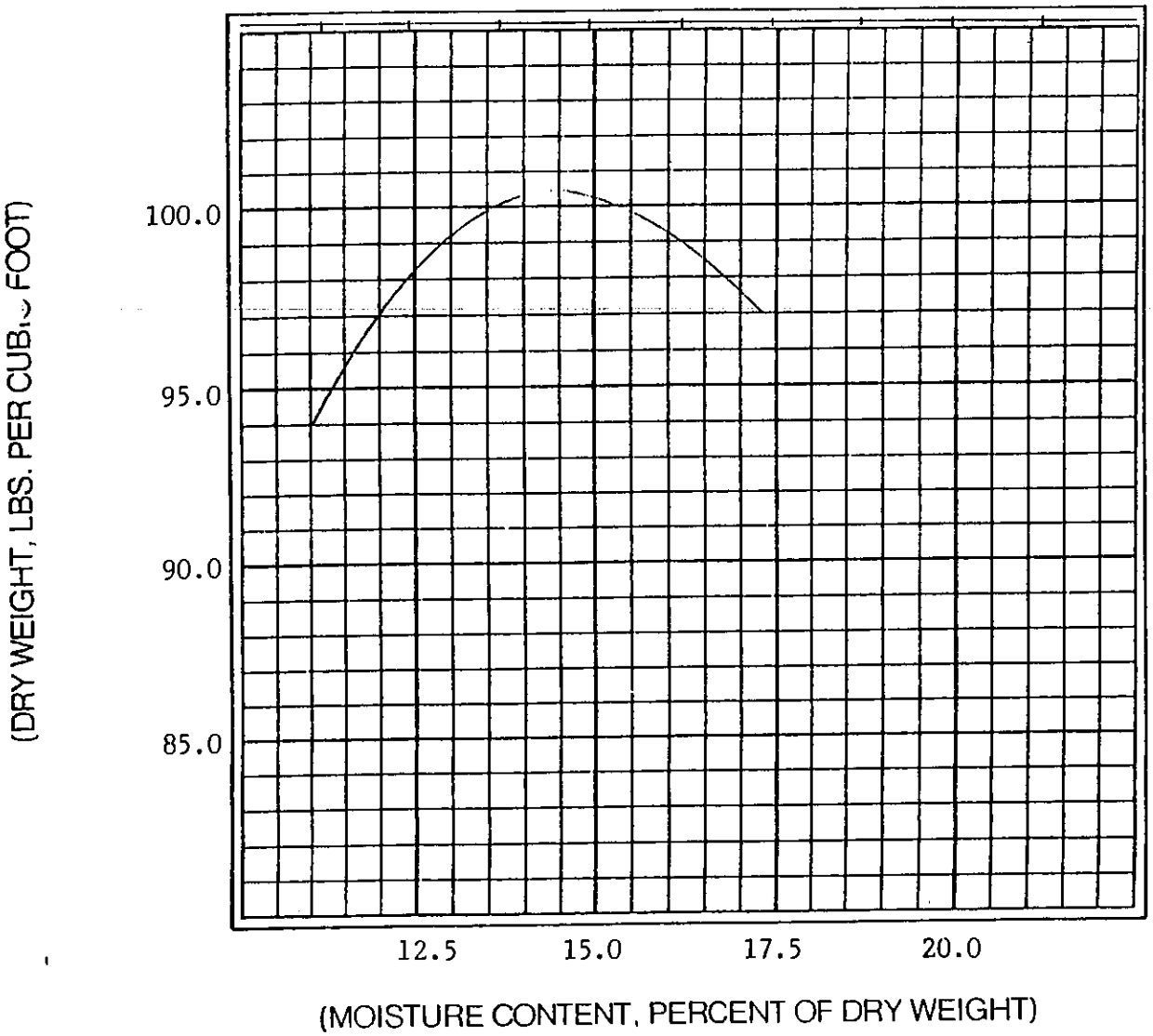
Sample #90-034

TYPE OF MATERIAL: Gray clay

TYPE PROCTOR ASTM D 698
Method A

REPORTED TO: Batson & Brown (1)

MOISTURE-DENSITY CURVE:



MAXIMUM DRY DENSITY, LBS. PER CUBIC FOOT 100.2

OPTIMUM MOISTURE CONTENT, PERCENT 14.5

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-5421
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782
2960 20TH AVENUE/GULFPORT, MISSISSIPPI 39505 / (601) 863-9657

PROJECT: International Paper Company
Wiggins, Ms.

DATE March 13, 1990

LAB. NO. 109-491-G

Analysis of Field Density Tests Gray Clay
Contractor: Batson & Brown
Inspector: Mike Sherman
Lift: Final
Reported to: Batson & Brown (1)

contact Cooling Pond

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
9	8"	S E corner	14.5	100.2	18.6	101.5	101.3
10	8"	Center	14.5	100.2	17.0	104.2	104.0
		TEST HOLES FOR CLAY ~~LINER~~ Cap THICKNESS					
	31"	S E corner					
	27"	Center					

Note:

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-5
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782
2960 20TH AVENUE/GULFPORT, MISSISSIPPI 39505 / (601) 863-9657

PROJECT: International Paper Company
Wiggins, Ms.

DATE March 9, 1990

LAB. NO. 109-491-F

Analysis of Field Density Tests Gray clay
Contractor: Batson & Brown
Inspector: Mike A. Cameron
Lift: Final
Reported to: Batson & Brown (1)

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
7	8"	Sludge pit 2 & 3, s. w. corner	14.5	100.2	18.4	105.0	104.8
8	8"	Sludge pit 2 & 3, n. e. corner	14.5	100.2	17.0	102.2	102.0
		TEST HOLES FOR CLAY ~~LINER~~ Cap THICKNESS					
	31½"	Sludge pit 2 & 3, s. w. corner					
	31"	Sludge pit 2 & 3, n. e. corner					

Note:

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-5421
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782
2960 20TH AVENUE/GULFPORT, MISSISSIPPI 39505 / (601) 863-9657

PROJECT: International Paper Company
Wiggins, Mississippi

DATE February 12, 1990

LAB. NO. 109-491-E

Analysis of Field Density Tests: Grey Lean Clay
Contractor: Batson & Brown, Inc.
Inspector: Mike A. Cameron
Lift: Final
Reported to: Batson & Brown, Inc. (1)

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs Per Cu. Ft.	% Max. Density Obtained
5	8"	Northeast Corner	19.6	99.7	21.8	97.5	97.8
6	8"	Southwest Corner	19.6	99.7	20.3	96.2	96.5
		TEST HOLES FOR DEPTH					
	2'3"	Southeast Corner					
	2'4½"	Northwest Corner					

Clay cap for Sludge Pits 4 & 5
taken 2/12/90

Note:

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782
2960 20TH AVENUE/GULFPORT, MISSISSIPPI 39505 / (601) 863-9657

PROJECT: International Paper Co.
Wiggins, Mississippi

DATE November 13, 1989

LAB. NO. 109-491-89C

Analysis of Field Density Tests Gray Lean Clay
Contractor: Batson & Brown, Inc.
Inspector: Wayne C. Harbour, Jr.
Lift: 1st Lift
Reported to: Batson & Brown, Inc. (1)

Contact Cooling Pond
Subgrade for cap

Density Number	Depth	Location	Optimum Moisture	Maximum Density	Percent Moisture	Dry Wt., Lbs. Per Cu. Ft.	% Max. Density Obtained
1	6"	Southeast Corner	19.6	99.7	20.0	98.4	98.7
2	6"	Northeast Corner	19.6	99.7	22.2	96.5	96.8
3	6"	Northwest Corner	19.6	99.7	22.0	96.5	96.8
4	6"	Southwest Corner	19.6	99.7	24.7	91.3	91.5

Note:

BURNS ENGINEERING, INC.

GEOTECHNICAL CONSULTANTS

104 EAST MARKETRIDGE DR. ■ POST OFFICE BOX 12828 ■ JACKSON, MS 39236 ■ TELEPHONE (601) 956-3198

October 9, 1990

Batson & Brown, Inc.
Consulting Engineers
Post Office Box 68
Wiggins, Mississippi 39577

Attention: Brax Batson, P.E.

Report No. 90171

Re: Results of Laboratory Sieve Analysis Test
IPCO Closure
Experimental Land Farm Site

Gentlemen:

Submitted here are the results of a laboratory sieve analysis test performed on a sample received at our office on October 2, 1990.

Results of the sieve analysis test are tabulated and presented graphically on the attached Plate 1.

We appreciate the opportunity to be of service. If we can be of any further assistance, please do not hesitate to call us.

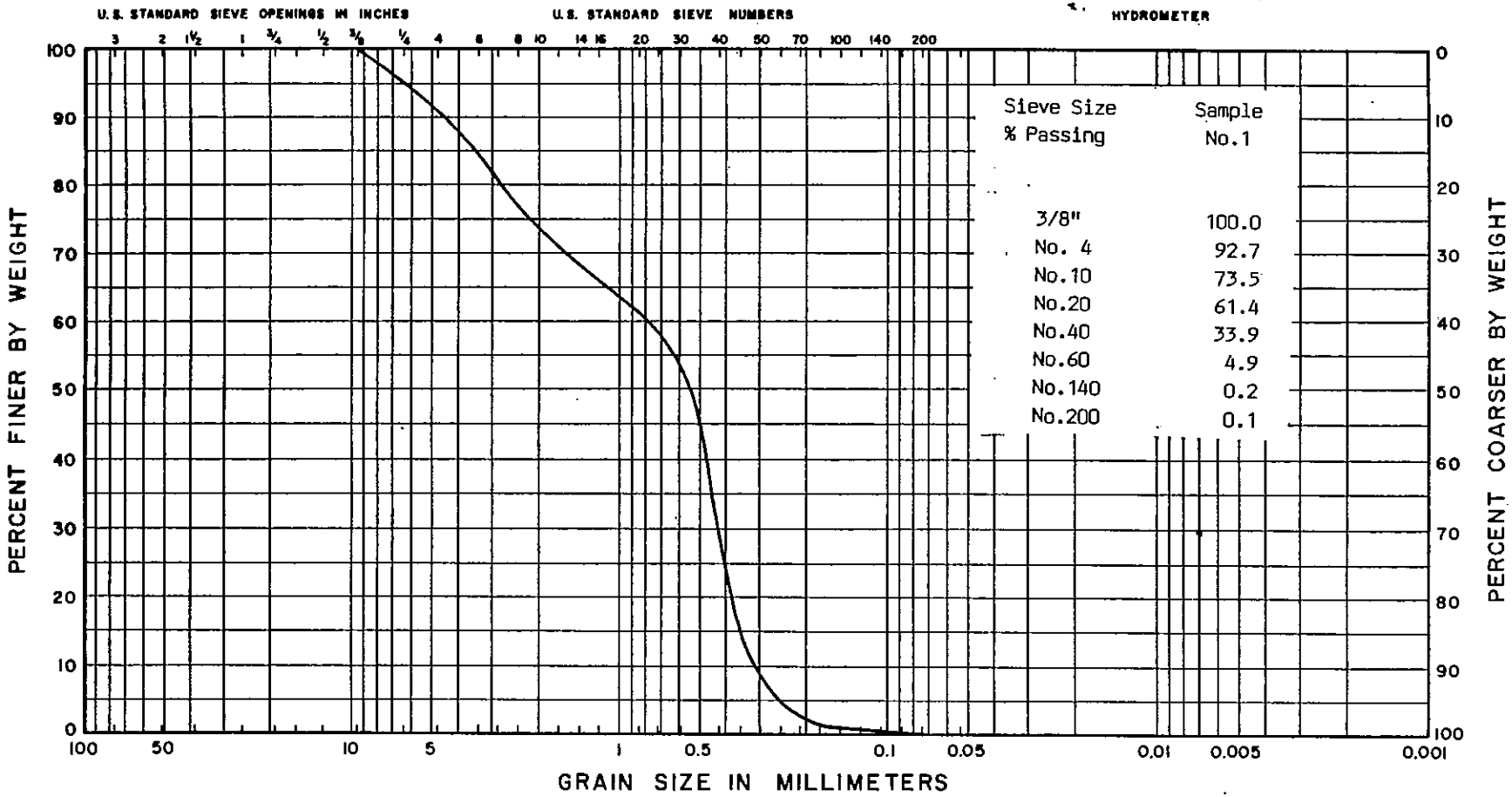
Very truly yours,

BURNS ENGINEERING, INC.

William D. Dennis, Jr., P.E.

WDD:dl
Attachment

GRAIN SIZE CURVES



Sieve Size % Passing	Sample No.1
3/8"	100.0
No. 4	92.7
No.10	73.5
No.20	61.4
No.40	33.9
No.60	4.9
No.140	0.2
No.200	0.1

GRAVEL	SAND			SILT or CLAY
	Coarse	Medium	Fine	

Boring No.	Depth, Ft.	Classification	Nat W %	LL	PL	PI
		Fine to course sand (SP)				

Project IPCO closure experimental

Land, Farm site

Sieve Analysis

Sample Received 10/2/90

Date 10-4-90 Job No. 90171

BRIANS ENGINEERING INC

BURNS ENGINEERING, INC.

GEOTECHNICAL CONSULTANTS

104 EAST MARKETRIDGE DR. ■ POST OFFICE BOX 12828 ■ JACKSON, MS 39236 ■ TELEPHONE (601) 956-3198

September 14, 1990

Batson & Brown, Inc.
Consulting Engineers
Post Office Box 68
Wiggins, Mississippi 39577

Report No. 90157

Attention: Brax Batson, P.E.

Re: Results of Laboratory Sieve Analysis

Gentlemen:

Submitted here are the results of one laboratory sieve analysis performed on a sample delivered to our office on September 12, 1990.

Results of the laboratory sieve analysis are presented in tabular form in the following table and in graphic form on Plate 1.

Sieve Size % Passing	Sample No. 1
1/2"	100.0
No. 4	96.3
No. 16	73.4
No. 50	14.2
No. 100	0.6
No. 200	0.2

We appreciate the opportunity to be of service on this project. If we can furnish you any additional information or further assist you in any way, please call on us.

Very truly yours,

BURNS ENGINEERING, INC.

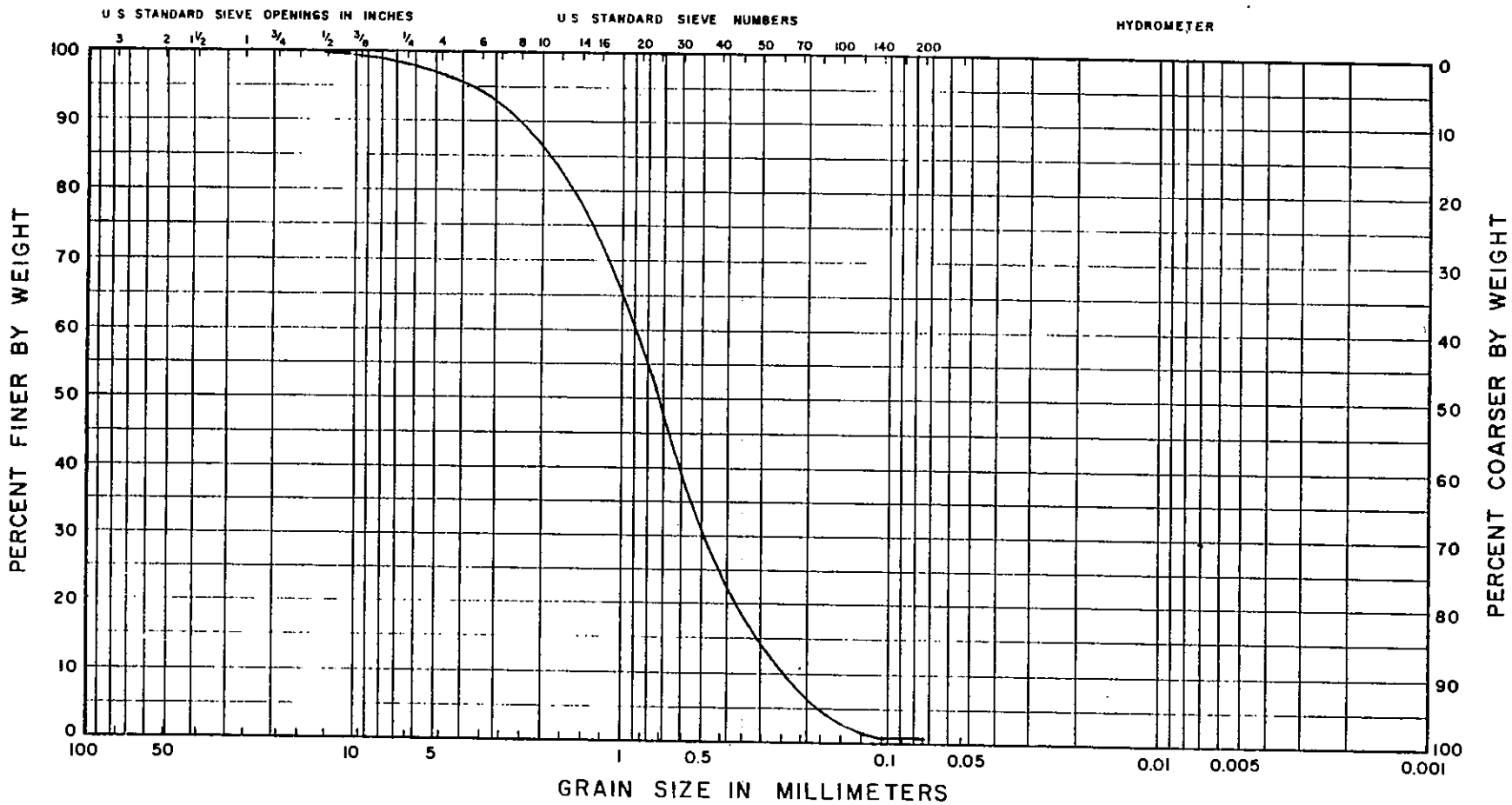
Larry A. Cooley

Larry A. Cooley, P.E.

LAC/it

Copies Submitted: (3)

GRAIN SIZE CURVES



GRAVEL	SAND			SILT or CLAY
	Coarse	Medium	Fine	

Boring No.	Depth, Ft.	Classification	Nat W %	LL	PL	PI
----	----	Fine to coarse sand (SP)				

Project Sieve Analysis

Sample Received 9/12/90

Date 9/12/90 Job No. 90157

BURNS ENGINEERING, INC.

PLATE 1

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-5421
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782
2960 20TH AVENUE / GULFPORT, MISSISSIPPI 39501-6006 / (601) 863-9657

PROJECT: International Paper Company
Wiggins, Mississippi

DATE December 18, 1989

LAB. NO. 281-491-A

SAMPLE NO: 89-204

Analysis of Concrete Sand

Received from R. D. Herring Construction Co.

Contractor R. D. Herring Construction Co.

Producer

Inspector Mike A. Cameron

Reported to: International Paper Company (1)

SIEVE ANALYSIS

SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	ASTM C33 SPECIFICATIONS
3/8"	0.0	100	100
#4	0.0	100	95-100
#8	1.4	99	80-100
#16	32.0	68	50-85
#30	54.5	46	25-60
#50	95.3	5	5-30
#100	99.8	0	0-10

NOTE: THE ABOVE TESTED SAMPLE DOES COMPLY WITH THE ABOVE SPECIFICATIONS.

BURNS ENGINEERING, INC.

GEOTECHNICAL CONSULTANTS

104 EAST MARKETRIDGE DR. ■ POST OFFICE BOX 12828 ■ JACKSON, MS 39236 ■ TELEPHONE (601) 956-3198

September 18, 1990

Batson & Brown, Inc.
Consulting Engineers
Post Office Box 68
Wiggins, Mississippi 39577

Project No. 90152

Attention: Brax Batson, P.E.

Results of Laboratory Compaction and Permeability Tests
Test No. 3
IPCO Pond Site

Gentlemen:

Submitted here are the results of one laboratory standard Proctor compaction test and one laboratory permeability test.

The standard Proctor compaction test was performed on a composite sample obtained by mixing the sample delivered to our office on September 11, 1990, with the sample that was delivered to our office on September 7, 1990. Results of the standard Proctor compaction test are presented on Plate 1 of this report. The permeability test was performed on the sample delivered to our office on September 11, 1990. The specimen was prepared by compacting in a 4-in. diameter compaction mold and was back-pressure saturated and tested in a flexible wall permeameter. Results of the laboratory permeability test are presented on Plate 2.

We appreciate the opportunity to be of service on this project. If we can furnish you any additional information or further assist you in any way, please call on us.

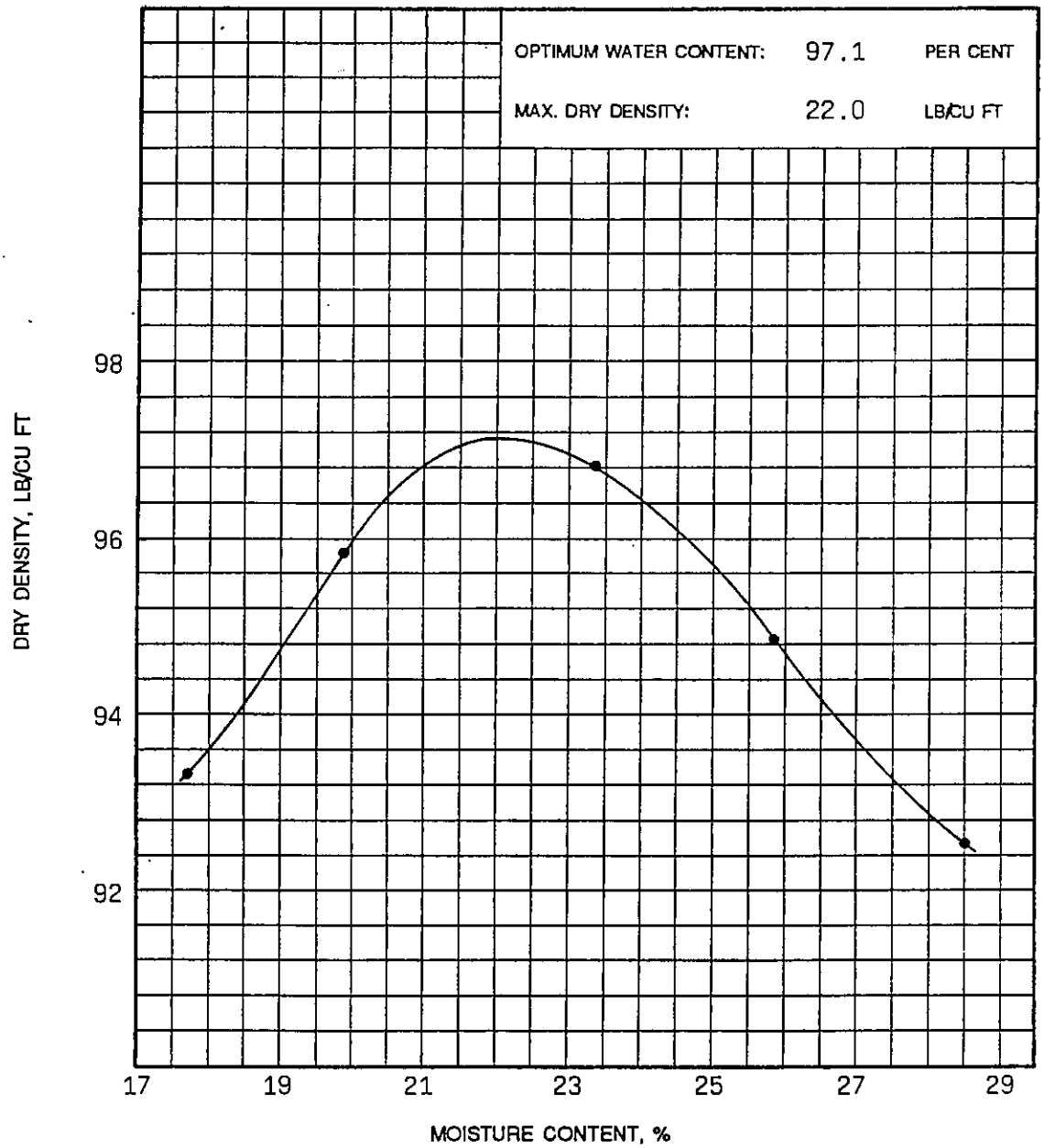
Very truly yours,

BURNS ENGINEERING, INC.

Larry A. Cooley

Larry A. Cooley, P.E.

LAC/it
Copies Submitted: (3)



SAMPLE LOCATION:			
DESCRIPTION OF MATERIAL: Light gray clay (CH)			
LIQUID LIMIT: 57	PLASTIC LIMIT: 24	PLASTICITY INDEX: 33	% PASSING NO. 200 SIEVE:
TEST METHOD: ASTM D 698-78, Method "A"			

REMARKS Test performed on composite of samples No. 2 and 3.	PROJECT IPCO Pond Site
	PROCTOR NO. 2 — DATE 9-12-90
	COMPACTION TEST REPORT

SUMMARY OF LABORATORY PERMEABILITY TEST RESULTS

Sample I.D.	Classification	Moisture Content Percent		Density PCF		Coefficient of Permeability cm/sec at 20° C
		Molded	Final	Dry	Wet	
Test No. 3 IPCO Pond	Light gray clay (CH)	30.8	30.8	93.6	122.4	3.43×10^{-9}

BURNS ENGINEERING, INC.

GEOTECHNICAL CONSULTANTS

104 EAST MARKETRIDGE DR. ■ POST OFFICE BOX 12828 ■ JACKSON, MS 39236 ■ TELEPHONE (601) 956-3198

September 10, 1990

Batson and Brown, Inc.
Consulting Engineers
Post Office Box 68
Wiggins, Mississippi 39577

Project No. 90152

Attention: Brax Batson, P.E.

Results of Laboratory Compaction and Permeability Tests
IPCO Pond Site

Gentlemen:

Submitted here are the results of one laboratory standard Proctor compaction test and one laboratory permeability test performed on a bag sample of material delivered to our office on August 30, 1990.

Results of the standard Proctor compaction test are presented on Plate 1 of this report and results of the laboratory permeability test are presented on Plate 2. The permeability specimen was prepared by compacting in a 4-in. diameter compaction mold prior to testing. The specimen was back-pressure saturated and tested in a flexible wall permeameter.

We appreciate the opportunity to be of service on this project. If we can furnish you any additional information of further assist you in any way, please call on us.

Very truly yours,

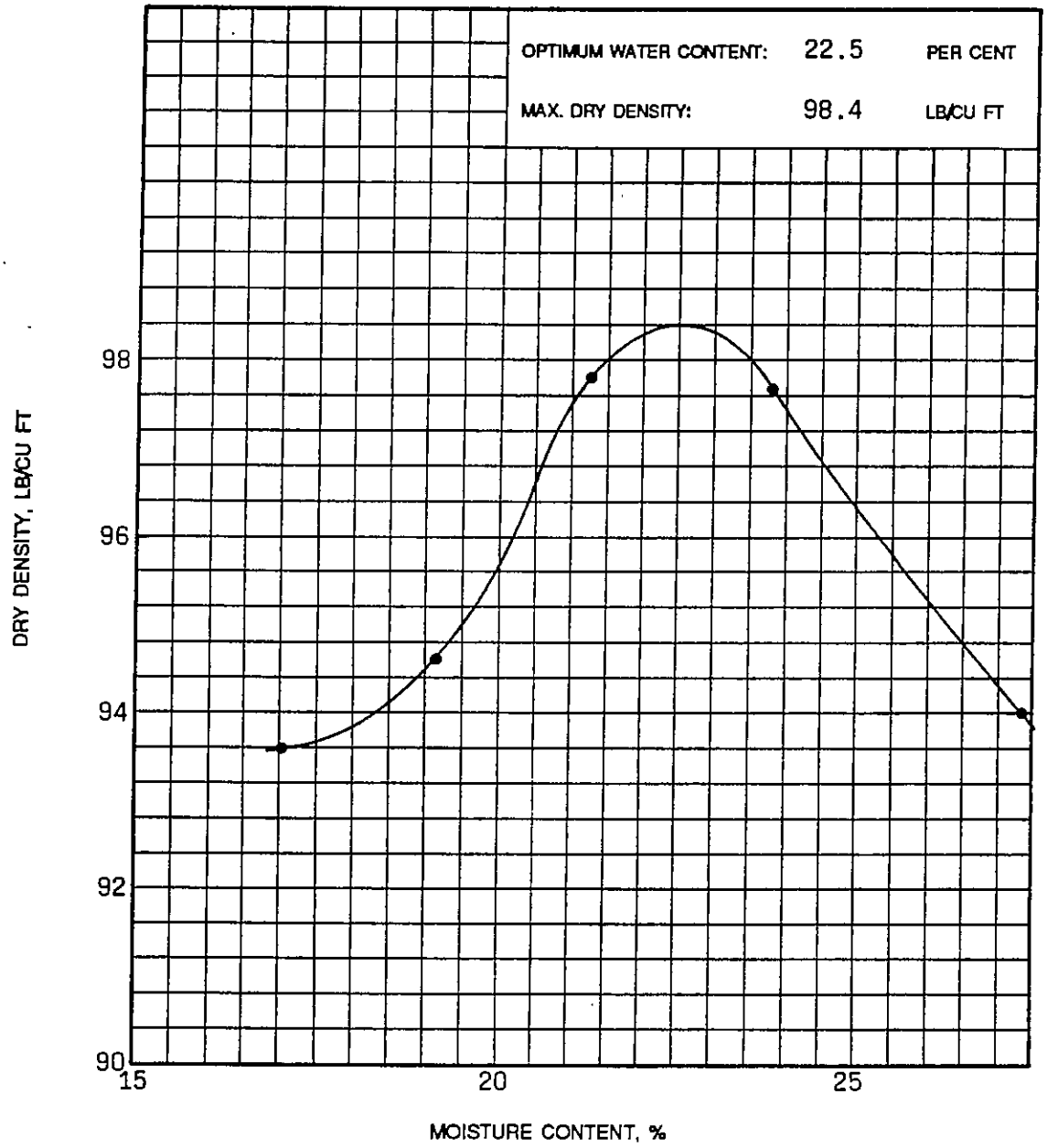
BURNS ENGINEERING, INC.

Larry A. Cooley

Larry A. Cooley, P.E.

LAC/it

Copies Submitted: (3)



SAMPLE LOCATION:			
DESCRIPTION OF MATERIAL: Light gray clay (CH)			
LIQUID LIMIT: 61	PLASTIC LIMIT: 20	PLASTICITY INDEX: 41	% PASSING NO. 200 SIEVE:
TEST METHOD: ASTM D 698			

REMARKS Sample delivered by UPS from Batson & Brown.	PROJECT IPCO Pond Site
	PROCTOR NO. 1 / DATE 9-4-90
	COMPACTION TEST REPORT

SUMMARY OF LABORATORY PERMEABILITY TEST RESULTS

Sample I.D.	Classification	Moisture Content Percent		Density PCF		Coefficient of Permeability cm/sec at 20° C
		Molded	Final	Dry	Wet	
IPCO Pond	Light gray clay (CH)	24.6	26.0	97.6	121.6	2.53×10^{-9}

BURNS ENGINEERING, INC.

GEOTECHNICAL CONSULTANTS

104 EAST MARKETRIDGE DR. ■ POST OFFICE BOX 12828 ■ JACKSON, MS 39236 ■ TELEPHONE (601) 956-3198

September 13, 1990

Batson and Brown, Inc.
Consulting Engineers
Post Office Box 68
Wiggins, Mississippi 39577

Report No. 90152-1

Attention: Brax Batson, P.E.

Results of Laboratory Permeability Test
Test No. 2
IPCO Pond Site

Gentlemen:

Submitted here are the results of one laboratory permeability test performed on a sample of material delivered to our office on September 7, 1990. For reference purposes this test is referenced to as Test No. 2.

The permeability specimen was prepared by compacting in a 4-in. diameter compaction mold prior to testing. The specimen was back-pressure saturated and tested in a flexible wall permeameter. Results of the laboratory permeability test are presented on Plate 1 of this report.

We appreciate the opportunity to be of service on this project. If we can furnish you any additional information or further assist you in any way, please call on us.

Very truly yours,

BURNS ENGINEERING, INC.

Larry A. Cooley

Larry A. Cooley, P.E.

LAC/it
Copies Submitted: (3)

SUMMARY OF LABORATORY PERMEABILITY TEST RESULTS

Sample I.D.	Classification	Moisture Content Percent		Density PCF		Coefficient of Permeability cm/sec at 20° C
		Molded	Final	Dry	Wet	
Test No. 2 IPCO Pond	Light gray clay (CH)	26.4	26.4	96.2	121.6	2.41×10^{-9}

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-5421
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782
2960 20TH AVENUE / GULFPORT, MISSISSIPPI 39501-6006 / (601) 863-9657

PROJECT: International Paper Company
Wiggins, Mississippi

DATE January 15, 1990

LAB. NO. 281-491-G

SAMPLE NO: 90-014

Analysis of	Gray Clay
Received from	R.D. Herring Construction Co.
Contractor	R.D. Herring Construction Co.
Producer	
Inspector	Mike R. Sherman
Reported to:	International Paper Company (1) Batson & Brown, Inc. (1)

Hertz, Bond Pit

SIEVE ANALYSIS

SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING
#10	0.0	100
#40	0.1	100
#60	0.3	100
#200	1.3	99

ATTERBERG LIMIT

LIQUID LIMIT:	65
PLASTIC LIMIT:	19
PLASTICITY INDEX:	46
ASTM SOIL CLASSIFICATION:	CH

NOTE:

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-5421
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782
2960 20TH AVENUE / GULFPORT, MISSISSIPPI 39501-6006 / (601) 863-9657

PROJECT: International Paper Company
Wiggins, Mississippi

DATE February 2, 1990

LAB. NO. 281-491-I

RECEIVED
1990
BATSON & BROWN

Grey Clay from Mertz Pond Pit

Analysis of Laboratory Permeability Test

Received from R.D. Herring Construction Co.

Contractor R.D. Herring Construction Co.

Producer

Inspector J.O.

Reported to: International Paper Company (1) Batson & Brown, Inc. (1)

LABORATORY PERMEABILITY TEST

VISUAL CLASSIFICATION	MOISTURE CONTENT PERCENT	MOLDED DENSITY PCF DRY	MOLDED DENSITY PCF WET	COEFFICIENT OF PERMEABILITY CM/SEC AT 20 C	INITIAL VOID RATIO	INITIAL PERCENT SATURATION
	Molded					
Light Tan and White Heavy Clay	28.8	90.5	116.5	6.0×10^{-10}*	0.896	88
	Final					
	30.4					

NOTE: *After 48 hours back pressure saturation and 216 hours permeating, the coefficient of permeability decreased from 1.4×10^{-9} to 6.0×10^{-10}. At this point, the test was terminated.

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-5421
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782

PROJECT: International Paper Company
Wiggins, Mississippi

DATE February 2, 1990

LAB. NO. 281-491-I

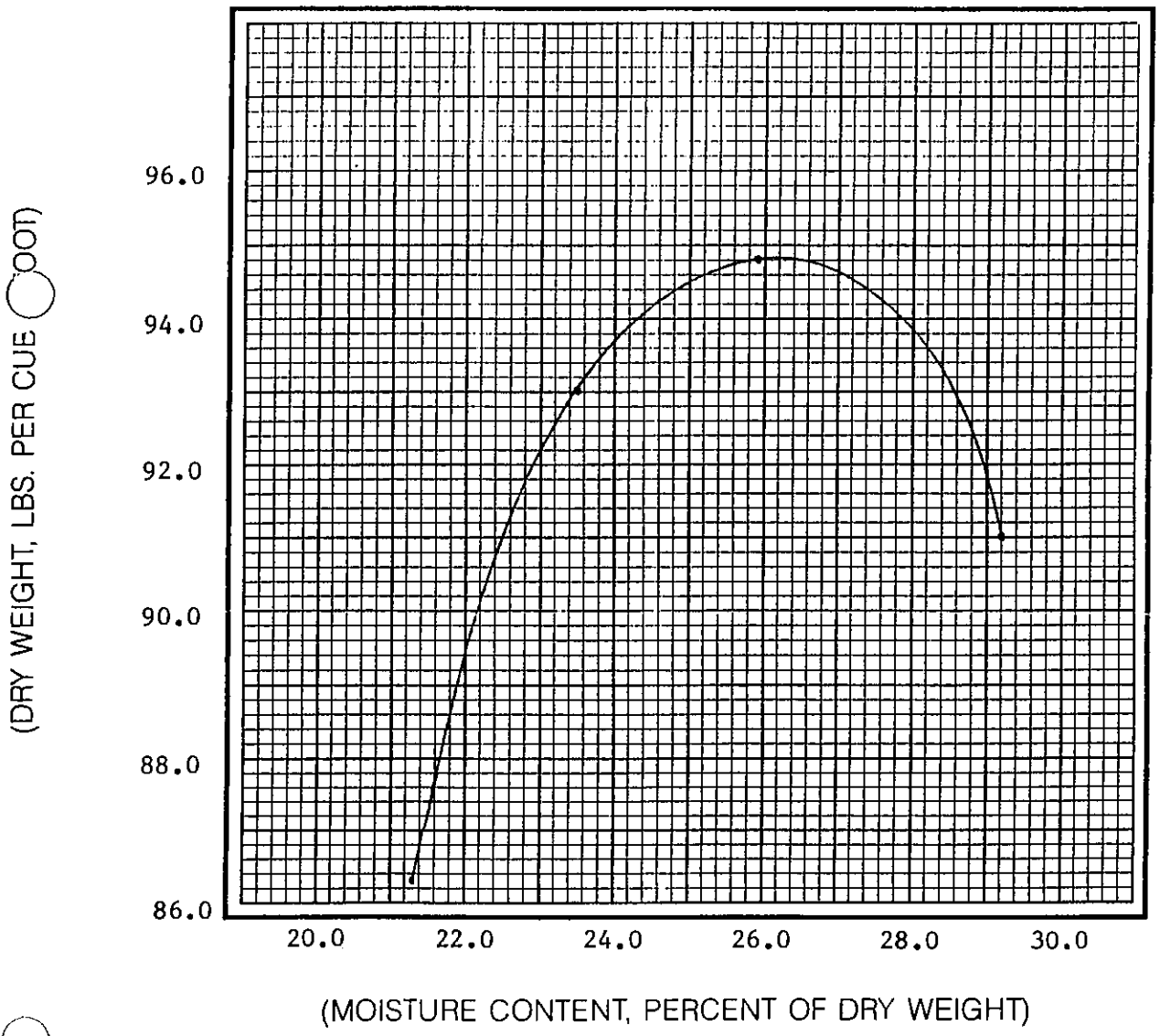
SAMPLED FROM: R.D. Herring Construction Co.

TYPE OF MATERIAL: Light Tan & White Heavy Clay

TYPE PROCTOR ASTM D-698 (Standard)

REPORTED TO: International Paper Company (1) Batson & Brown, Inc. (1)

MOISTURE-DENSITY CURVE:



MAXIMUM DRY DENSITY, LBS. PER CUBIC FOOT 94.8

OPTIMUM MOISTURE CONTENT, PERCENT 26.2

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-5421
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782
2960 20TH AVENUE / GULFPORT, MISSISSIPPI 39501-6006 / (601) 863-9657

PROJECT: International Paper Company
Wiggins, Mississippi

DATE February 2, 1990

LAB. NO. 281-491-I

Mertz Bond Pit

Analysis of Light Tan & White Heavy Clay

Received from R.D. Herring Construction Co.

Contractor R.D. Herring Construction Co.

Producer

Inspector J.O.

Reported to: International Paper Company (1) Batson & Brown, Inc.

SIEVE ANALYSIS

SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING
#10	0.0	100
#40	0.2	100
#60	0.3	100
#200	2.6	97

ATTERBERG LIMIT

LIQUID LIMIT:	65
PLASTIC LIMIT:	23
PLASTICITY INDEX:	42
ASTM SOIL CLASSIFICATION:	CH

NOTE: From [illegible] Pit

ladner testing laboratories, inc.
2832 UTICA AVENUE / POST OFFICE BOX 10778 / JACKSON, MISSISSIPPI 39289-0778 / (601) 362-5421
1827 HIGHWAY 11 BYPASS / HATTIESBURG, MISSISSIPPI 39401-1870 / (601) 544-5782
2960 20TH AVENUE / GULFPORT, MISSISSIPPI 39501-6006 / (601) 863-9657

PROJECT: International Paper Co.
Wiggins, Mississippi

DATE November 28, 1989

LAB. NO. 109-491-89D

REVISED: December 1, 1989

Mertz Bond Pit

Analysis of Laboratory Permeability Test

Received from Jobsite

Contractor Batson & Brown, Inc.

Producer

Inspector Wayne C. Harbour, Jr.

Reported to: Batson & Brown, Inc. (1)

contact cooling pond backfill material

LABORATORY PERMEABILITY TEST

VISUAL CLASSIFICATION	MOLDED MOISTURE CONTENT PERCENT	MOLDED DENSITY PCF DRY	MOLDED DENSITY PCF WET	COEFFICIENT OF PERMEABILITY CM/SEC AT 20 C	INITIAL VOID RATIO	INITIAL PERCENT SATURATION
Tan & Gray Silty Clay (CL)	19.4%	106.4	127.1	7.5×10^{-9}	0.583	90

NOTE:

EXHIBIT K

CERTIFICATE OF EQUIPMENT CLEANING

MoTec, Inc.
a Remediation Technologies Company
1301 West 25th Street
Suite 406
Austin, Texas 78705
(512) 476-7974

SOLVING TODAY'S ENVIROMENTAL PROBLEMS WITH TOMORROW'S TECHNOLOGY

November 28, 1990

Mr. Howard Hamilton
International Paper Co.
P.O. Box 37
Wiggins, Mississippi 39577

Dear Howard:

As per the request of International Paper Co., this letter is to document the decontamination of the equipment removed from the Wiggins site by MoTec, Inc. As stated in a memorandum from John Wall, equipment utilized on the land treatment unit was washed and photographed prior to removal. This equipment included an agriculture tractor, dish harrow, chisel plow and turning plow. The remaining equipment removed from the site included three Frac tanks and two 5 Hp aerators, which were decontaminated by IP's contractor prior to removal from the site. The aerators used in the liquid/solids slurry system, supplied to IP by MoTec, were left on-site for IP's use.

Please contact me should any additional information be required.

Very truly yours,

Donald F. Sherman
MoTec Operations Manager

DFS/cjp

PAPER CO
ED WOOD
UCTS

MoTec, Inc.
a Remediation Technologies Company
1301 West 25th Street
Suite 406
Austin, Texas 78705
(512) 476-7974

SOLVING TODAY'S ENVIROMENTAL PROBLEMS WITH TOMORROW'S TECHNOLOGY

November 28, 1990

Mr. Howard Hamilton
International Paper Co.
P.O. Box 37
Wiggins, Mississippi 39577

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Please contact me should any additional information be required.

Very truly yours,

Donald F. Sherman
MoTec Operations Manager

DFS/cjp

PAPER CO
ED WOOD
UCTS

R. D. HERRING CONTRACTING CO., INC. – Brax Batson

Offi[illegible] 46
ssiss[illegible] 9465
(601) 584-696

November 20, 1990

International Paper Co.
P.O. Box 37
Wiggins, MS

RE: INTERNATIONAL PAPER PLANT AT WIGGINS

ATTENTION MR. HOWARD HAMILTON:

Dear Sir:

TO WHOM IT MAY CONCERN:

This letter is to certify that at the closure of the contract at International Paper Co. in Wiggins, MS that all equipment and machinery used by R. D. HERRING CONTRACTING CO. INC., was cleaned of all waste at the Waste Management Area, before being removed from site.

Thank you very much, it was a pleasure working for your company.

Yours truly,

R. D. HERRING CONTRACTING CO.,INC.

R D Herring

R. D. Herring, President

TRICIL

July 25, 1990

JUL 1990
INT. PAPER CO.
TREATED WOOD
PRODUCTS
WIGGINS

Mr. Howard Hamilton
International Paper Company
Old Highway 49 South
Wiggins, MS 39577

RE: Pond Closure Project

Mr. Hamilton,

As per your request, please accept the following description of the decontamination procedures used prior to equipment demobilization.

1 Feed Tanks (3), Holding Tanks (4), Oil Skimmer (1), and Pumps and Hoses

1.1 Triple rinse with high pressure washer and hand scrub were required, all exterior and interior surfaces.

1.2 Inspect all areas to insure complete removal of all visible contamination and repeat step 1.1 as required.

1.3 All rinse water to be sent to the land farm containment area.

2 Filter Press (2.5 cu.yd), Filter Press (1 cu.yd.), and Pod Filters

2.1 Remove all filter media (ie. cloths and cartridges) and dispose of them on site.

2.2 Triple rinse with high pressure washer and hand scrub were required, all exterior and interior surfaces.

2.3 Inspect all areas to insure complete removal of all visible contamination and repeat step 2.2 as required.

2.4 All rinse water to be sent to the land farm containment area.

3 Carbon Filter Units (3)

3.1 Remove all carbon, sand, and other filter media and dispose of them on site.

3.2 Triple rinse with high pressure washer and hand scrub were required, all exterior and interior surfaces.

3.3 Inspect all areas to insure complete removal of all visible contamination and repeat step 3.2 as required.

Tricil Environmental Response Inc. 16016 Perkins Rd Baton Rouge Louisiana 70810 (504) 756-2570 FAX (504) 756-2587

3.4 All rinse water to be sent to the land farm containment area.

4 Trucks, Trailers and Other Wheel Mounted Equipment Used For Demobilization.

4.1 As these items exit the site rinse the wheels with high pressure washer.

4.2 Inspect the wheels to insure complete removal of all visible contamination and repeat step 4.1 as required.

4.3 All rinse water to be sent to the land farm containment area.

If You have any questions concerning these procedures, please contact me at (504) 756-2570.

Thank You,
LAIDLAW ENVIRONMENTAL SERVICES

Richard L. Pitts
Estimator

Sept. 24, 1989

Mr. Howard Hamilton
I P. Wiggins
POB 37, Old Hwy S. 49
Wiggins, MS. 39577

Dear Howard,

Enclosed are the pictures of MoTec's equipment as it was moved off your plant. I only recently stopped in one place long enough to have them developed. Sorry for the delay.

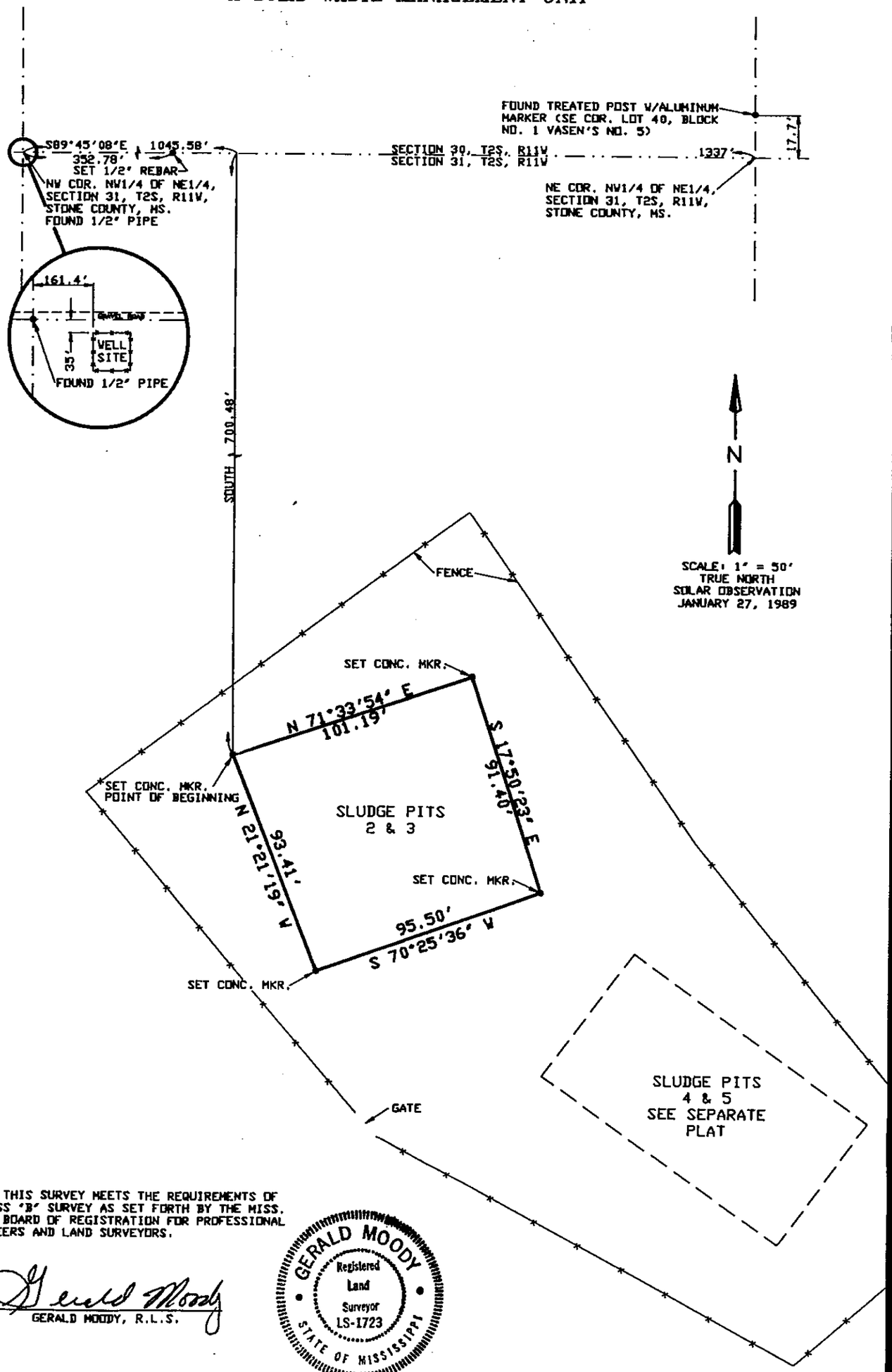
Sincerely,

John Wall

EXHIBIT L

SURVEY PLATS AND DESCRIPTIONS

INTERNATIONAL PAPER
WIGGINS, MS. TREATED WOOD PRODUCTS PLANT
BOUNDARY SURVEY OF SLUDGE PITS 2 & 3
A SOLID WASTE MANAGEMENT UNIT



NOTE: THIS SURVEY MEETS THE REQUIREMENTS OF A CLASS "B" SURVEY AS SET FORTH BY THE MISS. STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

Gerald Moody
GERALD MOODY, R.L.S.

GERALD MOODY
Registered Land Surveyor
LS-1723
STATE OF MISSISSIPPI

SEE SHEET 2 FOR DESCRIPTION

SCALE: 1" = 50'
DATE: 11/12/90
DRAWN BY: ROBERT

BATSON AND BROWN, INC.
WIGGINS □ LUCEDALE □ PASCAGOULA, MISSISSIPPI
CONSULTING ENGINEERS

PROJ\40716-11

INTERNATIONAL PAPER
WIGGINS, MS, TREATED WOOD PRODUCTS PLANT
BOUNDARY SURVEY OF SLUDGE PITS 2 & 3
A SOLID WASTE MANAGEMENT UNIT

DECEMBER, 1990

DESCRIPTION

A parcel of land located in the Northwest Quarter of the Northeast Quarter of Section 31, Township 2 South, Range 11 West, Stone County, Mississippi, being more particularly described as follows:

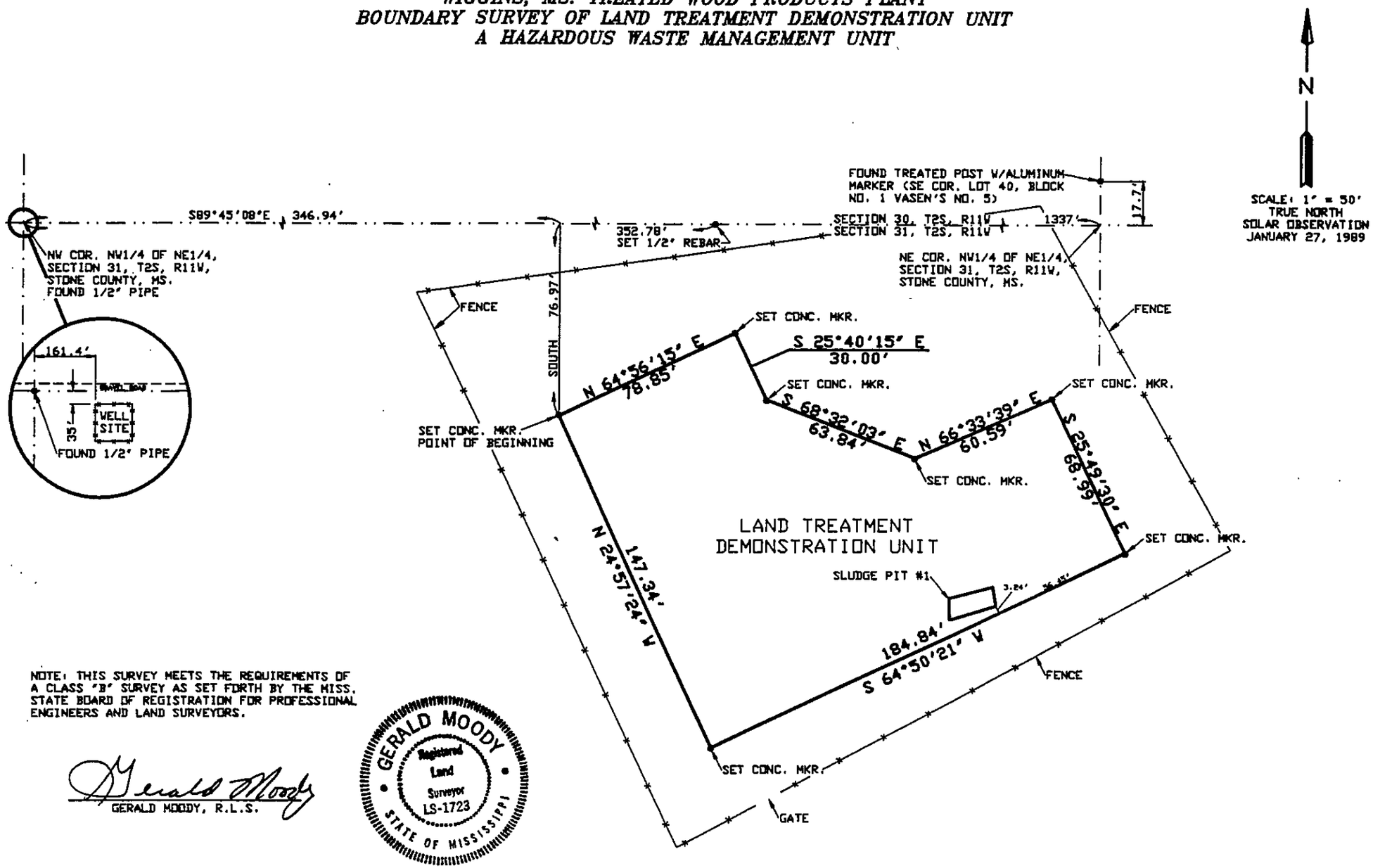
Commence at the Northwest Corner of the Northwest Quarter of the Northeast Quarter; thence run South 89 degrees 45 minutes 08 seconds East along the Section Line for 1,045.58 feet to a point; thence run South for 700.48 feet to a steel bar embedded in round concrete monument which is three inches in diameter for the POINT OF BEGINNING; thence run around the boundary of the solid waste management unit:

North 71 degrees 33 minutes 54 seconds East for 101.19 feet;
thence run South 17 degrees 50 minutes 23 seconds East for 91.40 feet;
thence run South 70 degrees 25 minutes 36 seconds West for 95.50 feet;
thence run North 21 degrees 21 minutes 19 seconds West for 93.41 feet,

back to the POINT OF BEGINNING. Each point of turn is marked with a steel reinforcing bar embedded in concrete monument which is three inches in diameter. All bearings are based on a True North Solar Observation made January 27, 1989.

Said parcel contains 0.20 acres, more or less.

INTERNATIONAL PAPER
WIGGINS, MS. TREATED WOOD PRODUCTS PLANT
BOUNDARY SURVEY OF LAND TREATMENT DEMONSTRATION UNIT
A HAZARDOUS WASTE MANAGEMENT UNIT



NOTE: THIS SURVEY MEETS THE REQUIREMENTS OF A CLASS "B" SURVEY AS SET FORTH BY THE MISS. STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

Gerald Moody

GERALD MOODY, R.L.S.

GERALD MOODY
Registered Land Surveyor
LS-1723
STATE OF MISSISSIPPI

SEE SHEET 2 FOR DESCRIPTION

BATSON AND BROWN, INC.
CONSULTING ENGINEERS
WIGGINS □ LUCEDALE □ PASCAGOULA, MISSISSIPPI

SCALE: 1" = 50'
DATE: 11/12/90
DRAWN BY: ROBERT

INTERNATIONAL PAPER
WIGGINS, MS, TREATED WOOD PRODUCTS PLANT
BOUNDARY SURVEY OF MSUFPL - LAND TREATMENT DEMONSTRATION UNIT
A HAZARDOUS WASTE MANAGEMENT UNIT

DECEMBER, 1990

DESCRIPTION

A parcel of land located in the Northwest Quarter of the Northeast Quarter of Section 31, Township 2 South, Range 11 West, Stone County, Mississippi, being more particularly described as follows:

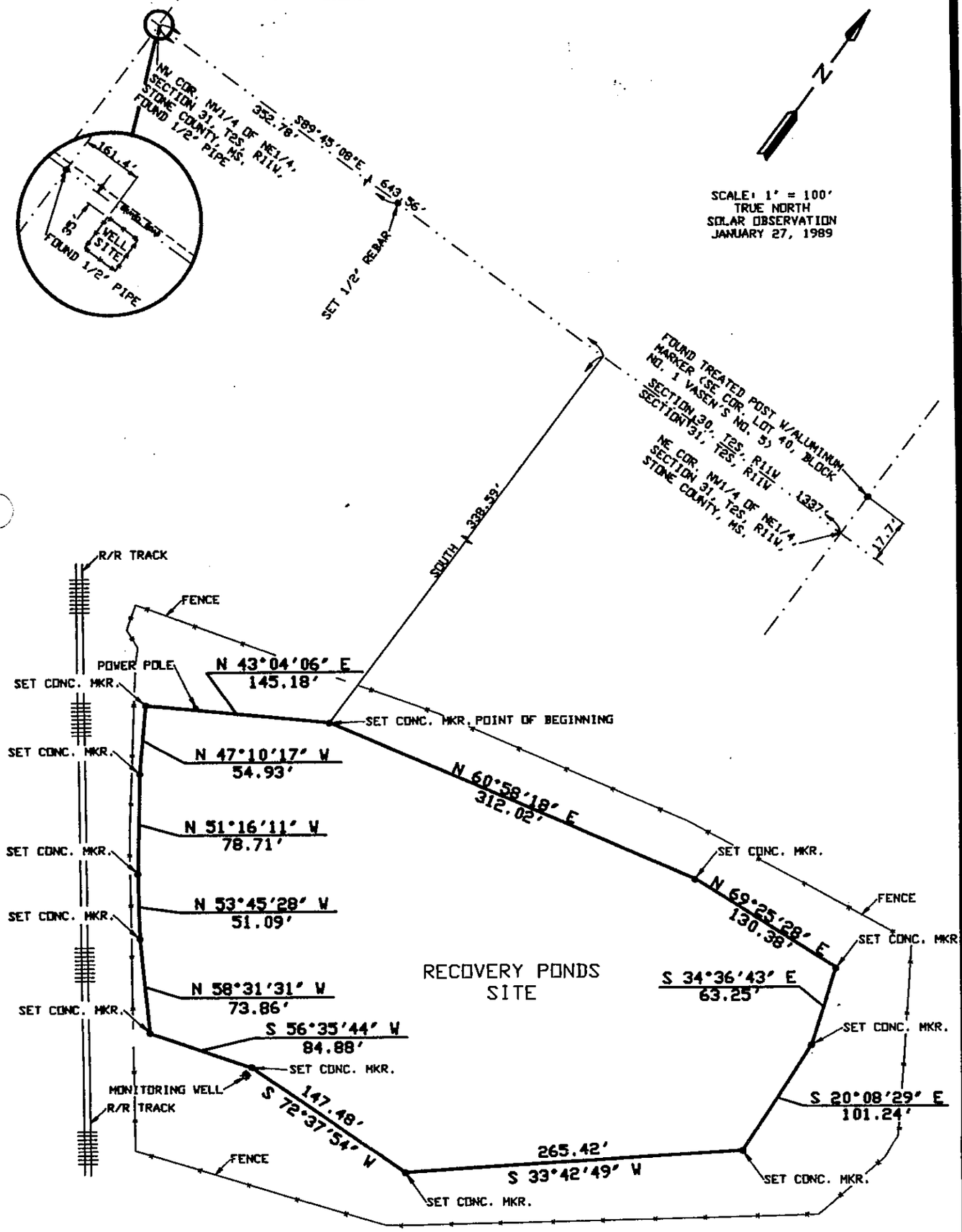
Commence at the Northwest Corner of said Northwest Quarter of Northeast Quarter; thence run along the Section Line South 89 degrees 45 minutes 08 seconds East for 346.94 feet to a point; thence run South for 76.97 feet to a steel reinforcing bar embedded in a round concrete monument three inches in diameter for a POINT OF BEGINNING; thence run along the boundary of the hazardous waste management unit:

North 64 degrees 56 minutes 15 seconds East for 78.85 feet;
thence South 25 degrees 40 minutes 15 seconds East for 30.00 feet;
thence South 68 degrees 32 minutes 03 seconds East for 63.84 feet;
thence North 66 degrees 33 minutes 39 seconds East for 60.59 feet;
thence South 25 degrees 49 minutes 30 seconds East for 68.99 feet;
thence South 64 degrees 50 minutes 21 seconds West for 184.84 feet;
thence North 24 degrees 57 minutes 24 seconds West for 147.34 feet,

back to the Point of Beginning. Each point of turn is marked with a steel reinforcing bar embedded in a round concrete monument which is three inches in diameter. All bearings are referenced to True North as calculated by a Solar Observation made January 27, 1989.

Said parcel contains 0.46 acres, more or less.

INTERNATIONAL PAPER
WIGGINS, MS. TREATED WOOD PRODUCTS PLANT
BOUNDARY SURVEY OF CELLON, PENTA & CREOSOTE RECOVERY PONDS
A HAZARDOUS WASTE MANAGEMENT UNIT



NOTE: THIS SURVEY MEETS THE REQUIREMENTS OF A CLASS 'B' SURVEY AS SET FORTH BY THE MISS. STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

GERALD MOODY
Registered Land Surveyor
LS-1723
STATE OF MISSISSIPPI

GERALD MOODY, R.L.S.

SEE SHEET 2 FOR DESCRIPTION

SCALE: 1" = 100'
DATE: 11/12/90
DRAWN BY: ROBERT

BATSON AND BROWN, INC.
WIGGINS □ LUCEDALE □ PASCAGOULA, MISSISSIPPI
CONSULTING ENGINEERS

PROJ.\40716-15

INTERNATIONAL PAPER
WIGGINS, MS, TREATED WOOD PRODUCTS PLANT
BOUNDARY SURVEY OF CELLON, PENTA, CREOSOTE RECOVERY PONDS SITE
A HAZARDOUS WASTE MANAGEMENT UNIT

DECEMBER, 1990

DESCRIPTION

A parcel of land located in the Northwest Quarter of the Northeast Quarter of Section 31, Township 2 South, Range 11 West, Stone County, Mississippi, being more particularly described as follows:

Commence at the Northwest Corner of said Northwest Quarter of Northeast Quarter; thence run South 89 degrees 45 minutes 08 seconds East along the Section Line for 643.56 feet to a point; thence run South 338.59 feet to an iron bar in a round three inch diameter concrete monument for a POINT OF BEGINNING; thence run along the boundary of the hazardous waste management unit;

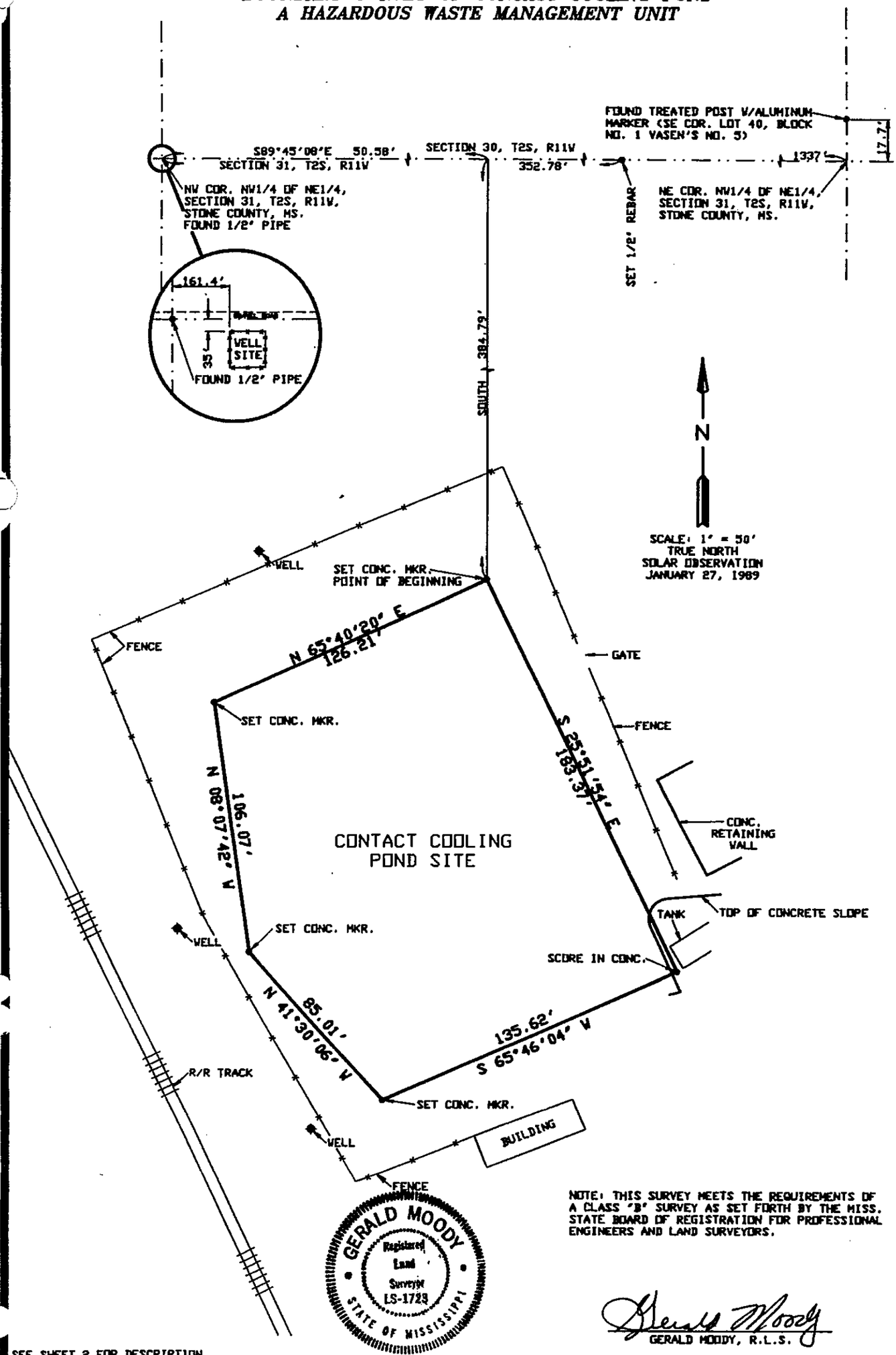
North 60 degrees 58 minutes 18 seconds East for 312.02 feet;
thence run North 69 degrees 25 minutes 28 seconds for 130.38 feet;
thence run South 34 degrees 36 minutes 43 seconds East for 63.25 feet;
thence run South 20 degrees 08 minutes 29 seconds East for 101.24 feet;
thence run South 33 degrees 42 minutes 49 seconds West for 265.42 feet;
thence run South 72 degrees 37 minutes 54 seconds West for 147.48 feet;
thence run South 56 degrees 35 minutes 44 seconds West for 84.88 feet;
thence run North 58 degrees 31 minutes 31 seconds West for 73.86 feet;
thence run North 53 degrees 45 minutes 28 seconds West for 51.09 feet;
thence run North 51 degrees 16 minutes 11 seconds West for 78.71 feet;
thence run North 47 degrees 10 minutes 17 seconds West for 54.93 feet;
thence run North 43 degrees 04 minutes 06 seconds East for 145.18 feet to the Point of Beginning.

Said parcel containing 3.17 acres more or less.

All points of turn are marked with a steel reinforcing bar embedded in a round concrete monument which is three inches in diameter.

All bearings are referenced to True North based on a Solar Observation made at the site on January 27, 1989.

INTERNATIONAL PAPER
WIGGINS, MS. TREATED WOOD PRODUCTS PLANT
BOUNDARY SURVEY OF CONTACT COOLING POND
A HAZARDOUS WASTE MANAGEMENT UNIT



NOTE: THIS SURVEY MEETS THE REQUIREMENTS OF A CLASS "B" SURVEY AS SET FORTH BY THE MISS. STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

Gerald Moody
GERALD MOODY, R.L.S.

SEE SHEET 2 FOR DESCRIPTION

SCALE: 1" = 50'
DATE: 11/12/90
DRAWN BY: ROBERT

BATSON AND BROWN, INC.
WIGGINS ☐ LUCEDALE ☐ PASCAGOULA, MISSISSIPPI
CONSULTING ENGINEERS

INTERNATIONAL PAPER
WIGGINS, MS, TREATED WOOD PRODUCTS PLANT
BOUNDARY SURVEY OF CONTACT COOLING POND
A HAZARDOUS WASTE MANAGEMENT UNIT

DECEMBER, 1990

DESCRIPTION

A parcel of land located in the Northwest Quarter of the Northeast Quarter of Section 31, Township 2 South, Range 11 West, Stone County, Mississippi, being more particularly described as:

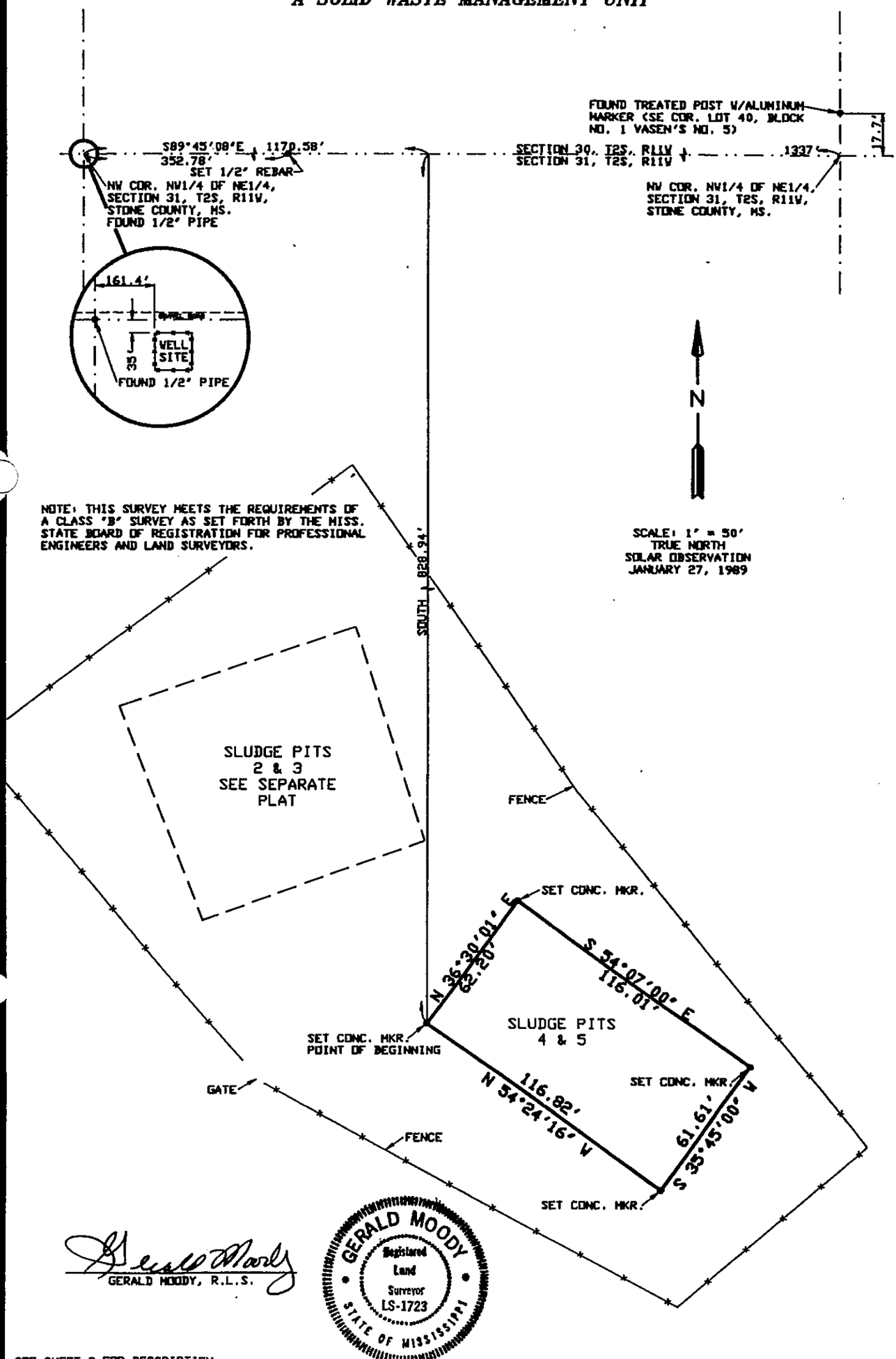
Commence at the Northwest Corner of said Northwest Quarter of Northeast Quarter; thence run South 89 degrees 45 minutes 08 seconds East along the Section Line for 50.58 feet; thence run South 384.79 feet to a steel reinforcing bar embedded in a three-inch diameter round concrete monument for a Point of Beginning; thence run along the boundary of the hazardous waste management unit;

South 25 degrees 51 minutes 54 seconds East for 183.37 feet;
thence run South 65 degrees 46 minutes 04 seconds West for 135.62 feet;
thence run North 41 degrees 30 minutes 06 seconds West for 85.01 feet;
thence run North 08 degrees 07 minutes 42 seconds West for 106.07 feet;
thence run North 65 degrees 40 minutes 20 seconds East for 126.21 feet,

back to the Point of Beginning. Each point of turn is marked with a steel reinforcing bar embedded in a three-inch diameter round concrete monument except the Southwest Corner which is marked with a hole scored in concrete slope pavement. All bearings are based on a True North Solar Observation made January 27, 1989, on the site.

Said parcel contains 0.61 acres more or less.

INTERNATIONAL PAPER
WIGGINS, MS. TREATED WOOD PRODUCTS PLANT
BOUNDARY SURVEY OF SLUDGE PITS 4 & 5
A SOLID WASTE MANAGEMENT UNIT



GERALD MOODY, R.L.S.

GERALD MOODY
Registered Land Surveyor
LS-1723
STATE OF MISSISSIPPI

SEE SHEET 2 FOR DESCRIPTION

SCALE: 1" = 50' DATE: 11/12/90 DRAWN BY: ROBERT	BATSON AND BROWN, INC. WIGGINS ☐ LUCEDALE ☐ PASCAGOULA, MISSISSIPPI CONSULTING ENGINEERS

PROJ\48716-12

INTERNATIONAL PAPER
WIGGINS, MS, TREATED WOOD PRODUCTS PLANT
BOUNDARY SURVEY OF SLUDGE PITS 4 & 5
A SOLID WASTE MANAGEMENT UNIT

DECEMBER, 1990

DESCRIPTION

A parcel of land located in the Northwest Quarter of the Northeast Quarter of Section 31, Township 2 South, Range 11 West, Stone County, Mississippi, being more particularly described as follows:

Commence at the Northwest Corner of said Northwest Quarter of Northeast Quarter; thence run South 89 degrees 45 minutes 08 seconds East along the Section Line for 1170.58 feet; thence run South for 828.94 feet to a steel reinforcing bar embedded in a three-inch round concrete monument for a POINT OF BEGINNING; thence run along the boundary of the solid waste management unit:

North 36 degrees 30 minutes 01 seconds East for 62.20 feet;
thence run South 54 degrees 07 minutes 00 seconds East for 116.01 feet;
thence run South 35 degrees 45 minutes 00 seconds West for 61.61 feet;
thence run North 54 degrees 24 minutes 16 seconds West for 116.82 feet;

back to the POINT OF BEGINNING. Each point of turn is marked with steel reinforcing bars embedded in a concrete monument which is three inches in diameter. All bearings are based on a True North Solar Observation made at the site on January 27, 1989.

Said parcel contains 0.17 acres, more or less.

APPENDIX I-2

POST CLOSURE CARE PLAN

TABLE OF CONTENTS

I-2 Post-Closure Plan [270.14(b)(13), 264.118, & 264.228(b)] 1
I-2a Inspection Plan [264.118(a)] 1
I-2b Monitoring Plan [264.118(b)(1)] 2
I-2c Maintenance Plan [264.118(b)(2)] 2
I-2d Land Treatment [264.280(c)] 4
I-2e Post-Closure Care for Miscellaneous Units [270.23(a)(3)] 4
I-2f Post-Closure Security [264.117(b)] 5
I-2g Post-Closure Contact [264.118(b)(3)] 5

FIGURE

Figure 1 Post-Closure Inspection Form

I-2 Post-Closure Plan [270.14(b)(13), 264.118, & 264.228(b)]

This Post-Closure Care Plan is submitted in accordance with the applicable requirements of 40 CFR 270 and 264, and identifies and describes the on-going monitoring and maintenance that will occur throughout the post-closure care period for the International Paper (IP) portion of the Wiggins Treated Wood Products Plant. IP will maintain a copy of the approved Post-Closure Care Plan and all revisions to the Plan on-site until the certification of post-closure activities has been submitted and accepted by the MDEQ.

This Post-Closure Care Plan describes the activities that will be performed to monitor the closed Old Cellon, PCP and Creosote Recovery Ponds, Land Treatment Demonstration Unit and Sludge Pits 1 through 5 (Closed Ponds and Pits Area) and the Contact Cooling Water Pond throughout the 30-year post-closure care period, which began in 1990, and beyond. This plan provides ground-water monitoring, inspection and maintenance activities required to monitor the closed Old Cellon, PCP and Creosote Recovery Ponds, Land Treatment Demonstration Unit and Sludge Pits 1 through 5 (Closed Ponds and Pits Area) and the Contact Cooling Water Pond. Documentation of post-closure care activities will be maintained to promote action, as necessary, to protect human health and the environment.

I-2a Inspection Plan [264.118(a)]

The closed Old Cellon, PCP and Creosote Recovery Ponds, Land Treatment Demonstration Unit and Sludge Pits 1 through 5 (Closed Ponds and Pits Area) and the Contact Cooling Water Pond (i.e. solid waste management units or SWMUs) will be monitored and maintained throughout the 30-year post-closure care period. Activities will consist of periodic inspections, groundwater monitoring and maintenance of all observable features pursuant to 40 CFR 264.118(b)(1) and (2). Inspection items include the:

1. Final Cover System; consisting of the
   - Vegetative cover,
   - Surface erosion and animal burrows, and

- Surface settlement; and

2. Monitoring wells.

Inspections of the SWMUs will be conducted at least quarterly and after significant weather events. An example of a post-closure inspection form is included as Figure 1. The purpose of the inspection form is to assist the inspector in observing signage, security and conditions of the cover systems that may require maintenance.

I-2b Monitoring Plan [264.118(b)(1)]

Ground-water monitoring activities will be continued throughout the 30-year post-closure care period or until IP receives authorization from the MDEQ to discontinue monitoring. Sampling and analysis will be performed in accordance with the Groundwater Monitoring Plan/Sampling and Analysis Plan (GMP/SAP), provided as Appendix E-4 of the Permit Application.

I-2c Maintenance Plan [264.118(b)(2)]

This section of the Post-Closure Care Plan addresses maintenance of the closed units in accordance with 40 CFR 264.310(b) in the following areas:

1) **Final Cover System** – The final cover system consisted of two feet of compacted clay, covered by six inches of drainage sand, covered by one foot of general fill soil and then by six inches of top-soil that can support the growth of native vegetation. The cover system has a slope of about 5 percent. The cover system will be visually inspected quarterly and after significant weather events. Inspections will be logged, and the reports will be retained on-site at Baldwin Pole Mississippi LLC's (Baldwin Pole) office. The inspection will be performed to check for adequate vegetation coverage, signs of surface erosion and surface settlement.

Vegetative Cover – The vegetative growth covering the closed units and the perimeter drainage ditches will be maintained. The vegetative cover will be visually inspected periodically for damage to the cover. The grass will be mowed twice a year during the late spring and early fall or more often as needed to maintain an average grass height of 2 feet or less. Mowing can be performed just prior to the groundwater sampling events. Mowing will reduce the height of the vegetative cover and thereby allow for inspection. The final cover will be inspected for the presence of woody perennials. If woody perennials are identified, they will be removed to keep the final cover system free of woody perennials. If the inspection reveals damage to the vegetative cover, the damaged areas will be seeded and fertilized until the vegetative cover is re-established.

Surface Erosion and Animal Burrows – The final cover system surface will be visually inspected periodically for evidence of erosion and other surface damage such as cracking, desiccation of the soils, or animal burrows. These inspections will occur during the late spring and early fall after the final cover is mowed. The final cover system may also be inspected after significant weather events. Erosion or other surface damage will be repaired by placing clean material that can support vegetative growth to restore the lines and grades of the eroded area. Required repairs will be completed prior to the next scheduled inspection.

Surface Settlement – The final cover system surface will be visually inspected quarterly for signs of ponding, slumping, and/or disruption of proper drainage patterns. Where possible, these inspections will occur following the mowing of the final cover. Repairs will be made by placing and lightly compacting additional material that can support vegetative growth on the settled area to eliminate ponding and restore efficient drainage. The repaired area will be seeded and fertilized. Repairs will be completed prior to the next scheduled inspection.

Benchmarks – Benchmarks used to survey the cover elevations will be maintained for use in case of a need to re-survey cover elevations or monitoring well elevations. The benchmarks are steel pins in the road of the adjacent Old Highway #49. Maintenance of these benchmarks will consist of visual inspection to confirm their presence in the roadway. The top of casing of monitoring well WC-8 will be used as the on-site benchmark for any cover surveys. No re-surveys are specifically required under this permit. Benchmarks to be maintained are shown on Figure B-2 of the Permit Application.

2) **Monitoring Wells** – The groundwater monitoring wells will be protected from vandalism by locking caps and covers. The monitoring wells will be inspected during each sampling event for evidence of tampering, presence of intact locking caps and covers, and adequate maintenance of the area for access. Depth to the bottom of the casing will be checked on an annual basis. If siltation is present at significant depths, maintenance will include purging of the well to remove silt buildup. The protective steel casing will be formally inspected annually and repairs, if necessary, will be initiated. A Well Inspection Report Form (included in the GMP/SAP) will be used to document the condition of each monitoring well during the sampling event.

A monitoring well plugging and abandonment plan will be prepared for removal of the monitoring well system at the end of the post-closure care period.

I-2d Land Treatment [264.280(c)]

This section is not applicable.

I-2e Post-Closure Care for Miscellaneous Units [270.23(a)(3)]

This section is not applicable.

I-2f Post-Closure Security [264.117(b)]

Access to the closed units will be controlled by fencing and Baldwin Pole plant security. As it is approached from the road, the IP property is located behind (east) of the Baldwin Pole plant such that Baldwin Pole property needs to be traversed to access the IP property. In addition, there is fencing around the closed Old Cellon, PCP and Creosote Recovery Ponds, Land Treatment Demonstration Units (which includes Sludge Pit 1), Sludge Pits 2 through 5 and the Contact Cooling Water Pond (Figure B-2). These fences will be repaired or replaced, as necessary.

I-2g Post-Closure Contact [264.118(b)(3)]

The Remediation Project Manager of IP's Corporate Environment Health & Safety Department will be responsible for retaining and updating the on-site copy of the Post-Closure Care Plan. A copy of the Post-Closure Care Plan will be maintained at the facility in the Baldwin Pole office. In accordance with 40 CFR 264.118(b)(3), the following representatives can be contacted concerning the post-closure activities of the closed units at the IP property in Wiggins, MS.:

Primary Contact
Emily W. Lee
Remediation Project Manager
International Paper
6400 Poplar Avenue
Memphis, TN 38197
(901) 419-7725
emily.lee@ipaper.com

On-site Contact:
Ms. Pam Jackson
EHS Manager
Baldwin Pole Mississippi
1633 South First Street
Wiggins, MS 39577
601-928-5475
pam@baldwinpole.com

FIGURE 1

POST-CLOSURE INSPECTION FORM

INTERNATIONAL PAPER

POST-CLOSURE INSPECTION FORM

DATE	Inspector's Name And Initials	Warning Signs				Fencing, Gates				Condition of Cover				Comments
		Visible, Legible Note Exceptions				Secure, Locked Note Exceptions				Vegetation, Drainage Erosion, Animal Burrowing				
		#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4	

Inspection of each closure area is documented as: #1 Contact Cooling Pond, #2 Land Treatment, #3 Process Ponds, #4 Sludge Pits

APPENDIX I-3

DECLARATION AND NOTICE TO THE PUBLIC OF MANAGEMENT OF HAZARDOUS WASTE SITE

STATE OF MISSISSIPPI

COUNTY OF STONE

DECLARATION AND NOTICE TO THE PUBLIC
OF MANAGEMENT OF HAZARDOUS WASTE SITE

NOTICE IS HEREBY GIVEN to the public and more particularly any future owners of the property hereinafter described, International Paper, whose address is shown at the end of this Notice, does hereby give the public notice the following described land and real property has been used to manage hazardous waste and has been designated a hazardous waste site as those terms are defined in Title 40 of the Code of the Federal Regulations (40 CFR), Paragraph 261.3 and Mississippi Hazardous Waste Management Regulations (MS HWMR), Part 261, and its use is restricted under 40 CFR, Part 264, Subpart G and MS HWMR, Part 264, Subpart G, and any and all other applicable regulations. All hazardous waste sludges designated as K001 (bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use Cellon, Creosote and/or Pentachlorophenol) have been removed from the site. However, soils contaminated with K001 hazardous waste sludge remain at the sites and said sites are described as follows, to-wit:

> A parcel of land located in the Northwest Quarter of the Northeast Quarter of Section 31, Township 2 South, Range 11 West, Stone County, Mississippi, being more particularly described as: Commence at the Northwest Corner of said Northwest Quarter of Northeast Quarter; thence run South 89 degrees 45 minutes 08 seconds East along the Section Line for 50.58 feet; thence run South 384.79 feet to a steel reinforcing bar embedded in a three-inch diameter round concrete monument for a Point of Beginning; thence run along the boundary of the hazardous waste management unit: South 25 degrees 51 minutes 54 seconds East for 183.37 feet; thence run South 65 degrees 46 minutes 04 seconds West for 135.62 feet; thence run North 41 degrees 30 minutes 06 seconds West for 85.01 feet; thence run North 08 degrees 07 minutes 42 seconds West for 106.07 feet; thence run North 65 degrees 40 minutes 20 seconds East for 126.21 feet, back to the Point of Beginning. Each point of turn is marked with a steel reinforcing bar embedded in a three-inch diameter round concrete monument except the Southwest Corner which is marked with a hole scored in concrete slope pavement. All bearings are based on a True North Solar Observation made January 27, 1989, on the site. Said parcel contains 0.61 acres more or less.

All as shown on a survey attached hereto and made a part hereof as if copied in full herein marked EXHIBIT "A".

ALSO:

A parcel of land located in the Northwest Quarter of the Northeast Quarter of Section 31, Township 2 south, Range 11 West, Stone County, Mississippi, being more particularly described as follows: Commence at the Northwest Corner of said Northwest Quarter of Northeast Quarter; thence run South 89 degrees 45 minutes 08 seconds East along the Section Line for 643.56 feet to a point; thence run South 338.59 feet to an iron bar in a round three inch diameter concrete monument for a Point of Beginning; thence run along the boundary of the hazardous waste management unit: North 60 degrees 58 minutes 18 seconds East for 312.02 feet; thence run North 69 degrees 25 minutes 28 seconds for 130.38 feet; thence run South 34 degrees 36 minutes 43 seconds East for 63.25 feet; thence run South 20 degrees 08 minutes 29 seconds East for 101.24 feet; thence run South 33 degrees 42 minutes 49 seconds West for 265.42 feet; thence run South 72 degrees 37 minutes 54 seconds West for 147.48 feet; thence run South 56 degrees 35 minutes 44 seconds West for 84.88 feet; thence run North 58 degrees 31 minutes 31 seconds West for 73.86 feet; thence run North 53 degrees 45 minutes 28 seconds West for 51.09 feet; thence run North 51 degrees 16 minutes 11 seconds West for 78.71 feet; thence run North 47 degrees 10 minutes 17 seconds West for 54.93 feet; thence run North 43 degrees 04 minutes 06 seconds East for 145.18 feet to the Point of Beginning. Said parcel containing 3.17 acres, more or less. All points of turn are marked with a steel reinforcing bar embedded in a round concrete monument which is three inches in diameter. All bearings are referenced to True North based on a Solar Observation made at the site on January 27, 1989.

All as shown on a survey attached hereto and made a part hereof as if copied in full herein marked EXHIBIT "B".

ALSO:

A parcel of land located in the Northwest Quarter of the Northeast Quarter of Section 31, Township 2 South, Range 11 West, Stone County, Mississippi, being more particularly described as follows: Commence at the Northwest Corner of said Northwest Quarter of Northeast Quarter; thence run along the Section Line South 89 degrees 45 minutes 08 seconds East for 346.94 feet to a point; thence run South for 76.97 feet to a steel reinforcing bar embedded in a round concrete monument three inches in diameter for a Point of Beginning; thence run along the boundary of the hazardous waste management unit: North 64 degrees 56 minutes 15 seconds East for 78.85 feet; thence South 25 degrees 40 minutes 15 seconds East for 30.00 feet; thence South 68 degrees 32 minutes 03 seconds East for 63.84 feet; thence North 66 degrees 33 minutes 39 seconds East for 60.59 feet; thence South 25 degrees 49 minutes 30 seconds East for 68.99 feet; thence South 64 degrees 50 minutes 21 seconds West for 184.84 feet; thence North 24 degrees 57 minutes 24 seconds West for 147.34 feet, back to the Point of Beginning. Each point of turn is marked with a steel reinforcing bar embedded in a round concrete monument which is three inches in diameter. All bearings are referenced to True North as calculated by a Solar Observation made January 27, 1989. Said parcel contains 0.46 acres, more or less.

All as shown on a survey attached hereto and made a part hereof as if copied in full herein marked EXHIBIT "C".

This notice is given pursuant to 40 CFR Section 264.119 in compliance with MS HWMR Regulations, and other appropriate regulations. A final survey plat is attached hereto and made a part hereof as if copied in full herein marked Exhibits "A," "B," and "C," respectively. Said survey has been prepared and certified by a registered professional engineer, who is licensed to do surveys, indicating the exact location and dimensions of the covered waste closure area with respect to its permanently surveyed benchmarks. These plats are attached to this notice and made a part hereof have been filed with the agencies as required by the regulations and International Paper has prominently displayed notice that states International Paper's obligations which restricts disturbance of the sites as specified in Section 264.117 (c). The public is hereby notified International Paper has submitted to the agencies identified in 40 CFR the type, location and quantities of hazardous waste disposed of within each cell or area of the facility.

The public is further noticed the parcels hereinabove described and as shown on the attached survey plats are located at International Paper Treated Wood Products Plant at Wiggins, Mississippi, and are further identified as the Cellon, Penta and Creosote Recovery Ponds and the Contact Cooling Water Pond Waste Management Units.

The use of any or all of the above described land is restricted under 40 CFR Section 264.117(c) which provides, among other things, that the hazardous waste remain in place after closure and must never at any time be allowed to disturb the integrity of the final cover, liners, or any other part or component of the containment system or the function of the facilities monitoring system, without prior approval of the Regional Administrator of EPA or the Director of Mississippi Department of Natural Resources, which authorize said disturbance and find, among other things:

1. It is necessary for the proposed use of the property and will not increase the potential hazard to human health or the environment;

2. It is necessary to reduce a threat to human health or the environment.

Notice is further given that soils contaminated with K001 hazardous waste sludge remain on above decribed land, which has been closed within the regulations of EPA and the Mississippi Department of Environmental Quality stipulations.

A copy of this notice, which shall and is to be recorded in the public records of Stone County, Mississippi, has been delivered to the appropriate authorities who have jurisdiction, control and supervision over land management in the area in which the waste disposal site is located, to-wit:

1. Mayor and Board of Aldermen
   City of Wiggins
   City Hall
   Wiggins, Mississippi 39577

2. Board of Supervisors
   Stone County Courthouse
   Wiggins, Mississippi 39577

3. Mississippi Department of Environmental Quality
   Hazardous Waste Division
   P. O. Box 10385
   Jackson, Mississippi 39289-0385

4. U.S. Environmental Protection Agency
   Region IV
   345 Courtland St. N.E.
   Atlanta, Georgia 30365

5. Tax Assessor
   Stone County Courthouse
   Wiggins, Mississippi 39577

6. Chancery Clerk
   Stone County Courthouse
   Wiggins, Mississippi 39577

(with instructions for this notice to be recorded in the deed records of Stone County, Mississippi, in the appropriate Section, Township and Range).

IN WITNESS WHEREOF, the undersigned, Howard Hamilton, a duly authorized agent to execute this document, sets and subscribed the signature of International Paper, and affixes its seal thereto on this the 28th day of February, 1991.

INTERNATIONAL PAPER

By Howard Hamilton
HOWARD HAMILTON

Correct Address: International Paper
Post Office Box 37
Wiggins, Mississippi 39577

STATE OF MISSISSIPPI

COUNTY OF STONE

BEFORE ME, the undersigned authority in and for the aforesaid jurisdiction, personally appeared HOWARD HAMILTON, as agent for International Paper, who acknowledged that he signed and delivered and above and foregoing document as the act and deed of International Paper, having first been authorized so to do.

GIVEN under my hand and official seal of office on this, the 28th day of February, 1991.

NOTARY PUBLIC

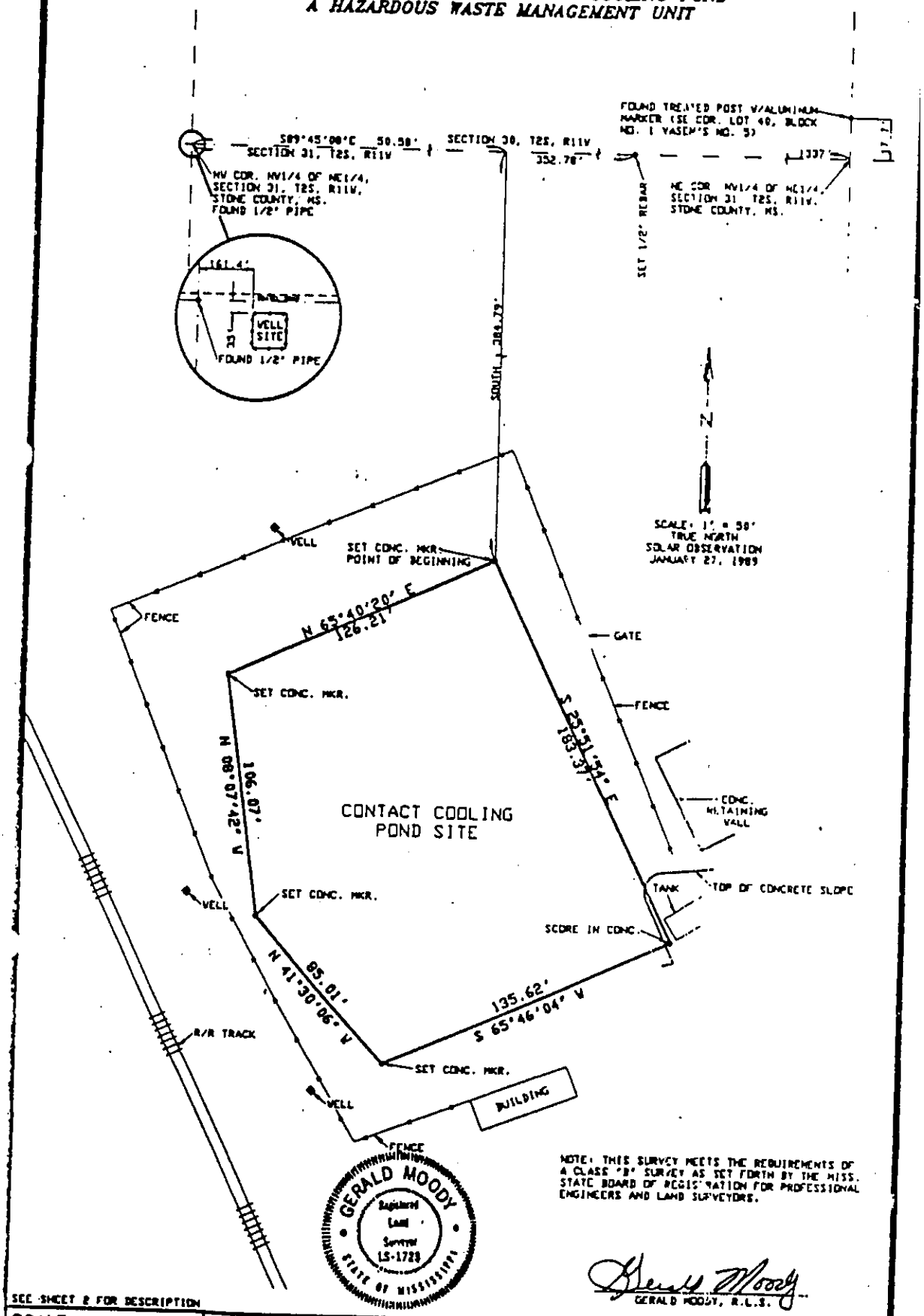
My Commission Expires:

My Commission Expires Nov. 9, 1992

Prepared by:

JACK PARSONS
Parsons and Taylor
Attorneys at Law
P. O. Drawer 6
Wiggins, MS 39577
601/928-7272

INTERNATIONAL PAPER
WIGGINS, MS. TREATED WOOD PRODUCTS PLANT
BOUNDARY SURVEY OF CONTACT COOLING POND
A HAZARDOUS WASTE MANAGEMENT UNIT



NOTE: THIS SURVEY MEETS THE REQUIREMENTS OF A CLASS "B" SURVEY AS SET FORTH BY THE MISS. STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

GERALD MOODY, R.L.S.

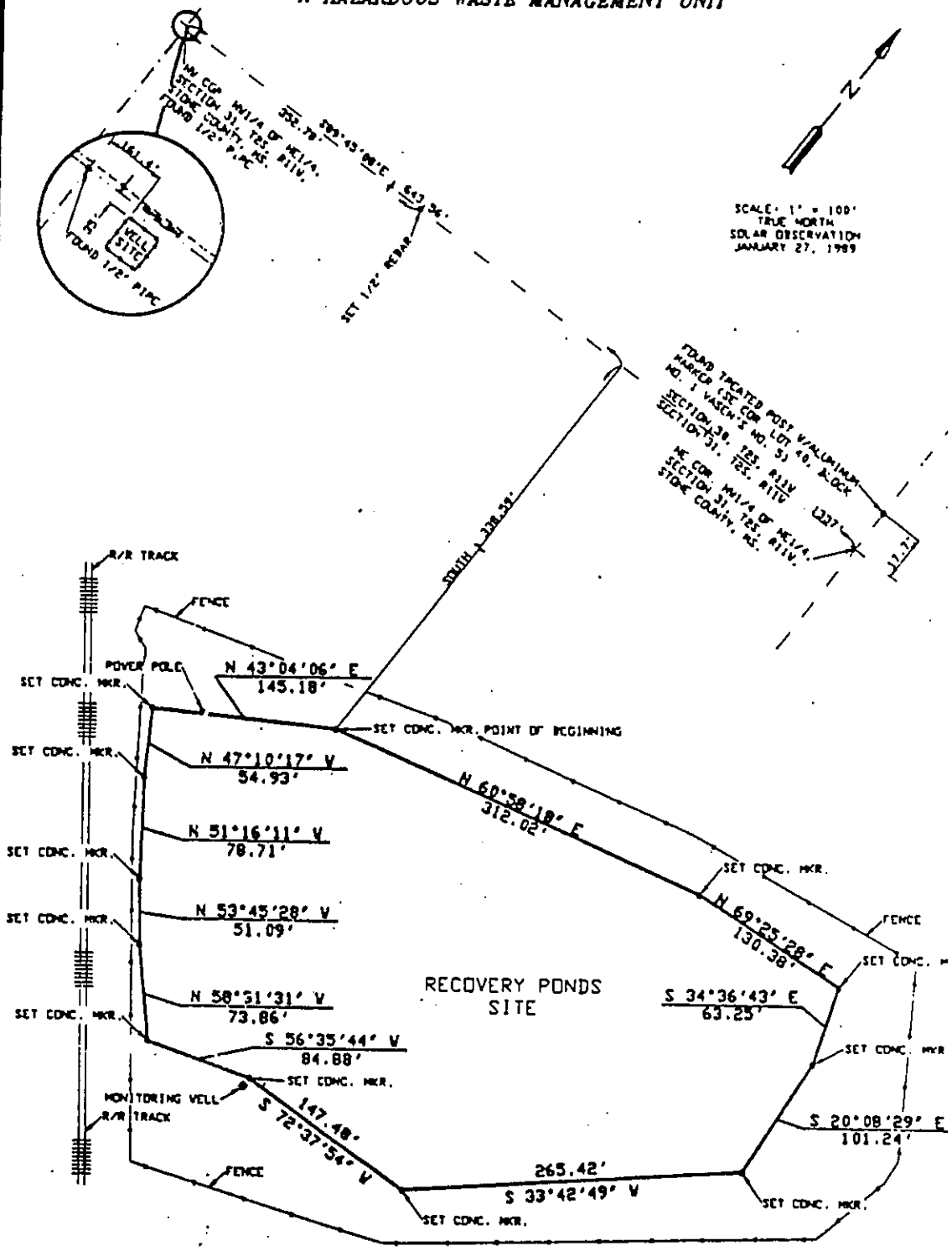
SEE SHEET 2 FOR DESCRIPTION

SCALE: 1" = 50'
DATE: 11/12/90
DRAWN BY: ROBERT

BATSON AND BROWN, INC.
WIGGINS ☐ LU[illegible] GOULA, MISSISSIPPI
CONSULTING ENGINEERS

EXHIBIT "A"

INTERNATIONAL PAPER
WIGGINS, MS. TREATED WOOD PRODUCTS PLANT
BOUNDARY SURVEY OF CELLON, PENTA & CREOSOTE RECOVERY PONDS
A HAZARDOUS WASTE MANAGEMENT UNIT



NOTE: THIS SURVEY MEETS THE REQUIREMENTS OF A CLASS "B" SURVEY AS SET FORTH BY THE MISS. STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

GERALD MOODY
Registered Land Surveyor
LS-1723
STATE OF MISSISSIPPI

GERALD MOODY, R.L.S.

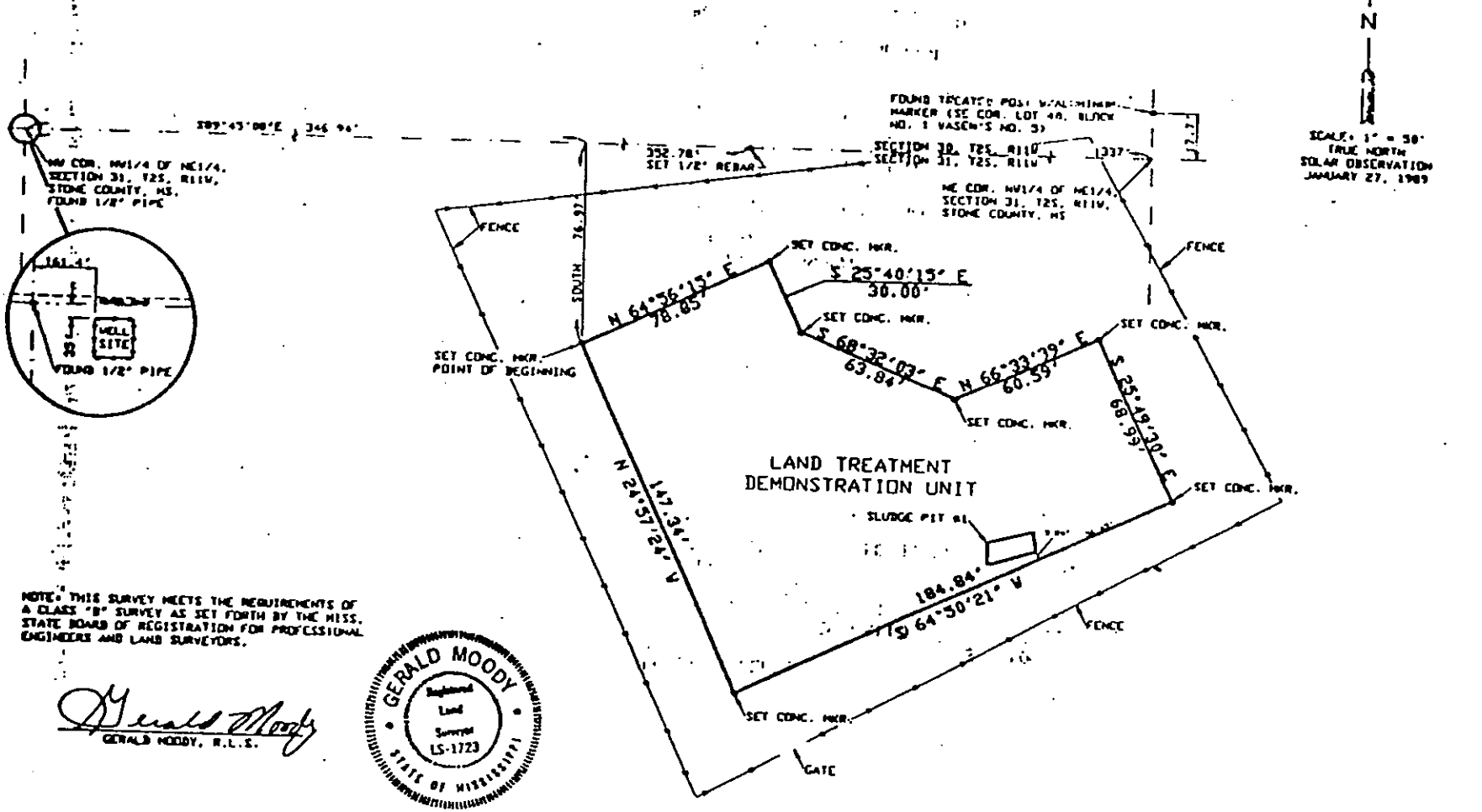
SEE SHEET 2 FOR DESCRIPTION

SCALE: 1" = 100'
DATE: 11/12/90
DRAWN BY: ROBERT

BATSON AND BROWN, INC.
WIGGINS ☐ PASCAGOULA, MISSISSIPPI
CONSULTING ENGINEERS

EXHIBIT "B"

INTERNATIONAL PAPER
WIGGINS, MS. TREATED WOOD PRODUCTS PLANT
BOUNDARY SURVEY OF LAND TREATMENT DEMONSTRATION UNIT
A HAZARDOUS WASTE MANAGEMENT UNIT



NOTE: THIS SURVEY MEETS THE REQUIREMENTS OF A CLASS "B" SURVEY AS SET FORTH BY THE MISS. STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

Gerald Moody
GERALD MOODY, R.L.S.

GERALD MOODY
Registered Land Surveyor
LS-1723
STATE OF MISSISSIPPI

BATSON AND BROWN, INC. CONSULTING ENGINEERS
WIGGINS ☐ LUCEDALE, MISSISSIPPI

SCALE: 1" = 50'
DATE: 11/12/90
DRAWN BY: ROBERT

RECORDING FEES:	
FIRST PAGE	$ 2.00
ADDITIONAL 2 PAGES @ $1.00	2.00
CERTIFICATES @ $1.00 EACH	1.00
COPIES ___ @ 50¢ PAGE	
SEARCH FEE	
MARGINAL ENTRIES ___ @ 50¢ EACH	
TOTAL	$ 10.00

The State of Mississippi
STONE COUNTY

I, the undersigned Clerk of the Chancery Court of said County, do certify that this instrument was filed for record in my office at 2:30 o'clock P M., on the 28 day of Feb. 19 91 and was duly recorded in Record of Land Deeds of said County, Volume 111, Page 443-450

GERALD W. BOND, Clerk

By _____ D.C.

call - 928-5475
Howard Hamilton

APPENDIX I-4

FINANCIAL ASSURANCE LETTER

INTERNATIONAL PAPER

Environment, Health & Safety
INTERNATIONAL PLACE, TOWER I
6400 Poplar Avenue
Memphis, TN 38197
(901) 419-7725

March 29, 2019

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Alan Farmer, RCRA Division Director
Environmental Protection Agency
Atlanta Federal Center
61 Forsyth St., SW
Atlanta, Georgia 30303-3104

Mr. Gary Rikard
Executive Director
Mississippi Department of Environmental Quality
P. O. Box 2261
Jackson, MS 39225-2261

Re: Wiggins Wood Preserving Plant
EPA ID No. MSD980600084
Financial Assurance

Dear Sirs:

Enclosed is a letter from International Paper's Chief Financial Officer demonstrating our financial responsibility for liability coverage and post-closure care for our facility located in Wiggins, Mississippi.

If there are any questions, please contact me at (901) 419-7725.

Very truly yours,

INTERNATIONAL PAPER COMPANY

Emily W. Lee

Emily W. Lee
Project Manager

cc: Deloitte & Touche – Memphis

INTERNATIONAL PAPER

Global Headquarters
INTERNATIONAL PLACE
6400 Poplar Avenue
Memphis, TN 38197
(901) 419-9000

March 29, 2019

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Alan Farmer, RCRA Division Director
Environmental Protection Agency
Atlanta Federal Center
61 Forsyth St., SW
Atlanta, Georgia 30303-3104

Mr. Gary Rikard
Executive Director
Mississippi Department of Environmental Quality
P. O. Box 2261
Jackson, MS 39225-2261

Re: Wiggins Wood Preserving Plant
EPA ID No. MSD980600084
Financial Assurance

Dear Sirs:

I am the chief financial officer of International Paper Company with corporate headquarters located at 6400 Poplar Avenue, Memphis, TN 38197. This letter is in support of the use of the Financial Test to demonstrate financial responsibility for liability coverage and closure and/or post-closure care as specified in Subpart H of 40 CFR Parts 264 and 265.

The firm identified above is the owner or operator of the following facilities for which liability coverage for both sudden and non-sudden accidental occurrences is being demonstrated through the Financial Test specified in Subpart H of 40 CFR Parts 264 and 265:

FACILITY	CLOSURE COST ESTIMATE	POST-CLOSURE & CORRECTIVE ACTION COST ESTIMATE
DeRidder Wood Preserving Plant 235 Post Plant Road DeRidder, LA 70634	$0	$7,356,200

EPA ID No. LAD008077315		
Wiggins Wood Preserving Plant 1633 S. First Avenue Wiggins, MS 39577 EPA ID No. MSD980600084	$0	$1,873,386
Franklin Mill 34040 Union Camp Dr. Franklin, VA 23851 EPA ID No. VAD003112265	$0	$398,071

The firm identified above guarantees, through the guarantee specified in Subpart H of 40 CFR Parts 264 and 265, liability coverage for both sudden and non-sudden accidental occurrences at the following facilities owned or operated by the following:

None

The firm identified above is the direct or higher-tier parent corporation of the owner or operator.

1. The firm identified above owns or operates the following facilities for which financial assurance for closure or post-closure care or liability coverage is demonstrated through the Financial Test specified in Subpart H of 40 CFR Parts 264 and 265. The current closure and/or post-closure cost estimate covered by the Test are shown for each facility:

FACILITY	CLOSURE COST ESTIMATE	POST-CLOSURE & CORRECTIVE ACTION COST ESTIMATE
DeRidder Wood Preserving Plant 235 Post Plant Road DeRidder, LA 70634 EPA ID No. LAD008077315	$0	$7,356,200
Joplin Wood Preserving Plant 2609 S. Rangeline Road Joplin, MO 64804 MDNR Permit Part I EPA ID No. MOD007129935	$0	$5,401,942
Joplin Wood Preserving Plant 2609 S. Rangeline Road Joplin, MO 64804 EPA Drip Pad & MTA Closure EPA ID No. MOD007129935	$0	$46,453
Wiggins Wood Preserving Plant 1633 S. First Avenue Wiggins, MS 39577	$0	$1,873,386

EPA ID No. MSD980600084		
International Paper 2221 J. R. Kennedy Dr. Wilmington, NC 28405 EPA ID No. NCD072022726	$0	$1,466,698
International Paper Company 2nd St. South & Central Ave. Cass Lake, MN 56633 CERCLA Nos. V-W-08-C-912, V-W-05-C-833,V-W-95-C-308	$0	$680,000
International Paper Company P. O. Box 1380 Navasota, TX 77868 SWR No. 31894	$6,596,617	$682,597
Franklin Mill 34040 Union Camp Dr. Franklin, VA 23851 EPA ID No. VAD003112265	$0	$398,071
Libby Groundwater Site Highway 2 South Libby, MT CERCLA No. VIII-83-03	$0	$11,676,741
Intl. Paper Charlotte Container 5419 Hovis Rd. Charlotte, NC 28208 EPA ID No. NCD003156460	$0	$694,946
International Paper Company 103 W. Borden Dr. Diboll, TX 75941 SWR No. 30112	$4,106,000	$31,900

2. The firm identified above guarantees, through the guarantee specified in Subpart H of 40 CFR Parts 264 and 265, the closure or post-closure care or liability coverage of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility:

   None

3. In states where EPA is not administering the financial requirements of Subpart H of 40 CFR, Part 264 or 265, this firm is demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent

to the Financial Test specified in Subpart H of 40 CFR Parts 264 and 265. The current closure or post-closure cost estimates covered by such a Test are shown for each facility:

FACILITY	CLOSURE COST ESTIMATE	POST-CLOSURE COST ESTIMATE
Savannah Mill Carter Adams Landfill Cells #4 & 11 1.5 Miles South of Bloomingdale City Limits Permit No. 025-0410(L)I	$2,426,600	$7,132,551
International Paper - Rome Mill Ash Monofill - Closed 2009 238 Mays Bridge Rd., S.W. Rome, GA 30165 Permit No. 057-17D(L)(I)	$0	$1,262,320
International Paper - Rome Mill Shepherd Tract - Closed 2003 238 Mays Bridge Rd., S.W. Rome, GA 30165 Permit No. 057-17D(L)(I)	$0	$908,056
International Paper - Rome Mill Turner Bend Road, Floyd County Rome, GA 30162 Permit No. 057-17D(L)(I) B Phase 2	$2,116,422	$1,520,892
Flint River - Oglethorpe 2449 Stagecoach Road Oglethorpe, GA Permit #094-004D(L)(I)	$3,593,454	$650,446
Fargo Wood Treating Site Hwy 94 & US 441 Fargo, GA 31631 HSI Site # 10626	$0	$311,435
Folkston (Thomas WTP) Hwy 121 at Nelson St. Folkston, GA 31537 HSI # 10218	$0	$358,588
Louisiana Mill P.O. Box 312 Bastrop, LA 71220-0312 Facility No. CTD - 067-0485 La Mill Landfill Permit No. P-0058 ASB/ESB Permit No. P-0149	$0	$2,967,892

Mansfield Mill 1202 Highway 509 Mansfield, LA 71052 Facility No. GTD-031-0845 Permit Nos. P-0293, P-002, P-0090, P-0089	$7,723,126	$7,127,935
International Paper - Oakdale P.O. Box 1147 Oakdale, LA 71463 Agency Interest No. 2885	$600,000	$0
Franklin Mill Landfill #2 34040 Union Camp Dr. Franklin, VA 23851 Permit No. 504	$7,811,807	$1,805,142
Eastover Mill Landfill 4001 McCords Ferry Road P.O. Box B Eastover, SC 29044 Permit No. 403313-1601	$1,498,884	$5,179,586
Georgetown Mill P.O. Box 538 Georgetown, SC 29440 Permit No. 222435-1601, IWP-190	$3,345,057	$1,752,152
Red River Mill P.O. Box 377 Campti, LA 71411 Permit # GD-069-0846	$1,937,070	$2,220,117
Valliant Mill P.O. Box 890 Valliant, OK 74764 Permit #3545009	$4,070,253	$350,259
Riegelwood Mill Landfill 865 John L. Riegel Road Riegelwood, NC 28456 Permit No. 24-02	$8,872,721	$5,616,207
International Paper - Bogalusa Mill One Mile East of State Hwy 21 on Cemetery Rd, Bogalusa, LA GD-117-0796 / P-0072R1 AI No. 38936 / PER19940001	$5,684,118	$1,552,748

4. The firm identified above owns or operates the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated either to EPA or a State through the Financial Test or any other financial assurance mechanisms specified in Subpart H of 40 CFR Parts 264 and 265 or equivalent or substantially equivalent State mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility:

   None

5. This firm is the owner or operator or guarantor of the following UIC facilities for which financial assurance for plugging and abandonment is required under Part 144 and is assured through a Financial Test. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility:

   None

This firm is required to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year. The fiscal year of this firm ends on December 31. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended December 31, 2018.

ALTERNATIVE II
Part B. Closure and Post-Closure Care
Liability Coverage

1. Sum of current closure and post-closure cost estimates (total of all cost estimates listed above)	$131,407,389
2. Amount of annual aggregate liability coverage to be demonstrated	$8,000,000
3. Sum of lines 1 and 2	$139,407,389
4. Current bond rating of most recent issuance and name of rating service	BBB - S&P
	Baa2 - Moody's
5. Date of issuance of bond	August 2017
6. Date of maturity of bond	August 2048
*7. Tangible net worth (if any portion of the closure or post-closure cost estimates is included in "total liabilities" on your financial statements you may add that portion to this line)	$3,594,000,000
*8. Total assets in the U.S. (required only if less than 90% of assets are located in the U.S.) Note: Reported as Long-lived assets only.	$10,586,000,000
9. Is line 7 at least $10 million? (Yes/No)	YES
10. Is line 7 at least 6 times line 3? (Yes/No)	YES
*11. Are at least 90% of assets located in the U.S.? (Yes/No) If not complete line 12.	NO
12. Is line 8 at least 6 times line 3? (Yes/No)	YES

*Figures are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended December 31, 2018.

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR 264.151(g) as such regulations were constituted on the date shown immediately below.

Very truly yours,

INTERNATIONAL PAPER COMPANY

Timothy S. Nicholls
Senior Vice President and Chief Financial Officer

3/29/19
Date

Deloitte & Touche LLP
Suite 350
6075 Poplar Avenue
Memphis, TN 38119 0112
USA

Tel: +1 901 322 6700
Fax: +1 901 572 4100
www.deloitte.com

INDEPENDENT ACCOUNTANTS' REPORT ON APPLYING AGREED-UPON PROCEDURES

To the Board of Directors
International Paper Company
Memphis, Tennessee

We have performed the procedures included in the Code of Federal Regulations (CFR) Title 40, Part 264, Section 147, which was agreed to by the Environmental Protection Agency, the Mississippi Department of Environmental Quality and International Paper Company and subsidiaries (the "Company"), solely to assist the specified parties in evaluating the Company's compliance with the financial test option as of December 31, 2018, included in the accompanying letter dated March 29, 2019 rom Timothy S. Nicholls, Senior Vice President and Chief Financial Officer of International Paper Company. Management is responsible for the Company's compliance with those requirements. This agreed-upon procedures engagement was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. The sufficiency of these procedures is solely the responsibility of the parties specified in this report. Consequently, we make no representation regarding the sufficiency of the procedures described below either for the purpose for which this report has been requested or for any other purpose.

The procedures that we performed and related findings are as follows:

1. We obtained an excerpt from the relevant EPA or state agency code section with financial definitions used in the computations below.

2. We recomputed from, or reconciled to, the audited consolidated financial statements of the Company as of and for the year ended December 31, 2018, on which we have issued our report dated February 20, 2019 (which report on the consolidated financial statements expresses an unqualified opinion), the amounts included in items 7 and 8 under the caption Alternative II in the letter dated March 29, 2019 from Timothy S. Nicholls, Senior Vice President and Chief Financial Officer of International Paper Company, and noted no differences.

3. We obtained the Company's schedule of total long-lived assets as of December 31, 2018, which is included in the audited consolidated financial statements of the Company on which we have issued our report dated February 20, 2019 (which report on the consolidated financial statements expresses an unqualified opinion).

4. Using the information obtained in Step 3, we recomputed the percentage of long-lived assets in the United States to total long-lived assets and noted such percentage was less than 90% per item 11 under the caption Alternative II in the letter dated March 29, 2019 from Timothy S. Nicholls, Senior Vice President and Chief Financial Officer of International Paper Company, and noted no differences.

We were not engaged to, and did not, perform an examination, the objective of which would be the expression of an opinion on the accompanying letter dated March 29, 2019. Accordingly, we do not express such an opinion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

This report is intended solely for the information and use of the Board of Directors and management of International Paper Company, the Environmental Protection Agency and the Mississippi Department of Environmental Quality and is not intended to be and should not be used by anyone other than these specified parties.

Deloitte + Touche LLP

March 29, 2019