

POND 2 CLOSURE REPORT

CONDEA Vista Company

Aberdeen, Mississippi

January 1998



Woodward-Clyde Diamond Group

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SECTION 1.0

1.0 INTRODUCTION

The National Pollutant Discharge Elimination System (NPDES)-permitted wastewater treatment pond (Pond 2) was used as a settling pond by Conoco from 1973 to 1984 at CONDEA Vista Company, Aberdeen, Mississippi, Chemical Plant. The pond was filled with 23,000,000 pounds of polyvinyl chloride (PVC) resin product. Conoco sold the plant to Vista Chemicals in 1984 but retained environmental liabilities resulting from past operations. This resin product was reclaimed by DuPont Environmental Remediation Services (DERS) and Vista from 1992 through 1995 in a voluntary remediation effort and sold as an off-specification product. A site map is shown as Figure 1.

The reclamation action was based on a ruling from the Mississippi Department of Environmental Quality (MDEQ) in May 1991 which classified Pond 2 resin as a "product," not a "waste." At MDEQ's request, reclamation of the resin proceeded quickly so that Pond 2 would be handled outside of the Superfund Administrative Order Process. After resin reclamation, Pond 2 was approximately 150 feet wide in a north to south direction, by 380 feet long, 12 feet deep, with approximately six feet of water.

Although the product reclamation project was conducted voluntarily, the MDEQ requested involvement in the closure phase of Pond 2. Closure consisted of removing residual resin, backfilling, and clay cap installation. Constituents in remaining pond sediments after closure were to be below risk-based levels and protective of human health and the environment.

SECTION 2.0

2.0 CLOSURE ACTIVITIES

2.1 Recycling of Recoverable PVC

The first step in closing Pond 2 was to reclaim as much of the PVC resin as a product rather than dispose of it as a waste. This process was allowed by MDEQ based on their ruling in May 1991 that classified the Pond 2 resin as "product" not a waste (See Appendix G).

2.1.1 Removal and Stockpiling of Previous Fill Dirt

A cap of topsoil had been placed over the pond after it had been taken out of service. A total of 3,200 cubic yards of topsoil cover were removed during resin product excavation and were stockpiled outside the pond. Two stockpiles of soil (containing minor quantities of PVC) were formed from this cover. One to the east and the other on the north side of the pond.

2.1.2 Sale and Shipment of Off-specification PVC Resin

Twenty-three million pounds of recovered PVC resin were reclaimed from Pond 2 between 1992 and 1995.

2.2 Characterization of Remaining Material

After all recoverable resin was removed, the remaining material was characterized through sampling and analysis to determine how the pond could be closed and how waste would be handled. This included sampling the pond sediments and stockpiled material for total metals, volatiles and semivolatiles as well as TCLP metals and volatiles. A site-specific risk assessment was performed on Pond 2 soils to determine the clean-up targets for any constituent that exceeded Environmental Protection Agency (EPA) Region III Risk-based standards.

2.2.1 Vibracore Sampling in Pond 2 (June 1996)

Prior to creating the Closure Plan, the remaining PVC material was characterized by collecting sediment samples from the bottom of Pond 2. A Vibracore unit was used to collect samples from six locations in Pond 2 from a pontoon boat. These locations are shown on Figure 2. The analytical report is included as Appendix A. Results from metals and phthalate analysis were as follows:

Table 1
June 1996 Preliminary Waste Characterization Results - Metals & Phthalates

	Metals (Total)						Phthalates	
	Barium		Cadmium		Lead		DEHP	DNOP
PND2-1-2TOP	70.9	mg/kg	< 0.985	mg/kg	7.96	mg/kg	210	mg/kg
PND2-1-2TOPDUP	124.0	mg/kg	< 1	mg/kg	12	mg/kg	260	mg/kg
PND2-1-2BTM	50.0	mg/kg	< 0.989	mg/kg	8.3	mg/kg	0.91	mg/kg
PND2-1-2BTMDUP	45.6	mg/kg	< 0.979	mg/kg	8.18	mg/kg	1.9	mg/kg
PND2-2-2TOP	90.3	mg/kg	< 1.82	mg/kg	11.2	mg/kg	4,900	mg/kg
PND2-2-2BTM	38.9	mg/kg	< 0.928	mg/kg	7.5	mg/kg	63	mg/kg
PND2-3-2TOP	119.0	mg/kg	< 7.44	mg/kg	8.99	mg/kg	3,400	mg/kg
PND2-3-2BTM	66.0	mg/kg	< 8.5	mg/kg	6.83	mg/kg	2,600	mg/kg
PND2-4-2TOP	176.0	mg/kg	< 7.24	mg/kg	18.1	mg/kg	6,400	mg/kg
PND2-4-2BTM	57.0	mg/kg	< 0.927	mg/kg	6.54	mg/kg	11	mg/kg
PND2-5-2TOP	48.5	mg/kg	< 1.74	mg/kg	7.4	mg/kg	1,200	mg/kg
PND2-5-2BTM	85.1	mg/kg	< 0.974	mg/kg	8.74	mg/kg	71	mg/kg
PND2-6-2TOP	81.9	mg/kg	< 0.962	mg/kg	9.3	mg/kg	830	mg/kg
PND2-6-2BTM	74.1	mg/kg	< 0.988	mg/kg	8.84	mg/kg	120	mg/kg
PND2-EQBLNK-2	< 0.01	mg/L	< 0.02	mg/L	< 0.1	mg/L	< 0.010	mg/L

DEHP: Bis(2-Ethylhexyl) phthalate

DNOP: Di-n-octyl phthalate

PND2-4-2BTM: Refers to Pond 2 - Vibracore Boring 4 - bottom depth of sample two feet. TOP and BTM refer to portion of core analyzed.

A correlation existed between high concentration of DEHP and the highest concentrations of cadmium and to a lesser extent barium and lead (every detection of cadmium had a DEHP result above 1,200 mg/kg.). For each location, there was a marked decrease in concentration of DEHP (and a lesser decrease in metals) with depth. Three of the samples exceeded the 3050 mg/kg clean-up target. The following table contains results for analysis of chlorinated organics that were potentially present in the Pond 2 sediments. Only very low concentrations (< 1 mg/kg) of TCE and VC were detected in the Pond 2 material.

Table 2
June 1996 Preliminary Waste Characterization Results - Volatiles

	Chlorinated Organics							
	cis 1,2 DCE		trans 1,2 DCE		TCE		VC	
PND2-1-2TOP	< 0.005	ug/kg	< 0.005	ug/kg	< 0.005	ug/kg	< 0.010	ug/kg
PND2-1-2TOPDUP	< 0.005	ug/kg	< 0.005	ug/kg	< 0.005	ug/kg	< 0.010	ug/kg
PND2-1-2BTM	< 0.005	ug/kg	< 0.005	ug/kg	< 0.005	ug/kg	< 0.010	ug/kg
PND2-1-2BTMDUP	< 0.005	ug/kg	< 0.005	ug/kg	< 0.005	ug/kg	< 0.010	ug/kg
PND2-2-2TOP	< 0.005	ug/kg	< 0.005	ug/kg	< 0.005	ug/kg	< 0.010	ug/kg
PND2-2-2BTM	< 0.005	ug/kg	< 0.005	ug/kg	< 0.005	ug/kg	< 0.010	ug/kg
PND2-3-2TOP	< 0.025	ug/kg	< 0.025	ug/kg	< 0.025	ug/kg	0.230	ug/kg
PND2-3-2BTM	< 0.025	ug/kg	< 0.025	ug/kg	< 0.025	ug/kg	0.850	ug/kg
PND2-4-2TOP	< 0.005	ug/kg	< 0.005	ug/kg	0.011	ug/kg	0.150	ug/kg
PND2-4-2BTM	< 0.005	ug/kg	< 0.005	ug/kg	< 0.005	ug/kg	< 0.010	ug/kg
PND2-5-2TOP	< 0.005	ug/kg	< 0.005	ug/kg	< 0.005	ug/kg	< 0.010	ug/kg
PND2-5-2BTM	< 0.005	ug/kg	< 0.005	ug/kg	< 0.005	ug/kg	< 0.010	ug/kg
PND2-6-2TOP	< 0.005	ug/kg	< 0.005	ug/kg	< 0.005	ug/kg	< 0.010	ug/kg
PND2-6-2BTM	< 0.005	ug/kg	< 0.005	ug/kg	< 0.005	ug/kg	< 0.010	ug/kg
PND2-EQBLNK-2	< 0.005	ug/L	< 0.005	ug/L	< 0.005	ug/L	< 0.010	ug/L
PND2-TBLK-2	< 0.005	ug/L	< 0.005	ug/L	< 0.005	ug/L	< 0.010	ug/L

DCE: Dichloroethene

TCE: Trichloroethene

VC: Vinyl chloride

There appears to be a slight correlation regarding the presence of TCE or VC with the highest concentrations of phthalates. The three samples that had detectable concentrations of TCE or VC also had the three of the four highest concentrations of DEHP.

2.2.2 Risk-based Target Clean-up Levels of DEHP

A site-specific exposure assessment was performed for the Pond 2 area to facilitate selection of an appropriate remedial strategy. The objective of this exposure assessment was to examine all potential pathways for human exposure to constituents of concern (COCs) in Pond 2, and to determine if each pathway is complete. Shown below is the comparison of Region IIIs' generic risk based standard and the maximum detected concentrations in Pond 2 material. The only constituent of concern that exceeds the generic risk standard was DEHP.

Table 3
Risk-based Screening of Pond 2 Analytical Results

Chemical of Concern	CAS Number	Maximum Detected Concentration (mg/kg)	Region III Risk-based Standard (mg/kg)	Pass or Fail
Vinyl Chloride	75014	0.85	3	Pass
Trichloroethene	79016	0.011	520	Pass
Bis(2-ethyl hexyl) phthalate (DEHP)	117817	6,400	410	Fail
Di-n-Octyl Phthalate (DNOP)	117840	67	41,000	Pass
Barium	7440393	176	140,000	Pass
Cadmium	7440439	8.5	1,000	Pass
Lead	7439921	18.1	400	Pass

Site-specific Analysis and Comparisons

To further evaluate DEHP as an exposure concern and a potential health risk, a pathway analysis was performed for on-site worker exposure as it relates to the Pond 2 area. Because workers rarely enter the embankments of Pond 2, it was determined that a modified worker exposure scenario was appropriate. Based on future facility operations, future use of Pond 2 is limited to complete backfilling and closure. Therefore, a construction worker scenario was used to calculate a new risk-based target concentration for DEHP since this scenario would only require a short term exposure. This calculation included a modified exposure duration (three months instead of 25 years) and a modified soil ingestion rate (480 mg/day instead of 50 mg/day). Three months was selected as the maximum amount of time during which worker exposure may occur during closure activities. The risk-based target calculation is shown in Appendix 2 of the Pond 2 Closure Plan (DERS, 1996); the calculation yielded a risk-based target concentration of 860 mg/kg for DEHP. After submittal of the closure plan, the MDEQ noted that DERS had used a dermal absorption coefficient of 0.1 (10 percent). MDEQ corrected this error and using a dermal absorption coefficient of 0.01 (one percent), the target clean-up level was recalculated by MDEQ to be 3050 mg/kg (See October 22, 1996, letter in Appendix G).

2.2.3 Characterization of Stockpiled Soils (April 1997)

Samples were collected from the two stockpiles of soil which had been the cover for Pond 2 during the period of time the pond and resin were buried. This soil was scooped off and stockpiled to the northwest and east of the pond. It was sampled to determine if this soil could be used as fill for the pond. As demonstrated by the analytical results below, the stockpile sample results passed the clean-up target for DEHP of 3050 mg/kg and contained only a small amount of TCE. The analytical lab report from the stockpiles is contained in Appendix B.

Table 4
April 1997 Stockpile Samples for Total Metals, Semivolatiles, and Volatiles

	Metals						Phthalates		Percent Moisture
	Barium		Cadmium		Lead		DEHP	DNOP	
ABD-SP-1	62 mg/kg	<	0.005 mg/kg	<	0.1 mg/kg		23000 ug/kg	1700 ug/kg	20.8%
ABD-SP-1 dup	60.3 mg/kg	<	0.005 mg/kg	<	0.1 mg/kg		18000 ug/kg	1300 ug/kg	20%
ABD-SP-2	49.3 mg/kg	<	0.005 mg/kg	<	0.1 mg/kg		11000 ug/kg	< 1600 ug/kg	17%
ABD-SP-3	45.6 mg/kg	<	0.005 mg/kg	<	0.1 mg/kg		11000 ug/kg	480 ug/kg	19.1%
ABD-SP-4	39.4 mg/kg	<	0.005 mg/kg	<	0.1 mg/kg		4700 ug/kg	< 1600 ug/kg	18.2%
ABD-EQBLK-3	< 0.2 mg/L	<	0.005 mg/L	<	0.1 mg/L		< 10 ug/L	< 10 ug/L	NA
ABD-TBLK-3	NA		NA		NA		NA	NA	NA

DEHP: Bis(2-ethylhexyl)phthalate

DNOP: Di-n-octyl phthalate

	Chlorinated Organics						TCE	VC
	1,1 DCE		cis 1,2 DCE		trans 1,2 DCE			
ABD-SP-1	< 5 ug/kg	<	2.5 ug/kg	<	2.5 ug/kg	<	5 ug/kg	< 10 ug/kg
ABD-SP-1 dup	< 5 ug/kg	<	2.5 ug/kg	<	2.5 ug/kg	<	5 ug/kg	< 10 ug/kg
ABD-SP-2	< 5 ug/kg	<	2.5 ug/kg	<	2.5 ug/kg	<	5 ug/kg	< 10 ug/kg
ABD-SP-3	< 5 ug/kg	<	2.5 ug/kg	<	2.5 ug/kg	<	5 ug/kg	< 10 ug/kg
ABD-SP-4	< 5 ug/kg	<	2.5 ug/kg	<	2.5 ug/kg	27	ug/kg	< 10 ug/kg
ABD-EQBLK-3	< 5 ug/L	<	2.5 ug/L	<	2.5 ug/L	<	5 ug/L	< 10 ug/L
ABD-TBLK-3	< 5 ug/L	<	2.5 ug/L	<	2.5 ug/L	<	5 ug/L	< 10 ug/L

DCE: Dichloroethylene

TCE: Trichloroethylene

VC: Vinyl chloride

2.2.4 TCLP Analysis of PVC Resin (for Metals and VOX) (May 1997)

Because total lead results from Pond 2 sludge samples were relatively high, the Houston Mississippi landfill requested additional samples be performed to document that leachable lead did not exceed the TCLP limits (definition of a characteristically hazardous waste by toxicity). These samples were collected in the first week of May 1997 and analyzed by the TCLP method for the metals barium, cadmium, and lead. The PD-Bottom sample was collected from a thick "delta" of resin that had been in the northwest corner of the pond. The sidewall sample was collected from the north wall of the pond in an area of white resin about a foot above the water surface. The results were as follows:

Table 5
May 7, 1997, Bottom, Sidewall, and Stockpile Sample Results for TCLP Metals

Composite Sludge Sample ID	Barium	Cadmium	Lead
ABD-EX-Stockpile	< 10 mg/L	< 0.1 mg/L	< 0.5 mg/L
ABD-PD-Bottom	< 10 mg/L	< 0.1 mg/L	< 0.5 mg/L
ABD-Sidewall	< 10 mg/L	< 0.1 mg/L	< 0.5 mg/L

After results for metals were received the project team evaluated the possibility that significant quantities of vinyl chloride from groundwater could be present in the Pond 2 material. To demonstrate that the sludge was not hazardous due to volatile constituents, two additional samples were collected May 29, 1997, and analyzed for TCLP volatiles. At this point, the pond was mostly dewatered and could be accessed by foot. Both BTM-1 and BTM-2 were collected from the northwest corner (the resin "delta"). Both samples had no detectable concentrations of VOCs in the TCLP leachate as shown in the following table. All lab data reports for TCLP sampling are included in Appendix B.

Table 6
May 29, 1997, Bottom Sludge Sample Results for TCLP Volatiles

	ABD-PD2-BTM-1		ABD-PD2-BTM-2	
1,2 dichloroethylene	<	0.05 mg/L	<	0.050 mg/L
1,1 dichloroethylene	<	0.05 mg/L	<	0.050 mg/L
Tetrachloroethylene	<	0.05 mg/L	<	0.050 mg/L
Trichloroethylene	<	0.05 mg/L	<	0.050 mg/L
Vinyl chloride	<	0.10 mg/L	<	0.10 mg/L
Benzene	<	0.05 mg/L	<	0.050 mg/L
Methyl ethyl ketone	<	0.20 mg/L	<	0.20 mg/L
Carbon tetrachloride	<	0.05 mg/L	<	0.050 mg/L
Chloroform	<	0.05 mg/L	<	0.050 mg/L

2.3 Excavation of Remaining PVC Resin

Before any material was removed from Pond 2, PVC resin (believed to be related to site operation by Conoco) was dredged from the center of Pond 4. This PVC was a result of the reclamation process from 1992-1995. This material (described as gray-black) was pumped into Pond 2 to settle out.

Water remaining in Pond 2 was pumped into a sediment basin (to settle out any resin) before being pumped into CONDEA Vista's wastewater ponds. Numerous heavy rainfalls interrupted the excavation work. Each rainfall event caused delays as the water had to be pumped from the pond. The earthen dike between Pond 2 and an active wastewater pond (Pond 5) was inspected daily for stability.

Actual excavation of Pond 2 began in May 1997 and continued until early July. All of the Pond 4 material (with at least a foot of material) was removed from all sections of the pond bottom. This material was stockpiled in a bermed area to allow water to drain out (so that waste could pass the paint filter test). After the stockpiled material drained, it was loaded into trucks for transport to the Waste Management Inc. Houston, Mississippi nonhazardous landfill. In addition to the one foot minimum removed, any visibly impacted sediments (bearing the white PVC powder) were also excavated from the sides and bottom of Pond 2. A total of 4,995 tons of resin impacted sediment were removed from Pond 2 and hauled to the Houston Mississippi landfill.

2.4 Confirmatory Sampling

Prior to backfilling the Pond 2 excavation, soil samples were collected on July 14-15, 1997. A representative from MDEQ was onsite to collect split samples, and to inspect the excavation. Results were received from the lab and the excavation was determined to have met its cleanup target on July 28, 1997.

2.4.1 Summary of Sampling and Analysis Plan

After the impacted sediment was removed from Pond 2, confirmation sampling was performed. The field geologist collected grab samples from 56 grab locations for twenty composite samples, marking the location with a survey marker (two grab locations per sidewall sample, 12 sidewall samples; four grab locations per bottom sample, eight bottom samples). Continental Engineering surveyed these locations after sampling. Locations are shown on Figure 3.

2.4.2 Results

Confirmatory sample results demonstrated the clean-up target for DEHP had been reached. Figure 4 displays the results for DEHP. This was communicated to the MDEQ in an August 15, 1997, letter (See Appendix G). The highest result for DEHP was 2,600 mg/kg at composite sample location B4. Other constituents [metals and di-n-octyl phthalate (DNOP)] were far below the Region III generic risk based clean-up targets referred to in Section 2.2.2.

Table 7
July 1997 Pond 2 Confirmatory Sampling Results for Bottom and Sides of Excavation

	Metals (Total)						Phthalates	
	Barium		Cadmium		Lead		DEHP	DNOP
S1	186	mg/kg	< 0.5	mg/kg	12.4	mg/kg	8.2	mg/kg
S2	43.2	mg/kg	< 0.5	mg/kg	< 10	mg/kg	100	mg/kg
S3	95.6	mg/kg	< 0.5	mg/kg	< 10	mg/kg	0.34	mg/kg
S4	21.4	mg/kg	0.5	mg/kg	< 10	mg/kg	1.4	ug/kg
S5	58.0	mg/kg	0.94	mg/kg	11.6	mg/kg	79	mg/kg
S6	69.2	mg/kg	< 0.5	mg/kg	< 10	mg/kg	1.3	mg/kg
S7	74.0	mg/kg	< 0.5	mg/kg	< 10	mg/kg	700	mg/kg
S8	80.8	mg/kg	< 0.5	mg/kg	< 10	mg/kg	260	mg/kg
S9	90.7	mg/kg	< 0.5	mg/kg	10.2	mg/kg	180	mg/kg
S9DUP	79.0	mg/kg	< 0.5	mg/kg	< 10	mg/kg	210	mg/kg
S10	107	mg/kg	< 0.5	mg/kg	13.5	mg/kg	310	mg/kg
S11	126	mg/kg	< 0.5	mg/kg	12.6	mg/kg	340	mg/kg
S12	73.9	mg/kg	< 0.5	mg/kg	15.5	mg/kg	36	mg/kg
B1	75.7	mg/kg	1	mg/kg	14.6	mg/kg	610	mg/kg
B2	134	mg/kg	< 0.5	mg/kg	< 10	mg/kg	280	mg/kg
B3	92.7	mg/kg	< 0.5	mg/kg	< 10	mg/kg	250	mg/kg
B4	63.8	mg/kg	1.7	mg/kg	< 10	mg/kg	2,600	mg/kg
B5	48.5	mg/kg	0.73	mg/kg	15.8	mg/kg	2,400	mg/kg
B6	78.3	mg/kg	< 0.5	mg/kg	10.4	mg/kg	480	mg/kg
B7	106	mg/kg	0.68	mg/kg	12	mg/kg	420	mg/kg
B7dup	NA	mg/kg	NA	mg/kg	NA	mg/kg	460	mg/kg
B8	83.8	mg/kg	< 0.5	mg/kg	13.9	mg/kg	540	mg/kg
EQBLNK-2	< 0.2	mg/L	< 0.005	mg/L	< 0.1	mg/L	0.27	mg/L
TBLNK-2	NA		NA		NA		NA	NA

DCE: Dichloroethene
TCE: Trichloroethene
VC: Vinyl chloride
DEHP: Bis(2-Ethylhexyl) phthalate
DNOP: Di-n-octyl phthalate

2.5 Backfill of Excavation

After confirmation was received that the confirmatory samples passed the clean-up target, the excavation was backfilled with clay fill from a nearby borrow pit. This process occurred from July 29-September 5, 1997. A total of 20,632 cubic yards was placed into the excavation in one foot lifts and compacted by onsite equipment. Geotechnical testing of the compacted backfill consisting of in-the-field compaction tests (143 total), and geotech lab samples (five total) for liquid limit, plasticity index, optimum moisture content, and sieve analysis (#40, #60, and #200 mesh). All geotechnical test results are included in Appendices D and E.

2.6 Installation of Clay Cap

A total of 3,800 cubic yards of clay was placed as a cap over the backfilled pond. The thickness of this cap was two feet, but additional material was used to form berms along the outside of the cap. These berms redirect stormwater toward the *Terracell*TM ditch.

Twenty compaction tests were completed on the final lift of the clay cap by Continental Engineering on September 17, 1997 (40 total compaction test on clay cap). Compaction test results are included in Appendix E.

2.7 Topsoil Placement and Seeding

Approximately six inches of top soil were placed on the clay cap (total of 900 cubic yards). This soil was also graded to prevent ponding of rainwater and direct flow toward the *Terracell*TM stormwater ditch to the north of the cap. The topsoil was disked, smoothed, fertilized, and seeded by Jacob-Lee construction. This work was completed on September 24, 1997. Figure 5 depicts the as built grading plan.

2.8 Stormwater Ditch Construction

The *Terracell*TM ditch was constructed September 29-30, 1997. This ditch is a shallow swale, constructed to direct stormwater runoff from Pond 2 into the plant stormwater ditch system. A filter fabric was installed first, followed by the *Terracell*TM panels. Eight inches of rock cobbles were placed in the *Terracell*TM panels.

2.9 Final Survey

Continental Engineering performed several surveys of the excavation and a final survey of the completed closure. The completed final topographic survey map of the closure is included as Appendix H.

SECTION 3.0

3.0 SITE INSPECTION

The closure operations were conducted under the supervision of a registered Professional Engineer (PE). The closure certification is provided in Section 5.0. The PE inspected the site on two critical occasions during the closure operations. The inspections were performed on July 15, 1997, during the confirmatory sampling, and on September 17, 1997, during the installation of the clay cap. No design modifications or changes to specifications were required during the project. The PE inspection reports are included in Appendix F.

SECTION 4.0

4.0 POST-CLOSURE CARE

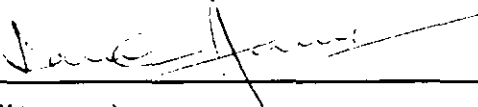
Ingress security around the closure site will be maintained by the facility. Access to the site is limited by existing chain link fences along the facility perimeter. Occasional inspection of perimeter fencing will identify holes or breaches in the security fencing. Inspection and repair will be the responsibility of CONDEA Vista.

SECTION 5.0

5.0 CLOSURE CERTIFICATION

REGISTERED PROFESSIONAL ENGINEER CLOSURE CERTIFICATION

I, Laique Haider, a Professional Engineer registered pursuant to the Professional Engineers Registration Law, Sections 73-13-1 through 73-13-45, hereby certify that I have reviewed the Closure Plan for the polyvinyl chloride manufacturing plant at the CONDEA Vista Aberdeen Mississippi Plant that I am familiar with the closure plan requirements pertaining to closure of such facility, and that I personally have made visual inspection(s) of the aforementioned facility, and that the closure of the aforementioned facility has been performed in full and complete accordance with the facility's Closure Plan approved in writing by Russel Smith (MDEQ) on October 22, 1996.


(Signature)

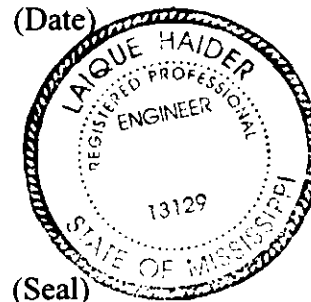
1/14/98

(Date)

13129
(Professional Engineering License Number)

140 Cypress Station Drive, Suite 140, Houston, TX 77090
(Business Address)

(281) 586-5600
(Telephone Number)



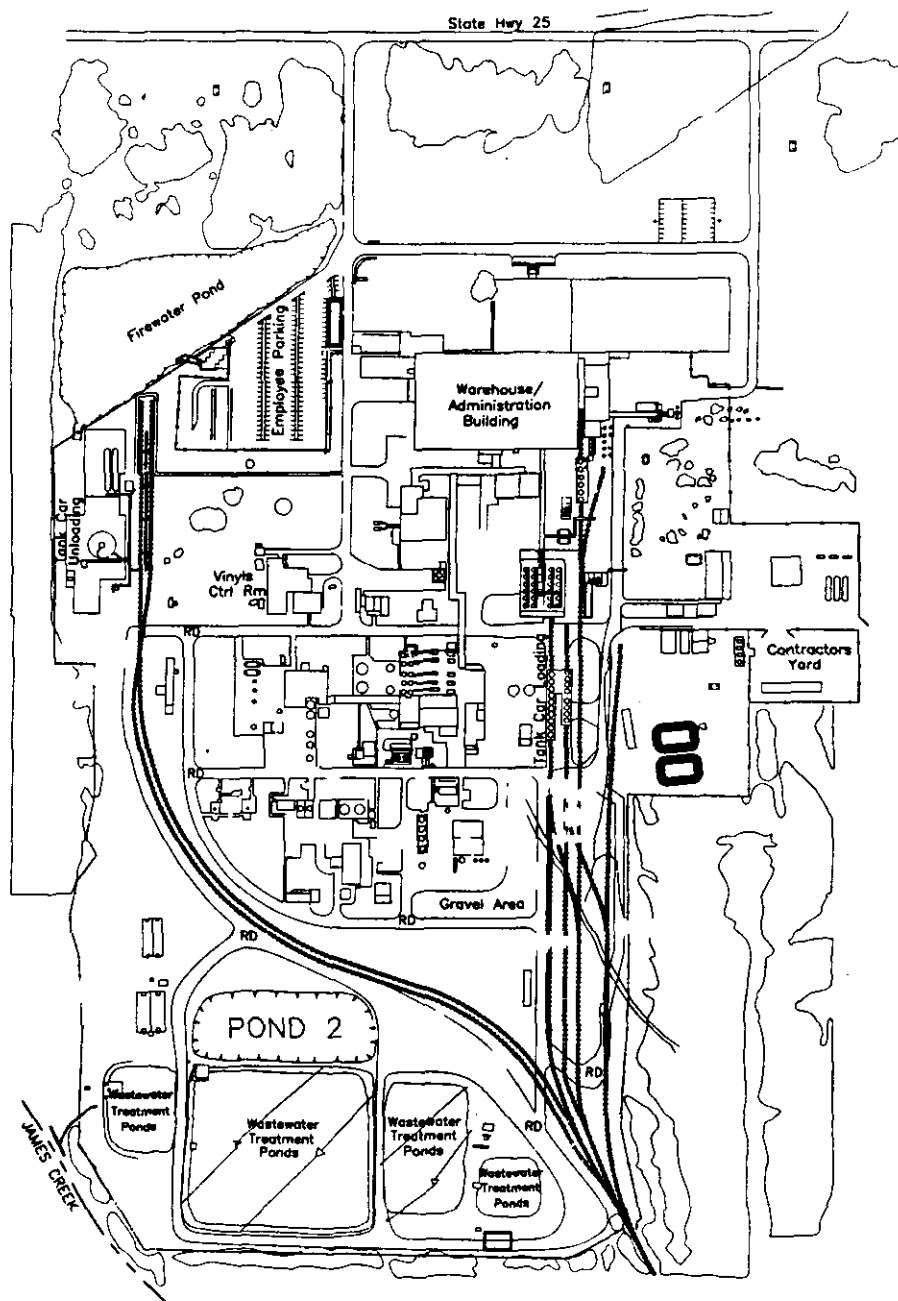
SECTION 6.0

6.0 REFERENCES

DuPont Environmental Remediation Services (DERS), 1996, *Pond 2 Closure Plan, CONDEA Vista Company, Aberdeen, Mississippi*. August 29, 1996.

FIGURES

FIGURES



0 200 400
FEET

FILE: ABERDEEN\GEO\MAPS\SMSITE96



DuPont Environmental
Remediation Services
Houston, Texas

TITLE:

Site Map
Pond 2 Closure Report
CONDEA Vista Aberdeen Plant
Aberdeen, Mississippi

DWN:

RAH

APPD:

CHKD:

REV.:

DATE:

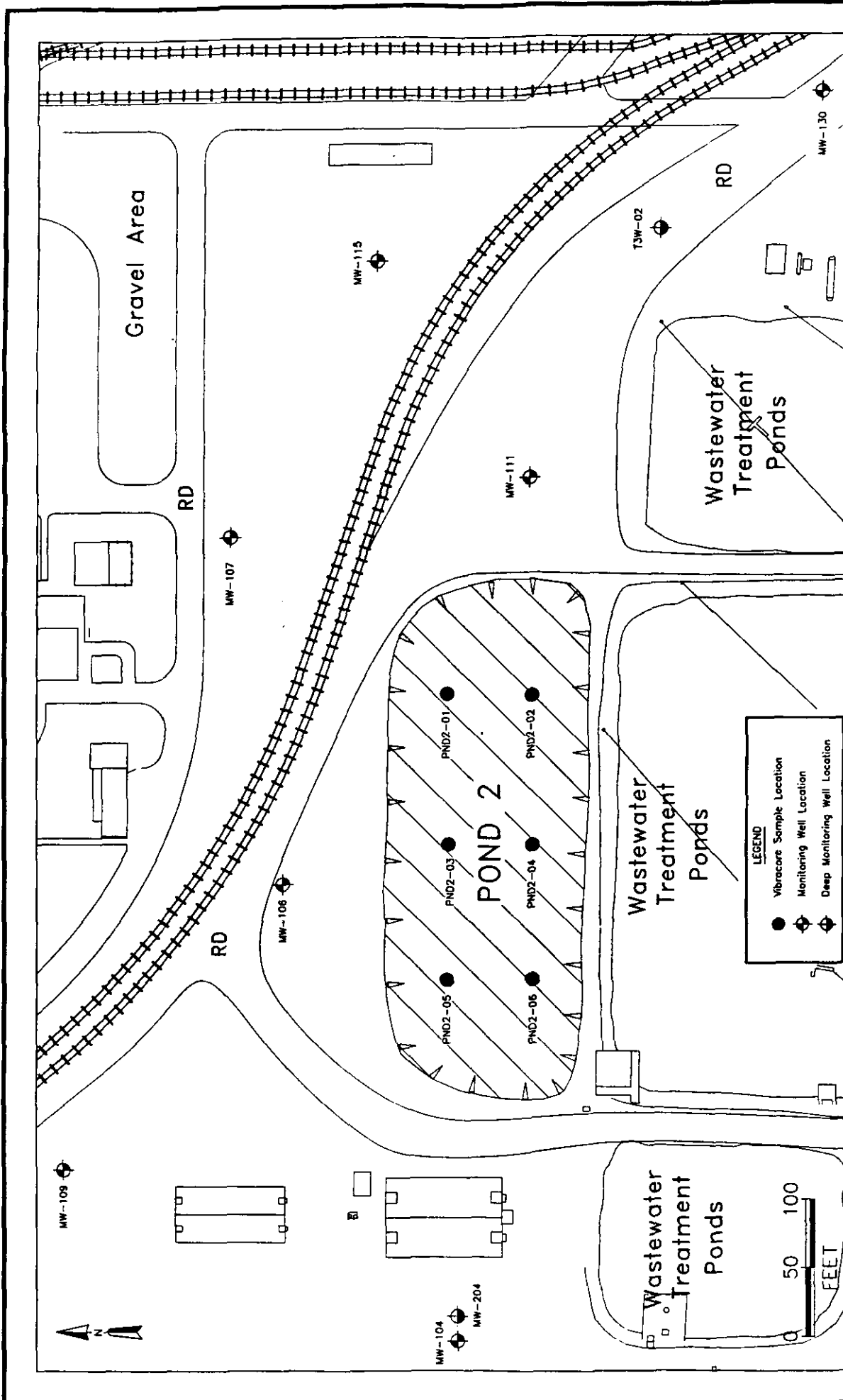
1/7/98

PROJECT NO.:

4041-01

FIGURE NO.:

1



FILE: ABERDEEN\GEO\MAPS\PD2CL696



DuPont Environmental
Remediation Services

Houston, Texas

TITLE:

Vibracore Characterization Sample Locations
Pond 2 Closure Report
CONDEA Vista Company Plant
Aberdeen, Mississippi

DWN: RAH

CHKD: APPD:

DATE: 1/7/98

DES:

PROJECT NO.:

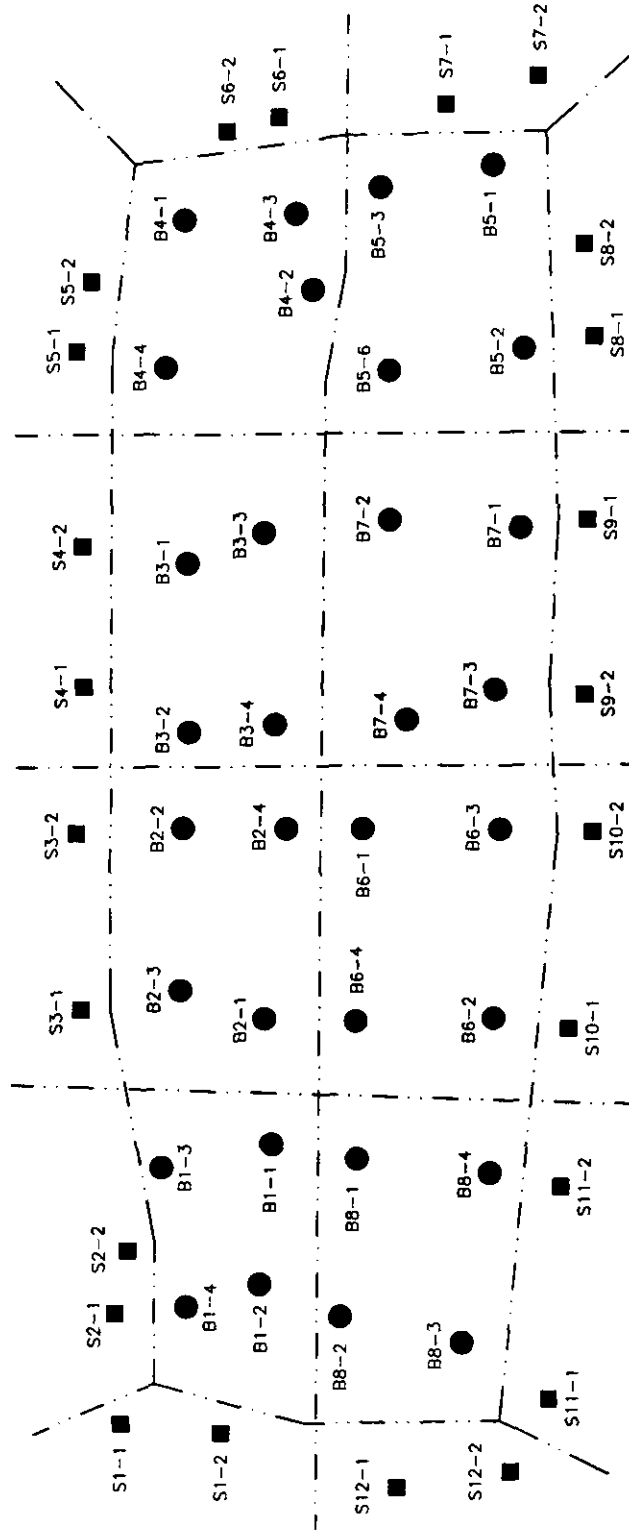
4041-01

FIGURE NO.:

2

REV:

POND 2



LEGEND

B1-1 Pond Bottom Soil Grab Sample Location

S1-1 Pond Side Wall Grab Sample Location

--- Grid System

NOTE: Sample ID designations indicate sample type [bottom (B) or sidewall (S)], confirmatory sample number, and grab sample number.

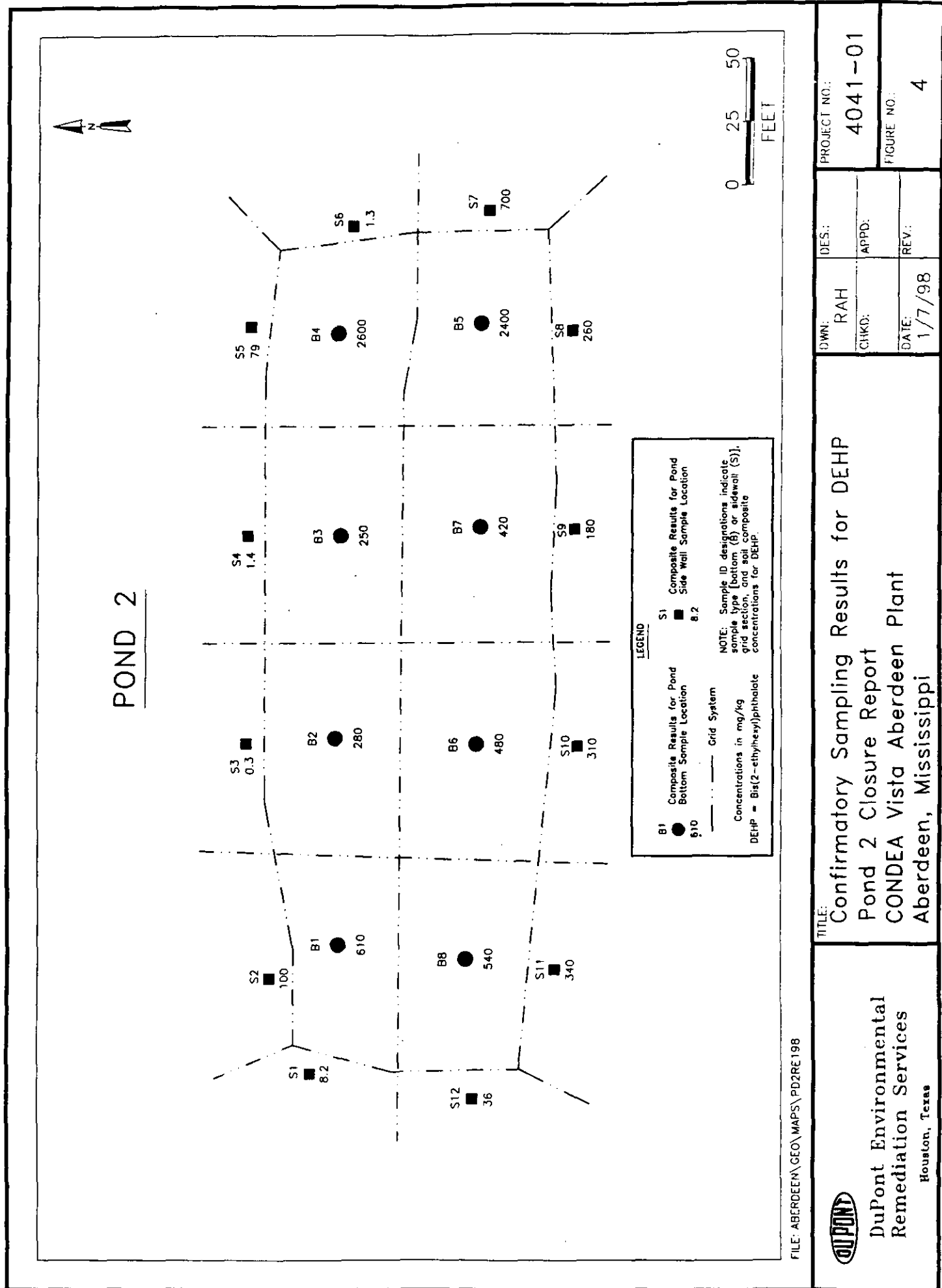
FILE: ABERDEEN\GEO\MAPS\PD2CL198



DuPont Environmental
Remediation Services
Houston, Texas

TITLE: Confirmatory Grab Sample Locations
Pond 2 Closure Report
CONDEA Vista Aberdeen Plant
Aberdeen, Mississippi

DOWN:	RAH	DES:	PROJECT NO.:
CHKO:		APPD:	4041-01
DATE:	1/7/98	REV:	FIGURE NO.:
			3



FILE: ABERDEEN\GEO\MAPS\PD2RE198



DuPont Environmental
Remediation Services

Houston, Texas

TITLE: Confirmatory Sampling Results for DEHP
Pond 2 Closure Report
CONDEA Vista Aberdeen Plant
Aberdeen, Mississippi

PROJECT NO.:

4041-01

DES.:

RAH

APPD:

1/7/98

REV.:

4

FIGURE NO.:

APPENDIX A

APPENDIX A
ANALYTICAL DATA FROM CHARACTERIZATION SAMPLING



TO: Mary Starrett, DERS, Houston
Bill Hitchcock, DERS, Houston

FROM: Elaine McDonald, Conoco, Ponca City

DATE: July 8, 1996

SUBJECT: **ABERDEEN POND II CLOSURE**

Attached is your report on the Aberdeen pond II Closure project. Please call on Ducom 442-5660 if you have questions.

Thanks,

Elaine

DATA REVIEW SHEET

Project: Alumina Pond II Closure Charge Number: 3794-01-11040
 Reviewer: hwo Date: 7/17/96
 Laboratory: COWI Methods: 8270
 Work Order No.: PL60047 Analyte List: Benz(2-ethylidene) Pyrene
Di-N-Octylphthalate

SAMPLES

<u>PND2-1.2 Bottom</u>	<u>U PND2-4.2 TOP</u>	
<u>U PND2-1.2 TOP</u>	<u>U PND2-1.2 Bottom</u>	
<u>PND2-1.2 Dup Bottom</u>	<u>U PND2-1.2 TOP</u>	
<u>U PND2-1.2 Dup TOP</u>	<u>U PND2-1.2 Bottom</u>	
<u>PND2-2.2 Bottom</u>	<u>U PND2-2.2 TOP</u>	
<u>PND2-2.2 TOP</u>	<u>U PND2-2.2 Bk-2</u>	
<u>U PND2-2.2 Bottom</u>		
<u>U PND2-2.2 TOP</u>		
<u>PND2-4.2 Bottom</u>		

REVIEW FOR:

Hold time	<u>X</u>	Method Blank	<u> </u>	All Constituents	<u>X</u>	Reporting Limit	<u>X</u>
MS Recovery	<u>X</u>	MSD Recovery	<u>X</u>	MS/MSD RPD	<u>X</u>	Surrogate	<u>X</u>
Trip Blank	<u>NA</u>	Field Blank	<u>X</u>	Field Duplicate	<u>21</u>	Laboratory Control	<u>NA</u>
Units	<u>X</u>	COC	<u>X</u>	Reasonable	<u> </u>	Completeness	<u> </u>

COMMENTS:

- 1) Surrogate was detected out
- 2) Recoveries 21.2% RPD for Benz(2-ethylidene) Pyrene between the original sample and duplicate. The original sample shows 7200 pg/kg in Di-N-Octylphthalate but the duplicate shows < 2300 pg/kg.
- 3) Internal standard across in control limit. The sample was reanalyzed with another lot standard.
- 4) Duplicate blank was run method 3520 and included in the batch for the associated soil samples.

DATA REVIEW SHEET

Project: 2-10-11-11 Charge Number: _____
 Reviewer: FW Date: 1/7/11
 Laboratory: Conoco Methods: 8240
 Work Order No.: P606247 Analyte List: 2-10-11-11
2-10-11-11
2-10-11-11

SAMPLES

<u>PND2-1-2 Bottom</u>	<u>1) PND2-4-2 TOP</u>	
<u>PND2-1-2 TOP</u>	<u>PND2-5-2 Bottom</u>	
<u>PND2-1-2-011 Bottom</u>	<u>PND2-5-2 TOP</u>	
<u>PND2-1-2-DUP TOP</u>	<u>PND2-6-2 Bottom</u>	
<u>PND2-2-2 Bottom</u>	<u>PND2-6-2 TOP</u>	
<u>PND2-2-2 TOP</u>	<u>PND2-6-2-2</u>	
<u>PND2-3-2 Bottom</u>	<u>PND2-7-2</u>	
<u>PND2-3-2 TOP</u>		
<u>PND2-4-2 Bottom</u>		

REVIEW FOR:

Hold time	<u>X</u>	Method Blank	<u> </u>	All Constituents	<u>X</u>	Reporting Limit	<u>X</u>
MS Recovery	<u>X</u>	MSD Recovery	<u>X</u>	MS/MSD RPD	<u>X</u>	Surrogate	<u>X U</u>
Trip Blank	<u>X</u>	Field Blank	<u>X</u>	Field Duplicate	<u>X</u>	Laboratory Control	<u>N/A</u>
Units	<u>X</u>	COC	<u>X</u>	Reasonable	<u> </u>	Completeness	<u> </u>

COMMENTS:

1) Recoveries for toluene & surrogate were high. Samples were analyzed with
no change in size. Surrogate recoveries from batch method blank met
acceptance criteria.

DATA REVIEW SHEET

Project: Albion Port II Closure Charge Number: _____
 Reviewer: TW Date: 07/17/96
 Laboratory: Conoco Methods: 6010
 Work Order No.: P606047 Analyte List: Barium, Cadmium, Lead

SAMPLES

<u>PND2-1-2 Bottom</u>	<u>PND2-4-2 TOP</u>	_____
<u>1) PND2-1-2 TOP</u>	<u>PND2-5-2 Bottom</u>	_____
<u>PND2-1-2-DUP Bottom</u>	<u>PND2-1-2 TOP</u>	_____
<u>1) PND2-1-2-DUP-TOP</u>	<u>PND2-1-2 Bottom</u>	_____
<u>PND2-2-2 Bottom</u>	<u>PND2-2-2 TOP</u>	_____
<u>PND2-2-2 TOP</u>	<u>PND2-2-2 Bottom</u>	_____
<u>PND2-3-2 Bottom</u>	_____	_____
<u>PND2-3-2 TOP</u>	_____	_____
<u>PND2-4-2 Bottom</u>	_____	_____

REVIEW FOR:

Hold time	<u>X</u>	Method Blank	_____	All Constituents	<u>X</u>	Reporting Limit	<u>X</u>
MS Recovery	<u>X 43</u>	MSD Recovery	<u>X 43</u>	MS/MSD RPD	<u>X 43</u>	Surrogate	<u>N/A</u>
Trip Blank	<u>N/A</u>	Field Blank	<u>X</u>	Field Duplicate	<u>X 11</u>	Laboratory Control	<u>X</u>
Units	<u>X</u>	COC	<u>X</u>	Reasonable	_____	Completeness	_____

COMMENTS:

- 1) There is a 31.5% RPD for Barium between the original sample and its duplicate; the original sample showed $< 1 \mu\text{g/g}$ for Cadmium, but the duplicate shows $1.82 \mu\text{g/g}$.
- 2) Engineering Blank used when Method 6010 for water matrices and included in the QC batch for the associated soil samples.
- 4) 6010A6 includes Cadmium, Silver, Manganese - Batch MS/MSD are not required because the matrix concentration is greater than 0.1%.



POND II CLOSURE

ABERDEEN

Environmental Services Division

CED Reporting Check List

Location Abundeen Jobname Pond II Closure

<u>SLB</u>	Preliminary Administration Sign out file/Update reporting schedule Review Project Sheet Verify location/jobname in sample table
<u>SLB</u>	PROJECT BACKSTOP Disk Deliverable Integrity QC Batch Integrity (Correct problems/ Pull backstop as necessary)
<u>SLB</u>	COMPLETENESS CHECK Samples <u>✓</u> 100% Tests <u>✓</u> 100% Parameters <u>✓</u> 100% or <u> </u> <100%
<u>QC Lab</u>	ACCURACY CHECK CED Results vs. Hard Copy Lab Reports
<u>SLB</u>	COMMENTS/NARRATIVE REVIEW
<u>GM</u>	Overview Review Report Cover letter for customer
<u>GM</u>	Report Finish Title Page Copy and Bind
<u>GM</u>	Mail to Client(s)

Shen-Bia Goei
 Certified by

July 8, 1994
 Date

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-1-2 BOTTOM
 Date Sampled: June 17, 1996
 Lab Sample ID: P606047-02 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	247	50	2.47	UG/G	Jun 25, 1996
CADMIUM	49.4	< .989	.989	UG/G	Jun 25, 1996
LEAD	49.4	8.3	4.94	UG/G	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 20, 1996
TRANS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 20, 1996
TRICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 20, 1996
VINYL CHLORIDE	1	< 10	10	UG/KG	Jun 20, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	1	94.0	Jun 20, 1996
4-BROMOFLUOROBENZENE SURR	1	88.0	Jun 20, 1996
TOLUENE-D8 SURR	1	100.0	Jun 20, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHTHALATE	33	910	330	UG/KG	Jun 26, 1996
D1-N-OCTYLPHTHALATE	33	< 330	330	UG/KG	Jun 26, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	33	81.0	Jun 26, 1996
2-FLUOROBIPHENYL	33	84.0	Jun 26, 1996
2-FLUOROPHENOL	33	77.0	Jun 26, 1996
NITROBENZENE-D5	33	80.0	Jun 26, 1996
PHENOL-D6	33	80.0	Jun 26, 1996
TERPHENYL-D14	33	108.0	Jun 26, 1996

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-1-2 TOP
 Date Sampled: June 17, 1996
 Lab Sample ID: P606047-01 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	246	70.9	2.46	UG/G	Jun 25, 1996
CADMIUM	49.3	< .985	.985	UG/G	Jun 25, 1996
LEAD	49.3	7.96	4.93	UG/G	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 20, 1996
TRANS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 20, 1996
TRICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 20, 1996
VINYL CHLORIDE	1	< 10	10	UG/KG	Jun 20, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	1	97.0	Jun 20, 1996
4-BROMOFLUOROBENZENE SURR	1	88.0	Jun 20, 1996
TOLUENE-D8 SURR	1	101.0	Jun 20, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHTHALATE	3333	210000	33000	UG/KG	Jun 24, 1996
DI-N-OCTYLPHTHALATE	667	7200	6700	UG/KG	Jun 24, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	667	0.0	Jun 24, 1996
2-FLUOROBIPHENYL	667	0.0	Jun 24, 1996
2-FLUOROPHENOL	667	0.0	Jun 24, 1996
NITROBENZENE-D5	667	0.0	Jun 24, 1996
PHENOL-D6	667	0.0	Jun 24, 1996
TERPHENYL-D14	667	0.0	Jun 24, 1996

Comments:

8270: Surrogates were diluted out.

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-1-2-DUP BOTTOM
 Date Sampled: June 17, 1996
 Lab Sample ID: P606047-04 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	245	45.6	2.45	UG/G	Jun 25, 1996
CADMIUM	49	< .979	.979	UG/G	Jun 25, 1996
LEAD	49	8.18	4.9	UG/G	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRANS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
VINYL CHLORIDE	1	< 10	10	UG/KG	Jun 21, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	1	88.0	Jun 21, 1996
4-BROMOFLUOROBENZENE SURR	1	90.0	Jun 21, 1996
TOLUENE-D8 SURR	1	108.0	Jun 21, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHTHALATE	33	1900	330	UG/KG	Jun 26, 1996
DI-N-OCTYLPHTHALATE	33	< 330	330	UG/KG	Jun 26, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	33	99.0	Jun 26, 1996
2-FLUOROBIPHENYL	33	81.0	Jun 26, 1996
2-FLUOROPHENOL	33	81.0	Jun 26, 1996
NITROBENZENE-D5	33	76.0	Jun 26, 1996
PHENOL-D6	33	83.0	Jun 26, 1996
TERPHENYL-D14	33	108.0	Jun 26, 1996

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-1-2-DUP TOP
 Date Sampled: June 17, 1996
 Lab Sample ID: P606047-03 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	250	124	2.5	UG/G	Jun 25, 1996
CADMIUM	50	< 1	1	UG/G	Jun 25, 1996
LEAD	50	12	5	UG/G	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRANS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
VINYL CHLORIDE	1	< 10	10	UG/KG	Jun 21, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	1	90.0	Jun 21, 1996
4-BROMOFLUOROBENZENE SURR	1	95.0	Jun 21, 1996
TOLUENE-D8 SURR	1	106.0	Jun 21, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHTHALATE	3333	260000	33000	UG/KG	Jun 26, 1996
DI-N-OCTYLPHTHALATE	3333	< 33000	33000	UG/KG	Jun 26, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	3333	0.0	Jun 26, 1996
2-FLUOROBIPHENYL	3333	0.0	Jun 26, 1996
2-FLUOROPHENOL	3333	0.0	Jun 26, 1996
NITROBENZENE-D5	3333	0.0	Jun 26, 1996
PHENOL-D6	3333	0.0	Jun 26, 1996
TERPHENYL-D14	3333	0.0	Jun 26, 1996

Comments:

8270: Surrogates were diluted out.

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-2-2 BOTTOM
 Date Sampled: June 18, 1996
 Lab Sample ID: P606047-06 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	232	38.9	2.32	UG/G	Jun 25, 1996
CADMIUM	46.4	< .928	.928	UG/G	Jun 25, 1996
LEAD	46.4	7.5	4.64	UG/G	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 20, 1996
TRANS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 20, 1996
TRICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 20, 1996
VINYL CHLORIDE	1	< 10	10	UG/KG	Jun 20, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	1	95.0	Jun 20, 1996
4-BROMOFLUOROBENZENE SURR	1	88.0	Jun 20, 1996
TOLUENE-D8 SURR	1	98.0	Jun 20, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHTHALATE	667	63000	6700	UG/KG	Jun 24, 1996
DI-N-OCTYLPHTHALATE	33	2100	330	UG/KG	Jun 24, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	33	67.0	Jun 24, 1996
2-FLUOROBIPHENYL	33	66.0	Jun 24, 1996
2-FLUOROPHENOL	33	71.0	Jun 24, 1996
NITROBENZENE-D5	33	60.0	Jun 24, 1996
PHENOL-D6	33	71.0	Jun 24, 1996
TERPHENYL-D14	33	75.0	Jun 24, 1996

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-2-2 TOP
 Date Sampled: June 18, 1996
 Lab Sample ID: P606047-05 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	240	90.3	2.4	UG/G	Jun 25, 1996
CADMIUM	48	1.82	.961	UG/G	Jun 25, 1996
LEAD	48	11.2	4.8	UG/G	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRANS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
VINYL CHLORIDE	1	< 10	10	UG/KG	Jun 21, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	1	102.0	Jun 21, 1996
4-BROMOFLUOROBENZENE SURR	1	78.0	Jun 21, 1996
TOLUENE-D8 SURR	1	111.0	Jun 21, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHTHALATE	66667	4900000	670000	UG/KG	Jun 27, 1996
DI-N-OCTYLPHTHALATE	66667	< 670000	670000	UG/KG	Jun 27, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	66667	0.0	Jun 27, 1996
2-FLUOROBIPHENYL	66667	0.0	Jun 27, 1996
2-FLUOROPHENOL	66667	0.0	Jun 27, 1996
NITROBENZENE-D5	66667	0.0	Jun 27, 1996
PHENOL-D6	66667	0.0	Jun 27, 1996
TERPHENYL-D14	66667	0.0	Jun 27, 1996

Comments:

8270: Surrogates were diluted out.

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-3-2 BOTTOM
 Date Sampled: June 18, 1996
 Lab Sample ID: P606047-08 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	48.3	66	.483	UG/G	Jun 25, 1996
CADMIUM	48.3	8.5	.965	UG/G	Jun 25, 1996
LEAD	48.3	6.83	4.83	UG/G	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	5	< 25	25	UG/KG	Jun 21, 1996
TRANS-1,2-DICHLOROETHYLENE	5	< 25	25	UG/KG	Jun 21, 1996
TRICHLOROETHYLENE	5	< 25	25	UG/KG	Jun 21, 1996
VINYL CHLORIDE	5	850	50	UG/KG	Jun 21, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	5	99.0	Jun 21, 1996
4-BROMOFLUOROBENZENE SURR	5	88.0	Jun 21, 1996
TOLUENE-D8 SURR	5	106.0	Jun 21, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHTHALATE	26667	2600000	270000	UG/KG	Jun 26, 1996
DI-N-OCTYLPHTHALATE	2667	67000	27000	UG/KG	Jun 26, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	2667	0.0	Jun 26, 1996
2-FLUOROBIPHENYL	2667	0.0	Jun 26, 1996
2-FLUOROPHENOL	2667	0.0	Jun 26, 1996
NITROBENZENE-D5	2667	0.0	Jun 26, 1996
PHENOL-D6	2667	0.0	Jun 26, 1996
TERPHENYL-D14	2667	0.0	Jun 26, 1996

Comments:

8270: Surrogates were diluted out.

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-3-2 TOP
 Date Sampled: June 18, 1996
 Lab Sample ID: P606047-07 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	241	119	2.41	UG/G	Jun 25, 1996
CADMIUM	241	7.44	4.82	UG/G	Jun 25, 1996
LEAD	48.2	8.99	4.82	UG/G	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	5	< 25	25	UG/KG	Jun 21, 1996
TRANS-1,2-DICHLOROETHYLENE	5	< 25	25	UG/KG	Jun 21, 1996
TRICHLOROETHYLENE	5	< 25	25	UG/KG	Jun 21, 1996
VINYL CHLORIDE	5	230	50	UG/KG	Jun 21, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	5	83.0	Jun 21, 1996
4-BROMOFLUOROBENZENE SURR	5	82.0	Jun 21, 1996
TOLUENE-D8 SURR	5	100.0	Jun 21, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHTHALATE	26667	3400000	270000	UG/KG	Jun 27, 1996
DI-N-OCTYLPHTHALATE	26667	< 270000	270000	UG/KG	Jun 27, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	26667	0.0	Jun 27, 1996
2-FLUOROBIPHENYL	26667	0.0	Jun 27, 1996
2-FLUOROPHENOL	26667	0.0	Jun 27, 1996
NITROBENZENE-D5	26667	0.0	Jun 27, 1996
PHENOL-D6	26667	0.0	Jun 27, 1996
TERPHENYL-D14	26667	0.0	Jun 27, 1996

Comments:

8270: Surrogates were diluted out.

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-4-2 BOTTOM
 Date Sampled: June 18, 1996
 Lab Sample ID: P606047-10 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	232	57	2.32	UG/G	Jun 25, 1996
CADMIUM	46.3	< .927	.927	UG/G	Jun 25, 1996
LEAD	46.3	6.54	4.63	UG/G	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRANS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
VINYL CHLORIDE	1	< 10	10	UG/KG	Jun 21, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	1	95.0	Jun 21, 1996
4-BROMOFLUOROBENZENE SURR	1	88.0	Jun 21, 1996
TOLUENE-D8 SURR	1	108.0	Jun 21, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHTHALATE	167	11000	1700	UG/KG	Jun 26, 1996
DI-N-OCTYLPHTHALATE	167	< 1700	1700	UG/KG	Jun 26, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	167	100.0	Jun 26, 1996
2-FLUOROBIPHENYL	167	98.0	Jun 26, 1996
2-FLUOROPHENOL	167	101.0	Jun 26, 1996
NITROBENZENE-D5	167	99.0	Jun 26, 1996
PHENOL-D6	167	100.0	Jun 26, 1996
TERPHENYL-D14	167	109.0	Jun 26, 1996

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-4-2 TOP
 Date Sampled: June 18, 1996
 Lab Sample ID: P606047-09 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	47.9	176	.479	UG/G	Jun 25, 1996
CADMIUM	47.9	7.24	.958	UG/G	Jun 25, 1996
LEAD	47.9	18.1	4.79	UG/G	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRANS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRICHLOROETHYLENE	1	11	5	UG/KG	Jun 21, 1996
VINYL CHLORIDE	1	150	10	UG/KG	Jun 21, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	1	106.0	Jun 21, 1996
4-BROMOFLUOROBENZENE SURR	1	74.0	Jun 21, 1996
TOLUENE-D8 SURR	1	137.0	Jun 21, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHthalATE	66667	6400000	670000	UG/KG	Jun 27, 1996
DI-N-OCTYLPHthalATE	66667	< 670000	670000	UG/KG	Jun 27, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	66667	0.0	Jun 27, 1996
2-FLUOROBIPHENYL	66667	0.0	Jun 27, 1996
2-FLUOROPHENOL	66667	0.0	Jun 27, 1996
NITROBENZENE-D5	66667	0.0	Jun 27, 1996
PHENCL-D6	66667	0.0	Jun 27, 1996
TERPHENYL-D14	66667	0.0	Jun 27, 1996

Comments:

8240: Recovery value for TOLUENE-D8 surrogate was high. Sample was reanalyzed with no changes observed. Surrogate recoveries from batch method blank met acceptance criteria.
 8270: Surrogates were diluted out.

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-5-2 BOTTOM
 Date Sampled: June 18, 1996
 Lab Sample ID: P606047-12 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	243	85.1	2.43	UG/G	Jun 25, 1996
CADMIUM	48.7	< .974	.974	UG/G	Jun 25, 1996
LEAD	48.7	8.74	4.87	UG/G	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRANS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
VINYL CHLORIDE	1	< 10	10	UG/KG	Jun 21, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	1	87.0	Jun 21, 1996
4-BROMOFLUOROBENZENE SURR	1	86.0	Jun 21, 1996
TOLUENE-D8 SURR	1	106.0	Jun 21, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHTHALATE	667	71000	6700	UG/KG	Jun 27, 1996
DI-N-OCTYLPHTHALATE	667	< 6700	6700	UG/KG	Jun 27, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	667	0.0	Jun 27, 1996
2-FLUOROBIPHENYL	667	0.0	Jun 27, 1996
2-FLUOROPHENOL	667	0.0	Jun 27, 1996
NITROBENZENE-D5	667	0.0	Jun 27, 1996
PHENOL-D6	667	0.0	Jun 27, 1996
TERPHENYL-D14	667	0.0	Jun 27, 1996

Comments:

8270: Surrogates were diluted out.

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-5-2 TOP
 Date Sampled: June 18, 1996
 Lab Sample ID: P606047-11 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	49.6	48.5	.496	UG/G	Jun 25, 1996
CADMIUM	49.6	1.74	.991	UG/G	Jun 25, 1996
LEAD	49.6	7.4	4.96	UG/G	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRANS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
VINYL CHLORIDE	1	< 10	10	UG/KG	Jun 21, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	1	96.0	Jun 21, 1996
4-BROMOFLUOROBENZENE SURR	1	86.0	Jun 21, 1996
TOLUENE-D8 SURR	1	115.0	Jun 21, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHTHALATE	13333	1200000	130000	UG/KG	Jun 27, 1996
DI-N-OCTYLPHTHALATE	13333	< 130000	130000	UG/KG	Jun 27, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	13333	0.0	Jun 27, 1996
2-FLUOROBIPHENYL	13333	0.0	Jun 27, 1996
2-FLUOROPHENOL	13333	0.0	Jun 27, 1996
NITROBENZENE-D5	13333	0.0	Jun 27, 1996
PHENOL-D6	13333	0.0	Jun 27, 1996
TERPHENYL-D14	13333	0.0	Jun 27, 1996

Comments:

8270: Surrogates were diluted out.

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-6-2 BOTTOM
 Date Sampled: June 18, 1996
 Lab Sample ID: P606047-14 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	247	74.1	2.47	UG/G	Jun 25, 1996
CADMIUM	49.4	< .988	.988	UG/G	Jun 25, 1996
LEAD	49.4	8.84	4.94	UG/G	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRANS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
VINYL CHLORIDE	1	< 10	10	UG/KG	Jun 21, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	1	85.0	Jun 21, 1996
4-BROMOFLUOROBENZENE SURR	1	81.0	Jun 21, 1996
TOLUENE-D8 SURR	1	100.0	Jun 21, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHTHALATE	1333	120000	13000	UG/KG	Jun 27, 1996
DI-N-OCTYLPHTHALATE	1333	< 13000	13000	UG/KG	Jun 27, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	1333	0.0	Jun 27, 1996
2-FLUOROBIPHENYL	1333	0.0	Jun 27, 1996
2-FLUOROPHENOL	1333	0.0	Jun 27, 1996
NITROBENZENE-D5	1333	0.0	Jun 27, 1996
PHENOL-D6	1333	0.0	Jun 27, 1996
TERPHENYL-D14	1333	0.0	Jun 27, 1996

Comments:

8270: Surrogates were diluted out.

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-6-2 TOP
 Date Sampled: June 18, 1996
 Lab Sample ID: P606047-13 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	240	81.9	2.4	UG/G	Jun 25, 1996
CADMIUM	48.1	< .962	.962	UG/G	Jun 25, 1996
LEAD	48.1	9.3	4.81	UG/G	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRANS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
TRICHLOROETHYLENE	1	< 5	5	UG/KG	Jun 21, 1996
VINYL CHLORIDE	1	< 10	10	UG/KG	Jun 21, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	1	103.0	Jun 21, 1996
4-BROMOFLUOROBENZENE SURR	1	84.0	Jun 21, 1996
TOLUENE-D8 SURR	1	114.0	Jun 21, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHTHALATE	13333	830000	130000	UG/KG	Jun 27, 1996
DI-N-OCTYLPHTHALATE	13333	< 130000	130000	UG/KG	Jun 27, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	13333	0.0	Jun 27, 1996
2-FLUOROBIPHENYL	13333	0.0	Jun 27, 1996
2-FLUOROPHENOL	13333	0.0	Jun 27, 1996
NITROBENZENE-D5	13333	0.0	Jun 27, 1996
PHENOL-D6	13333	0.0	Jun 27, 1996
TERPHENYL-D14	13333	0.0	Jun 27, 1996

Comments:

8270: Surrogates were diluted out.
 8270: Internal standard areas were outside control limits. The sample was reanalyzed with no changes observed.

Location: ABERDEEN
 Project Name: POND II CLOSURE
 Sample Source:
 Sample Name: PND2-EQBLK-2
 Date Sampled: June 18, 1996
 Lab Sample ID: P606047-15 Analysis Lab: PONCA CITY

Method Number: 6010

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	1	< .01	.0100	MG/L	Jun 25, 1996
CADMIUM	1	< .02	.0200	MG/L	Jun 25, 1996
LEAD	1	< .1	.1	MG/L	Jun 25, 1996

Method Number: 8240

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
CIS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/L	Jun 20, 1996
TRANS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/L	Jun 20, 1996
TRICHLOROETHYLENE	1	< 5	5	UG/L	Jun 20, 1996
VINYL CHLORIDE	1	< 10	10	UG/L	Jun 20, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4 SURR	1	96.0	Jun 20, 1996
4-BROMOFLUOROBENZENE SURR	1	97.0	Jun 20, 1996
TOLUENE-D8 SURR	1	102.0	Jun 20, 1996

Method Number: 8270

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL)PHTHALATE	1	< 10	10	UG/L	Jun 27, 1996
DI-N-OCTYLPHTHALATE	1	< 10	10	UG/L	Jun 27, 1996

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	1	75.0	Jun 27, 1996
2-FLUOROBIPHENYL	1	72.0	Jun 27, 1996
2-FLUOROPHENOL	1	63.0	Jun 27, 1996
NITROBENZENE-D5	1	75.0	Jun 27, 1996
PHENOL-D6	1	66.0	Jun 27, 1996
TERPHENYL-D14	1	72.0	Jun 27, 1996

Comments:

6010: Equipment blank prepared using Method 3010 for water matrices and included in the QC batch for the associated soil samples.
 8270: Equipment blank prepared using Method 3520 and included in the QC batch for the associated soil samples.

Location: ABERDEEN
Project Name: POND II CLOSURE
Sample Source:
Sample Name: PND2-TBLK-2
Date Sampled: June 13, 1996
Lab Sample ID: P606047-16 Analysis Lab: PONCA CITY

Method Number: 8240

Prep Method: 5030

<u>Analyte/Parameter</u>	<u>Dilution</u>	<u>Result</u>	<u>PQL</u>	<u>Unit</u>	<u>Date Analyzed</u>
CIS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/L	Jun 20, 1996
TRANS-1,2-DICHLOROETHYLENE	1	< 5	5	UG/L	Jun 20, 1996
TRICHLOROETHYLENE	1	< 5	5	UG/L	Jun 20, 1996
VINYL CHLORIDE	1	< 10	10	UG/L	Jun 20, 1996

Surrogates:

<u>Analyte/Parameter</u>	<u>Dilution</u>	<u>RPR</u>	<u>Date Analyzed</u>
1,2-DICHLOROETHANE-D4 SURR	1	99.0	Jun 20, 1996
4-BROMOFLUOROBENZENE SURR	1	95.0	Jun 20, 1996
TOLUENE-D8 SURR	1	101.0	Jun 20, 1996

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Location: ABERDEEN
Project Name: POND II CLOSURE

Analyte/Parameter	Result	Unit	PQL	Method No.	Sampled	Sample Name
BARIUM	50	UG/G	2.47	6010	96-06-17	PND2-1-2 BOTTOM
LEAD	8.3	UG/G	4.94	6010	96-06-17	PND2-1-2 BOTTOM
BIS (2-ETHYLHEXYL) PHTHALATE	910	UG/KG	330	8270	96-06-17	PND2-1-2 BOTTOM
BARIUM	70.9	UG/G	2.46	6010	96-06-17	PND2-1-2 TOP
LEAD	7.96	UG/G	4.93	6010	96-06-17	PND2-1-2 TOP
BIS (2-ETHYLHEXYL) PHTHALATE	210000	UG/KG	33000	8270	96-06-17	PND2-1-2 TOP
DI-N-OCTYLPHTHALATE	7200	UG/KG	6700	8270	96-06-17	PND2-1-2 TOP
BARIUM	45.6	UG/G	2.45	6010	96-06-17	PND2-1-2-DUP BOTTOM
LEAD	8.18	UG/G	4.9	6010	96-06-17	PND2-1-2-DUP BOTTOM
BIS (2-ETHYLHEXYL) PHTHALATE	1900	UG/KG	330	8270	96-06-17	PND2-1-2-DUP BOTTOM
BARIUM	124	UG/G	2.5	6010	96-06-17	PND2-1-2-DUP TOP
LEAD	12	UG/G	5	6010	96-06-17	PND2-1-2-DUP TOP
BIS (2-ETHYLHEXYL) PHTHALATE	260000	UG/KG	33000	8270	96-06-17	PND2-1-2-DUP TOP
BARIUM	38.9	UG/G	2.32	6010	96-06-18	PND2-2-2 BOTTOM
LEAD	7.5	UG/G	4.64	6010	96-06-18	PND2-2-2 BOTTOM
BIS (2-ETHYLHEXYL) PHTHALATE	63000	UG/KG	6700	8270	96-06-18	PND2-2-2 BOTTOM
DI-N-OCTYLPHTHALATE	2100	UG/KG	330	8270	96-06-18	PND2-2-2 BOTTOM
BARIUM	90.3	UG/G	2.4	6010	96-06-18	PND2-2-2 TOP
CADMIUM	1.82	UG/G	.961	6010	96-06-18	PND2-2-2 TOP
LEAD	11.2	UG/G	4.8	6010	96-06-18	PND2-2-2 TOP
BIS (2-ETHYLHEXYL) PHTHALATE	4900000	UG/KG	670000	8270	96-06-18	PND2-2-2 TOP
BARIUM	66	UG/G	.483	6010	96-06-18	PND2-3-2 BOTTOM
CADMIUM	8.5	UG/G	.965	6010	96-06-18	PND2-3-2 BOTTOM
LEAD	6.83	UG/G	4.83	6010	96-06-18	PND2-3-2 BOTTOM
VINYL CHLORIDE	850	UG/KG	50	8240	96-06-18	PND2-3-2 BOTTOM
BIS (2-ETHYLHEXYL) PHTHALATE	2600000	UG/KG	270000	8270	96-06-18	PND2-3-2 BOTTOM
DI-N-OCTYLPHTHALATE	67000	UG/KG	27000	8270	96-06-18	PND2-3-2 BOTTOM
BARIUM	119	UG/G	2.41	6010	96-06-18	PND2-3-2 TOP
CADMIUM	7.44	UG/G	4.82	6010	96-06-18	PND2-3-2 TOP
LEAD	8.99	UG/G	4.82	6010	96-06-18	PND2-3-2 TOP
VINYL CHLORIDE	230	UG/KG	50	8240	96-06-18	PND2-3-2 TOP
BIS (2-ETHYLHEXYL) PHTHALATE	3400000	UG/KG	270000	8270	96-06-18	PND2-3-2 TOP
BARIUM	57	UG/G	2.32	6010	96-06-18	PND2-4-2 BOTTOM
LEAD	6.54	UG/G	4.63	6010	96-06-18	PND2-4-2 BOTTOM
BIS (2-ETHYLHEXYL) PHTHALATE	11000	UG/KG	1700	8270	96-06-18	PND2-4-2 BOTTOM
BARIUM	176	UG/G	.479	6010	96-06-18	PND2-4-2 TOP
CADMIUM	7.24	UG/G	.958	6010	96-06-18	PND2-4-2 TOP
LEAD	18.1	UG/G	4.79	6010	96-06-18	PND2-4-2 TOP
TRICHLOROETHYLENE	11	UG/KG	5	8240	96-06-18	PND2-4-2 TOP
VINYL CHLORIDE	150	UG/KG	10	8240	96-06-18	PND2-4-2 TOP
BIS (2-ETHYLHEXYL) PHTHALATE	6400000	UG/KG	670000	8270	96-06-18	PND2-4-2 TOP
BARIUM	85.1	UG/G	2.43	6010	96-06-18	PND2-5-2 BOTTOM
LEAD	8.74	UG/G	4.87	6010	96-06-18	PND2-5-2 BOTTOM
BIS (2-ETHYLHEXYL) PHTHALATE	71000	UG/KG	6700	8270	96-06-18	PND2-5-2 BOTTOM
BARIUM	48.5	UG/G	.496	6010	96-06-18	PND2-5-2 TOP
CADMIUM	1.74	UG/G	.991	6010	96-06-18	PND2-5-2 TOP
LEAD	7.4	UG/G	4.96	6010	96-06-18	PND2-5-2 TOP
BIS (2-ETHYLHEXYL) PHTHALATE	1200000	UG/KG	130000	8270	96-06-18	PND2-5-2 TOP
BARIUM	74.1	UG/G	2.47	6010	96-06-18	PND2-6-2 BOTTOM
LEAD	8.84	UG/G	4.94	6010	96-06-18	PND2-6-2 BOTTOM
BIS (2-ETHYLHEXYL) PHTHALATE	120000	UG/KG	13000	8270	96-06-18	PND2-6-2 BOTTOM
BARIUM	81.9	UG/G	2.4	6010	96-06-18	PND2-6-2 TOP
LEAD	9.3	UG/G	4.81	6010	96-06-18	PND2-6-2 TOP
BIS (2-ETHYLHEXYL) PHTHALATE	830000	UG/KG	130000	8270	96-06-18	PND2-6-2 TOP

Conoco Environmental Services
Inter-Element Correction Report

July 8, 1996

Page 1

Location: ABERDEEN
Project Name: POND II CLOSURE

Sample Name	Analyte/Parameter	Result	PQL	Unit	Date Analyzed
PND2-1-2 BOTTOM	ALUMINUM	11900	1240	UG/G	Jun 25, 1996
PND2-1-2 BOTTOM	CALCIUM	1390	1240	UG/G	Jun 25, 1996
PND2-1-2 BOTTOM	IRON	12600	1240	UG/G	Jun 25, 1996
PND2-1-2 BOTTOM	MAGNESIUM	1100	247	UG/G	Jun 25, 1996
PND2-1-2 TOP	ALUMINUM	10500	1230	UG/G	Jun 25, 1996
PND2-1-2 TOP	CALCIUM	2820	1230	UG/G	Jun 25, 1996
PND2-1-2 TOP	IRON	13100	1230	UG/G	Jun 25, 1996
PND2-1-2 TOP	MAGNESIUM	1980	1230	UG/G	Jun 25, 1996
PND2-1-2-DUP BOTTOM	ALUMINUM	11300	1220	UG/G	Jun 25, 1996
PND2-1-2-DUP BOTTOM	CALCIUM	1440	1220	UG/G	Jun 25, 1996
PND2-1-2-DUP BOTTOM	IRON	12300	1220	UG/G	Jun 25, 1996
PND2-1-2-DUP BOTTOM	MAGNESIUM	1090	245	UG/G	Jun 25, 1996
PND2-1-2-DUP TOP	ALUMINUM	10100	1250	UG/G	Jun 25, 1996
PND2-1-2-DUP TOP	CALCIUM	2710	1250	UG/G	Jun 25, 1996
PND2-1-2-DUP TOP	IRON	12600	1250	UG/G	Jun 25, 1996
PND2-1-2-DUP TOP	MAGNESIUM	1950	1250	UG/G	Jun 25, 1996
PND2-2-2 BOTTOM	ALUMINUM	12100	1160	UG/G	Jun 25, 1996
PND2-2-2 BOTTOM	CALCIUM	1200	1160	UG/G	Jun 25, 1996
PND2-2-2 BOTTOM	IRON	13900	1160	UG/G	Jun 25, 1996
PND2-2-2 BOTTOM	MAGNESIUM	1080	232	UG/G	Jun 25, 1996
PND2-2-2 TOP	ALUMINUM	12100	1200	UG/G	Jun 25, 1996
PND2-2-2 TOP	CALCIUM	3570	1200	UG/G	Jun 25, 1996
PND2-2-2 TOP	IRON	10700	1200	UG/G	Jun 25, 1996
PND2-2-2 TOP	MAGNESIUM	1480	1200	UG/G	Jun 25, 1996
PND2-3-2 BOTTOM	ALUMINUM	5740	241	UG/G	Jun 25, 1996
PND2-3-2 BOTTOM	CALCIUM	2410	241	UG/G	Jun 25, 1996
PND2-3-2 BOTTOM	IRON	6610	241	UG/G	Jun 25, 1996
PND2-3-2 BOTTOM	MAGNESIUM	2530	241	UG/G	Jun 25, 1996
PND2-3-2 TOP	ALUMINUM	2600	1200	UG/G	Jun 25, 1996
PND2-3-2 TOP	CALCIUM	14300	1200	UG/G	Jun 25, 1996
PND2-3-2 TOP	IRON	3360	1200	UG/G	Jun 25, 1996
PND2-3-2 TOP	MAGNESIUM	1920	1200	UG/G	Jun 25, 1996
PND2-4-2 BOTTOM	ALUMINUM	7580	1160	UG/G	Jun 25, 1996
PND2-4-2 BOTTOM	CALCIUM	1790	1160	UG/G	Jun 25, 1996
PND2-4-2 BOTTOM	IRON	10300	1160	UG/G	Jun 25, 1996
PND2-4-2 BOTTOM	MAGNESIUM	625	232	UG/G	Jun 25, 1996
PND2-4-2 TOP	ALUMINUM	6130	239	UG/G	Jun 25, 1996
PND2-4-2 TOP	CALCIUM	23700	239	UG/G	Jun 25, 1996
PND2-4-2 TOP	IRON	5290	239	UG/G	Jun 25, 1996
PND2-4-2 TOP	MAGNESIUM	2030	239	UG/G	Jun 25, 1996
PND2-5-2 BOTTOM	ALUMINUM	10700	1220	UG/G	Jun 25, 1996
PND2-5-2 BOTTOM	CALCIUM	2330	1220	UG/G	Jun 25, 1996
PND2-5-2 BOTTOM	IRON	14300	1220	UG/G	Jun 25, 1996
PND2-5-2 BOTTOM	MAGNESIUM	943	243	UG/G	Jun 25, 1996
PND2-5-2 TOP	ALUMINUM	3940	248	UG/G	Jun 25, 1996
PND2-5-2 TOP	CALCIUM	2080	248	UG/G	Jun 25, 1996
PND2-5-2 TOP	IRON	5350	248	UG/G	Jun 25, 1996
PND2-5-2 TOP	MAGNESIUM	763	248	UG/G	Jun 25, 1996
PND2-6-2 BOTTOM	ALUMINUM	11500	1240	UG/G	Jun 25, 1996
PND2-6-2 BOTTOM	CALCIUM	5440	1240	UG/G	Jun 25, 1996
PND2-6-2 BOTTOM	IRON	13000	1240	UG/G	Jun 25, 1996
PND2-6-2 BOTTOM	MAGNESIUM	1240	1240	UG/G	Jun 25, 1996
PND2-6-2 TOP	ALUMINUM	17200	1200	UG/G	Jun 25, 1996
PND2-6-2 TOP	CALCIUM	7750	1200	UG/G	Jun 25, 1996
PND2-6-2 TOP	IRON	15900	1200	UG/G	Jun 25, 1996
PND2-6-2 TOP	MAGNESIUM	1740	1200	UG/G	Jun 25, 1996
PND2-EQBLK-2	ALUMINUM	< 5	5	MG/L	Jun 25, 1996
PND2-EQBLK-2	CALCIUM	< 5	5	MG/L	Jun 25, 1996
PND2-EQBLK-2	IRON	< 5	5	MG/L	Jun 25, 1996
PND2-EQBLK-2	MAGNESIUM	< 5	5	MG/L	Jun 25, 1996

Method Number: 6010 Prep Method: 3050 Pre-prep:
 Batch Start Date: 24JUN96
 Instrument: ICAP61-1
 Batch Number: 3

The following field samples are included in this batch:

Sample Name	Date Sampled	Lab ID
PND2-1-2 BOTTOM	17JUN96	PONCA CITYP606047 02
PND2-1-2 TOP	17JUN96	PONCA CITYP606047 01
PND2-1-2-DUP BOTTOM	17JUN96	PONCA CITYP606047 04
PND2-1-2-DUP TOP	17JUN96	PONCA CITYP606047 03
PND2-2-2 BOTTOM	18JUN96	PONCA CITYP606047 06
PND2-2-2 TOP	18JUN96	PONCA CITYP606047 05
PND2-3-2 BOTTOM	18JUN96	PONCA CITYP606047 08
PND2-3-2 TOP	18JUN96	PONCA CITYP606047 07
PND2-4-2 BOTTOM	18JUN96	PONCA CITYP606047 10
PND2-4-2 TOP	18JUN96	PONCA CITYP606047 09
PND2-5-2 BOTTOM	18JUN96	PONCA CITYP606047 12
PND2-5-2 TOP	18JUN96	PONCA CITYP606047 11
PND2-6-2 BOTTOM	18JUN96	PONCA CITYP606047 14
PND2-6-2 TOP	18JUN96	PONCA CITYP606047 13
PND2-EQBLK-2	18JUN96	PONCA CITYP606047 15

Lab Control Spike:

Analyte/Parameter	RPR	Lab Sample ID
ALUMINUM	89.9	LCS -01 PONCA CITY
BARIUM	92.2	LCS -01 PONCA CITY
CADMIUM	82.7	LCS -01 PONCA CITY
CALCIUM	88.4	LCS -01 PONCA CITY
IRON	89.3	LCS -01 PONCA CITY
LEAD	84.2	LCS -01 PONCA CITY
MAGNESIUM	87.7	LCS -01 PONCA CITY
ALUMINUM	89.2	LCSD -01 PONCA CITY
BARIUM	91.1	LCSD -01 PONCA CITY
CADMIUM	83.7	LCSD -01 PONCA CITY
CALCIUM	88.4	LCSD -01 PONCA CITY
IRON	88.5	LCSD -01 PONCA CITY
LEAD	85.3	LCSD -01 PONCA CITY
MAGNESIUM	87.2	LCSD -01 PONCA CITY

Matrix Spike:

Analyte/Parameter	RPR	Lab Sample ID
BARIUM	104	P606047-01 PONCA CITY
CADMIUM	98.1	P606047-01 PONCA CITY
LEAD	104	P606047-01 PONCA CITY

Matrix Spike Duplicate:

Analyte/Parameter	RPR	RPD	Lab Sample ID
BARIUM	107	3.1	P606047-01 PONCA CITY
CADMIUM	98.1	0	P606047-01 PONCA CITY
LEAD	102	2.6	P606047-01 PONCA CITY

Replicate:

Analyte/Parameter	Result	Unit	RPD	Lab Sample ID
ALUMINUM	12000	UG/G	.83	P606047-02 PONCA CITY
BARIUM	45.3	UG/G	9.8	P606047-02 PONCA CITY
CADMIUM	.958	UG/G	3.1	P606047-02 PONCA CITY
CALCIUM	1470	UG/G	5.5	P606047-02 PONCA CITY
IRON	13700	UG/G	8.3	P606047-02 PONCA CITY
LEAD	8.36	UG/G	.72	P606047-02 PONCA CITY
MAGNESIUM	1230	UG/G	11	P606047-02 PONCA CITY

Replicate:

Analyte/Parameter	Result	Unit	RPD	Lab Sample ID
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Comments:

6010 Aluminum, Calcium, Iron, Magnesium: Batch matrix spike and spike duplicate are not required, because the native concentration is greater than 0.1%.

Method Number: 8240 Prep Method: 5030 Pre-prep:
 Batch Start Date: 19JUN96
 Instrument: FINN4
 Batch Number: 1

The following field samples are included in this batch:

Sample Name	Date Sampled	Lab ID
PND2-EQBLK-2	12JUN96	PONCA CITYP606047 15
PND2-TBLK-2	13JUN96	PONCA CITYP606047 16

Matrix Spike:

Analyte/Parameter	RPR	Lab Sample ID
1,1-DICHLOROETHYLENE	118	P606037-02 PONCA CITY
BENZENE	110	P606037-02 PONCA CITY
CHLOROBEZENE	105	P606037-02 PONCA CITY
TOLUENE	109	P606037-02 PONCA CITY
TRICHLOROETHYLENE	109	P606037-02 PONCA CITY

Surrogates:

1,2-DICHLOROETHANE-D4 SURR	88	P606037-02 PONCA CITY
4-BROMOFLUOROBENZENE SURR	89	P606037-02 PONCA CITY
TOLUENE-D8 SURR	99	P606037-02 PONCA CITY

Matrix Spike Duplicate:

Analyte/Parameter	RPR	RPD	Lab Sample ID
1,1-DICHLOROETHYLENE	135	13	P606037-02 PONCA CITY
BENZENE	118	8	P606037-02 PONCA CITY
CHLOROBEZENE	108	2	P606037-02 PONCA CITY
TOLUENE	106	3	P606037-02 PONCA CITY
TRICHLOROETHYLENE	110	1	P606037-02 PONCA CITY

Surrogates:

1,2-DICHLOROETHANE-D4 SURR	99	P606037-02 PONCA CITY
4-BROMOFLUOROBENZENE SURR	86	P606037-02 PONCA CITY
TOLUENE-D8 SURR	91	P606037-02 PONCA CITY

Method Number: 8240 Prep Method: 5030 Pre-prep:
 Batch Start Date: 20JUN96
 Instrument: FINN
 Batch Number: 1

The following field samples are included in this batch:

Sample Name	Date Sampled	Lab ID
PND2-1-2 BOTTOM	17JUN96	PONCA CITYP606047 02
PND2-1-2 TOP	17JUN96	PONCA CITYP606047 01
PND2-1-2-DUP BOTTOM	17JUN96	PONCA CITYP606047 04
PND2-1-2-DUP TOP	17JUN96	PONCA CITYP606047 03

The following field samples are included in this batch:

Sample Name	Date Sampled	Lab ID
PND2-2-2 BOTTOM	18JUN96	PONCA CITYP606047 06
PND2-2-2 TOP	18JUN96	PONCA CITYP606047 05
PND2-3-2 BOTTOM	18JUN96	PONCA CITYP606047 08
PND2-3-2 TOP	18JUN96	PONCA CITYP606047 07
PND2-4-2 BOTTOM	18JUN96	PONCA CITYP606047 10
PND2-4-2 TOP	18JUN96	PONCA CITYP606047 09
PND2-5-2 BOTTOM	18JUN96	PONCA CITYP606047 12
PND2-5-2 TOP	18JUN96	PONCA CITYP606047 11
PND2-6-2 BOTTOM	18JUN96	PONCA CITYP606047 14
PND2-6-2 TOP	18JUN96	PONCA CITYP606047 13

Matrix Spike:

Analyte/Parameter	RPR	Lab Sample ID
TRICHLOROETHYLENE	112	P606047-01 PONCA CITY

Surrogates:

1,2-DICHLOROETHANE-D4 SURR	97	P606047-01 PONCA CITY
4-BROMOFLUOROBENZENE SURR	93	P606047-01 PONCA CITY
TOLUENE-D8 SURR	105	P606047-01 PONCA CITY

Matrix Spike Duplicate:

Analyte/Parameter	RPR	RPD	Lab Sample ID
TRICHLOROETHYLENE	112	0	P606047-01 PONCA CITY

Surrogates:

1,2-DICHLOROETHANE-D4 SURR	95	P606047-01 PONCA CITY
4-BROMOFLUOROBENZENE SURR	92	P606047-01 PONCA CITY
TOLUENE-D8 SURR	103	P606047-01 PONCA CITY

Method Number: 8270 Prep Method: 3550 Pre-prep:
 Batch Start Date: 24JUN96
 Instrument: HP3
 Batch Number: 1

The following field samples are included in this batch:

Sample Name	Date Sampled	Lab ID
PND2-1-2 BOTTOM	17JUN96	PONCA CITYP606047 02
PND2-1-2 TOP	17JUN96	PONCA CITYP606047 01
PND2-1-2-DUP BOTTOM	17JUN96	PONCA CITYP606047 04
PND2-1-2-DUP TOP	17JUN96	PONCA CITYP606047 03
PND2-2-2 BOTTOM	18JUN96	PONCA CITYP606047 06
PND2-2-2 TOP	18JUN96	PONCA CITYP606047 05
PND2-3-2 BOTTOM	18JUN96	PONCA CITYP606047 08
PND2-3-2 TOP	18JUN96	PONCA CITYP606047 07
PND2-4-2 BOTTOM	18JUN96	PONCA CITYP606047 10
PND2-4-2 TOP	18JUN96	PONCA CITYP606047 09
PND2-5-2 BOTTOM	18JUN96	PONCA CITYP606047 12
PND2-5-2 TOP	18JUN96	PONCA CITYP606047 11
PND2-6-2 BOTTOM	18JUN96	PONCA CITYP606047 14
PND2-6-2 TOP	18JUN96	PONCA CITYP606047 13
PND2-EQBLK-2	18JUN96	PONCA CITYP606047 15

Matrix Spike:

Analyte/Parameter	RPR	Lab Sample ID
DI-N-OCTYLPHTHALATE	98	P606047-10 PONCA CITY

Matrix Spike:

Analyte/ParameterRPRLab Sample ID

Surrogates:

2,4,6-TRIBROMOPHENOL
2-FLUOROBIPHENYL
2-FLUOROPHENOL
NITROBENZENE-D5
PHENOL-D6
TERPHENYL-D14

66
68
70
72
72
83

P606047-10 PONCA CITY
P606047-10 PONCA CITY
P606047-10 PONCA CITY
P606047-10 PONCA CITY
P606047-10 PONCA CITY
P606047-10 PONCA CITY

Matrix Spike Duplicate:

Analyte/ParameterRPRRPDLab Sample ID

DI-N-OCTYLPHTHALATE

113

14

P606047-10 PONCA CITY

Surrogates:

2,4,6-TRIBROMOPHENOL
2-FLUOROBIPHENYL
2-FLUOROPHENOL
NITROBENZENE-D5
PHENOL-D6
TERPHENYL-D14

75
81
80
83
82
99

P606047-10 PONCA CITY
P606047-10 PONCA CITY
P606047-10 PONCA CITY
P606047-10 PONCA CITY
P606047-10 PONCA CITY
P606047-10 PONCA CITY

Environmental Sample Chain of Custody and Log
Research and Engineering

783-649-602 #15

Project Number
No. 51277

Project Number
JEM

Telephone Number
Project Number

Telephone Number
Project Number

Telephone Number
Project Number

Telephone Number
Project Number

Telephone Number
Project Number

Facility Name
ABERDEEN

Facility Address
NEW HWY 25 ABERDEEN, MS 39730

Facility Supervisor
MARY STARRETT

Process Producing Sample
POND II CLOSURE

Employee(s) Sampling
George Gray

Other Employee(s) Handling
George Gray

Special Shipping Instructions
PACK IN WET ICE TO PONCA CITY, OK

Remarks
*B240=ICE, DCE, VC*6010=PB, BA, CD*
*B270=BIS-2-ETHYLHEXYLPHTHALATE AND
DI-N-OCTYLPHTHALATE*

Containers
Analysis Req. Preservative

Sample I.D. No. and Description
ANDE-1-2

Sample I.D. No. and Description
ANDE-1-4

Sample I.D. No. and Description
ANDE-1-6

Sample I.D. No. and Description
ANDE-1-8

Time
1800

Date
6-17-96

Sample Type
SOIL

Total Volume
1 car

Condition of Samples Upon Arrival at Final Destination
Good

Signature
Received by

Signature
Received by

Signature
Received by

Signature
Received by

Signature
Received by

Signature
Received by

Signature
Received by



783-6149-602

#15

No. 51280

ABD00039290

Research and Engineering

Facility Name BERDEEN		Telephone Number (601) 369-3637		Transporter Name FEDERAL EXPRESS		Project Number RPT-41-A054 JEM	
Facility Address NEW HWY 25 ABERDEEN MS 39200				Transporter Address		Telephone Number ()	
Facility Supervisor MARY STARRETT				Method of Shipping OVERNIGHT AIR			
Type or Print Date	Special Shipping Instructions PACK IN WET ICE TO PONCA CITY, OK						
Process Producing Sample OND II CLOSURE	Remarks P2940=YCE,DCE,VOC*6010=PB.BA,CD* *6070=BIS-2-ETHYLHEXYLPHTHALATE AND DI-N-OCTYLPHTHALATE*						
Employee(s) Sampling <i>[Signature]</i>							
Other Employee(s) Handling							
Sample I.D. No. and Description NDZ-1-2 <i>Tak from PND2-1-3</i>	Date 6/17/96	Time 1800	Sample Type SOIL	Total Volume 1Gx	Containers CORE 1	No. 1	Analysis Req. Preservative NONE
<i>[Large Signature]</i>							
Bottles Relinquished by <i>[Signature]</i>	Date/Time 6/19/96 1700	Bottles Received by <i>Ronald R. Stimpson</i>		Date/Time 6-20-96 10:00	Condition of Samples Upon Arrival at Final Destination Good		
Relinquished by	Date/Time	Received by		Date/Time	Signature RZS		
Relinquished by	Date/Time	Received by		Date/Time	Temp. of Samples on Arrival (Temp. sensitive analysis only)		
Relinquished by	Date/Time	Received by		Date/Time	04°C		
Relinquished by	Date/Time	Received by		Date/Time	Signature RZS		
Relinquished by	Date/Time	Received by		Date/Time	Date 6-20-96		



Environmental Sample Chain of Custody and Log
Research and Engineering

783-6149-602

#15

No. 51278

Research and Engineering

P6-06-047

Project Number

DUP-41-A054 JEM

Facility Name	Telephone Number	Transporter Name	Transporter Address	Method of Shipping		
ABERDEEN	(601) 369-3637	FEDERAL EXPRESS		OVERNIGHT AIR		
Facility Address						
NEW HWY 25 ABERDEEN, ME 05730						
Facility Supervisor						
MARY STARRETT						
Process Producing Sample						
SECOND II CLOSURE						
Employee(s) Sampling						
Other Employee(s) Handling						
Special Shipping Instructions PACK IN WET ICE TO PONCA CITY, OK						
Remarks *S240=ICE, DCE, VC*6010=PB, BA, CD* *S270=BIS-2-ETHYLHEXYLPHTHALATE AND DI-N-OCTYLPHTHALATE*						
Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers	Analysis Req.▲
END-2-2	6/19/96	0845	SOIL	1 oz	CORE 1	NONE
END-2-4			SOIL		CORE 1	NONE
END-2-6			SOIL		CORE 1	NONE
END-2-8			SOIL		CORE 1	NONE
Condition of Samples Upon Arrival at Final Destination						
Good						
Signature RZS						
Date 6-20-96						
Temp. of Samples on Arrival (Temp. sensitive analysis only)						
04°C						
Signature RZS						
Date 6-20-96						



783-6149-602

#15

No. 51281

ABD00039293

[illegible]



Environmental Sample Chain of Custody and Log
Research and Engineering

705-6144-602

#15 No. 51282

ABD00039294

Facility Name		Telephone Number	Transporter Name	Project Number									
ABERDEEN		(601) 369-3637	FEDERAL EXPRESS	DUPT-41-A054 JEM									
Facility Address			Transporter Address	Telephone Number ()									
NEW HWY 25 ABERDEEN, ME 05730													
Facility Supervisor			Method of Shipping										
MARY STARRETT			OVERNIGHT AIR										
Process Producing Sample		Special Shipping Instructions											
POND II CLOSURE		PACK IN WET ICE TO PONCA CITY, OK											
Employee(s) Sampling		Remarks											
<i>George Long</i>		*8240=ICE, DCE, VC*6010=PB, BA, CD*											
Other Employee(s) Handling		*8270=BIS-2-ETHYLHEXYLPHTHALATE AND DI-N-OCTYLPHTHALATE*											
Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers	Analysis Req.							
PND2-5-2	6/18/96	1330	SOIL	2 gms	CORE 2	NONE							
PND2-5-4			SOIL		CORE 1	NONE							
PND2-5-6			SOIL		CORE 1	NONE							
PND2-5-8			SOIL		CORE 1	NONE							
Composited #5 10/22 & 20/2													
Bottles Relinquished by	Date/Time	Bottles Received by		Date/Time	Condition of Samples Upon Arrival at Final Destination								
<i>Box 637</i>	6/18/96 1700	<i>Ronald R. Thompson</i>		6-20-96 10:00	Good								
Relinquished by	Date/Time	Received by		Date/Time	Signature								
					Date 6-20-96								
Relinquished by	Date/Time	Received by		Date/Time	Temp. of Samples on Arrival (Temp. sensitive analysis only)								
					04°C								
Relinquished by	Date/Time	Received by		Date/Time	Signature								
					Date 6-20-96								



783-6149-602

#15

No. 51283

ABD00039295

[illegible]



Environmental Sample Chain of Custody and Log
Research and Engineering

783-6149-602

#15

No. 51286

Project Number
DUPT-41-A054 JEM

Facility Name ABERDEEN	Telephone Number (501) 369-3637	Transporter Name FEDERAL EXPRESS	Telephone Number ()
Facility Address NEW HWY 25 ABERDEEN, MS 39720		Transporter Address	
Facility Supervisor MARY STARRETT		Method of Shipping OVERNIGHT AIR	

Type or Print Data	Special Shipping Instructions PACK IN WET ICE TO FOUNCA CITY, OK	Remarks #2240=YCE, DCE, VC*6010=PB, BA, CD*
Employee(s) Sampling <i>George Lopez</i>		
Other Employee(s) Handling	TBLK = 052896-2	

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers		Analysis Req. Preservative
					Type	No.	
AND2-EQBLK-2	6/18/96	0930	WATER	40 ML	AG/S	2	H2SO4
AND2-TBLK-2	6/13/96	1245	WATER	40 ML	AG/S	2	H2SO4
<i>[Large handwritten signature across the table]</i>							

Bottles Relinquished by <i>[Signature]</i>	Date/Time 6/13/96 1250	Bottles Received by <i>[Signature]</i>	Date/Time 6/17/96 1700	Condition of Samples Upon Arrival at Final Destination Good
Relinquished by <i>[Signature]</i>	Date/Time 6/13/96 1200	Received by <i>[Signature]</i>	Date/Time 6-20-96 10:00	Signature RZS
Relinquished by	Date/Time	Received by	Date/Time	Date 6-20-96
Relinquished by	Date/Time	Received by	Date/Time	Temp. of Samples on Arrival (Temp. sensitive analysis only) 04°C
Relinquished by	Date/Time	Received by	Date/Time	Signature RZS
Relinquished by	Date/Time	Received by	Date/Time	Date 6-20-96

Signatures

APPENDIX B

APPENDIX B
ANALYTICAL DATA FROM STOCKPILE AND TCLP SAMPLING

STOCKPILE SOILS 4/97
DuPont Aberdeen

April 25, 1997

Prepared for

Jeff Baker - DERS Houston

Prepared by

**DuPont Environmental Remediation Services
Laboratory Services - Jonathan Tschritter
140 Cypress Station Drive, Suite 140
Houston, Texas 77090**

DuPont Environmental Remediation Services Corporate Environmental Database Check List

Location: ABERDEENJobname: STOCKPILE SOILS-4/97

JST	Preliminary Administration Review Project Sheet Verify location/jobname in sample table-
JST	Project Backstop Disk Deliverable Integrity QC Batch Integrity (Correct problems/Pull backstop as necessary)
JST	Completeness Check Samples ___X___ 100% Tests ___X___ 100% Parameters ___ ___ 100% or ___X___ <100%
JST	Accuracy Check CED Results vs. Hard Copy Lab Reports
JST	Comments/Narrative Review
ADS	Laboratory Services Coordinator Overview Review Report Cover letter/title page for customer
AUB	Report Finish Copy and Bind
AUB	Mail to Client(s)

Jonathan Tschritter
 Certified by

04/25/97
 Date

DuPont Environmental Remediation Services
Lab Analysis Report

April 25, 1997

Page 1

Location: ABERDEEN
 Project Name: STOCKPILE SOILS-4/97
 Sample Source: ABD-EQBLK-3
 Sample Name: ABD-EQBLK-3
 Date Sampled: April 1, 1997
 Lab Sample ID: C8WVH -1 Analysis Lab: QES-AUS

Method Number: 6010A

Prep Method: 3010

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	1	< 0.20	0.20	MG/L	Apr 9, 1997
CADMIUM	1	< 0.0050	0.0050	MG/L	Apr 9, 1997
LEAD	1	< 0.10	0.10	MG/L	Apr 9, 1997

Method Number: 8240B

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
1,1-DICHLOROETHENE	1	< 5.0	5.0	UG/L	Apr 10, 1997
CIS-1,2-DICHLOROETHENE	1	< 2.5	2.5	UG/L	Apr 10, 1997
TRANS-1,2-DICHLOROETHENE	1	< 2.5	2.5	UG/L	Apr 10, 1997
TRICHLOROETHENE	1	< 5.0	5.0	UG/L	Apr 10, 1997
VINYL CHLORIDE	1	< 10	10	UG/L	Apr 10, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4	1	110.0	Apr 10, 1997
4-BROMOFLUOROBENZENE	1	99.0	Apr 10, 1997
TOLUENE-D8	1	95.0	Apr 10, 1997

Method Number: 8270B

Prep Method: 3520

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL) PHTHALATE	1	< 10	10	UG/L	Apr 9, 1997
DI-N-OCTYL PHTHALATE	1	< 10	10	UG/L	Apr 9, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	1	84.0	Apr 9, 1997
2-FLUOROBIPHENYL	1	62.0	Apr 9, 1997
2-FLUOROPHENOL	1	64.0	Apr 9, 1997
NITROBENZENE-D5	1	71.0	Apr 9, 1997
PHENOL-D5	1	68.0	Apr 9, 1997
TERPHENYL-D14	1	91.0	Apr 9, 1997

Location: ABERDEEN
 Project Name: STOCKPILE SOILS-4/97
 Sample Source: ABD-SP-1
 Sample Name: ABD-SP-1
 Date Sampled: April 1, 1997
 Lab Sample ID: C8WVC -1 Analysis Lab: QES-AUS

Method Number: 6010A

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	1	62.0	20.0	MG/KG	Apr 10, 1997
CADMIUM	1	< 0.50	0.50	MG/KG	Apr 10, 1997
LEAD	1	< 10.0	10.0	MG/KG	Apr 10, 1997

Method Number: 8240B

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
1,1-DICHLOROETHENE	1	< 5.0	5.0	UG/KG	Apr 11, 1997
CIS-1,2-DICHLOROETHENE	1	< 2.5	2.5	UG/KG	Apr 11, 1997
TRANS-1,2-DICHLOROETHENE	1	< 2.5	2.5	UG/KG	Apr 11, 1997
TRICHLOROETHENE	1	< 5.0	5.0	UG/KG	Apr 11, 1997
VINYL CHLORIDE	1	< 10	10	UG/KG	Apr 11, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4	1	113.0	Apr 11, 1997
4-BROMOFLUOROBENZENE	1	100.0	Apr 11, 1997
TOLUENE-D8	1	105.0	Apr 11, 1997

Method Number: 8270B

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
DI-N-OCTYL PHTHALATE	1	1700	330	UG/KG	Apr 7, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	1	96.0	Apr 7, 1997
2-FLUOROBIPHENYL	1	84.0	Apr 7, 1997
2-FLUOROPHENOL	1	78.0	Apr 7, 1997
NITROBENZENE-D5	1	80.0	Apr 7, 1997
PHENOL-D5	1	81.0	Apr 7, 1997
TERPHENYL-D14	1	102.0	Apr 7, 1997

Method Number: OLM03.1

Prep Method: OLM03.1

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
PERCENT MOISTURE	1	20.8	0.50	%	Apr 10, 1997

Method Number: 8270B

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL) PHTHALATE	10	23000	3300	UG/KG	Apr 9, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	10	89.0	Apr 9, 1997
2-FLUOROBIPHENYL	10	90.0	Apr 9, 1997
2-FLUOROPHENOL	10	85.0	Apr 9, 1997

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Location: ABERDEEN
Project Name: STOCKPILE SOILS-4/97
Sample Source: ABD-SP-1
Sample Name: ABD-SP-1
Date Sampled: April 1, 1997
Lab Sample ID: C8WVC -2 Analysis Lab: QES-AUS

Analyte/Parameter -----	Dilution -----	RPR ---	Date Analyzed -----
NITROBENZENE-D5	10	71.0	Apr 9, 1997
PHENOL-D5	10	93.0	Apr 9, 1997
TERPHENYL-D14	10	99.0	Apr 9, 1997

DuPont Environmental Remediation Services
Lab Analysis Report

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Location: ABERDEEN
 Project Name: STOCKPILE SOILS-4/97
 Sample Source: ABD-SP-1-DUP
 Sample Name: ABD-SP-1-DUP
 Date Sampled: April 1, 1997
 Lab Sample ID: C84WD -1 Analysis Lab: QES-AUS

Method Number: 6010A

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	1	60.3	20.0	MG/KG	Apr 10, 1997
CADMIUM	1	< 0.50	0.50	MG/KG	Apr 10, 1997
LEAD	1	< 10.0	10.0	MG/KG	Apr 10, 1997

Method Number: 8240B

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
1,1-DICHLOROETHENE	1	< 5.0	5.0	UG/KG	Apr 11, 1997
CIS-1,2-DICHLOROETHENE	1	< 2.5	2.5	UG/KG	Apr 11, 1997
TRANS-1,2-DICHLOROETHENE	1	< 2.5	2.5	UG/KG	Apr 11, 1997
TRICHLOROETHENE	1	< 5.0	5.0	UG/KG	Apr 11, 1997
VINYL CHLORIDE	1	< 10	10	UG/KG	Apr 11, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4	1	116.0	Apr 11, 1997
4-BROMOFLUOROBENZENE	1	105.0	Apr 11, 1997
TOLUENE-D8	1	112.0	Apr 11, 1997

Method Number: 8270B

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
DI-N-OCTYL PHTHALATE	1	1300	330	UG/KG	Apr 7, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	1	103.0	Apr 7, 1997
2-FLUOROBIPHENYL	1	85.0	Apr 7, 1997
2-FLUOROPHENOL	1	76.0	Apr 7, 1997
NITROBENZENE-D5	1	80.0	Apr 7, 1997
PHENOL-D5	1	82.0	Apr 7, 1997
TERPHENYL-D14	1	100.0	Apr 7, 1997

Method Number: OLM03.1

Prep Method: OLM03.1

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
PERCENT MOISTURE	1	20.0	0.50	%	Apr 10, 1997

Method Number: 8270B

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL) PHTHALATE	10	18000	3300	UG/KG	Apr 9, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	10	97.0	Apr 9, 1997
2-FLUOROBIPHENYL	10	88.0	Apr 9, 1997
2-FLUOROPHENOL	10	80.0	Apr 9, 1997

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Location: ABERDEEN
Project Name: STOCKPILE SOILS-4/97
Sample Source: ABD-SP-1-DUP
Sample Name: ABD-SP-1-DUP
Date Sampled: April 1, 1997
Lab Sample ID: C8WVD -2 Analysis Lab: QES-AUS

Analyte/Parameter -----	Dilution -----	RPR ---	Date Analyzed -----
NITROBENZENE-D5	10	68.0	Apr 9, 1997
PHENOL-D5	10	87.0	Apr 9, 1997
TERPHENYL-D14	10	102.0	Apr 9, 1997

Location: ABERDEEN
 Project Name: STOCKPILE SOILS-4/97
 Sample Source: ABD-SP-2
 Sample Name: ABD-SP-2
 Date Sampled: April 1, 1997
 Lab Sample ID: CBWVE -1 Analysis Lab: QES-AUS

Method Number: 6010A

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIIUM	1	49.3	20.0	MG/KG	Apr 10, 1997
CADMIUM	1	< 0.50	0.50	MG/KG	Apr 10, 1997
LEAD	1	< 10.0	10.0	MG/KG	Apr 10, 1997

Method Number: 8240B

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
1,1-DICHLOROETHENE	1	< 5.0	5.0	UG/KG	Apr 11, 1997
CIS-1,2-DICHLOROETHENE	1	< 2.5	2.5	UG/KG	Apr 11, 1997
TRANS-1,2-DICHLOROETHENE	1	< 2.5	2.5	UG/KG	Apr 11, 1997
TRICHLOROETHENE	1	< 5.0	5.0	UG/KG	Apr 11, 1997
VINYL CHLORIDE	1	< 10	10	UG/KG	Apr 11, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4	1	111.0	Apr 11, 1997
4-BROMOFLUOROBENZENE	1	94.0	Apr 11, 1997
TOLUENE-DB	1	104.0	Apr 11, 1997

Method Number: 8270B

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL) PHTHALATE	5	11000	1600	UG/KG	Apr 8, 1997
DI-N-OCTYL PHTHALATE	5	< 1600	1600	UG/KG	Apr 8, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	5	88.0	Apr 8, 1997
2-FLUOROBIPHENYL	5	86.0	Apr 8, 1997
2-FLUOROPHENOL	5	79.0	Apr 8, 1997
NITROBENZENE-D5	5	68.0	Apr 8, 1997
PHENOL-D5	5	86.0	Apr 8, 1997
TERPHENYL-D14	5	96.0	Apr 8, 1997

Method Number: OLM03.1

Prep Method: OLM03.1

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
PERCENT MOISTURE	1	17.0	0.50	%	Apr 10, 1997

Location: ABERDEEN
 Project Name: STOCKPILE SOILS-4/97
 Sample Source: ABD-SP-3
 Sample Name: ABD-SP-3
 Date Sampled: April 1, 1997
 Lab Sample ID: CBWVF -1 Analysis Lab: QES-AUS

Method Number: 6010A

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	1	45.6	20.0	MG/KG	Apr 10, 1997
CADMIUM	1	< 0.50	0.50	MG/KG	Apr 10, 1997
LEAD	1	< 10.0	10.0	MG/KG	Apr 10, 1997

Method Number: 8240B

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
1,1-DICHLOROETHENE	1	< 5.0	5.0	UG/KG	Apr 11, 1997
CIS-1,2-DICHLOROETHENE	1	< 2.5	2.5	UG/KG	Apr 11, 1997
TRANS-1,2-DICHLOROETHENE	1	< 2.5	2.5	UG/KG	Apr 11, 1997
TRICHLOROETHENE	1	< 5.0	5.0	UG/KG	Apr 11, 1997
VINYL CHLORIDE	1	< 10	10	UG/KG	Apr 11, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4	1	109.0	Apr 11, 1997
4-BROMOFLUOROBENZENE	1	98.0	Apr 11, 1997
TOLUENE-D8	1	102.0	Apr 11, 1997

Method Number: 8270B

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
DI-N-OCTYL PHTHALATE	5	480	330	UG/KG	Apr 8, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	5	95.0	Apr 8, 1997
2-FLUOROBIPHENYL	5	83.0	Apr 8, 1997
2-FLUOROPHENOL	5	75.0	Apr 8, 1997
NITROBENZENE-D5	5	74.0	Apr 8, 1997
PHENOL-D5	5	80.0	Apr 8, 1997
TERPHENYL-D14	5	95.0	Apr 8, 1997

Method Number: OLM03.1

Prep Method: OLM03.1

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
PERCENT MOISTURE	1	19.1	0.50	%	Apr 10, 1997

Method Number: 8270B

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL) PHTHALATE	5	11000	1600	UG/KG	Apr 8, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	5	99.0	Apr 8, 1997
2-FLUOROBIPHENYL	5	88.0	Apr 8, 1997
2-FLUOROPHENOL	5	78.0	Apr 8, 1997

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Location: ABERDEEN
Project Name: STOCKPILE SOILS-4/97
Sample Source: ABD-SP-3
Sample Name: ABD-SP-3
Date Sampled: April 1, 1997
Lab Sample ID: C8WVF -2 Analysis Lab: QES-AUS

Analyte/Parameter -----	Dilution -----	RPR ---	Date Analyzed -----
NITROBENZENE-D5	5	71.0	Apr 8, 1997
PHENOL-D5	5	87.0	Apr 8, 1997
TERPHENYL-D14	5	106.0	Apr 8, 1997

Location: ABERDEEN
 Project Name: STOCKPILE SOILS-4/97
 Sample Source: ABD-SP-4
 Sample Name: ABD-SP-4
 Date Sampled: April 1, 1997
 Lab Sample ID: C8WVG -1 Analysis Lab: QES-AUS

Method Number: 6010A

Prep Method: 3050

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BARIUM	1	39.4	20.0	MG/KG	Apr 10, 1997
CADMIUM	1	< 0.50	0.50	MG/KG	Apr 10, 1997
LEAD	1	< 10.0	10.0	MG/KG	Apr 10, 1997

Method Number: 8240B

Prep Method: 5030

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
1,1-DICHLOROETHENE	1	< 5.0	5.0	UG/KG	Apr 14, 1997
CIS-1,2-DICHLOROETHENE	1	< 2.5	2.5	UG/KG	Apr 14, 1997
TRANS-1,2-DICHLOROETHENE	1	< 2.5	2.5	UG/KG	Apr 14, 1997
TRICHLOROETHENE	1	27	5.0	UG/KG	Apr 14, 1997
VINYL CHLORIDE	1	< 10	10	UG/KG	Apr 14, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
1,2-DICHLOROETHANE-D4	1	99.0	Apr 14, 1997
4-BROMOFLUOROBENZENE	1	94.0	Apr 14, 1997
TOLUENE-D8	1	99.0	Apr 14, 1997

Method Number: 8270B

Prep Method: 3550

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
BIS(2-ETHYLHEXYL) PHTHALATE	5	4700	1600	UG/KG	Apr 8, 1997
DI-N-OCTYL PHTHALATE	5	< 1600	1600	UG/KG	Apr 8, 1997

Surrogates:

Analyte/Parameter	Dilution	RPR	Date Analyzed
2,4,6-TRIBROMOPHENOL	5	75.0	Apr 8, 1997
2-FLUOROBIPHENYL	5	78.0	Apr 8, 1997
2-FLUOROPHENOL	5	69.0	Apr 8, 1997
NITROBENZENE-D5	5	64.0	Apr 8, 1997
PHENOL-D5	5	76.0	Apr 8, 1997
TERPHENYL-D14	5	89.0	Apr 8, 1997

Method Number: OLM03.1

Prep Method: OLM03.1

Analyte/Parameter	Dilution	Result	PQL	Unit	Date Analyzed
PERCENT MOISTURE	1	18.2	0.50	%	Apr 10, 1997

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Location: ABERDEEN
Project Name: STOCKPILE SOILS-4/97
Sample Source: ABD-TBLK-3
Sample Name: ABD-TBLK-3
Date Sampled: March 25, 1997
Lab Sample ID: CBWVJ -1 Analysis Lab: QES-AUS

Method Number: 82408

Prep Method: 5030

Analyte/Parameter -----	Dilution -----	Result -----	PQL ---	Unit ----	Date Analyzed -----
1,1-DICHLOROETHENE	1	< 5.0	5.0	UG/L	Apr 10, 1997
CIS-1,2-DICHLOROETHENE	1	< 2.5	2.5	UG/L	Apr 10, 1997
TRANS-1,2-DICHLOROETHENE	1	< 2.5	2.5	UG/L	Apr 10, 1997
TRICHLOROETHENE	1	< 5.0	5.0	UG/L	Apr 10, 1997
VINYL CHLORIDE	1	< 10	10	UG/L	Apr 10, 1997

Surrogates:

Analyte/Parameter -----	Dilution -----	RPR ---	Date Analyzed -----
1,2-DICHLOROETHANE-D4	1	109.0	Apr 10, 1997
4-BROMOFLUOROBENZENE	1	98.0	Apr 10, 1997
TOLUENE-D8	1	96.0	Apr 10, 1997

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April 25, 1997

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Location: ABERDEEN
Project Name: STOCKPILE SOILS-4/97

Analyte/Parameter -----	Result -----	Unit ----	PQL ---	Method No. -----	Sampled -----	Sample Name -----
BARIUM	62.0	MG/KG	20.0	6010A	97-04-01	ABD-SP-1
BIS(2-ETHYLHEXYL) PHTHALATE	23000	UG/KG	3300	8270B	97-04-01	ABD-SP-1
DI-N-OCTYL PHTHALATE	1700	UG/KG	330	8270B	97-04-01	ABD-SP-1
PERCENT MOISTURE	20.8	%	0.50	OLM03.1	97-04-01	ABD-SP-1
BARIUM	60.3	MG/KG	20.0	6010A	97-04-01	ABD-SP-1-DUP
BIS(2-ETHYLHEXYL) PHTHALATE	18000	UG/KG	3300	8270B	97-04-01	ABD-SP-1-DUP
DI-N-OCTYL PHTHALATE	1300	UG/KG	330	8270B	97-04-01	ABD-SP-1-DUP
PERCENT MOISTURE	20.0	%	0.50	OLM03.1	97-04-01	ABD-SP-1-DUP
BARIUM	49.3	MG/KG	20.0	6010A	97-04-01	ABD-SP-2
BIS(2-ETHYLHEXYL) PHTHALATE	11000	UG/KG	1600	8270B	97-04-01	ABD-SP-2
PERCENT MOISTURE	17.0	%	0.50	OLM03.1	97-04-01	ABD-SP-2
BARIUM	45.6	MG/KG	20.0	6010A	97-04-01	ABD-SP-3
BIS(2-ETHYLHEXYL) PHTHALATE	11000	UG/KG	1600	8270B	97-04-01	ABD-SP-3
DI-N-OCTYL PHTHALATE	480	UG/KG	330	8270B	97-04-01	ABD-SP-3
PERCENT MOISTURE	19.1	%	0.50	OLM03.1	97-04-01	ABD-SP-3
BARIUM	39.4	MG/KG	20.0	6010A	97-04-01	ABD-SP-4
TRICHLOROETHENE	27	UG/KG	5.0	8240B	97-04-01	ABD-SP-4
BIS(2-ETHYLHEXYL) PHTHALATE	4700	UG/KG	1600	8270B	97-04-01	ABD-SP-4
PERCENT MOISTURE	18.2	%	0.50	OLM03.1	97-04-01	ABD-SP-4

Method Number: 6010A Prep Method: 3010 Pre-prep:
 Batch Start Date: 07APR97
 Instrument: B1
 Batch Number: 87

The following field samples are included in this batch:

Sample Name	Date Sampled	Lab ID
ABD-EQBLK-3	01APR97	QES-AUS C8WVH 1

Lab Control Spike:

Analyte/Parameter	RPR	Lab Sample ID
BARIUM	99	C8XJF -1 QES-AUS
CADMIUM	101	C8XJF -1 QES-AUS
LEAD	102	C8XJF -1 QES-AUS

Matrix Spike:

Analyte/Parameter	RPR	Lab Sample ID
BARIUM	102	C8X2F -1 QES-AUS
CADMIUM	97	C8X2F -1 QES-AUS
LEAD	96	C8X2F -1 QES-AUS

Matrix Spike Duplicate:

Analyte/Parameter	RPR	RPD	Lab Sample ID
BARIUM	99	2.4	C8X2F -1 QES-AUS
CADMIUM	96	1.3	C8X2F -1 QES-AUS
LEAD	94	2	C8X2F -1 QES-AUS

Method Number: 6010A Prep Method: 3050 Pre-prep:
 Batch Start Date: 09APR97
 Instrument: B1
 Batch Number: 9

The following field samples are included in this batch:

Sample Name	Date Sampled	Lab ID
ABD-SP-1	01APR97	QES-AUS C8WVC 1
ABD-SP-1-DUP	01APR97	QES-AUS C8WVD 1
ABD-SP-2	01APR97	QES-AUS C8WVE 1
ABD-SP-3	01APR97	QES-AUS C8WVF 1
ABD-SP-4	01APR97	QES-AUS C8WVG 1

Lab Control Spike:

Analyte/Parameter	RPR	Lab Sample ID
BARIUM	98	C9ORP -1 QES-AUS
CADMIUM	94	C9ORP -1 QES-AUS
LEAD	89	C9ORP -1 QES-AUS

Matrix Spike:

Analyte/Parameter	RPR	Lab Sample ID
BARIUM	100	C8WVC -1 QES-AUS
CADMIUM	98	C8WVC -1 QES-AUS
LEAD	94	C8WVC -1 QES-AUS

Matrix Spike Duplicate:

Analyte/Parameter	RPR	RPD	Lab Sample ID	
-----	---	---	-----	-----
BARIUM	86	12	C8WVC -1	QES-AUS
CADMIUM	92	6.2	C8WVC -1	QES-AUS
LEAD	89	4.9	C8WVC -1	QES-AUS

Method Number: 82408 Prep Method: 5030 Pre-prep:
 Batch Start Date: 11APR97
 Instrument: E1
 Batch Number: 94

The following field samples are included in this batch:

Sample Name	Date Sampled Lab ID	
-----	-----	-----
ABD-EQBLK-3	01APR97	QES-AUS C8WVH 1
ABD-TBLK-3	25MAR97	QES-AUS C8WVJ 1

Lab Control Spike:

Analyte/Parameter	RPR	Lab Sample ID	
-----	---	-----	-----
1,1-DICHLOROETHENE	99	C9208 -1	QES-AUS
BENZENE	106	C9208 -1	QES-AUS
CHLOROBENZENE	110	C9208 -1	QES-AUS
TOLUENE	107	C9208 -1	QES-AUS
TRICHLOROETHENE	107	C9208 -1	QES-AUS

Surrogates:

1,2-DICHLOROETHANE-D4	109	C9208 -1	QES-AUS
4-BROMOFLUOROBENZENE	100	C9208 -1	QES-AUS
TOLUENE-D8	100	C9208 -1	QES-AUS

Matrix Spike:

Analyte/Parameter	RPR	Lab Sample ID	
-----	---	-----	-----
1,1-DICHLOROETHENE	102	C8VAE -1	QES-AUS
BENZENE	93	C8VAE -1	QES-AUS
CHLOROBENZENE	105	C8VAE -1	QES-AUS
TOLUENE	114	C8VAE -1	QES-AUS
TRICHLOROETHENE	108	C8VAE -1	QES-AUS

Surrogates:

1,2-DICHLOROETHANE-D4	104	C8VAE -1	QES-AUS
4-BROMOFLUOROBENZENE	97	C8VAE -1	QES-AUS
TOLUENE-D8	95	C8VAE -1	QES-AUS

Matrix Spike Duplicate:

Analyte/Parameter	RPR	RPD	Lab Sample ID	
-----	---	---	-----	-----
1,1-DICHLOROETHENE	101	.98	C8VAE -1	QES-AUS
BENZENE	104	2.5	C8VAE -1	QES-AUS
CHLOROBENZENE	106	.27	C8VAE -1	QES-AUS
TOLUENE	114	.2	C8VAE -1	QES-AUS
TRICHLOROETHENE	107	.77	C8VAE -1	QES-AUS

Surrogates:

1,2-DICHLOROETHANE-D4	108	C8VAE -1	QES-AUS
4-BROMOFLUOROBENZENE	99	C8VAE -1	QES-AUS

Matrix Spike Duplicate:

Analyte/Parameter -----	RPR ---	RPD ---	Lab Sample ID -----
TOLUENE-D8	99		C8VAE -1 QES-AUS

Method Number: 82408 Prep Method: 5030 Pre-prep:
 Batch Start Date: 14APR97
 Instrument: E1
 Batch Number: 20

The following field samples are included in this batch:

Sample Name -----	Date Sampled	Lab ID
ABD-SP-1	01APR97	QES-AUS C8WVC 1
ABD-SP-1-DUP	01APR97	QES-AUS C8WVC 1
ABD-SP-2	01APR97	QES-AUS C8WVE 1
ABD-SP-3	01APR97	QES-AUS C8WVF 1

Lab Control Spike:

Analyte/Parameter -----	RPR ---	Lab Sample ID -----
1,1-DICHLOROETHENE	117	C9325 -1 QES-AUS
BENZENE	106	C9325 -1 QES-AUS
CHLOROBENZENE	108	C9325 -1 QES-AUS
TOLUENE	107	C9325 -1 QES-AUS
TRICHLOROETHENE	106	C9325 -1 QES-AUS

Surrogates:

1,2-DICHLOROETHANE-D4	103	C9325 -1 QES-AUS
4-BROMOFLUOROBENZENE	98	C9325 -1 QES-AUS
TOLUENE-D8	104	C9325 -1 QES-AUS

Matrix Spike:

Analyte/Parameter -----	RPR ---	Lab Sample ID -----
1,1-DICHLOROETHENE	97	C8WVC -1 QES-AUS
BENZENE	99	C8WVC -1 QES-AUS
CHLOROBENZENE	100	C8WVC -1 QES-AUS
TOLUENE	98	C8WVC -1 QES-AUS
TRICHLOROETHENE	97	C8WVC -1 QES-AUS

Surrogates:

1,2-DICHLOROETHANE-D4	107	C8WVC -1 QES-AUS
4-BROMOFLUOROBENZENE	96	C8WVC -1 QES-AUS
TOLUENE-D8	98	C8WVC -1 QES-AUS

Matrix Spike Duplicate:

Analyte/Parameter -----	RPR ---	RPD ---	Lab Sample ID -----
1,1-DICHLOROETHENE	102	4.8	C8WVC -1 QES-AUS
BENZENE	105	5.7	C8WVC -1 QES-AUS
CHLOROBENZENE	108	7.3	C8WVC -1 QES-AUS
TOLUENE	109	10	C8WVC -1 QES-AUS
TRICHLOROETHENE	101	3.6	C8WVC -1 QES-AUS

Surrogates:

1,2-DICHLOROETHANE-D4	105	C8WVC -1 QES-AUS
4-BROMOFLUOROBENZENE	99	C8WVC -1 QES-AUS

Matrix Spike Duplicate:

Analyte/Parameter	RPR	RPD	Lab Sample ID
-----	---	---	-----
TOLUENE-D8	102		C8WVC -1 QES-AUS

Method Number: 82408 Prep Method: 5030 Pre-prep:
 Batch Start Date: 15APR97
 Instrument: E1
 Batch Number: 43

The following field samples are included in this batch:

Sample Name	Date Sampled	Lab ID
-----	-----	-----
ABD-SP-4	01APR97	QES-AUS C8WVG 1

Lab Control Spike:

Analyte/Parameter	RPR	Lab Sample ID
-----	---	-----
1,1-DICHLOROETHENE	98	C938D -1 QES-AUS
BENZENE	102	C938D -1 QES-AUS
CHLOROBENZENE	106	C938D -1 QES-AUS
TOLUENE	102	C938D -1 QES-AUS
TRICHLOROETHENE	106	C938D -1 QES-AUS

Surrogates:

1,2-DICHLOROETHANE-D4	101	C938D -1 QES-AUS
4-BROMOFLUOROBENZENE	96	C938D -1 QES-AUS
TOLUENE-D8	97	C938D -1 QES-AUS

Matrix Spike:

Analyte/Parameter	RPR	Lab Sample ID
-----	---	-----
1,1-DICHLOROETHENE	101	C8WVG -1 QES-AUS
BENZENE	105	C8WVG -1 QES-AUS
CHLOROBENZENE	107	C8WVG -1 QES-AUS
TOLUENE	104	C8WVG -1 QES-AUS
TRICHLOROETHENE	115	C8WVG -1 QES-AUS

Surrogates:

1,2-DICHLOROETHANE-D4	97	C8WVG -1 QES-AUS
4-BROMOFLUOROBENZENE	95	C8WVG -1 QES-AUS
TOLUENE-D8	100	C8WVG -1 QES-AUS

Matrix Spike Duplicate:

Analyte/Parameter	RPR	RPD	Lab Sample ID
-----	---	---	-----
1,1-DICHLOROETHENE	97	4.3	C8WVG -1 QES-AUS
BENZENE	99	6.5	C8WVG -1 QES-AUS
CHLOROBENZENE	104	2.4	C8WVG -1 QES-AUS
TOLUENE	102	2.7	C8WVG -1 QES-AUS
TRICHLOROETHENE	102	8.3	C8WVG -1 QES-AUS

Surrogates:

1,2-DICHLOROETHANE-D4	97	C8WVG -1 QES-AUS
4-BROMOFLUOROBENZENE	93	C8WVG -1 QES-AUS
TOLUENE-D8	99	C8WVG -1 QES-AUS

Method Number: 82708 Prep Method: 3520 Pre-prep:
 Batch Start Date: 07APR97
 Instrument: F1
 Batch Number: 22

The following field samples are included in this batch:

Sample Name	Date Sampled	Lab ID
ABD-EQBLK-3	01APR97	QES-AUS CBWVH 1

Lab Control Spike:

Analyte/Parameter	RPR	Lab Sample ID
1,2,4-TRICHLOROBENZENE	64	C8XL1 -1 QES-AUS
1,4-DICHLOROBENZENE	58	C8XL1 -1 QES-AUS
2,4-DINITROTOLUENE	74	C8XL1 -1 QES-AUS
2-CHLOROPHENOL	69	C8XL1 -1 QES-AUS
4-CHLORO-3-METHYLPHENOL	74	C8XL1 -1 QES-AUS
4-NITROPHENOL	72	C8XL1 -1 QES-AUS
ACENAPHTHENE	72	C8XL1 -1 QES-AUS
N-NITROSODI-N-PROPYLAMINE	78	C8XL1 -1 QES-AUS
PENTACHLOROPHENOL	72	C8XL1 -1 QES-AUS
PHENOL	66	C8XL1 -1 QES-AUS
PYRENE	94	C8XL1 -1 QES-AUS

Surrogates:

Analyte/Parameter	RPR	Lab Sample ID
2,4,6-TRIBROMOPHENOL	85	C8XL1 -1 QES-AUS
2-FLUOROBIPHENYL	65	C8XL1 -1 QES-AUS
2-FLUOROPHENOL	67	C8XL1 -1 QES-AUS
NITROBENZENE-D5	76	C8XL1 -1 QES-AUS
PHENOL-D5	71	C8XL1 -1 QES-AUS
TERPHENYL-D14	91	C8XL1 -1 QES-AUS

Matrix Spike:

Analyte/Parameter	RPR	Lab Sample ID
1,2,4-TRICHLOROBENZENE	66	C8W2N -1 QES-AUS
1,4-DICHLOROBENZENE	63	C8W2N -1 QES-AUS
2,4-DINITROTOLUENE	78	C8W2N -1 QES-AUS
2-CHLOROPHENOL	72	C8W2N -1 QES-AUS
4-CHLORO-3-METHYLPHENOL	83	C8W2N -1 QES-AUS
4-NITROPHENOL	89	C8W2N -1 QES-AUS
ACENAPHTHENE	76	C8W2N -1 QES-AUS
N-NITROSODI-N-PROPYLAMINE	85	C8W2N -1 QES-AUS
PENTACHLOROPHENOL	91	C8W2N -1 QES-AUS
PHENOL	72	C8W2N -1 QES-AUS
PYRENE	98	C8W2N -1 QES-AUS

Surrogates:

Analyte/Parameter	RPR	Lab Sample ID
2,4,6-TRIBROMOPHENOL	105	C8W2N -1 QES-AUS
2-FLUOROBIPHENYL	66	C8W2N -1 QES-AUS
2-FLUOROPHENOL	73	C8W2N -1 QES-AUS
NITROBENZENE-D5	83	C8W2N -1 QES-AUS
PHENOL-D5	77	C8W2N -1 QES-AUS
TERPHENYL-D14	86	C8W2N -1 QES-AUS

Matrix Spike Duplicate:

Analyte/Parameter	RPR	RPD	Lab Sample ID
1,2,4-TRICHLOROBENZENE	65	1.8	C8W2N -1 QES-AUS
1,4-DICHLOROBENZENE	62	1.6	C8W2N -1 QES-AUS
2,4-DINITROTOLUENE	79	1.2	C8W2N -1 QES-AUS
2-CHLOROPHENOL	70	2.6	C8W2N -1 QES-AUS

Matrix Spike Duplicate:

Analyte/Parameter	RPR	RPD	Lab Sample ID	
-----	---	---	-----	-----
4-CHLORO-3-METHYLPHENOL	79	4	C8W2N -1	QES-AUS
4-NITROPHENOL	90	1.6	C8W2N -1	QES-AUS
ACENAPHTHENE	78	2.7	C8W2N -1	QES-AUS
N-NITROSODI-N-PROPYLAMINE	83	2.1	C8W2N -1	QES-AUS
PENTACHLOROPHENOL	95	3.5	C8W2N -1	QES-AUS
PHENOL	68	4.6	C8W2N -1	QES-AUS
PYRENE	100	1.8	C8W2N -1	QES-AUS

Surrogates:

2,4,6-TRIBROMOPHENOL	103	C8W2N -1	QES-AUS
2-FLUOROBIPHENYL	69	C8W2N -1	QES-AUS
2-FLUOROPHENOL	71	C8W2N -1	QES-AUS
NITROBENZENE-D5	79	C8W2N -1	QES-AUS
PHENOL-D5	72	C8W2N -1	QES-AUS
TERPHENYL-D14	63	C8W2N -1	QES-AUS

Method Number: 82708 Prep Method: 3550 Pre-prep:
 Batch Start Date: 04APR97
 Instrument: D1
 Batch Number: 89

The following field samples are included in this batch:

Sample Name	Date Sampled	Lab ID	
-----	-----	-----	-----
ABD-SP-1	01APR97	QES-AUS	C8WVC 1
ABD-SP-1	01APR97	QES-AUS	C8WVC 2
ABD-SP-1-DUP	01APR97	QES-AUS	C8WVD 1
ABD-SP-1-DUP	01APR97	QES-AUS	C8WVD 2
ABD-SP-2	01APR97	QES-AUS	C8WVE 1
ABD-SP-3	01APR97	QES-AUS	C8WVF 1
ABD-SP-3	01APR97	QES-AUS	C8WVF 2
ABD-SP-4	01APR97	QES-AUS	C8WVG 1

Lab Control Spike:

Analyte/Parameter	RPR	Lab Sample ID	
-----	---	-----	-----
1,2,4-TRICHLOROBENZENE	67	C8X3L -1	QES-AUS
1,4-DICHLOROBENZENE	63	C8X3L -1	QES-AUS
2,4-DINITROTOLUENE	81	C8X3L -1	QES-AUS
2-CHLOROPHENOL	62	C8X3L -1	QES-AUS
4-CHLORO-3-METHYLPHENOL	67	C8X3L -1	QES-AUS
4-NITROPHENOL	84	C8X3L -1	QES-AUS
ACENAPHTHENE	67	C8X3L -1	QES-AUS
N-NITROSODI-N-PROPYLAMINE	63	C8X3L -1	QES-AUS
PENTACHLOROPHENOL	87	C8X3L -1	QES-AUS
PHENOL	60	C8X3L -1	QES-AUS
PYRENE	96	C8X3L -1	QES-AUS

Surrogates:

2,4,6-TRIBROMOPHENOL	86	C8X3L -1	QES-AUS
2-FLUOROBIPHENYL	66	C8X3L -1	QES-AUS
2-FLUOROPHENOL	65	C8X3L -1	QES-AUS
NITROBENZENE-D5	64	C8X3L -1	QES-AUS
PHENOL-D5	66	C8X3L -1	QES-AUS
TERPHENYL-D14	98	C8X3L -1	QES-AUS

Matrix Spike:

Analyte/Parameter	RPR	Lab Sample ID	
-----	---	-----	-----
1,2,4-TRICHLOROBENZENE	80	C8WVC -1	QES-AUS

Matrix Spike:

Analyte/Parameter	RPR	Lab Sample ID	
-----	---	-----	-----
1,4-DICHLOROBENZENE	74	C8WVC -1	QES-AUS
2,4-DINITROTOLUENE	88	C8WVC -1	QES-AUS
2-CHLOROPHENOL	77	C8WVC -1	QES-AUS
4-CHLORO-3-METHYLPHENOL	80	C8WVC -1	QES-AUS
4-NITROPHENOL	87	C8WVC -1	QES-AUS
ACENAPHTHENE	87	C8WVC -1	QES-AUS
N-NITROSODI-N-PROPYLAMINE	79	C8WVC -1	QES-AUS
PENTACHLOROPHENOL	99	C8WVC -1	QES-AUS
PHENOL	73	C8WVC -1	QES-AUS
PYRENE	100	C8WVC -1	QES-AUS

Surrogates:

2,4,6-TRIBROMOPHENOL	99	C8WVC -1	QES-AUS
2-FLUOROBIPHENYL	86	C8WVC -1	QES-AUS
2-FLUOROPHENOL	79	C8WVC -1	QES-AUS
NITROBENZENE-D5	80	C8WVC -1	QES-AUS
PHENOL-D5	82	C8WVC -1	QES-AUS
TERPHENYL-D14	101	C8WVC -1	QES-AUS

Matrix Spike Duplicate:

Analyte/Parameter	RPR	RPD	Lab Sample ID	
-----	---	---	-----	-----
1,2,4-TRICHLOROBENZENE	73	8.1	C8WVC -1	QES-AUS
1,4-DICHLOROBENZENE	67	9.9	C8WVC -1	QES-AUS
2,4-DINITROTOLUENE	84	5.3	C8WVC -1	QES-AUS
2-CHLOROPHENOL	72	6.4	C8WVC -1	QES-AUS
4-CHLORO-3-METHYLPHENOL	77	4.3	C8WVC -1	QES-AUS
4-NITROPHENOL	82	6.5	C8WVC -1	QES-AUS
ACENAPHTHENE	84	3.6	C8WVC -1	QES-AUS
N-NITROSODI-N-PROPYLAMINE	76	3	C8WVC -1	QES-AUS
PENTACHLOROPHENOL	93	6.1	C8WVC -1	QES-AUS
PHENOL	71	3	C8WVC -1	QES-AUS
PYRENE	92	8.6	C8WVC -1	QES-AUS

Surrogates:

2,4,6-TRIBROMOPHENOL	96	C8WVC -1	QES-AUS
2-FLUOROBIPHENYL	81	C8WVC -1	QES-AUS
2-FLUOROPHENOL	73	C8WVC -1	QES-AUS
NITROBENZENE-D5	72	C8WVC -1	QES-AUS
PHENOL-D5	77	C8WVC -1	QES-AUS
TERPHENYL-D14	91	C8WVC -1	QES-AUS

Method Number: OLM03.1 Prep Method: OLM03.1 Pre-prep:
 Batch Start Date: 07APR97
 Instrument: A1
 Batch Number: 37

The following field samples are included in this batch:

Sample Name	Date Sampled	Lab ID	
-----	-----	-----	-----
ABD-SP-1	01APR97	QES-AUS	C8WVC 1
ABD-SP-1-DUP	01APR97	QES-AUS	C8WVD 1
ABD-SP-2	01APR97	QES-AUS	C8WVE 1
ABD-SP-3	01APR97	QES-AUS	C8WVF 1
ABD-SP-4	01APR97	QES-AUS	C8WVG 1

Replicate:

Analyte/Parameter	Result	Unit	RPD	Lab Sample ID	
-----	-----	-----	---	-----	-----
PERCENT MOISTURE	24.6	%	0	C8TRR -1	QES-AUS

Chain of Custody Record



QUA-4148

Client

JERRY BAKER

Project Manager

ANDREW STON

Date

Chain Of Custody Number

19271

Address

VISTA ARBIDEEN

Telephone Number (Area Code)/Fax Number

601-369 3637

Lab Number

07 03 051

City

ARBIDEEN

State MS

Zip Code 39130

Site Contact

DENNIS WILSON

Project Name

362547 STARKVILLE SOILS 4/97

Carrier/Waybill Number

PRD11

Contract/Purchase Order/Quote No.

QUOTE #

PACK IN WEST ICE/SHIP TO: QUANTERRA AUSTIN

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers		Preservative	Condition on Receipt	Analysis									
					Type	No.			6	8	2	3	4	7	9	0		
ABD-SP-1	4-1-97	1020	SOIL	120HL	GLASS	1	4 C	1800 D42	X									
ABD-SP-1		1020	SOIL	250HL	GLASS	1	4 C	500 4 77	X									
ABD-SP-1-DUP		1020	SOIL	170HL	GLASS	1	1 C		X									
ABD-SP-1-DUP		1020	SOIL	250HL	GLASS	1	4 C		X									
ABD-SP-2		1045	SOIL	120HL	GLASS	1	4 C		X									
ABD-SP-2		1045	SOIL	250HL	GLASS	1	4 C		X									
ABD-SP-3		1110	SOIL	120HL	GLASS	1	4 C		X									
ABD-SP-3		1110	SOIL	250HL	GLASS	1	4 C		X									
ABD-SP-4		1130	SOIL	120HL	GLASS	1	4 C		X									
ABD-SP-4		1130	SOIL	250HL	GLASS	1	4 C		X									
ABD-EQBL-3		1145	WATER	40 HL	GL/SRP 2	2	H2SO4		X									
ABD-EQBL-3		1145	WATER	1L	AMB/GL	21	4 C	MS 512547										
ABD-EQBL-3		1145	WATER	500HL	POLY	1	HN93		X									
ABD-TELR-3	3-25-97	1750	WATER	40 HL	GL/SRP 2	2	H2SO4		X									

Special Instructions

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Turn Around Time Required

☐ Normal ☐ Rush

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For

Project Specific (Specify)

1. Relinquished By

John M. Johnson

Date

3-25-97

Time

1800

2. Relinquished By

Michelle

Date

4-2-97

Time

1400

3. Relinquished By

Michelle

Date

Time

Comments

Date 3/27/97 Time 1200
Date 4-2-97 Time 1400
Date Date Time

Client JEFF BAKER		Project Manager ANDREW STON		Chain Of Custody Number 22202	
Address VISTA ABERDEEN		Telephone Number (Area Code)/Fax Number 713-586-5638		Lab Number C7-85-009	
City ABERDEEN	State MS	Zip Code 39738	Date 5/18/97		
Project Name ICE INVESTIGATION 5/97			Page 1 of 1		
Contract/Purchase Order/Quote No.			Analysis		

PACK IN WET ICE/SHIP TO: QUANTERRA AUSTIN								
Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers		Preservative	Condition on Receipt
					Type	No.		
ABD-PND2 SA BTM-1	5-29-97	10 ⁴⁵	SOIL	120ML	GLASS	1	4 deg. C	
ABD-PND2 SA BTM-2	5-29-97	10 ⁵⁰	SOIL	110-250g	GLASS	1	4 deg. C	
ABD-E0BLK-2			WATER	40ML	GL/SEW	2	H2SO4	
ABD-E0BLK-2			WATER	40ML	GL/SEW	2	H2SO4	
ABD-E0BLK-2			WATER	40ML	GL/SEW	2	H2SO4	
ABD-E0BLK-2			WATER	40ML	GL/SEW	2	H2SO4	
ABD-E0BLK-2			WATER	40ML	GL/SEW	2	H2SO4	
ABD-E0BLK-2			WATER	40ML	GL/SEW	2	H2SO4	

Special Instructions		Sample Disposal		Archive For		Months	
Possible Hazard Identification		Project Specific (Specify)		Disposal By Lab		Date	
☐ Non-Hazard	☐ Flammable	☐ Skin Irritant	☐ Poison B	☐ Unknown	☐ Return To Client	☐ Disposal By Lab	☐ Archive For
Turn Around Time Required		QC Level		Project Specific (Specify)		Date	
☐ Normal	☐ Rush	☐ I.	☐ II.	☐ III.	1. Received By		Time
1. Relinquished By		Date		Time		Date	
2. Relinquished By		Date		Time		Date	
3. Relinquished By		Date		Time		Date	

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy



Date: 06/06/97
 Time: 15:30:30
 (Mountain Time)

From: Chris Schepcoff
 Quanterra Inc.
 5307 Industrial Oaks Blvd
 Suite 160
 Austin, TX 78735

To: ANDREW STOW
 DERS
 713-5865695

voice: 512-892-6684
 fax: 512-892-6652

Number of Pages
 Including Cover Sheet: 02

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 Quote Number: 015966
 Project Number: TCE INVEST.5/97
 Project Name/Site: ABD

QUANTERRA INCORPORATED

PRELIMINARY DATA SUMMARY

 The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: I7F020104 DuPont Environmental Remediation Svcs. PAGE 1
 ABD Date Reported: 6/06/97
 Project Number: TCE INVEST.5/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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Client Sample ID: ABD-PND2-BTM-1

Sample #: 001 Date Sampled: 05/29/97 10:45 Date Received: 05/30/97 Matrix: SOLID

Volatile Organics by GC/MS TCLP

In Review

1,2-Dichloroethane	ND	0.050	mg/L	SW846 8240B
1,1-Dichloroethylene	ND	0.050	mg/L	SW846 8240B
Tetrachloroethylene	ND	0.050	mg/L	SW846 8240B
Trichloroethylene	ND	0.050	mg/L	SW846 8240B
Vinyl chloride	ND	0.10	mg/L	SW846 8240B
Benzene	ND	0.050	mg/L	SW846 8240B
Methyl ethyl ketone	ND	0.20	mg/L	SW846 8240B
Carbon tetrachloride	ND	0.050	mg/L	SW846 8240B
Chlorobenzene	ND	0.050	mg/L	SW846 8240B
Chloroform	ND	0.050	mg/L	SW846 8240B

Client Sample ID: ABD-PND2-BTM-2

Sample #: 002 Date Sampled: 05/29/97 10:50 Date Received: 05/30/97 Matrix: SOLID

Volatile Organics by GC/MS TCLP

In Review

1,2-Dichloroethane	ND	0.050	mg/L	SW846 8240B
1,1-Dichloroethylene	ND	0.050	mg/L	SW846 8240B
Tetrachloroethylene	ND	0.050	mg/L	SW846 8240B
Trichloroethylene	ND	0.050	mg/L	SW846 8240B
Vinyl chloride	ND	0.10	mg/L	SW846 8240B
Benzene	ND	0.050	mg/L	SW846 8240B
Methyl ethyl ketone	ND	0.20	mg/L	SW846 8240B
Carbon tetrachloride	ND	0.050	mg/L	SW846 8240B
Chlorobenzene	ND	0.050	mg/L	SW846 8240B
Chloroform	ND	0.050	mg/L	SW846 8240B

QUA-4148

Client: **JEFF BAKER** Project Manager: **ANDREW STON** Date: _____

Address: **VISTA - ABERDEEN** Telephone Number (Area Code)/Fax Number: **713-586-5638** Lab Number: **C7-05-008** Page: **22198** of _____

City: **ABERDEEN** State: **MS** Zip Code: **39730** Site Contact: **KIMMY AKINS**

Project Name: **TCE INVESTIGATION 5/97** Carrier/Waybill Number: **AIRBORNE**

Contract/Purchase Order/Quote No. _____

Analysis: _____

QUOTE # _____

PACK IN WET ICE/SHIP TO: QUANTERRA AUSTIN

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers		Preservative	Condition on Receipt
					Type	No.		
ABD-PND2-BTM-1	7/5/97	705	SOIL	120HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-1		705	SOIL	250HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-2		735	SOIL	120HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-2		735	SOIL	250HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-3		630	SOIL	120HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-3		630	SOIL	250HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-4		716	SOIL	120HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-4		716	SOIL	250HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-5		800	SOIL	120HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-5		800	SOIL	250HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-6		745	SOIL	120HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-6		745	SOIL	250HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-7		645	SOIL	120HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-7		645	SOIL	250HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-8		750	SOIL	120HL	GLASS	1	4 deg. C	
ABD-PND2-BTM-8		750	SOIL	250HL	GLASS	1	4 deg. C	

Special Instructions

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Turn Around Time Required

☐ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Project Specific (Specify)

1. Relinquished By: *[Signature]* Date: **5-22-97** Time: **1800**

2. Relinquished By: *[Signature]* Date: **7/15/97** Time: **2000**

3. Relinquished By: *[Signature]* Date: _____ Time: _____

Comments

QUA-4149

Client JEFF BAKER		Project Manager ANDREW SLOW		Date	Chain Of Custody Number 22201
Address VISTA - ABERDEEN		Telephone Number (Area Code)/Fax Number 713-586-5638		Lab Number (7-85-009)	Page 22201 of 22201
City ABERDEEN	State MS	Zip Code 39230	Site Contact KENNY AKINS		
Project Name TCE INVESTIGATION 5/97		Carrier/Waybill Number AIRBORNE		Analysis	
Contract/Purchase Order/Quote No.					

QUOTE # **PACK IN WET ICE/SHIP TO: QUANTERRA AUSTIN**

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	No.	Preservative	Condition on Receipt	Analysis
ABD-PND2-S5	7/14/97	15:15	SOIL	120ML	GLASS	1	4 deg. C		6 8 8
ABD-PND2-S5	7/14/97	15:15	SOIL	250ML	GLASS	1	4 deg. C		6 8 2
ABD-PND2-S6	7/15/97	10:50	SOIL	120ML	GLASS	1	4 deg. C		6 8 2
ABD-PND2-S6	7/15/97	10:50	SOIL	250ML	GLASS	1	4 deg. C		6 8 7
ABD-PND2-S7	7/15/97	5:50	SOIL	120ML	GLASS	1	4 deg. C		6 8 0
ABD-PND2-S7	7/15/97	5:50	SOIL	250ML	GLASS	1	4 deg. C		6 8 0
ABD-PND2-S8	7/15/97	6:10	SOIL	120ML	GLASS	1	4 deg. C		6 8 0
ABD-PND2-S8	7/15/97	6:10	SOIL	250ML	GLASS	1	4 deg. C		6 8 0
ABD-PND2-S9	7/15/97	6:10	SOIL	120ML	GLASS	1	4 deg. C		6 8 0
ABD-PND2-S9	7/15/97	6:10	SOIL	250ML	GLASS	1	4 deg. C		6 8 0
ABD-PND2-S9-DUP	7/15/97	6:10	SOIL	120ML	GLASS	1	4 deg. C		6 8 0
ABD-PND2-S9-DUP	7/15/97	6:10	SOIL	250ML	GLASS	1	4 deg. C		6 8 0
ABD-PND2-S10	7/15/97	7:00	SOIL	120ML	GLASS	1	4 deg. C		6 8 0
ABD-PND2-S10	7/15/97	7:00	SOIL	250ML	GLASS	1	4 deg. C		6 8 0
ABD-PND2-S11	7/15/97	10:15	SOIL	120ML	GLASS	1	4 deg. C		6 8 0
ABD-PND2-S11	7/15/97	10:15	SOIL	250ML	GLASS	1	4 deg. C		6 8 0

Special Instructions

Possible Hazard Identification		Sample Disposal	
☐ Non-Hazard	☐ Flammable	☐ Return To Client	☐ Disposal By Lab
☐ Turn Around Time Required	☐ Skin Irritant	☐ Archive For	☐ Months
☐ Normal	☐ Rush	Project Specific (Specify)	
1. Relinquished By <i>Jeff Baker</i> Date <i>5/14/97</i> Time <i>1800</i>		1. Received By <i>Ken Akins</i> Date <i>5/15/97</i> Time <i>0800</i>	
2. Relinquished By <i>Ken Akins</i> Date <i>7/15/97</i> Time <i>2000</i>		2. Received By <i>Ken Akins</i> Date <i>7/15/97</i> Time <i>2000</i>	
3. Relinquished By <i>Ken Akins</i> Date <i>7/15/97</i> Time <i>2000</i>		3. Received By <i>Ken Akins</i> Date <i>7/15/97</i> Time <i>2000</i>	
Comments			

QUA-4149		Client		Project Manager		Date		Chain Of Custody Number	
JERRY BAKER		Address		ANDREW STON				23021	
VISTA - ABERDEEN		City		713-586-5638		Lab Number		Page	
State		Zip Code		Site Contact		67-06-003		of	
MS		39730		Kenny Arins					
Project Name		Carrier/Waybill Number		AIRBORNE					
PROPIUS 5/97									
Contract/Purchase Order/Quote No.									

QUOTE #	Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type No.	Preservative	Condition on Receipt
	ABD-TETRA-1	7/15/97		SOLID	250ml	WVGL 1	4C	
	ABD-SCHOL-2	7/15/97		SOLID	250ml	WVGL 1	4C	
	ABD-SCHOL-3	7/15/97		SOLID	250ml	WVGL 1	4C	
	ABD-PNDZ-2-B7d	7/15/97	10:30	sold	120ml	wv/gl 1	4C	X
	BD-TBLK-2	NA	NA	water	420ml	G.L./sep 2	4C/16L H ₂ O	X
	ADD-CLC	7/15/97						
	ABD-EGRUK-2	7/15/97	6:5	water	G.L./SEP	40-L 2	4C/H ₂ O	X
	↓ ↓ ↓	↓	↓	↓	Poly	50ml 1	HNO ₃	X
	↓ ↓ ↓	↓	↓	↓	Analyt	1L 2	4C	X
	ABD-PNDZ-512	7/15/97	10:00	Solid	120	wv/gl 1	4C	X
	" "	"	"	"	250	" " 1	4C	X

Special Instructions		Possible Hazard Identification		Sample Disposal		Project Specific (Specify)	
Turn Around Time Required	QC Level	Non-Hazard	Flammable	Skin Irritant	Poison B	Unknown	Return To Client
		☐	☐	☐	☐	☐	☐
Normal ☐ Rush ☐	☐ I. ☐ II. ☐ III.						
1. Relinquished By <i>James</i>	Date <i>6/2/97</i> Time <i>1640</i>					1. Received By <i>Genex Corp</i> Date <i>5/7/97</i> Time <i>800</i>	
2. Relinquished By <i>Genex Corp</i>	Date <i>7/15/97</i> Time <i>2000</i>					2. Received By <i>Genex Corp</i> Date <i>5/7/97</i> Time <i>800</i>	
3. Relinquished By <i>Genex Corp</i>						3. Received By <i>Genex Corp</i> Date <i>5/7/97</i> Time <i>800</i>	

QUA-4149

Client JEFF BAKER		Project Manager ANDREW STUM		Date	Chain Of Custody Number 22199
Address VISTA - ABERDEEN		Telephone Number (Area Code)/Fax Number 713-586-5638		Lab Number C7-05-008	Page 08 of 08
City ABERDEEN	State MS	Zip Code 39730	Site Contact KENNY AKINS		
Project Name ICE INVESTIGATION 5/97		Carrier/Waybill Number AIRBORNE			

Contract/Purchase Order/Quote No.

QUOTE #

PACK IN WET ICE/SHIP TO: QUANTERRA AUSTIN

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers		Preservative	Condition on Receipt	Analysis							
					Type	No.			6	8	2	4	6	8	2	4
ABD-PND2-S1	7/14/97	1630	SOIL	120ML	GLASS	1	4 deg. C									
ABD-PND2-S1	7/14/97	1630	SOIL	250ML	GLASS	1	4 deg. C									
ABD-PND2-S2		1430	SOIL	120ML	GLASS	1	4 deg. C									
ABD-PND2-S2		1430	SOIL	250ML	GLASS	1	4 deg. C									
ABD-PND2-S3		1445	SOIL	120ML	GLASS	1	4 deg. C									
ABD-PND2-S3		1445	SOIL	250ML	GLASS	1	4 deg. C									
ABD-PND2-S4		1500	SOIL	120ML	GLASS	1	4 deg. C									
ABD-PND2-S4		1500	SOIL	250ML	GLASS	1	4 deg. C									
ABD-PND2-S5		1513	SOIL	120		1										
ABD-PND2-S5		1513	SOIL	250		1										
ABD-PND2-S7		1530	SOIL	120		1										
ABD-PND2-S7		1530	SOIL	250		1										
ABD-PND2-S8		1600	SOIL	120		1										
ABD-PND2-S8		1600	SOIL	250		1										
ABD-PND2-S9		1610	SOIL	120		1										
ABD-PND2-S9		1610	SOIL	250		1										

Special Instructions

Possible Hazard Identification		Sample Disposal		Archive For	
☐ Non-Hazard	☐ Flammable	☐ Return To Client	☐ Disposal By Lab	☐ Months	
Turn Around Time Required		Project Specific (Specify)			
☐ Normal	☐ Rush				
Relinquished By <i>Jan Maly</i>		1. Received By <i>Jan Maly</i>		Date 5/15/97	Time 0800
Relinquished By		2. Received By		Date	Time
Relinquished By		3. Received By		Date	Time

Comments

APPENDIX C

APPENDIX C
ANALYTICAL DATA FROM CONFIRMATORY SAMPLING



Date: 07/25/97
Time: 13:01:56
(Mountain Time)

From: Chris Schepcoff
Quanterra Inc.
5307 Industrial Oaks Blvd
Suite 160
Austin, TX 78735

To: GEORGE GREGORY
DuPont Environmental Remediation
281-5865695

voice: 512-892-6684
fax: 512-892-6652

Number of Pages
Including Cover Sheet: 20

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Quote Number: 015966
Project Number: TCE INVEST.5/97
Project Name/Site: ABD

QUANTERRA INCORPORATED
PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: I7G160157 DuPont Environmental Remediation Svcs. PAGE 1
ABD Date Reported: 7/25/97

Project Number: TCE INVEST.5/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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Client Sample ID: ABD-PND2-S5

Sample #: 001 Date Sampled: 07/14/97 15:15 Date Received: 07/16/97 Matrix: SOLID

Inductively Coupled Plasma (ICP) Metals

Barium	58.0	20.0	mg/kg	SW846 6010A
Cadmium	0.94	0.50	mg/kg	SW846 6010A
Lead	11.6	10.0	mg/kg	SW846 6010A

In Review

Volatile Organics by GC/MS

1,1-Dichloroethene	ND	5.0	ug/kg	SW846 8210B
trans-1,2-Dichloroethene	ND	5.0	ug/kg	SW846 8240B
Trichloroethene	ND	5.0	ug/kg	SW846 8240B
Vinyl chloride	ND	10	ug/kg	SW846 8210B
cis-1,2-Dichloroethene	ND	5.0	ug/kg	SW846 8240B

In Review

Semivolatile Organic Compounds by GC/MS

bis(2-Ethylhexyl) phthalate	90000 E	3300	ug/kg	SW846 8270B
Di-n-octyl phthalate	5300	3300	ug/kg	SW846 8270B

In Review

E Estimated result. Result concentration exceeds the calibration range.

Semivolatile Organic Compounds by GC/MS

bis(2-Ethylhexyl) phthalate	79000 D	8200	ug/kg	SW846 8270B
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In Review

D Result was obtained from the analysis of a dilution.

Client Sample ID: ABD-PND2-S6

Sample #: 002 Date Sampled: 07/15/97 10:50 Date Received: 07/16/97 Matrix: SOLID

Inductively Coupled Plasma (ICP) Metals

Barium	69.2	20.0	mg/kg	SW846 6010A
Cadmium	ND	0.50	mg/kg	SW846 6010A

In Review

(Continued on next page)

PAGE 2

Date Reported: 7/25/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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QUANTERRA INCORPORATED

PRELIMINARY DATA SUMMARY

 The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: I7G160157 DuPont Environmental Remediation Svcs. PAGE 6
 ABD Date Reported: 7/25/97

Project Number: TCE INVEST.5/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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Client Sample ID: ABD-PND2-S10

Sample #: 007 Date Sampled: 07/15/97 07:00 Date Received: 07/16/97 Matrix: SOLID

Inductively Coupled Plasma (ICP) Metals

Barium	107	20.0	mg/kg	SW846 6010A
Cadmium	ND	0.50	mg/kg	SW846 6010A
Lead	13.5	10.0	mg/kg	SW846 6010A

In Review

Volatile Organics by GC/MS

1,1-Dichloroethene	ND	5.0	ug/kg	SW846 8240B
trans-1,2-Dichloroethene	ND	5.0	ug/kg	SW846 8240B
Trichloroethene	ND	5.0	ug/kg	SW846 8240B
Vinyl chloride	ND	10	ug/kg	SW846 8240B
cis-1,2-Dichloroethene	ND	5.0	ug/kg	SW846 8240B

In Review

Semivolatile Organic Compounds by GC/MS

bis(2-Ethylhexyl) phthalate	310000 E	3300	ug/kg	SW846 8270B
Di-n-octyl phthalate	18000	3300	ug/kg	SW846 8270B

In Review

E Estimated result. Result concentration exceeds the calibration range.

Semivolatile Organic Compounds by GC/MS
 IN PROGRESS

In Review

Client Sample ID: ABD-PND2-S11

Sample #: 008 Date Sampled: 07/15/97 10:15 Date Received: 07/16/97 Matrix: SOLID

Inductively Coupled Plasma (ICP) Metals

Barium	126	20.0	mg/kg	SW846 6010A
Cadmium	ND	0.50	mg/kg	SW846 6010A
Lead	12.6	10.0	mg/kg	SW846 6010A

In Review

Volatile Organics by GC/MS

1,1-Dichloroethene	ND	5.0	ug/kg	SW846 8240B
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In Review

(Continued on next page)

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QUANTERRA INCORPORATED

PRELIMINARY DATA SUMMARY

 The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: I7G160157 DuPont Environmental Remediation Svcs. PAGE 11
 ABD Date Reported: 7/25/97
 Project Number: TCE INVEST.5/97

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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Client Sample ID: ABD-PND2-BTM-4

Sample #: 012 Date Sampled: 07/15/97 07:20 Date Received: 07/16/97 Matrix: SOLID

Semivolatile Organic Compounds by GC/MS				In Review
bis(2-Ethylhexyl)	2500000 D	820000	ug/kg	SW846 8270B
phthalate				

D Result was obtained from the analysis of a dilution.

Client Sample ID: ABD-PND2-BTM-5

Sample #: 013 Date Sampled: 07/15/97 08:00 Date Received: 07/16/97 Matrix: SOLID

Inductively Coupled Plasma (ICP) Metals				In Review
Barium	48.5	20.0	mg/kg	SW846 6010A
Cadmium	0.73	0.50	mg/kg	SW846 6010A
Lead	15.8	10.0	mg/kg	SW846 6010A

Volatile Organics by GC/MS				In Review
1,1-Dichloroethene	ND	5.0	ug/kg	SW846 8240B
trans-1,2-Dichloroethene	ND	5.0	ug/kg	SW846 8240B
Trichloroethene	ND	5.0	ug/kg	SW846 8240B
Vinyl chloride	ND	10	ug/kg	SW846 8240B
cis-1,2-Dichloroethene	ND	5.0	ug/kg	SW846 8240B

Surrogates outside acceptance criteria due to demonstrated matrix effect.

Semivolatile Organic Compounds by GC/MS				In Review
bis(2-Ethylhexyl)	2200000 E	33000	ug/kg	SW846 8270B
phthalate				
Di-n-octyl phthalate	150000	33000	ug/kg	SW846 8270B

E Estimated result. Result concentration exceeds the calibration range.

Semivolatile Organic Compounds by GC/MS				In Review
bis(2-Ethylhexyl)	2400000 D	160000	ug/kg	SW846 8270B
phthalate				

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METHOD

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QUANTERRA INCORPORATED

PRELIMINARY DATA SUMMARY

 The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: I7G160157 DuPont Environmental Remediation Svcs. PAGE 19
 ABD Date Reported: 7/25/97
 Project Number: TCE INVEST.5/97
 REPORTING
 LIMIT UNITS ANALYTICAL
 METHOD

Client Sample ID: ABD-PND2-S12

Sample #: 024 Date Sampled: 07/15/97 10:00 Date Received: 07/16/97 Matrix: SOLID

Lead	10.0	mg/kg	SW846 6010A
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Volatile Organics by GC/MS

In Review

1,1-Dichloroethene	ND	5.0	ug/kg	SW846 8240B
trans-1,2-Dichloroethene	ND	5.0	ug/kg	SW846 8240B
Trichloroethene	ND	5.0	ug/kg	SW846 8240B
Vinyl chloride	ND	10	ug/kg	SW846 8240B
cis-1,2-Dichloroethene	ND	5.0	ug/kg	SW846 8240B

Semivolatile Organic Compounds by GC/MS

In Review

bis(2-Ethylhexyl)	25000 E	330	ug/kg	SW846 8270B
phthalate				
Di-n-octyl phthalate	1200	330	ug/kg	SW846 8270B

E Estimated result. Result concentration exceeds the calibration range.

Semivolatile Organic Compounds by GC/MS

In Review

bis(2-Ethylhexyl)	36000	3300	ug/kg	SW846 8270B
phthalate				

APPENDIX D

APPENDIX D
GEOTECHNICAL ANALYSIS OF BACKFILL AND
CAP MATERIALS

CONTINENTAL ENGINEERING SERVICE
OF MISSISSIPPI
P. O. Box 752, Aberdeen, MS 39730

Phone: 369-8944

Fax: 369-4707

Soil Test Data

Project Condea-Vista Pond 2 Closure**Location Aberdeen, Ms****Date April 24, 1997**

Soil No	Description	Liquid Limit	Plas Index	%Pass #40	%Pass #200
1	Silty Red Clay -- CH	62	36	99.7	63.6
2	Orange/Tan Fine Sand -- SM	Non-Plastic		99.7	33.1

Technician



CONTINENTAL ENGINEERING SERVICE
OF MISSISSIPPI
P. O. Box 752, Aberdeen, MS 39730

Phone: 369-8944

Fax:-- 369-4707

Soil Test Data

Project VISTA POND # 2 CLOSURELocation MONROE CO.Date July 28, 1997

Soil No.	Description	Liquid Limit	Plas. Index	%Pass #40	%Pass #200
4	Tan/Orange Silt	40	17	98	52
5	Tan/Orange Silt	43	24	98	60
6	Tan/Orange Silt	40	19	98	45
	Spec.'s for Clay Cap	Min. 40	Min. 15		

Technician

Anthony Schuck

SOIL COMPACTION TEST GRAPH

DATE 9/10/97

PROJECT VISTA POND 2 CLOSURE

RESULTS

EXCAVATION NUMBER

SAMPLE NUMBER

1

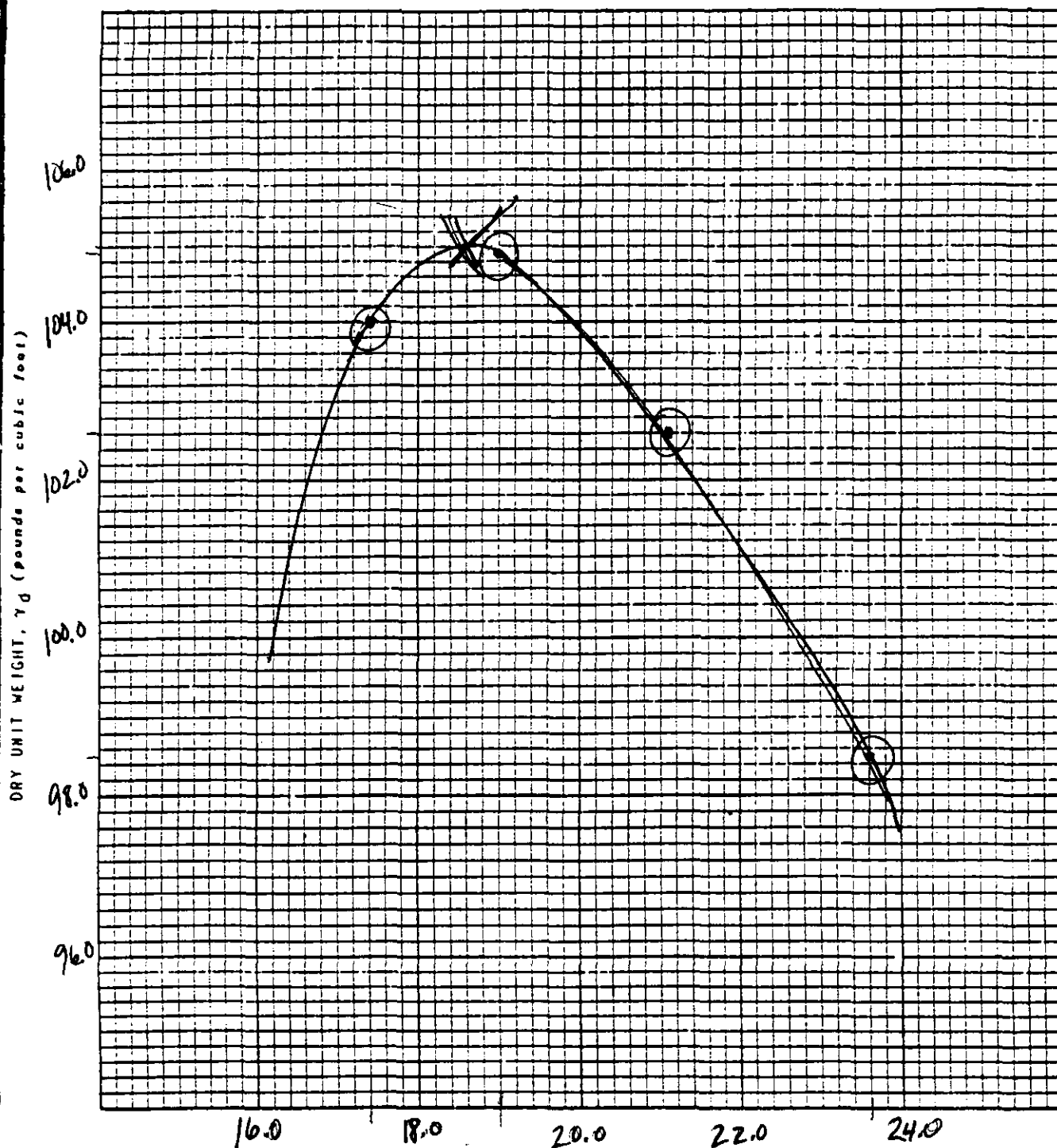
MAXIMUM DRY UNIT WEIGHT

105.0

REMARKS (Use reverse side, if more space is needed)

OPTIMUM MOISTURE (Water) CONTENT

18.6



TECHNICIAN (Signature)

PLOTTED BY (Signature)

CHECKED BY (Signature)

SOIL COMPACTION TEST DATA									
PROJECT	DATE	SAMPLE NUMBER	EXCAVATION NUMBER	HEIGHT OF DROP	HEIGHT OF SOIL SAMPLE (in.)	MAXIMUM PARTICLE SIZE	VOLUME OF SOIL SAMPLE (cu. ft.)	NUMBER OF LAYERS	
VISTA DND2 Close	9/8/97	#1		12				3	
CONVERSION FACTORS									
1728 cu. in. per cu. ft.									
453.6 gm. per lb.									
NUMBER OF BLOWS PER LAYER									
25									
SPECIFIC GRAVITY									
4									
UNITS									
1									
WEIGHT OF WET SOIL + MOLD									
WEIGHT OF MOLD									
WEIGHT OF WET SOIL									
WET UNIT WEIGHT, $\gamma = \frac{\text{Weight of wet soil (lb.)}}{\text{Vol. of soil sample (cu. ft.)}}$									
TARE NUMBER									
A. WEIGHT OF WET SOIL + TARE									
B. WEIGHT OF DRY SOIL + TARE									
C. WEIGHT OF WATER, w_w (A. - B.)									
D. WEIGHT OF TARE									
E. WEIGHT OF DRY SOIL, w_s (B. - D.)									
WATER CONTENT, $w = \left(\frac{w_w}{w_s} \times 100\right)$									
AVERAGE WATER CONTENT									
DRY UNIT WEIGHT, $\gamma_d = \left(\frac{\gamma}{1 + \frac{w}{100}}\right)$									
TECHNICIAN (Signature)	COMPUTED BY (Signature)	CHECKED BY (Signature)							

SOIL COMPACTION TEST GRAPH		DATE <u>9/10/97</u>
PROJECT <u>VISTA POND 2 CLOSURE</u>		RESULTS
EXCAVATION NUMBER	SAMPLE NUMBER <u>2</u>	MAXIMUM DRY UNIT WEIGHT <u>103.8</u>
REMARKS (Use reverse side, if more space is needed)		OPTIMUM MOISTURE (Water) CONTENT <u>19.0</u>

MOISTURE (Water) CONTENT, w (per cent of dry weight)	
TECHNICIAN (Signature)	PLOTTED BY (Signature) CHECKED BY (Signature)

SOIL COMPACTION TEST DATA									
PROJECT	EXCAVATION NUMBER		SAMPLE NUMBER	DATE	NUMBER OF LAYERS		MAXIMUM PARTICLE SIZE		
VISTA ROAD 2 CLOSURE	#2		#2	7/8/77	3		1/30		
CONVERSION FACTORS		HEIGHT OF TAMPER		HEIGHT OF SOIL SAMPLE		VOLUME OF SOIL SAMPLE			
1728 cu. in. per cu. ft.		5.5165		12"		(cu. ft.)			
453.6 gm. per lb.		41"		(in.)					
SPECIFIC GRAVITY		DIA. OF HOLE (in.)							
2.5		41"							
UNITS									
2.52									
WEIGHT OF WET SOIL		WEIGHT OF DRY SOIL		WEIGHT OF WATER, w_w (A-B.)		WEIGHT OF TARE		WEIGHT OF DRY SOIL, w_s (B-D.)	
1871		1850		1813		1795		118.7	
123.7		122.4		119.9		118.7		11	
8		42		20		12		62.37	
81.44		80.54		86.4		86.4		57.37	
71.81		70.26		73.60		73.60		5.58	
9.03		10.28		12.81		13.44		21.71	
217.6		217.4		218.6		217.2		35.60	
50.05		48.52		49.73		55.31		15.1	
19.2		21.2		22.7		24.3		15.8	
PERCENT		PERCENT		PERCENT		PERCENT		PERCENT	
19.2		21.3		22.9		24.6		15.7	
103.8		102.8		99.6		96.2		102.6	
DRY UNIT WEIGHT, $\gamma_{d2}(T, \frac{1}{2} \gamma_{d2})$									
TECHNICIAN (Signature)		COMPUTED BY (Signature)		CHECKED BY (Signature)					

SOIL COMPACTION TEST GRAPH

DATE

4/28/97

PROJECT

VISTA POND 2 CLOSURE

RESULTS

MAXIMUM DRY UNIT WEIGHT

EXCAVATION NUMBER

1

SAMPLE NUMBER

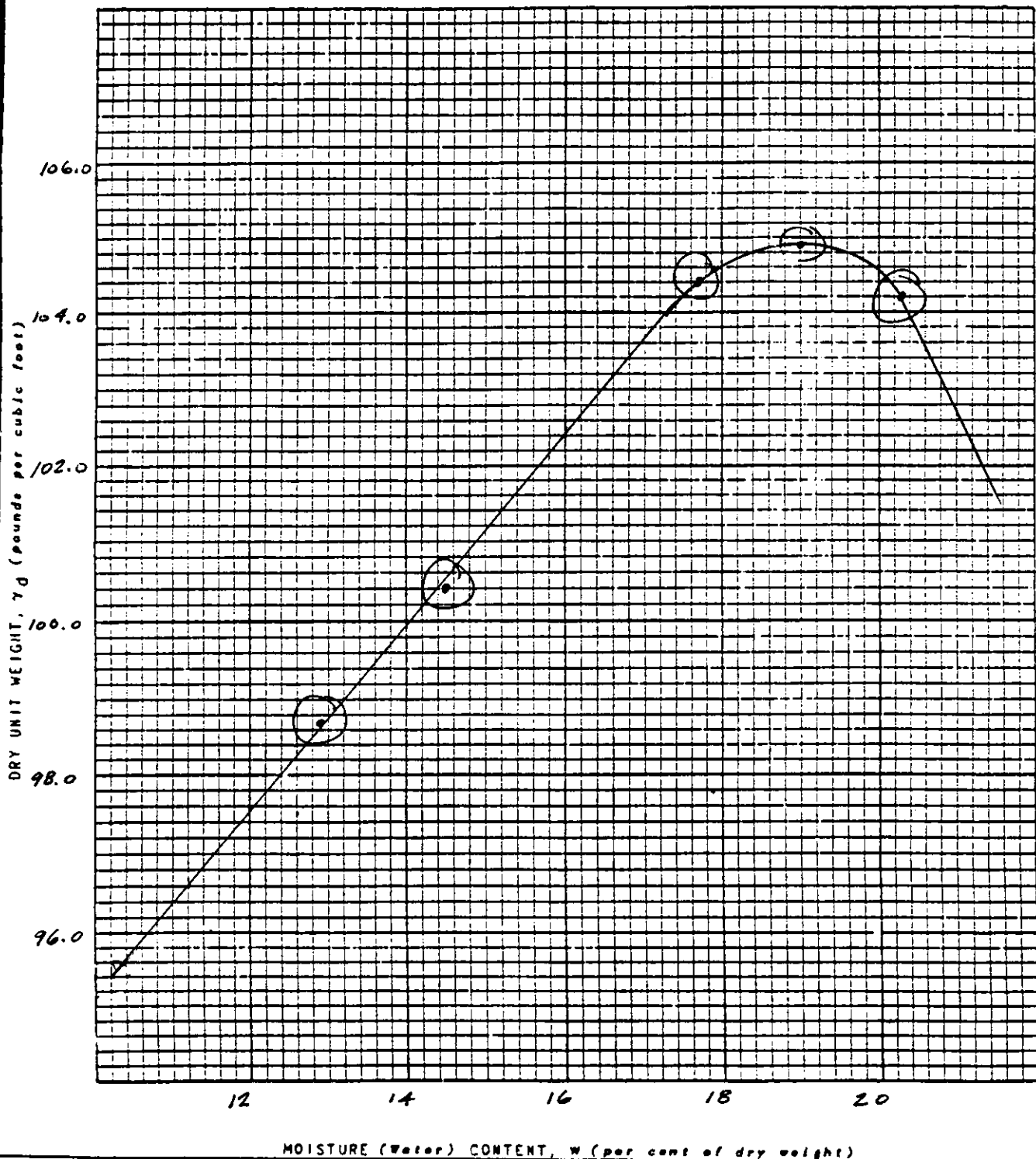
2

104.9

REMARKS (Use reverse side, if more space is needed)

OPTIMUM MOISTURE (Water) CONTENT

19.0



TECHNICIAN (Signature)

Anthony J. Snook

PLOTTED BY (Signature)

CHECKED BY (Signature)

DD FORM 1211
1 AUG 57

CONTINENTAL ENGINEERING SERVICE

P. O. BOX 752
Aberdeen, MS 39730

DATE: Apr. 28, 1997

LABORATORY DENSITY DATA

Project VISTA POND 2
Location ABERDEEN, MS
Test Metho ASTM 698

Sample No 3
Description TAN SILTY SAND
Tested by A. SCHROCK

No. of Layers 3
No. of Blows 25
Dia. Mold 4"
Ht. of Drop 12"
Wt. of Hammer 5.5lbs
Volume 1/30cft

RUN NO.	1	2	3	4	5
GROSS	3838.0	3890.0	4011.0	4040.0	4048.0
TARE	2153.0	2153.0	2153.0	2153.0	2153.0
NET	1685.0	1737.0	1858.0	1887.0	1895.0
PCF	111.4	114.9	122.9	124.8	125.3

Dish No.	6	7	11	12	30	31	32	33	34	35
Wet & dish	89.52	82.20	90.19	83.66	86.85	78.44	85.65	90.44	94.30	83.18
Dry & dish	81.82	75.24	81.47	75.81	77.09	69.92	75.56	79.44	82.10	72.85
Water	7.70	6.96	8.72	7.85	9.76	8.52	10.09	11.00	12.20	10.33
Dish	21.42	21.86	21.70	21.16	21.87	21.81	22.14	21.62	22.20	21.68
Dry Soil	60.40	53.38	59.77	54.65	55.22	48.11	53.42	57.82	59.90	51.17
%m	12.7	13.0	14.6	14.4	17.7	17.7	18.9	19.0	20.4	20.2
Ave. %m		12.9		14.5		17.7		19.0		20.3
Dry pcf		98.7		100.4		104.4		104.9		104.2

(SIGNED) Technician



SOIL COMPACTION TEST GRAPH

DATE

12/12/96

PROJECT

VISTA POND #2 CLOSURE

RESULTS

EXCAVATION NUMBER

(PRR HAM) - 2

SAMPLE NUMBER

4

MAXIMUM DRY UNIT WEIGHT

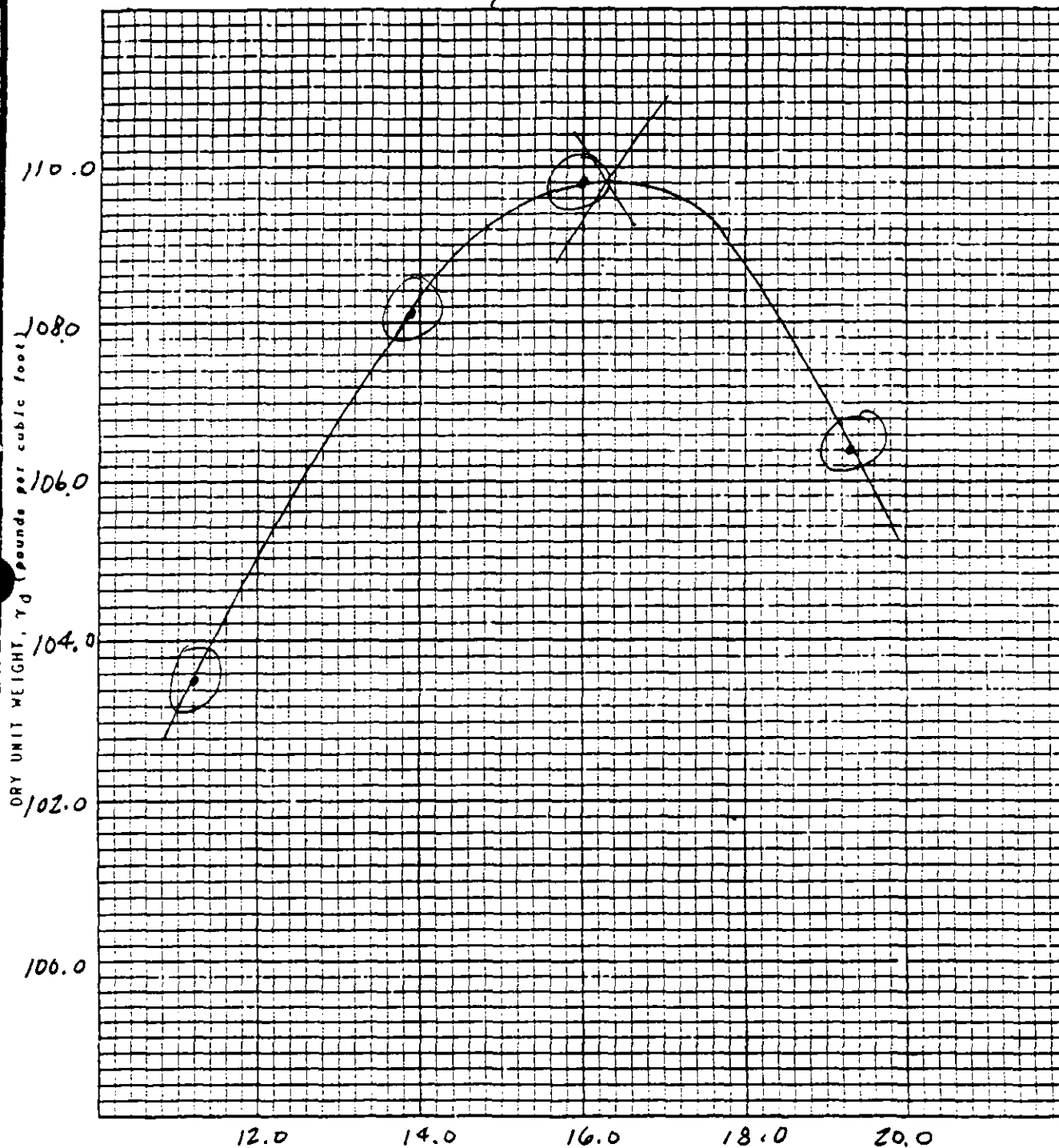
109.8

REMARKS (Use reverse side, if more space is needed)

GRAY/ORANGE Lean Clay

OPTIMUM MOISTURE (Water) CONTENT

16.3



TECHNICIAN (Signature)

Anthony Schmale

PLOTTED BY (Signature)

CHECKED BY (Signature)

SOIL COMPACTION TEST DATA

PROJECT

VISTA Pond #2 Closure

CONVERSION FACTORS

1728 cu. in. per cu. ft.

453.6 gm. per lb.

UNITS

1000

WEIGHT OF WET SOIL + MOLD

WEIGHT OF MOLD

WEIGHT OF WET SOIL

$$\text{WET UNIT WEIGHT, } \gamma = \frac{\text{Weight of wet soil (lb.)}}{\text{Vol of soil sample (cu. ft.)}}$$

TARE NUMBER

A. WEIGHT OF WET SOIL + YARE

B. WEIGHT OF DRY SOIL + TARE

C. WEIGHT OF WATER, W (A - B)

UNIT WEIGHT OF TABLE

E. WEIGHT OF DRY SOIL, W_2 (g.-d.)

WATER CONTENT, $w = \left(\frac{M}{M_s} \times 100 \right)$

AVERAGE WATER CONTENT

DRY UNIT WEIGHT, $\gamma_d = \left(\frac{\gamma}{1 + \frac{w}{100}} \right)$

TECHNICIAN (Signature)

Signature) *Anthony Schwach*

COMPUTED BY (Signature)

CHECKED BY (Signature)

DD FORM

DD FORM 1210
1 AUG 57

9-

SOIL COMPACTION TEST GRAPH

DATE

7/29/97

PROJECT

VISTA POND 2

RESULTS

EXCAVATION NUMBER

SAMPLE NUMBER

#5

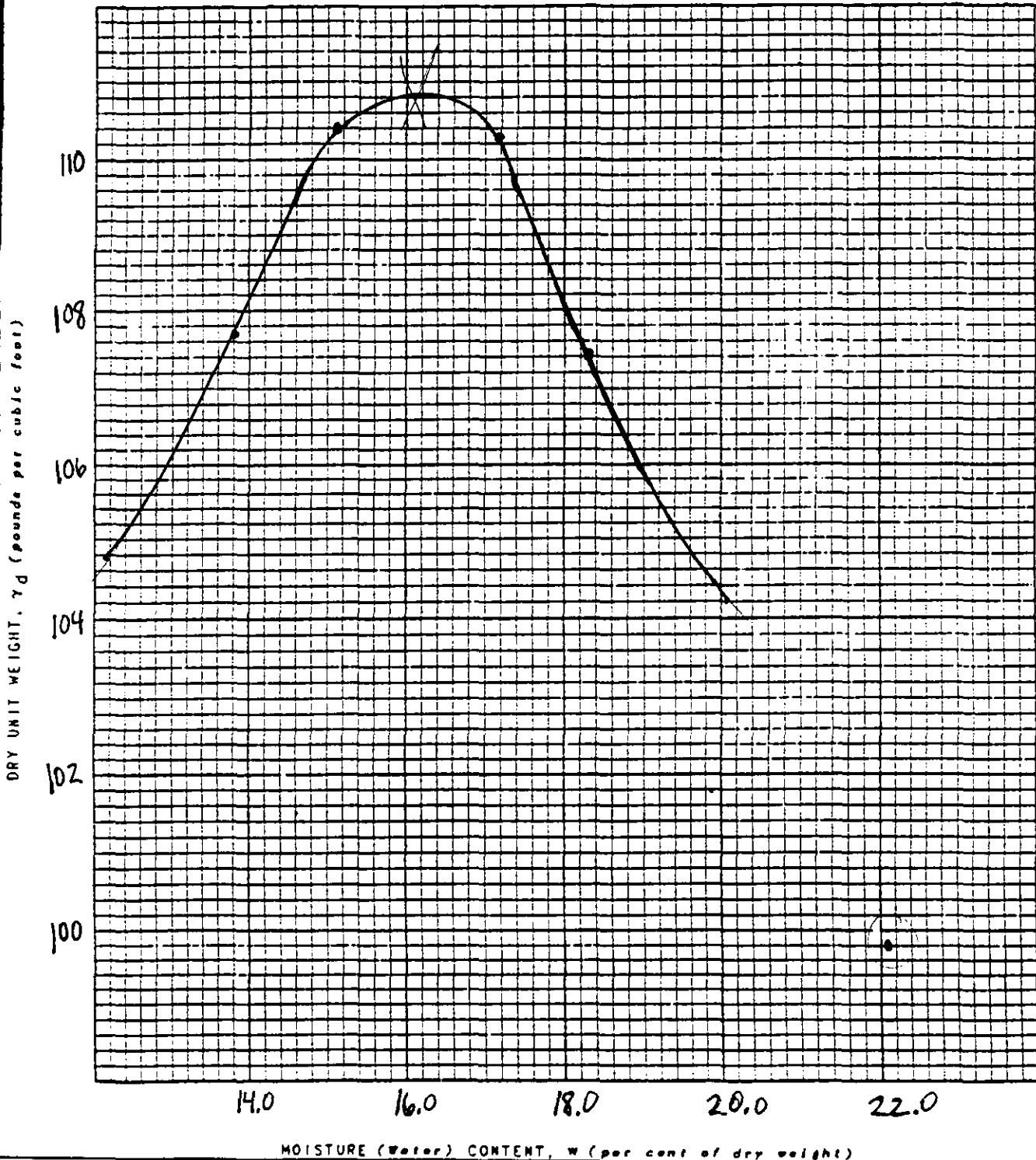
MAXIMUM DRY UNIT WEIGHT

110.8

REMARKS (Use reverse side, if more space is needed)

OPTIMUM MOISTURE (Water) CONTENT

16.1



TECHNICIAN (Signature)

Bubey Schuch

PLOTTED BY (Signature)

CHECKED BY (Signature)

DD FORM 1211
1 AUG 57

CONTINENTAL ENGINEERING SERVICE

P. O. BOX 752
Aberdeen, MS 39730

DATE: July 29, 1997

LABORATORY DENSITY DATA

Project VISTA POND 2 Sample No. 5 No. of Layers 3 Dia. Mold 4"
Location ABERDEEN, MS Description TAN/RED SILT No. of Blows 25 Ht. of Drop 12"
Test Metho ASTM 698 Tested by A. SCHROCK Wt. of Hammer 5.5lbs Volume 1/30cft

RUN NO.	1	2	3	4
GROSS	4004.0	4074.0	4074.0	3994.0
TARE	2152.0	2152.0	2152.0	2152.0
NET	1852.0	1922.0	1922.0	1842.0
PCF	122.5	127.1	127.1	121.8

Dish No.	46	47	14	15	7	8	20	21
Wet & dish	68.38	76.90	75.01	78.98	84.55	75.80	92.08	96.53
Dry & dish	62.70	70.25	68.05	71.43	74.77	67.49	79.48	82.91
Water	5.68	6.65	6.96	7.55	9.78	8.31	12.60	13.62
Dish	21.80	21.47	21.57	21.81	21.88	21.70	22.07	21.67
Dry Soil	40.90	48.78	46.48	49.62	52.89	45.79	57.41	61.24
%m	13.9	13.6	15.0	15.2	18.5	18.1	21.9	22.2
Ave. %m		13.8		15.1		18.3		22.1
Dry pcf		107.7		110.4		107.4		99.8

(SIGNED) Technician



SOIL COMPACTION TEST GRAPH

DATE 7/29/97

PROJECT VISTA POND 2

RESULTS

EXCAVATION NUMBER

SAMPLE NUMBER #6

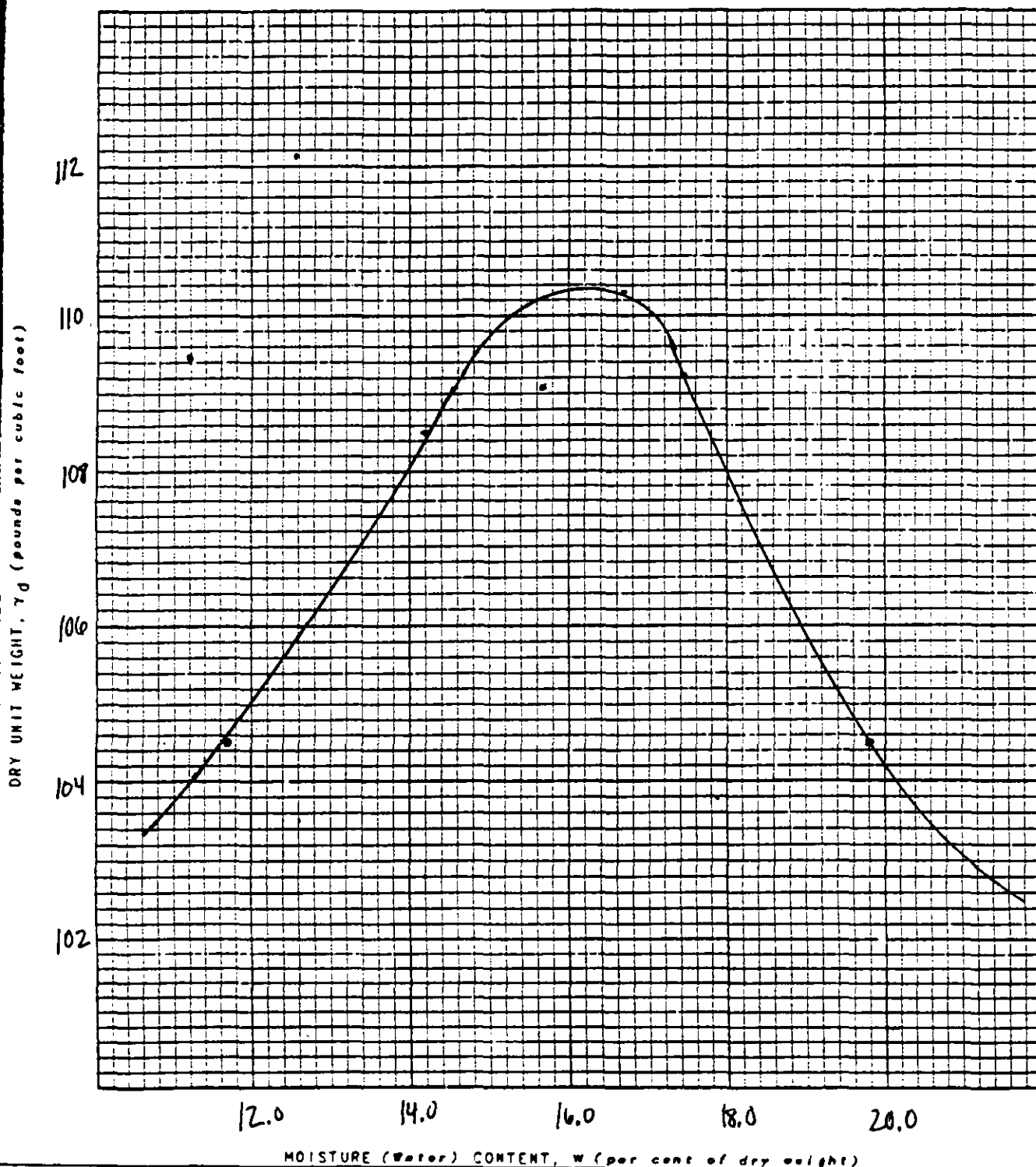
MAXIMUM DRY UNIT WEIGHT

110.4

REMARKS (Use reverse side, if more space is needed)

OPTIMUM MOISTURE (Water) CONTENT

16.2



TECHNICIAN (Signature)

Andy Schrock

PLOTTED BY (Signature)

CHECKED BY (Signature)

DD FORM 1211 AUG 57

CONTINENTAL ENGINEERING SERVICE

P. O. BOX 752
Aberdeen, MS 39730

DATE: July 29, 1997

LABORATORY DENSITY DATA

Project VISTA POND 2 Sample No. 6 No. of Layers 3 Dia. Mold 4"
Location ABERDEEN, MS Description TAN/RED SILT No. of Blows 25 Ht. of Drop 12"
Test Metho ASTM 698 Tested by A. SCHROCK Wt. of Hammer 5.5lbs Volume 1/30cft

RUN NO.	1	2	3	4
GROSS	3917.0	4025.0	4099.0	4044.0
TARE	2152.0	2152.0	2152.0	2152.0
NET	1765.0	1873.0	1947.0	1892.0
PCF	116.7	123.9	128.8	125.1

Dish No.	11	12	34	35	36	37	38	39
Wet & dish	68.82	75.33	80.18	68.79	82.16	74.85	77.18	80.24
Dry & dish	63.88	69.78	72.91	62.95	73.50	67.24	68.04	70.52
Water	4.94	5.55	7.27	5.84	8.66	7.61	9.14	9.72
Dish	21.68	22.14	21.68	21.56	21.87	21.63	21.73	21.52
Dry Soil	42.20	47.64	51.23	41.39	51.63	45.61	46.31	49.00
%m	11.7	11.6	14.2	14.1	16.8	16.7	19.7	19.8
Ave. %m		11.7		14.2		16.7		19.8
Dry pcf		104.5		108.5		110.3		104.5

(SIGNED) Technician



**CONTINENTAL ENGINEERING SERVICE
OF MISSISSIPPI
P. O. Box 752, Aberdeen, MS 39730**

Phone: 369-8944

Fax:-- 369-4707

Soil Test Data

Project Condea-Vista Pond 2 ClosureLocation Aberdeen, MsDate April 24, 1997

Soil No.	Description	Liquid Limit	Plas. Index	%Pass #40	%Pass #200
1	Silty Red Clay -- CH	62	36	99.7	63.6
2	Orange/Tan Fine Sand -- SM	Non-Plastic		99.7	33.1

Technician _____

**CONTINENTAL ENGINEERING SERVICE
OF MISSISSIPPI
P. O. Box 752, Aberdeen, MS 39730**

Phone: 369-8944
Fax: -- 369-4707

Soil Test Data

Project VISTA POND # 2 CLOSURE
Location MONROE CO.
Date July 28, 1997

Soil No.	Description	Liquid Limit	Plas. Index	%Pass #40	%Pass #200
4	Tan/Orange Silt	40	17	98	52
5	Tan/Orange Silt	43	24	98	60
6	Tan/Orange Silt	40	19	98	45
	Spec.'s for Clay Cap	Min. 40	Min. 15		

Technician

Robert S. Smith

CONTINENTAL ENGINEERING SERVICE
OF MISS., INC.

P O Box 752
Aberdeen, MS 39730

Project	VISTA POND 2 CLOSURE	Date	July 22, 1997
Location	Aberdeen, MS	County	Monroe
Soil Type	Silty Sand #1	Soil Depth	
Producer	Hanna	Tested By	A. Schrock

Remarks _____

Wt. of Soil and Dish	262.9
Dish Wt.	112.2
Soil Wt.	150.7

MECHANICAL ANALYSIS:

Sieve No.	Wt. Retain	Wt. Passed	% Passing	Specifications
3"				
1.5"				
1"				
3/4"				
1/2"				
3/8"				
#4				
#8				
#10				
#16				
#20				
#30				
#40	0.3	150.4	99.8	
#50				
#60	11.5	139.2	92.4	
#100				
#200	131.6	19.1	12.7	0-100

(signed)

A. Schrock

Archie Shuck

CONTINENTAL ENGINEERING SERVICE
OF MISS., INC.

P O Box 752
Aberdeen, MS 39730

Project	VISTA POND 2 CLOSURE	Date	July 22, 1997
Location	Aberdeen, MS	County	Monroe
Soil Type	Silty Sand # 3	Soil Depth	
Producer	Hanna	Tested By	A. Schrock

Remarks _____

Wt. of Soil and Dish	255.3
Dish Wt.	112.2
Soil Wt.	143.1

MECHANICAL ANALYSIS:

Sieve No.	Wt. Retain	Wt. Passed	% Passing	Specifications
-----------	------------	------------	-----------	----------------

3"				
1.5"				
1"				
3/4"				
1/2"				
3/8"				
#4				
#8				
#10				
#16				
#20				
#30				
#40	1.2	141.9	99.2	
#50				
#60	9.9	133.2	93.1	
#100				
#200	109.7	33.4	23.3	0-100

(signed)

A. Schrock

CONTINENTAL ENGINEERING SERVICE OF MISSISSIPPI, INC.

P.O. BOX 752
ABERDEEN, MS 39730

MECHANICAL ANALYSIS

Project VISTA POND 2 Job No. _____
 Location of Project VISTA Aberdeen, MS Boring No. _____ Sample No. _____
 County _____ Producer _____
 Description of Soil _____ Depth of Soil _____
 Tested By Ken Luker Date of Test 9/10/97

Wt. of dry sample & container	257.36
Wt. of container	112.46
Wt. of dry sample	144.90

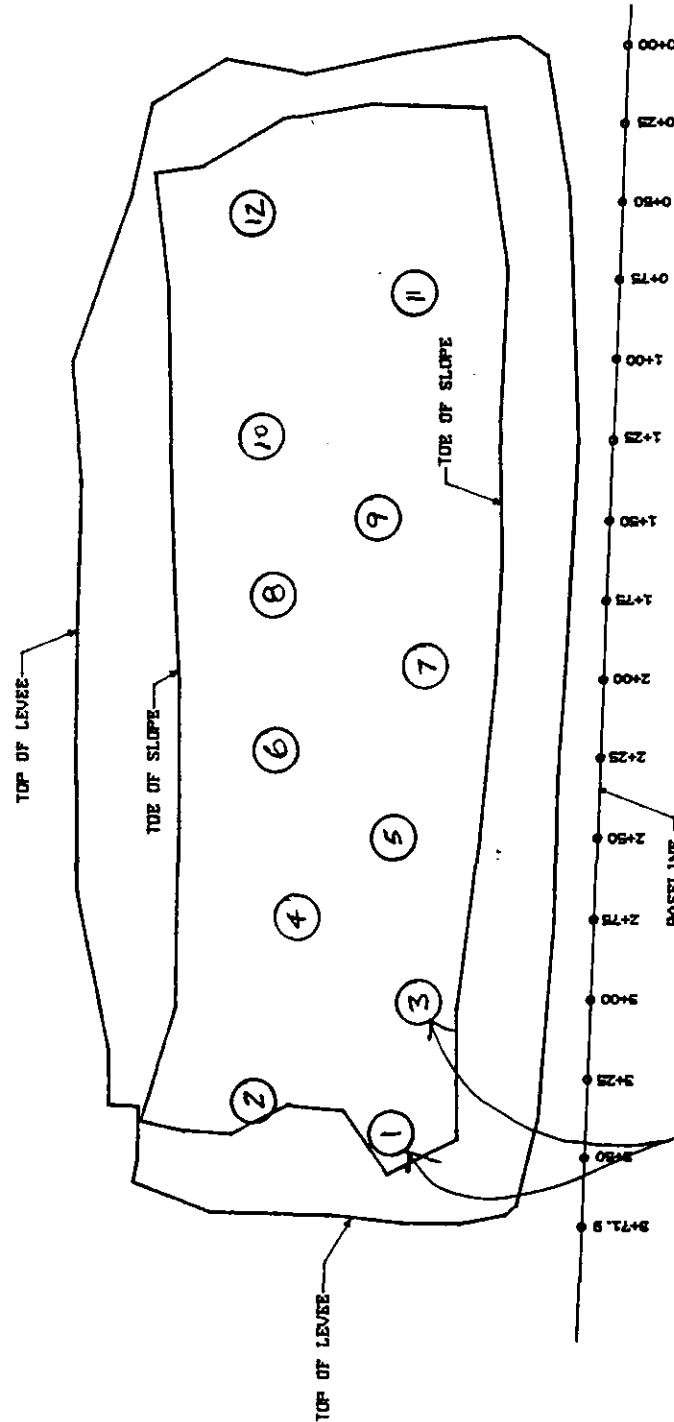
Sieve analysis and grain shape

Sieve No.	Spec.	Total Wt. Passing	% Passing (of Whole Sample)	% Passing (of -10 portion)
40		143.02	98.7	
60		131.13	90.5	
200		46.63	32.2	

Kenneth Luker
Signed

APPENDIX E

APPENDIX E
RESULTS FOR FIELD COMPACTION TESTS



CONTINENTAL ENGINEERING SERVICE
ABERDEEN, MISSISSIPPI 39730 - PH.369-8944

SCALE: 1" = 40'	LOCATION: CONDEA VISTA - ABERDEEN, MISS.
DATE: 7/17/97	CAPPING ON POND #2
CLASS:	
TITLE: DUPONT ENVIRONMENTAL REMEDIAL SERVICES	FILE NO. AB970706

PROJECT VISTA POND 2 CLO
 LOCATION ABERDEEN, S.C.
 DATE 8/14/97
 TAKEN BY A. SCHROCK

NUCLEAR COMPACTION
 TEST DATA
 By Continental Engineering Service

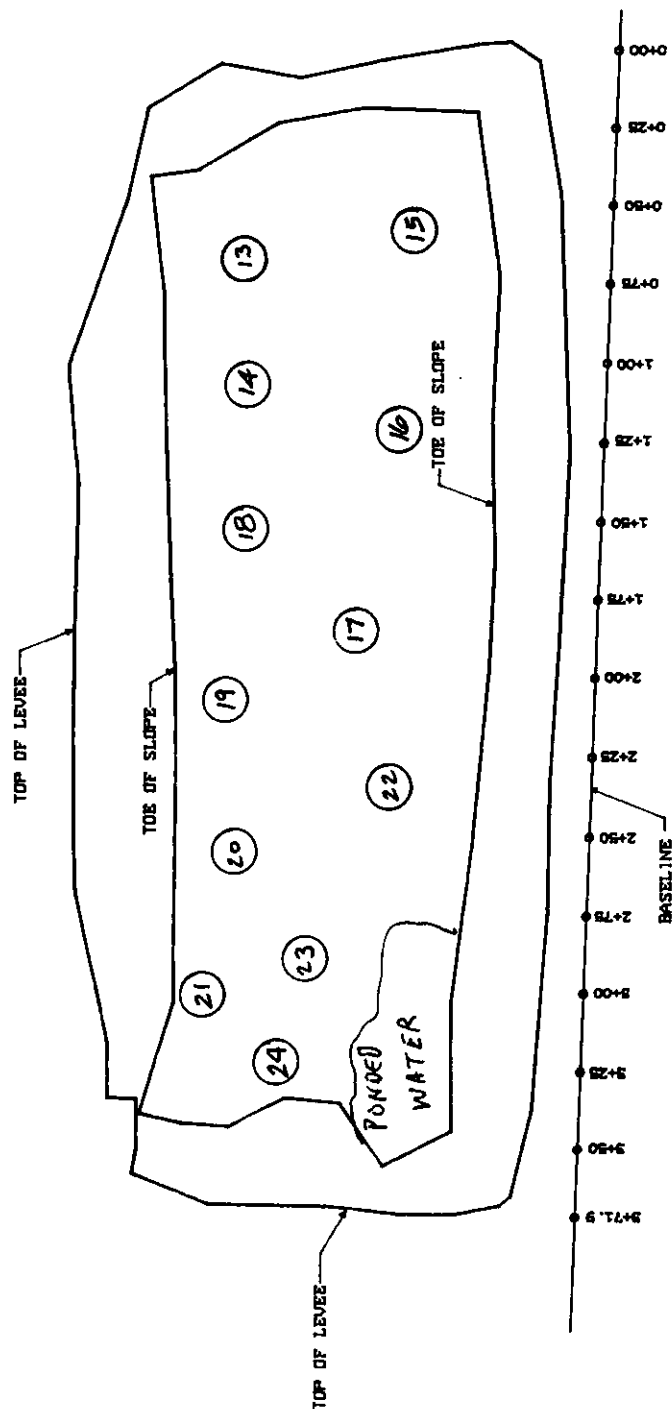


TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION										
OFFSET										
ELEVATION	127.41 FT									
MODE & DEPTH	DT-6"	6"	6"	8"	8"	8"	8"	8"	8"	8"
DENS. CNT.	2392	2344	2886	1727	1832	1507	1747	1265	1984	139.1
WET DENS.	121.5	122.5	113.8	118.8	116.9	123.9	118.6	130.3	114.1	127.3
MSTRE. CNT.	206	194	164	185	156	169	158	195	135	190
MOISTURE										
DRY DENS.	99.2	101.6	96.5	99.0	100.4	106.0	101.9	109.3	100.2	106.9
% MOISTURE	22.5	20.4	18.0	20.0	16.3	16.9	16.3	19.2	13.9	19.1
STD. DENS.	110.3	110.3	110.3	110.3	110.3	114.3	110.3	110.3	110.3	110.3
OPT. MSTRE.	166.2	166.2	166.2	166.2	166.2	166.2	166.2	166.2	166.2	166.2
% COMP.	90	92	88	90	91	96	92	99	91	97
MSTRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION										
OFFSET										
ELEVATION										
MODE & DEPTH	8"	8"								
DENS. CNT.	1450	1104								
WET DENS.	125.3	122.2								
MSTRE. CNT.	189	202								
MOISTURE										
DRY DENS.	104.9	110.4								
% MOISTURE	19.3	19.5								
STD. DENS.	110.3	110.3								
OPT. MSTRE.	166.2	166.2								
% COMP.	95	100								
MSTRE. CORR.										

REMARKS: AVERAGES OF 3 BORROW SAMPLES

Signed *Andy Schrock*
 Title



CONTINENTAL ENGINEERING SERVICE ABERDEEN, MISSISSIPPI 39730 - PR.368-8944			
SCALE: 1" = 40'	LOCATION: CONTEA VISTA - ABERDEEN, MISS.		
DATE: 7/17/97	CAPPING ON FOND H2		
CLASS:			
TITLE: DUPONT ENVIRONMENTAL REMEDATION SERVICES	FILE NO. AB570705		



NUCLEAR COMPACTION

PROJECT VISTA POND 2 CLOSURE
LOCATION ABERDEEN, S.
DATE 8/15/97
TAKEN BY A. SCHROCK

TEST DATA

By
Continental Engineering Service

TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
OFFSET										
ELEVATION										
MODE & DEPTH	DT-8"	DT-8"	DT-8"	DT-8"	DT-8"	DT-8"	DT-8"	DT-8"	DT-8"	DT-8"
DENS. CNT.	1512	136.9	151.3	142.1	155	147.4	16.0	145.5	152.9	149.7
WET DENS.	123.9	124.6	122.7	121.1	120.1	121.7	121.7	118.5	116.1	120.3
MSTRE. CNT.	163	169	160	149	174	145	149	141	151	141
MOISTURE										
DRY DENS.	106.3	109.4	105.5	107.5	102.2	107.7	105.8	101.2	99.9	105.3
% MOISTURE	16.3	16.1	16.4	14.9	15.8	11.8	15.0	14.1	14.1	14.2
STD. DENS.	110.3	110.3	110.3	110.3	105.3	115.5	110.3	110.3	115.3	115.3
OPT. MSTRE.	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
% COMP.	96.4	99.7	95.16	99.7	99.7	91.9	95.9	91.7	95.6	95.5
MSTRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION	(13)	(14)								
OFFSET										
ELEVATION										
MODE & DEPTH	DT-8"	DT-8"								
DENS. CNT.	1792	1592								
WET DENS.	118.1	123.5								
MSTRE. CNT.	165	141								
MOISTURE										
DRY DENS.	100.3	115.9								
% MOISTURE	14.5	13.1								
STD. DENS.	110.3	110.3								
OPT. MSTRE.	16.3	16.3								
% COMP.	90.9	95.1								
MSTRE. CORR.										

REMARKS:

DENSITY

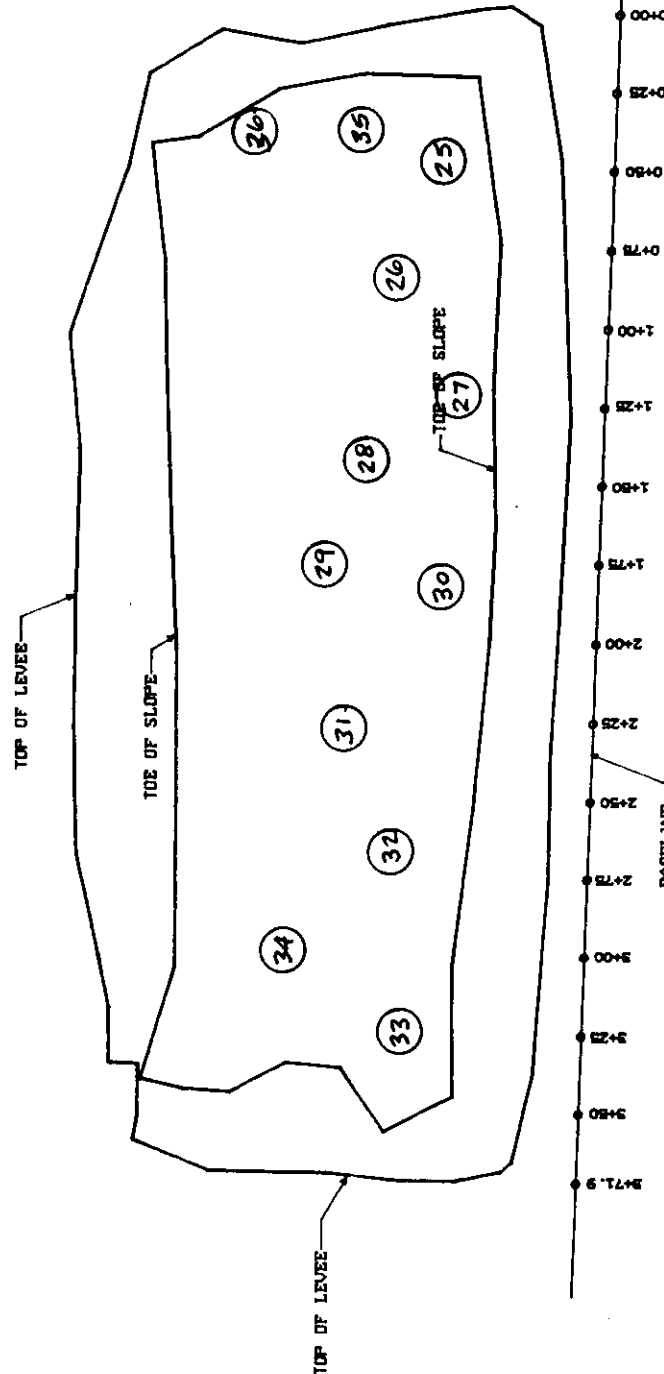
MOISTURE

Signed

Title

A. Schrock

ABD00039377



CONTINENTAL ENGINEERING SERVICE ABERDEEN, MISSISSIPPI 39730 - PH.369-8944	
SCALE: 1" = 40'	LOCATION: CONDEA VISTA - ABERDEEN, MISS.
DATE: 7/17/97	CAPPING ON POND #2
CLASS:	
TITLE: DUPONT ENVIRONMENTAL REMEDIAL SERVICES	FILE NO. AB970705



NUCLEO COMPACTOR TEST DATA

PROJECT Vista Park
LOCATION Abbeville, AL
DATE 11/13
TAKEN BY

By
Continental Engineering Service

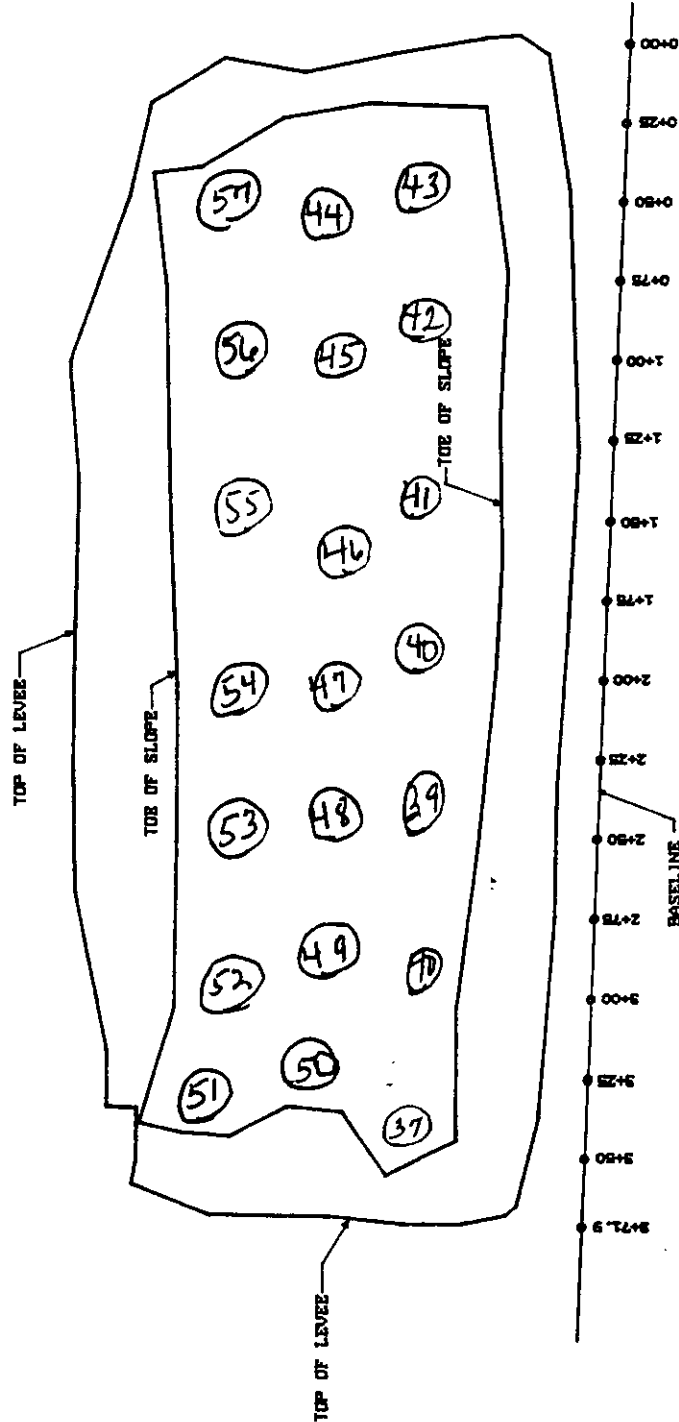
TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION	125	136	27	28	29	30	31	32	33	34
OFFSET										
ELEVATION										
MODE & DEPTH	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"
DENS. CNT.	1818	1865	1486				1902	1442	1509	1452
WET DENS.	119.7	116.5	126.0	119.1	125.7	116.9	119.1	119.9	123.3	120.2
MSTRE. CNT.	153	149	176	155	171	147	151	149	201	161
MOISTURE										
DRY DENS.	104.8	101.4	106.1	105.7	105.7	101	99.0	96.5	100.9	102.6
% MOISTURE	15.6	15.3	19.5			15.7	19.3		22.2	19.1
STD. DENS.	110.3	100.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
OPT. MSTRE.	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
% COMP.	92.3	92.0	96		91.9	91.6	91.2	92.3	91.5	93.0
MSTRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION	35	36								
OFFSET										
ELEVATION										
MODE & DEPTH	DT8"	DT8"								
DENS. CNT.	1462	2112								
WET DENS.	124.7	126.8								
MSTRE. CNT.	173	154								
MOISTURE										
DRY DENS.	105.7	110.1								
% MOISTURE	18.0	15.2								
STD. DENS.	110.3	110.3								
OPT. MSTRE.	16.2	16.2								
% COMP.	95.8	92.8								
MSTRE. CORR.										

REMARKS:

SIGNED

TITLE



CONTINENTAL ENGINEERING SERVICE ABERDEEN, MISSISSIPPI 39730 - PH.369-8944			
SCALE: 1" = 40'	LOCATION: CONDER VISTA - ABERDEEN, MISS.		
DATE: 7/17/97	CLASS: CHIPPING ON POND #2		
TITLE: DUPONT ENVIRONMENTAL REMEDIAL SERVICES	FILE NO. AB970705		

NUCLEAR COMPACTION

TEST DATA

BY

Continental Engineering Service

PROJECT

LOCATION

DATE

TAKEN BY

TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION	(39)	(38)	(35)	(24)	(11)	(10)	(43)	(41)	(45)	(41)
OFFSET										
ELEVATION										
MODE & DEPTH	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"
DENS. CNT.	1391	1491	1109	9355	1105	1102	1104	1105	1107	1107
WET DENS.	1222	1241	1107	1105	1105	1104	1104	1104	1104	1104
MSTRE. CNT.	180	150	150	165	114	114	114	114	114	114
MOISTURE										
DRY DENS.	102.4	103.5	103.6	99.1	102.1	102.3	102.3	102.3	102.3	102.3
% MOISTURE	16.1	18.7	21.0	15.3	14.9	11.5	16.3	14.3	14.3	14.3
STD. DENS.	110.3	109.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
OPT. MSTRE.	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
% COMP.	93.0	95.0	90.0	90.0	94.2	94.0	94.0	94.0	94.0	94.0
MSTRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION	(49)	(48)	(49)	(50)	(51)	(52)	(53)	(50)	(55)	(56)
OFFSET										
ELEVATION										
MODE & DEPTH	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"
DENS. CNT.	1480	1480	1480	1480	1480	1480	1480	1480	1480	1480
WET DENS.	1244	1244	1244	1244	1244	1244	1244	1244	1244	1244
MSTRE. CNT.	109	109	109	109	109	109	109	109	109	109
MOISTURE										
DRY DENS.	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9
% MOISTURE	18.6	18.6	18.6	18.6	18.6	18.6	18.6	18.6	18.6	18.6
STD. DENS.	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
OPT. MSTRE.	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
% COMP.	95.0	94.0	93.0	98.0	99.0	95.0	94.0	94.0	92.1	92.1
MSTRE. CORR.										

REMARKS:

DENSITY

MOISTURE

Signed

Title

NUCLEAR COMPACTOR TEST DATA

PROJECT Wish. R. 2. C. 10. 10. 10.
LOCATION Abilene, TX
DATE 8-19-97
TAKEN BY

by
Continental Engineering Service

TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION	(51)									
OFFSET										
ELEVATION										
MODE B DEPTH	17.5"									
DENS. CNT.	2.042									
WET DENS.	112.5									
MSTRE. CNT.	13.5									
MOISTURE										
DRY DENS.	99.3									
% MOISTURE	14.3									
STD. DENS.	11.3									
OPT. MSTRE.	16.1									
% COMP.	90.0									
MSTRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION										
OFFSET										
ELEVATION										
MODE B DEPTH										
DENS. CNT.										
WET DENS.										
MSTRE. CNT.										
MOISTURE										
DRY DENS.										
% MOISTURE										
STD. DENS.										
OPT. MSTRE.										
% COMP.										
MSTRE. CORR.										

REMARKS:

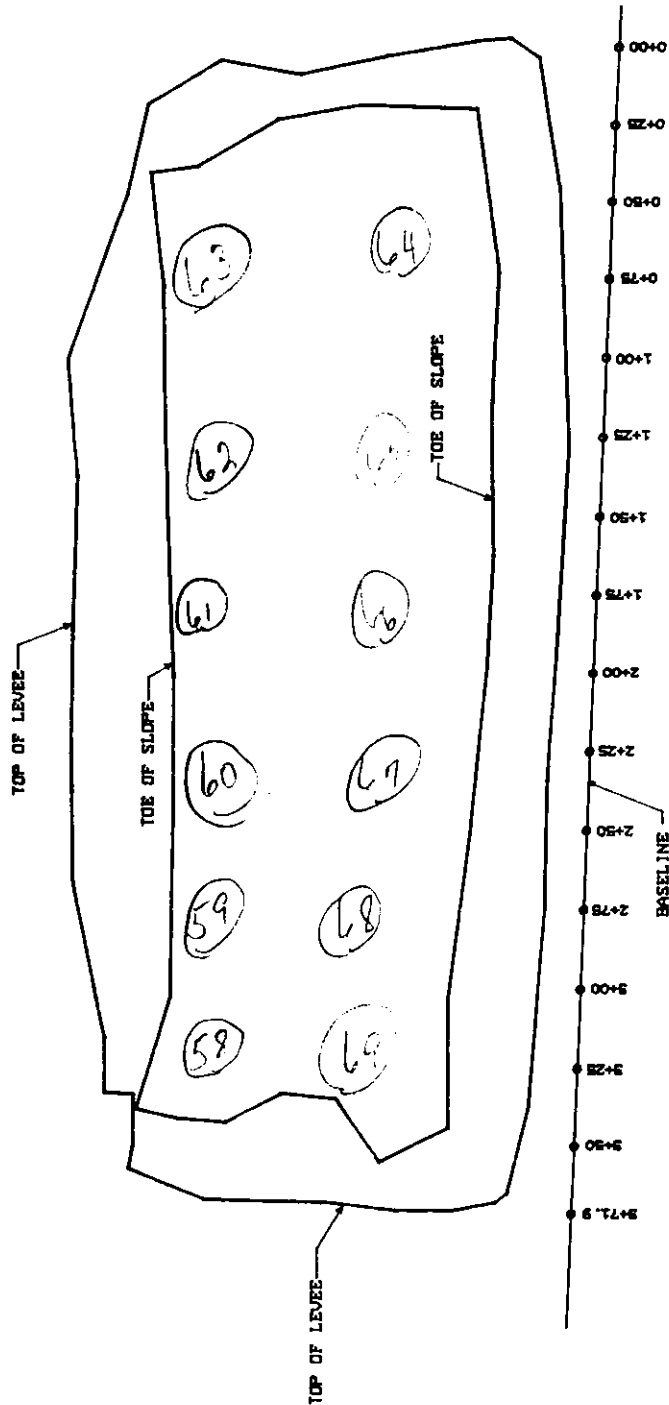
DENSITY

MOISTURE

Signed

Title

Anthony J. Schork



CONTINENTAL ENGINEERING SERVICE ABERDEEN, MISSISSIPPI 39730 - PH. 369-8944	
SCALE: 1" = 40'	LOCATION: CONDEA VISTA - ABERDEEN, MISS.
DATE: 7/17/97	CAPPING ON POND #2
CLASS:	
TITLE: DUPONT ENVIRONMENTAL REMEDIAL SERVICES	FILE NO. AB970705



NUCLEAR COMPACTION

TEST DATA

By Continental Engineering Service

TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION	58	59	60	61	62	63	64	65	66	67
OFFSET										
ELEVATION										
MODE & DEPTH	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"
DENS. CNT.	1443	1943	1989	1890	1712	1809	2098	1509	1639	1624
WET DENS.	124.5	114.8	117.6	115.8	119.2	116.3	112.0	122.6	21.0	121.5
MSTRE. CNT.	168	148	146	134	164	163	143	171	142	143
MOISTURE										
DRY DENS.	106.7	99.3	100.1	106.8	101.9	99.0	97.2	104.3	106.2	106.4
% MOISTURE	16.7	15.6	17.5	13.8	19.0	17.4	15.3	19.4	13.9	14.0
STD. DENS.	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
OPT. MSTRE.	14.2	16.2	14.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
% COMP.	96.7	90.0	90.7	92.3	94.4	89.8	97.2	94.7	96.3	96.5
MSTRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION	68	69								
OFFSET										
ELEVATION										
MODE & DEPTH	DT8"	DT8"								
DENS. CNT.	1815	1493								
WET DENS.	117.3	124.3								
MSTRE. CNT.	129	149								
MOISTURE										
DRY DENS.	104.1	108.8								
% MOISTURE	12.7	14.3								
STD. DENS.	110.3	110.3								
OPT. MSTRE.	14.2	16.2								
% COMP.	94.4	98.6								
MSTRE. CORR.										

REMARKS:

DENSITY

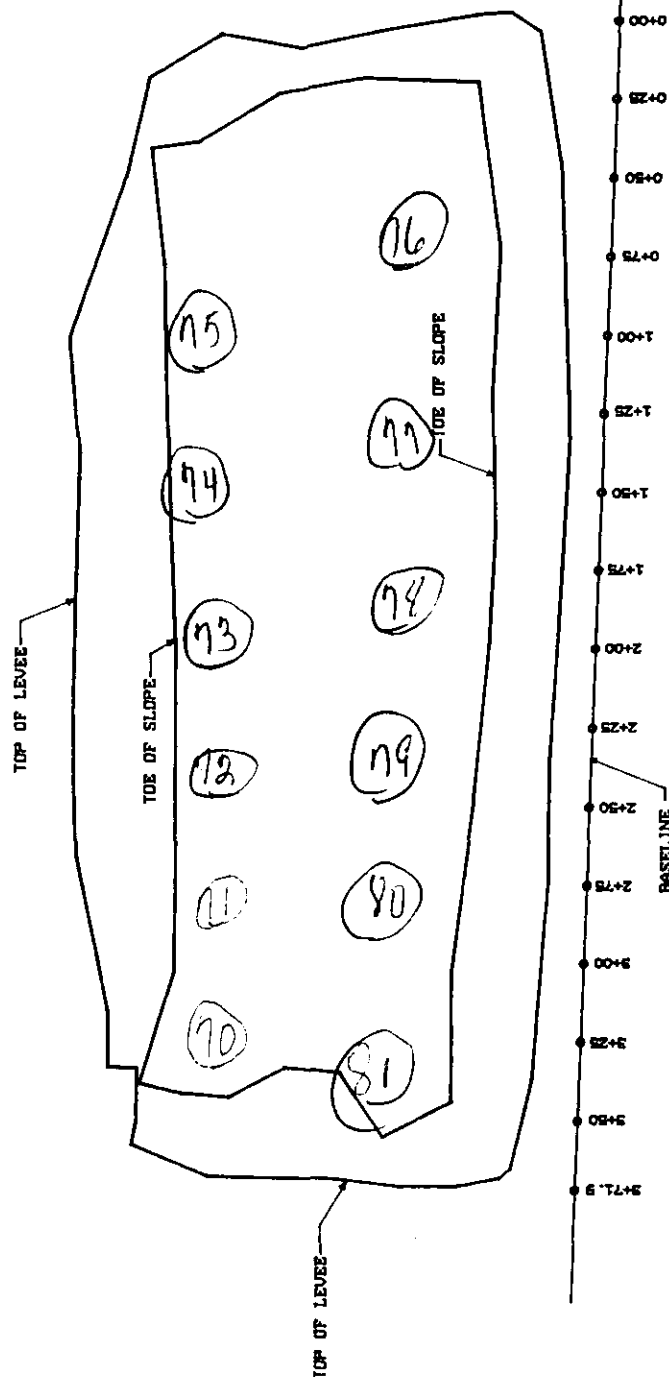
MOISTURE

Signed

Title

Kenneth Luber

 PROJECT Visfa Pond Closure
 LOCATION Aberdeen, MD
 DATE 8-22-97
 TAKEN BY



CONTINENTAL ENGINEERING SERVICE ABERDEEN, MISSISSIPPI 39730 - PH.368-8944			
SCALE: 1" = 40'	LOCATION: CONDEA VISTA - ABERDEEN, MISS.		
DATE: 7/17/97	CLASS: CAPPING ON POND #2		
TITLE: DUPONT ENVIRONMENTAL REMEDATION SERVICES	FILE NO. AB570705		



NUCLEON COMPACTOR TEST DATA

PROJECT: State Road 3 Closure
LOCATION: Abertown, Pa
DATE: 4-2-97
TAKEN BY: Graydon May

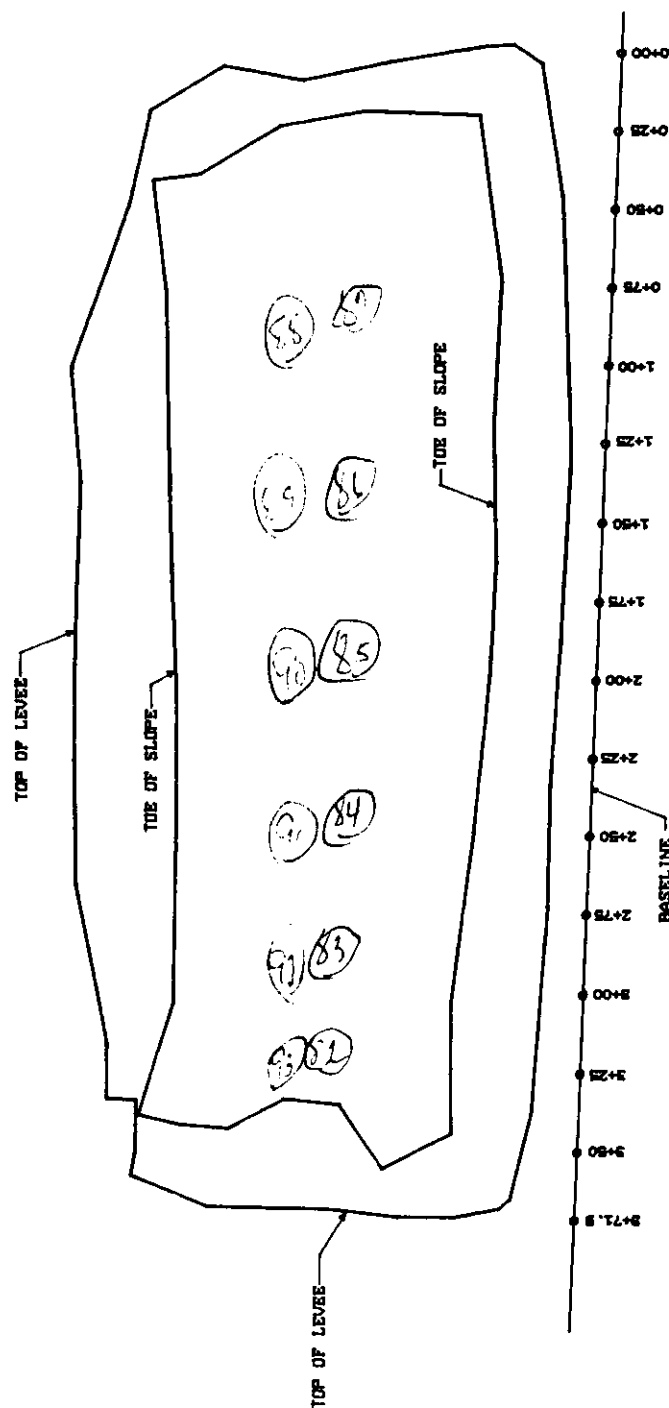
By
Continental Engineering Service

TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION	70									
OFFSET		41	72	72	74	75	76	77	78	79
ELEVATION										
MODE & DEPTH	PT 8"	PT 8"	PT 8"	PT 8"	PT 8"	PT 8"	PT 8"	PT 8"	PT 8"	PT 8"
DENS. CNT.	1784	1784	1754	1589	1452	1906	1581	1441	1350	1251
WET DENS.	118.3	118.3	119.0	132.14	121.9	116.8	120	110	105	100
MSTRE. CNT.	111.3	131	120	132	121	140	106	11	1	1
MOISTURE										
DRY DENS.	110.1	114.3	106.3	105.3	100.4	100.8	103.1	101	101	100
% MOISTURE	15.1	13.4	12.8	13.1	12.5	15.1	3.0	1.1	1.1	1.1
STD. DENS.	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
OPT. MSTRE.	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
% COMP.	93.1	96.6	96.3	98.2	90.4	91.4	92.9	92	92	92
MSTRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION	80	81								
OFFSET										
ELEVATION										
MODE & DEPTH	PT 8"	PT 8"	PT 8"	PT 8"	PT 8"	PT 8"	PT 8"	PT 8"	PT 8"	PT 8"
DENS. CNT.	1784	1784	1754	1589	1452	1906	1581	1441	1350	1251
WET DENS.	118.3	118.3	119.0	132.14	121.9	116.8	120	110	105	100
MSTRE. CNT.	111.3	131	120	132	121	140	106	11	1	1
MOISTURE										
DRY DENS.	110.1	114.3	106.3	105.3	100.4	100.8	103.1	101	101	100
% MOISTURE	15.1	13.4	12.8	13.1	12.5	15.1	3.0	1.1	1.1	1.1
STD. DENS.	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
OPT. MSTRE.	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
% COMP.	93.1	96.6	96.3	98.2	90.4	91.4	92.9	92	92	92
MSTRE. CORR.										

REMARKS:

Signed
Title



CONTINENTAL ENGINEERING SERVICE
ABERDEEN, MISSISSIPPI 39730 - PH.369-8944

SCALE: 1" = 40' LOCATION: CONDEA VISTA - ABERDEEN, MISS.
DATE: 7/17/97 CAPPING ON POND #2
CLASS:

TITLE: DUPONT ENVIRONMENTAL
REMEDIALATION SERVICES
FILE NO.
AB970706

NUCLEON COMPACTOR TEST DATA

PROJECT
LOCATION
DATE
TAKEN BY

By Continental Engineering Service

TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION	82	83	84	85	86	87	88	89	90	91
OFFSET										
ELEVATION										
MODE & DEPTH	178"	178"	178"	178"	178"	178"	178"	178"	178"	178"
DENS. CNT.	1845	1629	1781	1895	1759	1925	1735	1557	11233	1625
WET DENS.	116.5	1210	117.8	115.6	118.2	113.9	116.7	122.1	1209	1200
MSTRE. CNT.	107	110	146	136	154	138	150	136	149	157
MOISTURE										
DRY DENS.	105.6	103.3	106.8	100.9	104.3	99.9	102.3	99.3	104.6	101.1
% MOISTURE	10.6	17.1	15.7	14.6	14.51	15.0	16.1	13.1	13.4	16.8
STD. DENS.	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
OPT. MSTRE.	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
% COMP.	95.9	93.6	92.3	91.5	91.8	90.6	92.7	94.3	91.8	93.1
MSTRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION	92	93								
OFFSET										
ELEVATION										
MODE & DEPTH	178"	178"								
DENS. CNT.	1737	1787								
WET DENS.	118.7	117.9								
MSTRE. CNT.	149	102								
MOISTURE										
DRY DENS.	102.1	102.3								
% MOISTURE	15.9	9.8								
STD. DENS.	110.3	110.3								
OPT. MSTRE.	110.3	110.3								
% COMP.	92.8	91.3								
MSTRE. CORR.										

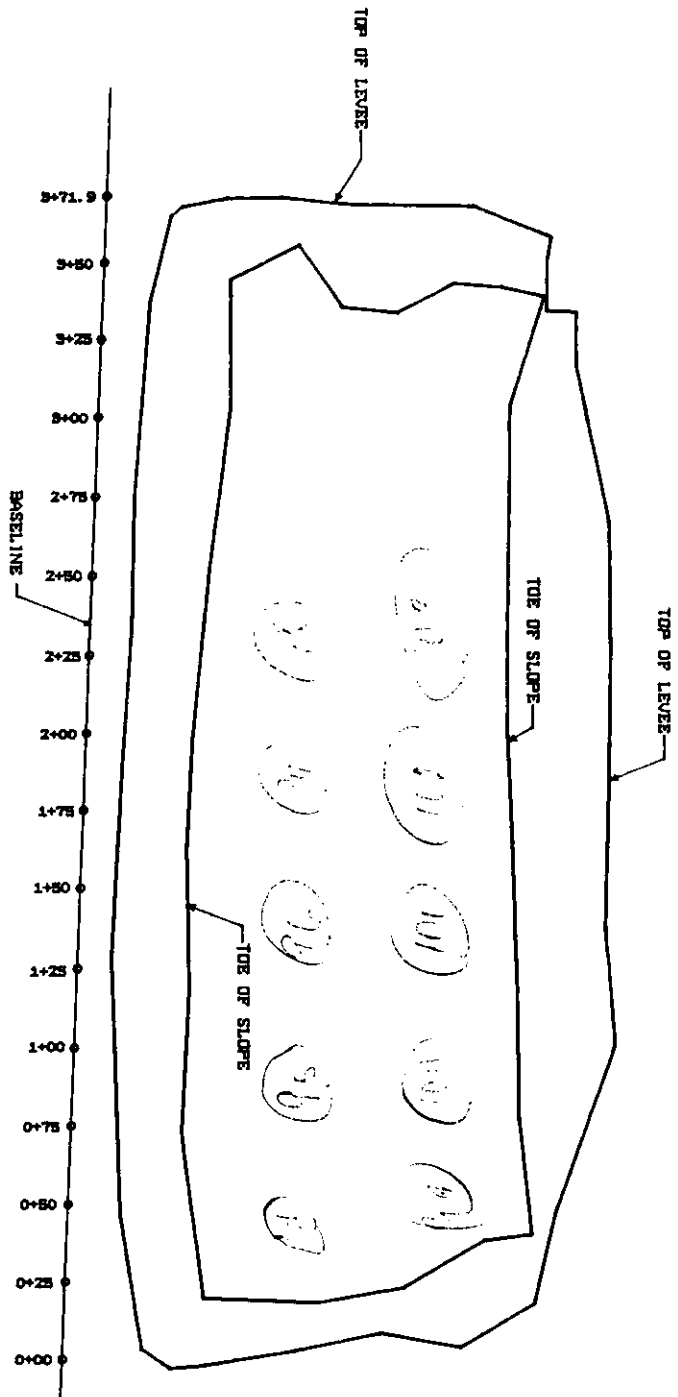
REMARKS:

DENSITY

MOISTURE

Signed

Title



CONTINENTAL ENGINEERING SERVICE	
ABERDEEN, MISSISSIPPI 39730 - PH. 369-8944	
SCALE: 1" = 40'	LOCATION: CONDER VISTA - ABERDEEN, MISS.
DATE: 7/17/97	DRAWING: ON POND #2
CLASS:	
TITLE: DUPONT ENVIRONMENTAL REMEDIATION SERVICES	FILE NO. AB970705

NUCLEAR COMPACTION TEST DATA

PROJECT W. Sta. Road 2, C105606
LOCATION Aberdeen, MS
DATE 8-22-97
TAKEN BY Gayla Clay

By Continental Engineering Service

TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION OFFSET	94	95	96	97	98	99	100	101	102	103
ELEVATION										
MODE & DEPTH	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"
DENS. CNT.	119.4	116.42	119.3	116.6	118.93	118.91	119.23	114.5	119.33	116.15
WET DENS.	118.0	120.9	118.9	120.4	115.17	116.0	119.1	120.3	118.9	121.5
MSTRE. CNT.	146	138	133	152	140	131	110	144	128	135
MOISTURE										
DRY DENS.	102.5	106.1	105.0	104.2	104.0	101.8	104.1	105.1	105.6	109.3
% MOISTURE	15.1	13.16	13.2	15.5	14.6	14.0	14.1	14.5	12.6	13.2
STD. DENS.	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
OPT. MSTRE.	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2
% COMP.	93.0	91.1	95.2	94.5	91.5	92.3	94.6	95.3	95.8	92.3
MSTRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION OFFSET										
ELEVATION										
MODE & DEPTH										
DENS. CNT.										
WET DENS.										
MSTRE. CNT.										
MOISTURE										
DRY DENS.										
% MOISTURE										
STD. DENS.										
OPT. MSTRE.										
% COMP.										
MSTRE. CORR.										

REMARKS:

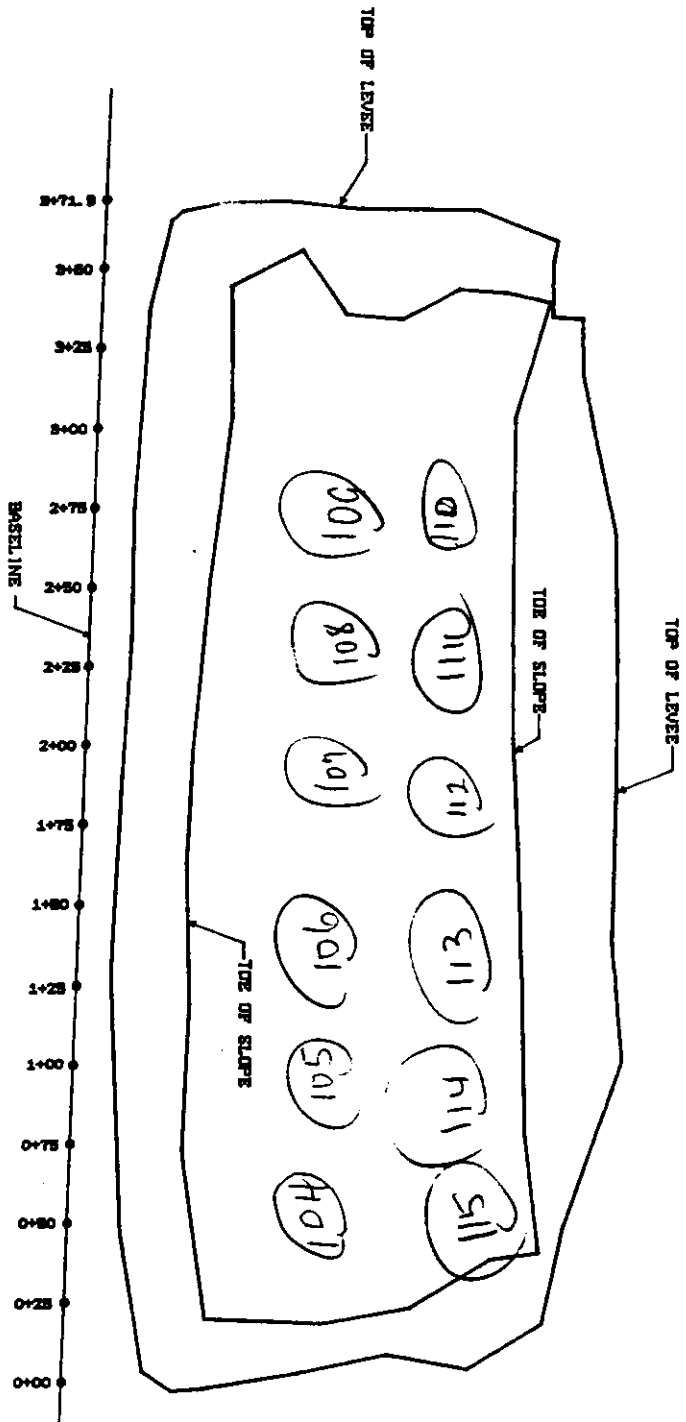
DENSITY

MOISTURE

Signed

Title

Gayla Clay



CONTINENTAL ENGINEERING SERVICE	
ABERDEEN, MISSISSIPPI 39730 - PH.368-8944	
SCALE: 1" = 40'	LOCATION: CONDEA VISTA - ABERDEEN, MISS.
DATE: 7/17/97	DEPICTING ON POND #2
CLASS:	
TITLE: DUPONT ENVIRONMENTAL REMEDIAL SERVICES	FILE NO. AB970705

NUCLEAR COMPACTION TEST DATA

PROJECT
LOCATION
DATE
TAKEN BY

Visita Don 2
Albuquerque, NM
8-28-97
H. Smith gylar

BY
Continental Engineering Service

TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION	104	105	106	107	108	109	110	111	112	113
OFFSET										
ELEVATION										
MODE & DEPTH	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"
DENS. CNT.	1951	1457	1952	1165	1952	1920	2347	1908	1427	1643
WET DENS.	14.5	120.3	118.3	118.1	118.3	115.0	108.0	119.4	121.0	120.7
MSTRE. CNT.	131	151	150	110	157	145	129	127	145	145
MOISTURE										
DRY DENS.	100.9	101.3	102.4	103.3	101.0	99.7	94.96	106.2	105.7	105.2
% MOISTURE	13.5	15.3	15.5	14.3	16.5	15.3	14.2	12.4	14.5	14.5
STD. DENS.	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
OPT. MSTRE.	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
% COMP.	91.5	94.6	97.8	93.6	92.4	90.4	85.7	96.3	95.9	95.5
MSTRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION	114	115								
OFFSET										
ELEVATION										
MODE & DEPTH	DT8"	DT8"								
DENS. CNT.	1725	1613								
WET DENS.	1189	121.3								
MSTRE. CNT.	138	152								
MOISTURE										
DRY DENS.	104.5	105.2								
% MOISTURE	13.8	15.3								
STD. DENS.	110.3	110.3								
OPT. MSTRE.	110.3	110.3								
% COMP.	11.2	14.2								
MSTRE. CORR.	14.9	95.4								

REMARKS:

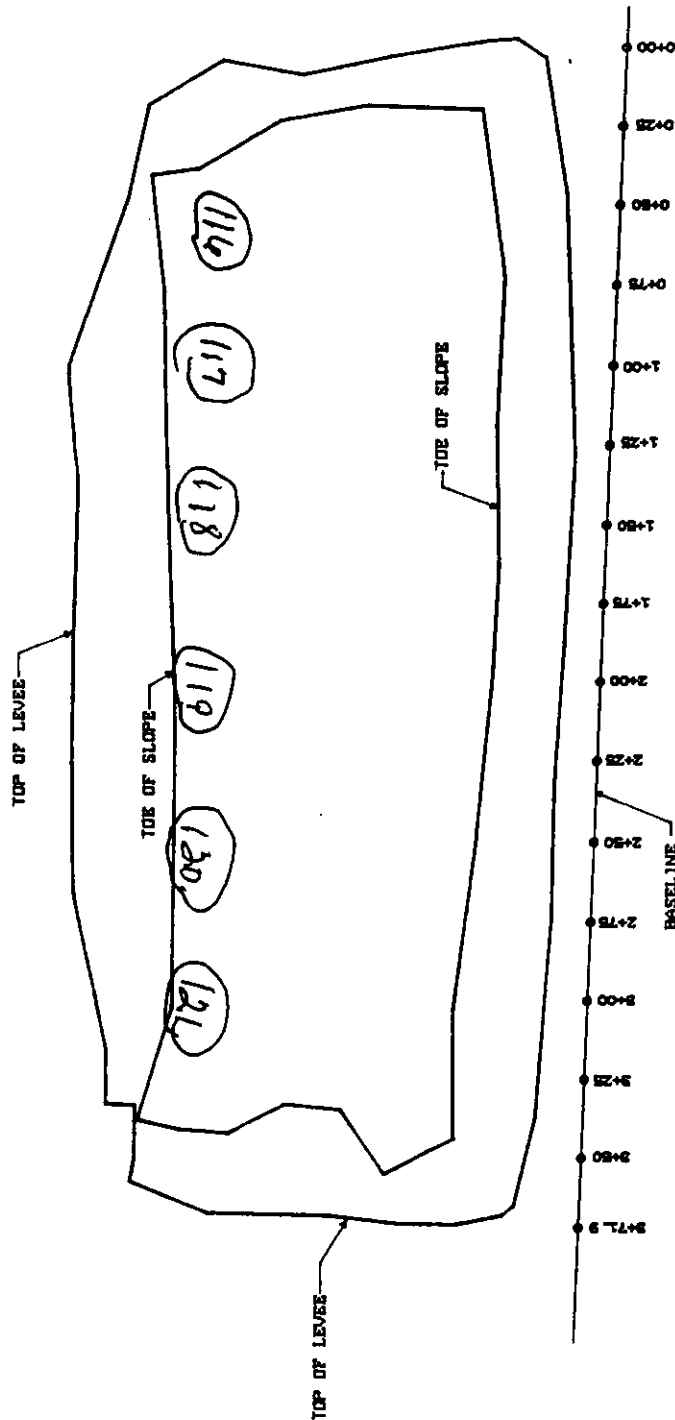
MOISTURE

DENSITY

Signed

Title

Ken Luker



CONTINENTAL ENGINEERING SERVICE ABERDEEN, MISSISSIPPI 39730 - PH.369-8944			
SCALE: 1" = 40'	LOCATION: COMIDA VISTA - ABERDEEN, MISS.		
DATE: 7/17/97	CAPTIVE ON POND #2		
CLASS:			
TITLE: DUPONT ENVIRONMENTAL REMEDIATION SERVICES	FILE NO. AB970705		



NUCLEAR COMPACTION TEST DATA

PROJECT Vista Dr. 2
LOCATION ACERDREHMS
DATE 9-2-97
TAKEN BY Gaytha Clay

Continental Engineering Service

TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION	116	117	118	119	120	121	122			
OFFSET										
ELEVATION										
MODE & DEPTH	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"			
DENS. CNT.	1863	1891	1910	1887	1999	1923	1941			
WET DENS.	116.1	116.0	115.2	115.6	117.7	115.3	114.7			
MSTRE. CNT.	140	131	144	137	139	119	124			
MOISTURE										
DRY DENS.	101.0	102.0	99.6	100.9	102.8	102.7	101.6			
% MOISTURE	14.9	13.7	15.6	14.6	14.6	12.2	12.9			
STD. DENS.	110.3	110.3	110.3	110.3	110.3	110.3	110.3			
OPT. MSTRE.	116.2	116.2	116.2	116.2	116.2	116.2	116.2			
% COMP.	91.6	92.5	90.3	91.5	93.2	93.1	92.1			
MSTRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION										
OFFSET										
ELEVATION										
MODE & DEPTH										
DENS. CNT.										
WET DENS.										
MSTRE. CNT.										
MOISTURE										
DRY DENS.										
% MOISTURE										
STD. DENS.										
OPT. MSTRE.										
% COMP.										
MSTRE. CORR.										

REMARKS:

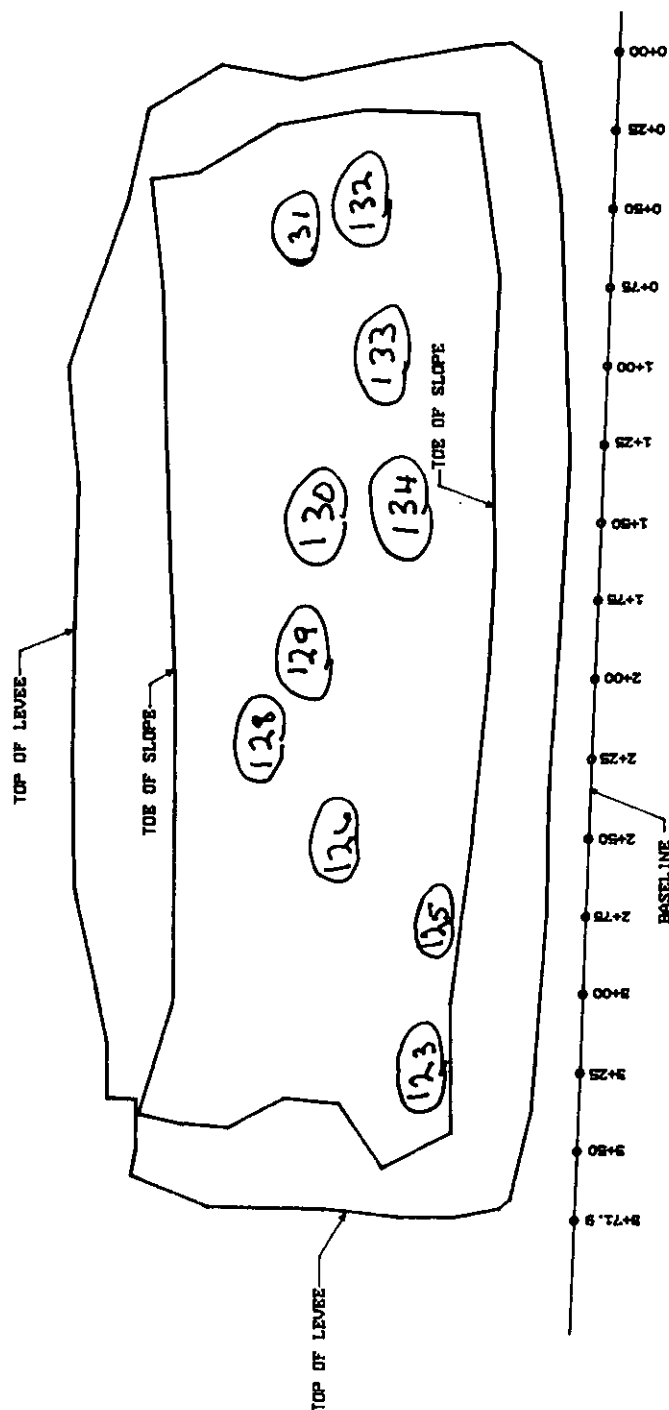
DENSITY

MOISTURE

Signed

Title

Gaytha Clay



CONTINENTAL ENGINEERING SERVICE
ABERDEEN, MISSISSIPPI 39730 - PH.369-8944

SCALE: 1" = 40' LOCATION: CONDEA USTA - ABERDEEN, MISS.
 DATE: 7/17/97 CAPPING ON POND #2
 CLASS:

TITLE: DUPONT ENVIRONMENTAL
 REMEDIATION SERVICES FILE NO.
 AB570705



NUCLEON COMPACTOR TEST DATA

PROJECT
LOCATION
DATE
TAKEN BY

Visita Poma
Abedeeb, N.S.
9.5.97
Caytha Clay

By
Continental Engineering Service

TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION	123	125	126	128	129	130	131	132	133	134
OFFSET										
ELEVATION										
MODE & DEPTH	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"	DT 8"
DENS. CNT.	208	2030	1951	1873	2000	1954	1914	1862	1885	2028
WET DENS.	112.5	113.4	114.8	116.3	114.0	114.8	115.4	116.6	116.2	113.5
MSTRE. CNT.	133	140	132	134	128	122	122	118	106	119
MOISTURE										
DRY DENS.	98.5	98.5	100.9	102.2	100.5	102.1	102.9	104.4	105.4	101.2
% MOISTURE	14.2	15.1	13.8	13.8	13.3	12.4	12.3	11.7	10.2	12.2
STD. DENS.	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
OPT. MSTRE.	112	112	112	112	112	112	112	112	112	112
% COMP.	89.3	89.3	91.5	92.6	91.2	92.6	93.3	94.6	95.6	96.2
MSTRE. CORR.										

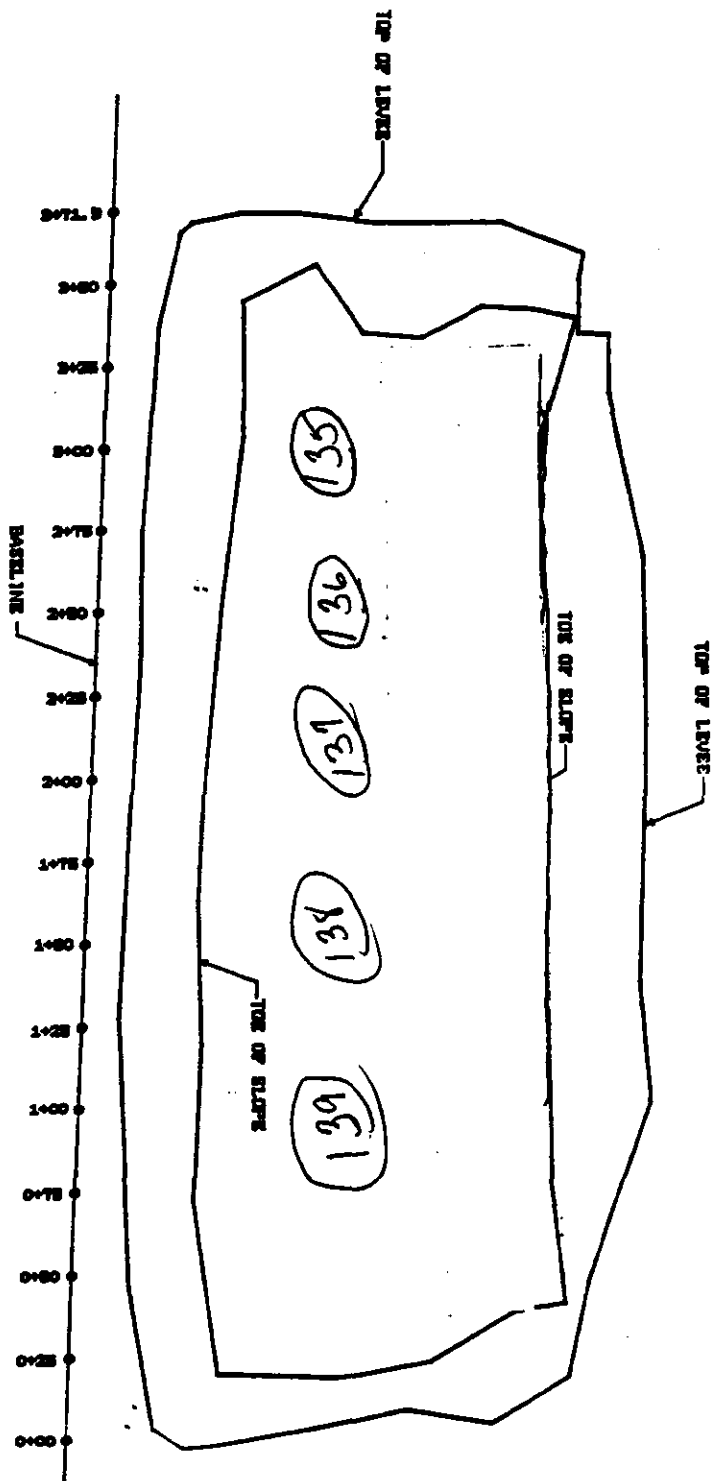
TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION										
OFFSET										
ELEVATION										
MODE & DEPTH										
DENS. CNT.										
WET DENS.										
MSTRE. CNT.										
MOISTURE										
DRY DENS.										
% MOISTURE										
STD. DENS.										
OPT. MSTRE.										
% COMP.										
MSTRE. CORR.										

REMARKS:

DENSITY	MOISTURE

Signed
Title

Caytha Clay



CONTINENTAL ENGINEERING SERV	
ABERDEEN, MISSISSIPPI 38730 - PH.368-89	
SCALE: 1" = 40'	LOCATION: CONDON VICTA - ABERDEEN, MI
DATE: 7/17/97	DRAWING ON FORM #2
CLASS:	
TITLE: DUPONT ENVIRONMENTAL REMEDATION SERVICES	FILE NO. ABSTO



NUCLEAR COMPACTION TEST DATA

PROJECT Vista Land & Closure
LOCATION Alameda, MS
DATE 9-8-97
TAKEN BY Cayla Clay

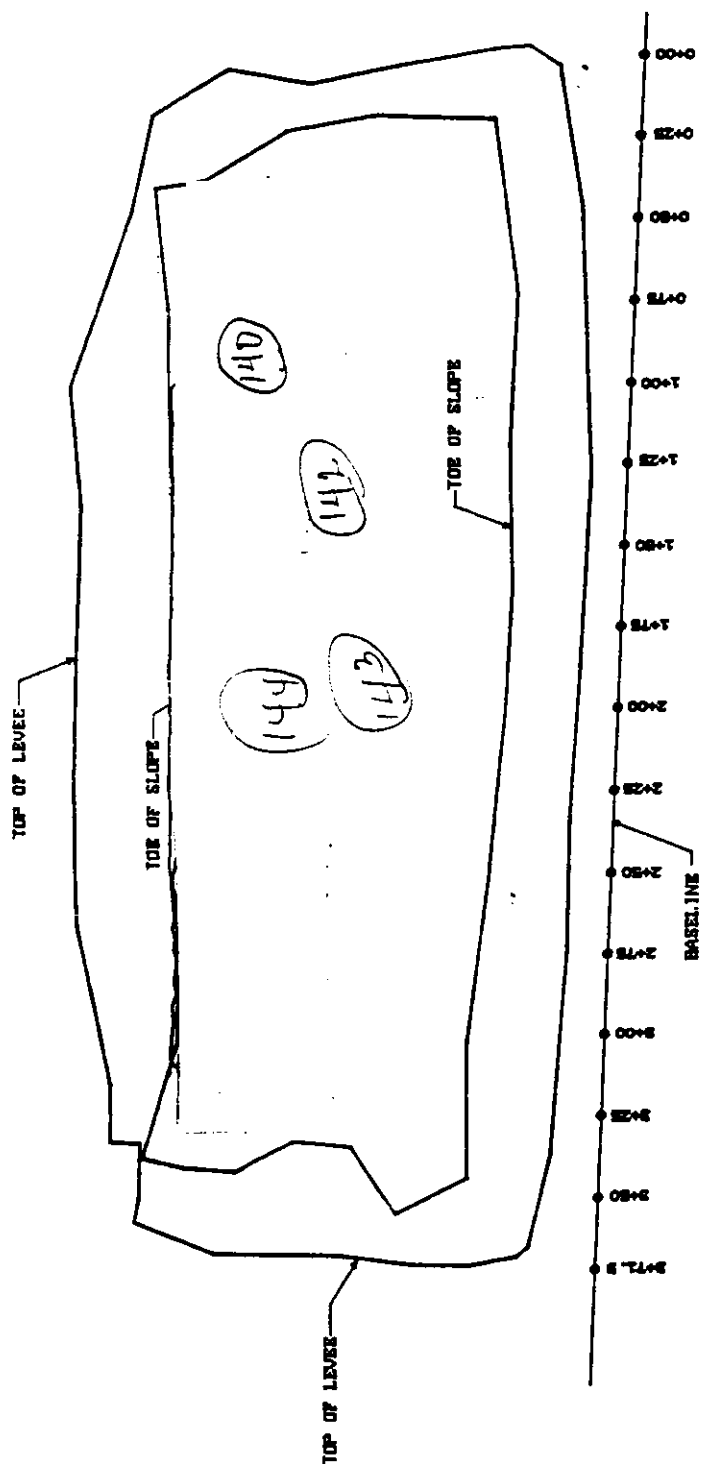
By Continental Engineering Service

TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION	135	136	137	138	139					
OFFSET										
ELEVATION										
MODE & DEPTH	DT8"	DT8"	DT8"	DT8"	DT8"					
DENS. CNT.	1818	1868	1621	1579	1665					
WET DENS.	116.7	115.8	120.8	121.7	120.0					
MSTRE. CNT.	147	135	164	180	136					
MOISTURE										
DRY DENS.	101.4	101.5	103.4	102.4	105.9					
% MOISTURE	15.2	13.7	16.8	18.8	13.3					
STD. DENS.	110.3	110.3	110.3	110.3	110.3					
OPT. MSTRE.	116.2	116.2	116.2	116.2	116.2					
% COMP.	91.9	92.4	93.8	92.9	96.0					
MSTRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION										
OFFSET										
ELEVATION										
MODE & DEPTH										
DENS. CNT.										
WET DENS.										
MSTRE. CNT.										
MOISTURE										
DRY DENS.										
% MOISTURE										
STD. DENS.										
OPT. MSTRE.										
% COMP.										
MSTRE. CORR.										

REMARKS:

Signed Cayla Clay
Title



CONTINENTAL ENGINEERING SERVICE ABERDEEN, MISSISSIPPI 39730 - PE.369-8944			
SCALE: 1" = 40'	LOCATION: CONDERA VISTA - ABERDEEN, MISS.		
DATE: 7/17/97	CAPPING ON POND #2		
CLASS:			
TITLE: DUPONT ENVIRONMENTAL REMEDIATION SERVICES	FILE NO. A8970706		



NUCLEAR COMPACTION TEST DATA

By Continental Engineering Service

PROJECT Vista Pond Closure 2
LOCATION ABERDEEN, MS.
DATE 9-11-97
TAKEN BY Kenneth Kuter

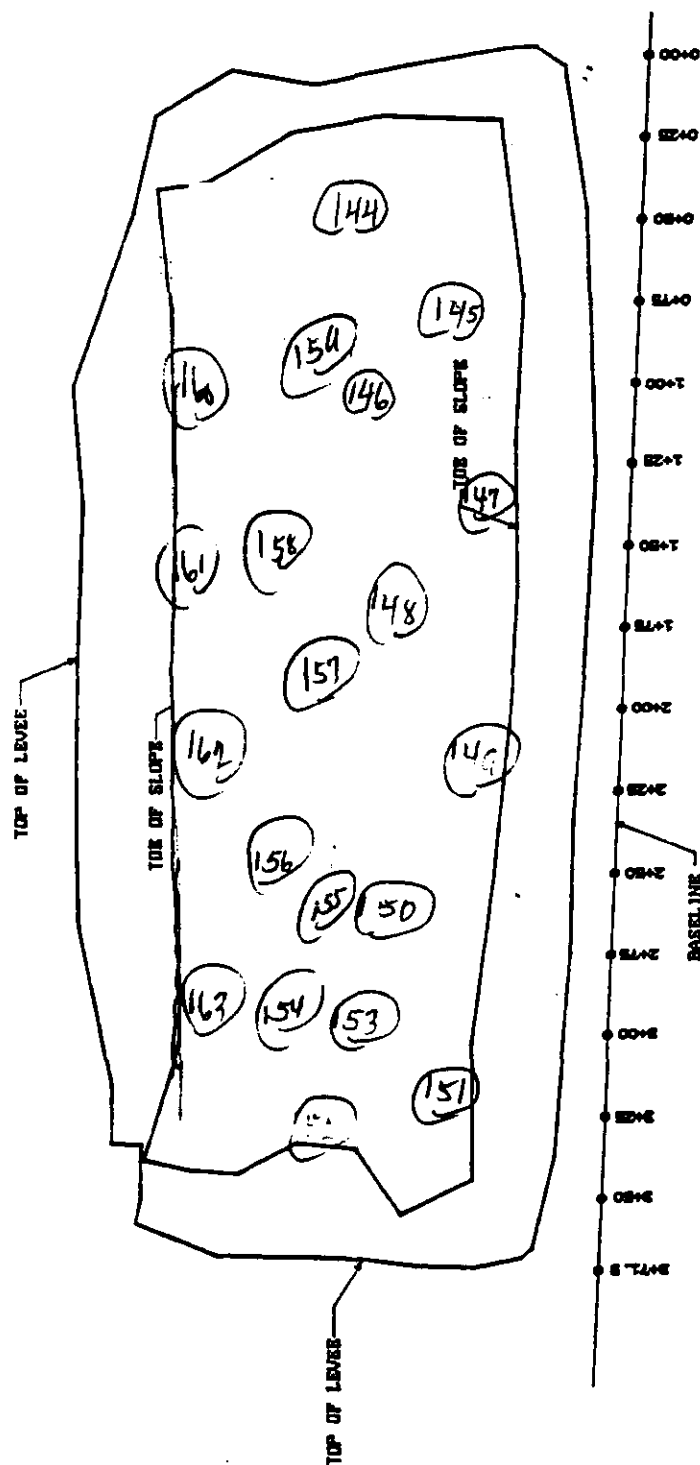
TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION	140	141	142	143						
OFFSET										
ELEVATION										
MODE & DEPTH	DT8"	DT8"	DT8"	DT8"						
DENS. CNT.	150.1	154.0	148.8	154.5						
WET DENS.	123.9	122.8	124.1	122.7						
MSTRE. CNT.	207	224	226	220						
MOISTURE										
DRY DENS.	101.4	98.4	99.4	98.7						
% MOISTURE	22.1	24.5	24.7	24.3						
STD. DENS.	104.4	104.4	104.4	104.4						
OPT. MSTRE.	12.8	18.8	18.8	18.8						
% COMP.	99.1	94.2	95.2	94.5						
MSTRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION										
OFFSET										
ELEVATION										
MODE & DEPTH										
DENS. CNT.										
WET DENS.										
MSTRE. CNT.										
MOISTURE										
DRY DENS.										
% MOISTURE										
STD. DENS.										
OPT. MSTRE.										
% COMP.										
MSTRE. CORR.										

REMARKS:

DENSITY	MOISTURE
---------	----------

Signed
Title



CONTINENTAL ENGINEERING SERVICE		
ABERDEEN, MISSISSIPPI 39730 - PH.389-8944		
SCALE: 1" = 40'	LOCATION: CORONA VISTA - ABERDEEN, MISS.	
DATE: 7/17/97	CAPPING ON POND #2	
CLASS:		
TITLE: DUPONT ENVIRONMENTAL REMEDIATION SERVICES		FILE NO. ABD70706



NUCLEAR COMPACTOR

PROJECT

LOCATION

DATE

TAKEN BY

TES DATA

Confidential Engineering Service

Vista Road 2 Closure

Aberdeen

12-97

Caythe Clay

TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION	144	145	146	147	148	149	150	151	152	153
OFFSET										
ELEVATION										
MODE & DEPTH	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"
DENS. CNT.	1798	1481	1367	1630	1591	1531	1420	1500	1382	1337
WET DENS.	117.3	119.6	127.1	120.9	121.7	123.1	125.7	123.8	126.7	128
MSIRE. CNT.	113	186	207	158	141	176	197	178	198	194
MOISTURE										
DRY DENS.	99.7	99.3	104.3	103.9	104.4	104.0	104.1	104.5	1050	106.7
% MOISTURE	17.6	20.4	21.8	16.3	16.6	18.4	20.7	18.5	20.7	19.9
STD. DENS.	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4
OPT. MSIRE.	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.4	18.4	18.4
% COMP.	95.5	95.1	99.8	99.5	100.0	99.5	99.7	100.	100.5	102.2
MSIRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION	154	155	156	157	158	159	160	161	162	163
OFFSET										
ELEVATION										
MODE & DEPTH	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"
DENS. CNT.	1608	1425	1571	1490	1522	1472	1626	1599	1764	1606
WET DENS.	121.3	125.6	122.0	124.1	123.3	124.4	120.9	121.5	119.9	121.3
MSIRE. CNT.	173	186	187	171	163	143	1192	171	169	171
MOISTURE										
DRY DENS.	102.5	105.4	106.6	105.16	105.8	103.3	92.9	103.0	99.7	102.8
% MOISTURE	18.3	19.2	20.1	17.5	16.6	20.4	21.0	17.9	18.3	18.0
STD. DENS.	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4
OPT. MSIRE.	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8
% COMP.	98.2	100.9	97.3	101.1	101.3	98.9	95.6	98.6	95.4	98.4
MSIRE. CORR.										

REMARKS:

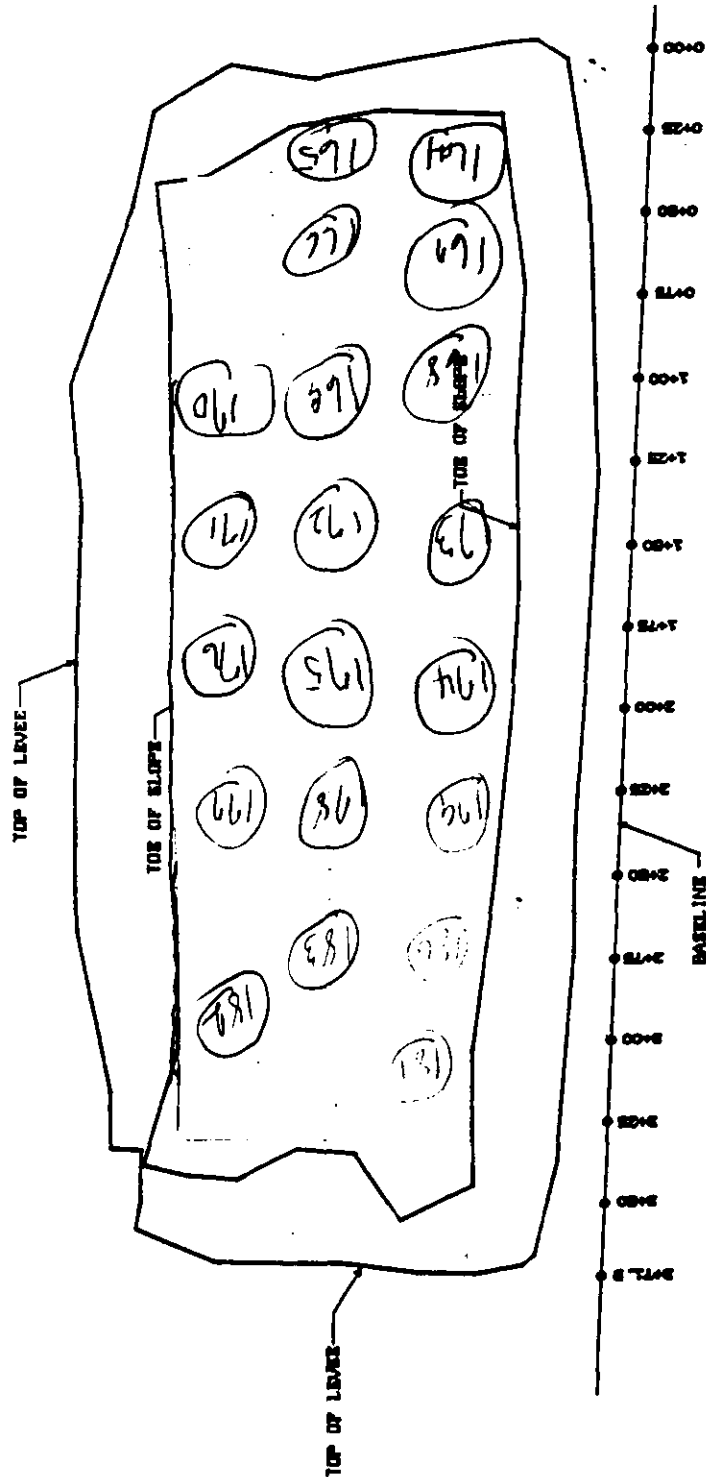
DENSITY

MOISTURE

Signed

Title

Caythe Clay



CONTINENTAL ENGINEERING SERVICE			
ABERDEEN, MISSISSIPPI 39730 - PR.369-6944			
SCALE	1" = 40'	LOCATION	CORONA VISTA - ABERDEEN, MISS.
DATE	7/17/97	CHIPPING ON POND #2	
CLASS			
TITLE	DUPONT ENVIRONMENTAL REMEDIAL SERVICES		
FILE NO.	ABD00039403		

NUCLEAR COMPACTION TEST DATA

PROJECT US542 Ph. 105612
LOCATION Aberdeen, Md.
DATE 9-12-57
TAKEN BY Gayla C. May

By
Continental Engineering Service

TEST NUMBER	1	2	3	4	5	6	7	8	9	10
STATION	114	165	166	117	168	169	170	171	172	173
OFFSET										
ELEVATION										
MODE & DEPTH	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"
DENS. CNT.	1931	1530	1738	1411	1534	1515	1794	2000	1818	1518
WET DENS.	118.3	121.7	118.2	125.9	120.6	123.0	119.4	113.2	123.2	123.3
MSIRE. CNT.	146	180	158	142	192	162	155	142	146	142
MOISTURE										
DRY DENS.	103.2	102.5	101.5	111.2	101.9	105.8	101.1	98.5	108.0	106.2
% MOISTURE	14.8	18.8	16.4	13.3	20.3	16.2	16.1	150	14.1	16.1
STD. DENS.	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4
OPT. MSIRE.	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8
% COMP.	98.8	98.1	97.2	106.4	97.6	101.3	96.8	94.3	103.4	101.7
MSIRE. CORR.										

TEST NUMBER	11	12	13	14	15	16	17	18	19	20
STATION	174	175	176	177	178	179	180	181	182	183
OFFSET										
ELEVATION										
MODE & DEPTH	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"	DT8"
DENS. CNT.	1774	1840	1556	1493	1445	1438	1813	1913	1659	1645
WET DENS.	119.4	116.2	122.2	123.5	124.8	120.5	116.7	118.6	119.8	120.1
MSIRE. CNT.	160	153	129	198	181	143	1150	171	181	183
MOISTURE										
DRY DENS.	106.0	101.0	103.7	102.2	105.5	105.5	101.0	100.5	100.4	100.5
% MOISTURE	11.8	16.1	17.7	20.9	18.3	14.1	15.6	18.1	19.3	19.5
STD. DENS.	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4
OPT. MSIRE.	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8
% COMP.	96.3	95.8	99.3	97.7	101.0	101.1	96.7	96.2	96.1	96.2
MSIRE. CORR.										

REMARKS:

DENSITY

MOISTURE

Signed

Title

Gayla C. May

ABD00039405

~~APPENDIX E~~

APPENDIX F
DAILY FIELD REPORTS

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.: 4041

Date: 5/13/14/15/97

Page: 5/20/97

Field Activity:

Build Ramp, west end/Load/Haul/Stockpile Resin

I was not on site. Hanna Construction excavated the pond to the bottom of the bottom. They cut the pond to the bottom on the west side (about 300 cu) to build a ramp to get their tandem to the bottom. They excavated & loaded about 90 loads & placed in a stockpile due west of pond 2. About 40 loads was the material pumped from pond #4 the other 50 loads was the clean resin. The white resin material was about 100 cu. While the pond #4 material was very wet & gray black material. Hanna Construction cut off 100m to stockpile, pulled off the job site. I came to the site May 20, showed Jacob where to build another catchment area North west of the Pond #2. He will charge me T&M to do this work. No Man, Jack & Lot
Exc Loads = 70

WORK COMPLETE TO DATE:

1) Exc Pond Resin	900 TONS	\$ 3,780	TTD	900 TON	\$ 3,780
2) Load & Haul Resin	8 TONS		TTD	8 TON	\$ 8
3) Borrow Back Fill	8 CY		TTD	8 CY	\$ 8
4) Clay CAP	8 CY		TTD	8 CY	\$ 8
5) TOP SOIL	8 CY		TTD	8 CY	\$ 8
6) T & M	8 F		TTD	8 F	\$ 8

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Important Phone Calls:

DERS Personnel on site:

Site Supervisor:

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 CLOSURE

Project No.:

4041

Date:

6/7/97

Field Activity:

Load / haul / Stockpile Resin

Page:

7:00 - 3:30

Hanna Const. I had them clean the North East bank. Load the Resin & haul to stockpile. I had Top Loads in the North East corner. I had them use the dozer & push about 150 cy of the "clean" Stock Pile from the East Side of Pond 2. They loaded 13 Loads from the South East bank had to mix some of the Clean Material with the Resin to build a ramp to reach the South East bank. There was a lot of Resin above Pond Level covered with the topsoil. I had them use the mixed material to build a ramp on the North East Side so they could get the truck down to dig a sump for the pump.

Exc Loads = 23

WORK COMPLETE TO DATE:

1.) Exc. Pond Resin	230 tons @ 96¢	TTD 11:30 TONS \$ 4,746
2.) Load & haul Resin	@ Ton	TTD @ TONS \$ @
3.) Borrow Backfill	@ cy	TTD @ cy \$ @
4.) Clay CAP	@ cy	TTD @ cy \$ @
5.) Top Soil	@ cy	TTD @ cy \$ @
6.) T & M	\$ 420.00	TTD \$ 420 \$ 420.00
7.) Hoxton LF	@ Ton \$ @	TTD @ Ton \$ @

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Overcast
80°

Important Phone Calls:

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name: <u>Pond 2 Closure</u>	Project No.: <u>4041</u>
Field Activity: <u>Load / haul / Stockpile Resin</u>	Date: <u>6/9/97</u>
<u>7:00 - 3:30</u>	Page:

I had John take the dozer to the bottom of Puch the wet Resin in the East end. The Resin was very wet so he pushed it into a pile at the East end so the machine could reach it.

The bottom of the Pond is very hard under the Resin, there is a hard Pack of clay, the dozer had no problem working on it. The resin that they loaded was very wet. We stockpiled it on the north west Stockpile. John pushed about 1/4 of the bottom. It started raining about 3:00 so we shut down. I went to the safety meeting, watched films & got my badge. I can now take my truck on site.

Exc Loads = 13

LF Loads =

WORK COMPLETE TO DATE:

1.) Exc Pond Resin	130 Tons	\$ 546	TTD: 1,260 TONS	\$ 5392
2.) Load & haul Resin	10 Tons	\$ 7.97	TTD: 40 TON	\$ 318.80
3.) Bottom Backfill	0 CY		TTD: 0 CY	\$ 0
4.) Clay CAP	0 CY		TTD: 0 CY	\$ 0
5.) Topsoil	0 CY		TTD: 0 CY	\$ 0
6.) T & M	0 \$		TTD: \$ 420	\$ 420
7.) Haulton LF	0 TON		TTD: 0 TON	\$ 0

Visitors on site:	Changes in Plans or Specifications:
Weather Conditions: <u>Overcast</u> <u>Rain afternoon</u> <u>early am</u>	Important Phone Calls:
DERS Personnel on site: <u>Dennis R Dubbel</u>	
Site Supervisor: <u>Dennis R Dubbel</u> <i>Dennis R Dubbel</i>	

DAILY FIELD ACTIVITY REPORT

Project Name: POND 2 CLOSUREProject No.: 4041Date: 6/10/97

Field Activity:

Page:

Load 1 haul Resin to Landfill7:00 - 3:30

Used Bobcat to make dike for pond water on north-west stock pile. From 7:00 to 3:30. John & I drove to the Houston Landfill to check with them on how much & where we dump the resin. They said they did not want wet resin, but OK if rain on it from plant to landfill. John hauled 3 loads to the landfill to show his drivers where to go. Dumped the pond. No work in the pond to wet.

Exc Loads = 0

LF Loads = 3

WORK COMPLETE TO DATE:

1.) Exc Pond Resin	0 Tons	\$0	TTD: 1260 Tons	\$5,292
2.) Load & haul Resin	44.26 Tons	\$269.97	TTD: 44.26 Tons	\$269.97
3.) Borrow Backfill	0 CY	\$0	TTD: 0 CY	\$0
4.) Clay Cap	0 CY	\$0	TTD: 0 CY	\$0
5.) Top Soil	0 CY	\$0	TTD: 0 CY	\$0
6.) T&M	0	\$0	TTD: \$420	\$420
7.) Houston LF	44.26 TON	\$1,195.02	TTD: 44.26 TON	\$1,195.02

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions: Rain early am
Overcast

Important Phone Calls:

DERS Personnel on site: Dennis R. DubbelSite Supervisor: Dennis R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

6/11/97

Page:

Field Activity:

Haul Resin to LF. Move North Stockpile

7:00 - 5:30

I had John Excavate Load the north stockpile & dump it on the back of the east stockpile. We are making another laydown area for the Resin. They loaded & hauled six loads of Resin to the landfill from the northwest stockpile. We loaded the material that was excavated Saturday. They used one end dump & one tandem to haul with. Jacob used his backhoe to dig out the sand with. I took a shovel & dug trenches for the water to drain into the sump. I had John build a ramp at the north west end (just east of the concrete pad) so he could set his excavator up to load resin from the pond. We hauled off most of the dirt resin from Saturday's stockpile & will start on the west stockpile in the morning.

Exc Loads =

LF Loads = 6

WORK COMPLETE TO DATE:

1.) EXC Pond Resin	0 TONS	TTD: 1260 TONS	\$ 5,292
2.) Load & Haul Resin	116.92 TONS	TTD: 161.18 TONS	\$ 983.18
3.) Bottom Backfill	0 CY	TTD: 0 CY	\$ 0
4.) Clay Cap	0 CY	TTD: 0 CY	\$ 0
5.) Topsoil	0 CY	TTD: 0 CY	\$ 0
6.) T & M	\$ 1,085	TTD:	\$ 1,505.00
7.) Hauling LF	116.92 TON	TTD: 161.18 TON	\$ 4,351.86

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

overcast
Clear PM ☼
No Rain

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubber

Site Supervisor:

Dennis R. Dubber & Dennis R. Dubber

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

6/12/97

Page:

Field Activity:

Haul Resin to L.F. / Exc Pond Resin

7:00 - 5:30

John finished hauling the "Clean" Stockpiled Material from the North Stockpile to the East Stockpile. John loaded Resin from his North ramp area & dumped it in the new North Stockpile area, hauled 10 loads to Stockpile. Started cleaning resin off north bank with dozer pushing it to Stockpile at north ramp. Loaded & hauled six loads of dry Resin from West Stockpile to the Houston Landfill. End dumped flats. John left at 8:00 returned at 1:00. Bottom of Pond in good shape used dozer to push wet resin to the north stockpile.

Exc Loads = 10

LF Loads = 6

WORK COMPLETE TO DATE:

1.) Exc Pond Resin	140 TONS	\$ 588.00	TTD: 1400 TONS	\$ 5,880
2.) Load & Haul Resin	9869 TONS	\$ 602.00	TTD: 259.87 TONS	\$ 1,585.17
3.) Bottom Backfill	0 CY		TTD: 0 CY	\$ 0
4.) Clay CAP	0 CY		TTD: 0 CY	\$ 0
5.) Topsoil	0 CY		TTD: 0 CY	\$ 0
6.) T & M	\$ 160.00		TTD:	\$ 1,665.00
7.) Houston LF	9869 TON	\$ 2,326.31	TTD: 259.87 TONS	\$ 1,678.17

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear
Low 80s

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

Dennis R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 CLOSURE

Project No.: 4041

Date: 6/13/97

Field Activity:

HAUL RESIN TO L.F. / EXC POND RESIN

Page:

7:00 - 5:00

Loaded & hauled 7 Loads of Resin to the Houston Landfill. Loaded Resin from the West Stockpile. Material at West end is dry enough to haul. Material at East end of stockpile still too wet - this was the material that was from the Pond 4 Pumping. John had to replace a tire on the tandem dump truck. Excavated & Loaded Material from North Ramp & dumped at North Stockpile. Most of the material is fairly dry - still needs some drying time. Used dozer to work on North Slope & finished moving material from the Pump area to the North Stockpile at bottom of Pond.

I worked till 12:15 - drove to airport
got home at 6:30

Exc Loads = 15

LF Loads = 7

WORK COMPLETE TO DATE:

1.) EXC POND RESIN	210 TONS	\$887.00	TTD:	1610 TONS	\$6,762.00
2.) Load & Haul Resin	11428 TONS	\$697.11	TTD:	37415 TONS	\$2,382.32
3.) BORROW BACKFILL	0 CY		TTD:	0 CY	\$0
4.) CLAY CAP	0 CY		TTD:	0 CY	\$0
5.) TOPSOIL	0 CY		TTD:	0 CY	\$0
6.) T & M	\$0		TTD:		\$1,665.00
7.) HOUSTON LF	114,28 TONS	\$2,128.44	TTD:	37415 TONS	\$2,382.32

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear am
upper EOS
rained late afternoon

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel & Leonard R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name: POND 2 CLOSURE	Project No.: 4041
Field Activity: HAUL RESIN TO L.F. / Exc POND RESIN	Date: 6/16/97
7:00 - 5:00	Page:

John loaded pond bottom material from 10:15 F on North Side & dumped it on north side of the area. John used the excavator to dig out an area where the water was on fire from the fire on the pond on the East end. Loaded & hauled 6 loads to the Houston L.F. I flew back from Houston plane was delayed for 4 hours in Atlanta getting to Columbus. I did not get to Aberdeen till 6:30

Exc Loads = 12 LF Loads = 6

WORK COMPLETE TO DATE:

1.) Exc POND RESIN 168 TONS \$ 705.60	TTD: 1778 TONS \$17,467.60
2.) Load & Haul RESIN 112.2 TONS \$ 714.92	TTD: 491.35 TONS \$ 2,997.24
3.) Borrow Backfill 0 CY	TTD: 0 CY \$ 0
4.) Clay CAP 0 CY	TTD: 0 CY \$ 0
5.) TOPSOIL 0 CY	TTD: 0 CY \$ 0
6.) T&M \$ 0	TTD: \$ 1,665.00
7.) HOUSTON LF 117.20 TONS \$ 21,056.00	TTD: 4101.35 TONS \$12,002.21

Visitors on site:	Changes in Plans or Specifications:
Weather Conditions: Clear 80s	Important Phone Calls:
DERS Personnel on site: Dennis R Dubbel	
Site Supervisor: Dennis R Dubbel	

DAILY FIELD ACTIVITY REPORT

Project Name:

Road 2 Closure

Project No.: 4041

Date: 6/17/97

Field Activity:

Haul Resin to Landfill / Exc Pond Resin

Page:

7:00 - 11:30

John loaded resin from pond to 40M stockpile at north end & dumped it in north stockpile. Landfill area. Two trucks were loaded from Monday night to go to the landfill. They left the shop around 7:00 got back to the site at 10:30. Said the Houston Landfill was raining on it, wet & too muddy also one bridge shot down, had two feet of water over it. I shot the job down. It started to rain at 10:30 with heavy rain on the way. I told John not to haul till it was dry enough at the landfill our area here is ok to load, too wet at landfill.

Exc Loads = 8

LF Loads = 2

WORK COMPLETE TO DATE:

1.) Exc Pond Resin 112 tons \$470.40	TTD: 1200 tons \$7938
2.) Load & Haul Resin 37.21 tons \$226.96	TTD: 528.56 tons \$3,224.22
3.) Borrow Backfill 0 cy	TTD: 0 cy \$0
4.) Clay Cap 0 cy	TTD: 0 cy \$0
5.) Top Soil 0 cy	TTD: 0 cy \$0
6.) T&M 0 \$	TTD: 0 \$1,665.00
7.) Houston LF 37.21 tons \$95.00	TTD: 528.56 tons \$10,558.44

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Rain Mid Morning
70°
rain afternoon

Important Phone Calls:

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.: 4041

Date: 6/18, 1990

Page:

Field Activity:

Load 1 Haul Resin to Landfill

resin from Tuesday. However, landfill was closed to get into. Loaded & hauled 3 loads of 1000 lbs. of resin to landfill. On Wednesday, loaded & hauled 6 loads of resin to landfill. On Thursday, loaded & hauled 6 loads of resin to landfill. On Friday, no work in the pond. John worked on his other trailer so he can start to haul with two 25-ton trailers & one 15-ton dump truck. The pond bottom is about 10 ft. in it. The base of spring flow is about 10 ft. in it. The resin is on the south side of the pond bottom (about 13). The north park is clear of growth. The south park still needs cleared. Loaded & hauled 2000 lbs. of resin to landfill.

Exc Loads = 0

LF Loads = 15

WORK COMPLETE TO DATE:

1.) Exc Pond Resin	0 tons	\$1 00	TTD: 1,890 tons	\$ 7,938
2.) Load & Haul Resin	39,76 tons	\$ 1,950.54	TTD: 848.32 tons	\$ 5,174.75
3.) Borrow Backfill	0 cy		TTD: 0 cy	\$ 0
4.) Clay Cap	0 cy		TTD: 0 cy	\$ 0
5.) Topsoil	0 cy		TTD: 0 cy	\$ 0
6.) T&M	\$ 0		TTD:	\$ 1,665.00
7.) Haul LF	319.76 tons	\$ 7354.46	TTD: 209.22 tons	\$ 21,115.52

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear
80s
No rain

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

Dennis R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

6/23/97

Field Activity:

Page:

Load / Haul Resin to Landfill

Time - 5:30

I started Submerged & Surfact the pond bed closer towards the shore and further away from the shore. I used a shovel in the pond bottom to direct the water to the sump. John working on his trailer Hauled 6 Loads of Resin to Landfill. I had John reshape the bottom of the west stockpile. There was a low spot in the corner of it. I had use the dozer & tamping to get a good base. I also had John haul a gravel layer in the water.

Exc Loads = 2

LF Loads = 6

WORK Complete TO DATE!

1) Exc Pond Resin	2 Tons	\$	TTDI	890 Tons	\$7938
2) Load & Haul Resin	124.38 Tons	\$758.72	TTDI	972.70 Tons	\$5,933.4
3) Borrow Backfill	0 CY		TTDI	0 CY	\$0
4) Clay CAP	0 CY		TTDI	0 CY	\$0
5) Top Soil	0 CY		TTDI	0 CY	\$0
6) T&M	\$0		TTDI		\$1,665.00
7) Haul to LF	124.38 Tons	\$2,560.74	TTDI	972.70 Tons	\$2,303.26

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear

90S

No Rain

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

Dennis R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4/241

Date:

6/24/97

Page:

Field Activity:

Load/Haul Resin to Landfill

7:00 - 4:30

Finished loading all the resin from the pond. The resin was loaded into the truck. I had to use the tractor to break the crust on top of the stockpiled resin & also on there was not any standing water in the Resin. I used the bobcat trackhoe in the pond bottom to open up areas for the water to drain into the Sump. I also found out the West end has an area lower than the East end Sump. John Smith (contractor) brought his parts came in for the new piles. Loaded & hauled a total of 8 Loads to the Landfill.

Exc Loads = 8

LF Loads = 8

WORK Complete TO DATE:

1) Exc Pond Resin	8 Tons	TTD: 1,200 Tons	\$7,038
2) Load & Haul Resin	173.38 Tons	\$1,057.62 TTD: 1,146.08 Tons	\$6,991.09
3) Borrow Backfill	0 CY	TTD: 0 CY	\$0
4) Clay Cap	0 CY	TTD: 0 CY	\$0
5) Top Soil	0 CY	TTD: 0 CY	\$0
6) T&M	\$0	TTD: \$1,645	
7) Hauling LF	173.38 Tons	\$3,957.74 TTD: 1,146.08 Tons	\$27,031.09

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear

90S

110 Rain

Important Phone Calls:

OERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

L. Lemmon R. Cristofari

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 CLOSURE

Project No.:

21011

Date:

6/25/97

Page:

Field Activity:

Load/Haul Resin To Landfill

7:00 - 4:30

Loading Resin from North West Stockpile. John IR used dozer to push Resin along top of the stockpile. He said that are some problems with the material. Loaded & hauled 60 Loads to Houston Landfill. I used the Bobcat to clean up the North West Stockpile, pushed up to North End. I used the Bobcat in the pond bottom to smooth out some areas. It started to rain around 4:30. Loaded the last Loads & left the site. John IR said they are now waiting on the new material.

Exc Loads = 0

LF Loads = 60

WORK Complete TO DATE:

1.) Exc Pond Resin	0 Tons	TTD: 11,800 Tons	\$ 7,028
2.) Load & Haul Resin	133.46 Tons	TTD: 1279.54 Tons	\$ 7,805.19
3.) Borrow Backfill	0 CY	TTD: 0 CY	\$ 0
4.) Clay Cap	0 CY	TTD: 0 CY	\$ 0
5.) Topsoil	0 CY	TTD: 0 CY	\$ 0
6.) T & M	0	TTD:	\$ 1,115
7.) Houston LF	133.46 Tons	TTD: 1279.54 Tons	\$ 30,130.58

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Overcast AM
Rain afternoon
80s

Important Phone Calls:

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closed

Project No.:

4041

Date:

6/26/97

Page:

Field Activity:

Load / Haul Resin to Landfill
7:00 - 5:00

John finished up the truckload at 7:30. Left his Ford machine to load the last load. I pumped out the Sump in the pond bottom & used a shovel to clear up the bottom. John used his backhoe to load the rest of the Northwest Stockpile into one pile closer to the road so it was easier for John to load. He could stay on the road. I brought the backhoe down the West ramp. Could only place a small amount of Resin - the clay was too slick. I re-measured the North stockpile & added 400 to the cubic yards. I readjusted the Exc Pond Resin - added 310 tons to make a total 2,200 tons. John broke a hydraulic line on his backhoe while loading the last truck.

Exc Loads = LF Loads = 6

WORK COMPLETE TO DATE:

1) Exc Pond Resin	310 TONS	\$1,302	TTD: 2,200 TONS	\$9,240
2) Load & Haul Resin	127.91 TONS	\$780.25	TTD: 1,407.45 TONS	\$8,585.45
3) Borrow Backfill	x CY		TTD: x CY	\$ x
4) CLAY CAP	x CY		TTD: x CY	\$ x
5) TOPSOIL	x CY		TTD: x CY	\$ x
6) T & M	\$ x		TTD: \$	1,645.00
7) AMTAN LF	127.91 TONS	\$2,941.93	TTD: 1,407.45 TONS	\$33,072.51

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Overcast
Rain, Showers 3:30
& 4:15

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

Dennis R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Ford 2 CLOSURE

Project No.:

4041

Date:

6/27/97

Field Activity:

Load / Haul Resin to Landfill

7:30 - 4:00

Page:

Finished Loading from the North West Stockpile
 (-) Loads started loading from North West Stockpile. They
 only hauled 4 loads to the landfill. We
 also started to load from the North West Stockpile. We
 success. We had rain & lightning between 2:00
 2:30. Jimmie came by at 3:30 said they were
 not hauling anymore today. John said he should
 have his trailer running by Monday & he could
 bring back the material.

Exc Loads: 0

LF Loads = 4

WORK COMPLETE TO DATE:

1.) Exc Pond Resin	0 Tons	TTD: 0.00
2.) Load & Haul Resin	803 Tons	TTD: 1,487.25 Tons
3.) Portland Cement	0 CY	TTD: 0.00
4.) Clay Cap	0 CY	TTD: 0.00
5.) Top Soil	0 CY	TTD: 0.00
6.) T & M	0	TTD: 1,665.00
7.) Houston LF	0 Tons	TTD: 0.00

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Overcast & M
Rain showers 2:00 - 2:30

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

7/1/97

Field Activity:

Load Haul Resin to Landfill / Load Resin from Pond
Time - 5:30

Page:

John & I moved the 3" pump & hoses out of the Pond. John IR loaded trucks from the Pond. I used the dozer to push wet resin to the West end. Most all the bottom to within 50 feet of the East end. We still have a pile in the North West corner. The trackhoe will move it tomorrow. John had the 3rd trailer running by 3:00. Loaded the truck will dump in the morning. Loaded 43 loads from the Pond in 40 min. I used 17 tons for load. I pushed piles up at the East end still real wet.

Exc Loads = 43 LF Loads = 8

WORK COMPLETE TO DATE!

1.) Exc Pond Resin 731 TONS	13,702.00	3,526	14,809.20
2.) Load Haul Resin 170.62 TONS	1,040.78	1,775.93	10,833.17
3.) Backfill Backfill	8 CY	TTDI	8 CY
4.) Clay CAP	8 CY	TTDI	8 CY
5.) Top Soil	8 CY	TTDI	8 CY
6.) T & M	8 CY	TTDI	8 CY
7.) Backfill	170.62	1,775.93	41,547.55

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear 90's
No Rain

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

Dennis R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 CLOSURE

Project No.:

4041

Date:

7/2/97

Field Activity:

Load/Haul Resin to Landfill / Load Resin from Pond
7:00 - 5:00

John loaded tons at 6:50. He made a trip to the landfill & back. Loaded 180 tons for the day. I loaded 180 tons for the north of pond. I left John Baker a voice mail told him we loaded 180 tons to landfill also we will go over the estimated 3,100 tons from pond to atom. I used a 1:1 for estimate from cy to tons, actual is 1.3 to 1. I had John take the trackhoe to the bottom of the pond on the north west corner & dig out under the concrete slab on the north end & refuse in that area. Finished cleaning the bottom up to 50' from the East end. Loaded & hauled 30 loads of wet resin - in loads to north stockpile & to north west & west stockpile.

Exc Loads = 30 LF Loads = 9

WORK COMPLETE TO DATE:

- 1.) EXC POND RESIN 51n TONS \$2.12 TTD: 4,036 TONS \$16,951.20
- 2.) Load & Haul Resin 181.44 TONS \$1.166.78 TTD: 1,957.37 TONS \$11,939.96
- 3.) Borrow Backfill 0 CY TTD: 0 CY \$0
- 4.) Clay Cap 0 CY TTD: 0 CY \$0
- 5.) TOPSOIL 0 CY TTD: 0 CY \$0
- 6.) T&M 0 \$ TTD: 0 \$ 1.665
- 7.) Hauling LF 101.04 TONS \$4.173.12 TTD: 1,957.37 TONS \$45,206

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear
90°
No Rain

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Check

Project No.:

40211

Date:

7/3/97

Field Activity:

Load / Haul Resin to Landfill / Load Resin from Land

Time: 5:00

7:15. John finished loading Pond 2 Resin from North Pond. Started on East-end Hauling Pond Resin. Loaded Resin truck 2nd - 3rd. When he pulled out, scraped 2 front rear axel at 9:30. Pulled out Joint & he went to the shop at 11:05. I used dozer to push Resin at East end. Several areas very wet Resin & North East corner very muddy in the clay. I called Jeff Baker, gave him an update. I thought I would be ready for George around the 14 of July. I told Jeff we are going over the 3,000 tons of final fossil

Exc Loads = 22 LF Loads = 8

WORK COMPLETE TO DATE:

- 1.) Exc Pond Resin 374 TONS \$1,578.80 TTD: 14,410 Tons \$8,522
- 2.) Load & Haul Resin 218.61 TONS \$1,333.52 TTD: 12,175.98 TONS \$3,273.46
- 3.) Buried Backfill 0 CV TTD: 0 CV \$0
- 4.) Clay CAP 0 CV TTD: 0 CV \$0
- 5.) Top Soil 0 CV TTD: 0 CV \$0
- 6.) T & M 0 \$ TTD: \$1,165
- 7.) Long haul LF 218.61 TONS \$5028.03 TTD: 12,175.98 TONS \$50,748.70

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear
No Rain
90's

Important Phone Calls:

Jeff Baker

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 Closure

Project No.:

4041

Date:

7/9/97

Field Activity:

Load / Haul Resin To Landfill / Clean South bank
7:00 - 5:30

Finished Cleaning to South bank, except the very east end. Most of the material pulled down was clean dirt, about 10-20% Resin - I pushed the cleaner material into the low areas in the pond bottom to help fill in. I leveled out the total bottom. We cleaned the north bank, the top eight feet was all that needed cleaned. Finished loading most of the material from the north ramp. Loaded & hauled material from the East bank ramp will finish the East bank tomorrow. I also talked to John II about cleaning out the South West corner.

Exc Loads 173 TONS

LF Loads = 9

WORK COMPLETE TO DATE

1.) Exc Pond Resin	173 TONS	\$ 726.60	TTD: 4,838 TONS	\$ 29,319.60
2.) Load & Haul Resin	221.36 TONS	\$ 1,350.30	TTD: 2,724.23 TONS	\$ 16,617.80
3.) Borrow Backfill	0 CY		TTD: 0 CY	\$ 0
4.) Clay Cap	0 CY		TTD: 0 CY	\$ 0
5.) Top Soil	0 CY		TTD: 0 CY	\$ 0
6.) T & M	0		TTD: 0	\$ 0
7.) Houston LF	251.36 TONS	\$ 5,091.20	TTD: 2,724.23 TONS	\$ 16,356.45

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear most of the day 1/2" Rain after 6:00 pm.

Important Phone Calls:

OERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

41041

Date:

7/10/97

Field Activity:

Load / Haul Resin to Landfill / Clean East bank
7:00 - 5:30

Loading Material from East end onto trucks going to Houston Landfill. It rained 1/2" last night so wet to use drier in Pond bottom. Pops had to replace 3 pins on his trailer before he could haul. I called George & Jeff, talked to them about the testing next Tuesday. I told them I pushed the Cleaner dirt into the lower spots in the Pond bottom it has very little Resin in it. I told them I lined up the Summers for next week. I had John Jr dig out the ramp in the North West Corner & load it on the trucks going to the landfill.

Exc Loads = 10

LF Loads = 6

WORK: Complete TO DATE:

1.) Exc Pond Resin	166 Tons	\$ 697.20	TTD: 5.004	Tons	\$21,016.80
2.) Load & Haul Resin	165.83 Tons	\$ 1,011.56	TTD: 2,890.06	Tons	\$17,629.37
3.) Barrowed backfill	0 CY		TTD:	0 CY	\$ 0
4.) Clay Cap	0 CY		TTD:	0 CY	\$ 0
5.) Top Soil	0 CY		TTD:	0 CY	\$ 0
6.) T & M	0 S		TTD:		\$ 1,165
7.) Houston LF	165.03 Tons	\$ 3,214.09	TTD: 2,890.06	Tons	\$16,172.57

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

HOT 90s
CLEAR
NO RAIN

Important Phone Calls:

George & Jeff

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

7/11/97

Field Activity:

Page:

Load / Haul Resin to Landfill / Clean East Ramp

John LR finished cleaning out the East ramp & cleaned the South East Corner. He loaded the material directly onto the endclumps.

I drove to Brevard to pick up the Terracell panels & filter fabric. There was not any work done in the pond bottom.

Exc Loads 8

LF Loads 8

WORK COMPLETE TO DATE:

1.) Exc Pond Resin	225 TONS	\$ 945	TTD:	5,229 TONS	\$21,961.87
2.) Load & Haul Resin LF	222.80 TONS	\$1,359.08	TTD:	3,112.86 TONS	\$18,988.45
3.) Borrow Backfill	0 CY		TTD:	0 CY	\$ 0
4.) Clay Cap	0 CY		TTD:	0 CY	\$ 0
5.) Topsoil	0 CY		TTD:	0 CY	\$ 0
6.) T & B	0		TTD:		\$1,165
7.) Material	222.80 TONS	\$512.40	TTD:	3,112.86 TONS	\$72,296.79

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear 90S

Important Phone Calls:

No Rain

DERS Personnel on site:

Site Supervisor:

Dennis R. Dubbel

L. James R. Collier

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

7/14/97

Page:

Field Activity:

Load/Haul Resin to Landfill / T&M work

7:00 - 4:30

John JR finished cleaning out the East bank & ramp. He loaded the material onto the trailers going to the Houston Landfill. Billy's truck broke down coming back from his first load. I had John haul clean material to the West bank to build a slope where it was vertical. We removed all the Resin first. George was here in the afternoon. I used the Bobcat track hoe to dig out some areas on the West bank above to original ground. George started setting up his flags for taking his samples. The track hoe broke down at 11:00 has a problem in the transmission. John will start loading Resin from the North West Stockpile in the morning. Jacob removed the 4" Pump & hoses from the Pond - 1 hr
 on Bobcat

Exc Loads 4

LF Loads 4

WORK Complete TO DATE:

1) Exc Pond Resin	100 TONS @ 420	TTD: 5,329 TONS @ 22,381.8
2) Load & Haul Resin LF	1000 TONS @ 64.94	TTD: 3,213.67 TONS @ 19,603.3
3) Borrow Back Fill	0 CY	TTD: 0 CY @ 0
4) Clean CAF	0 CY	TTD: 0 CY @ 0
5) T&M	0 CY	TTD: 0 CY @ 0
6) " " "	\$515	TTD: \$515 @ 2,180
7) Houston LF	1000 TONS @ 2,318.05	TTD: 3,213.67 TONS @ 74,615.5

Visitors on site:

George Gregory

Changes in Plans or Specifications:

Weather Conditions:

Clear
9/5
No Rain

Important Phone Calls:

DERS Personnel on site:

Dennis Dubbel, George Gregory

Site Supervisor:

Dennis R Dubbel, Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

7/15/97

Page:

Field Activity:

Load/Haul Resin to Landfill / Take Soil Samples

7:00 - 4:00

John started Loading Resin from the North West Stockpile, I had him start in the South end. I used the Bobcat to clean out the South end so Bob could use it to pump out the Concrete basin. One truck still broken down running POPS truck & Tandum. George started at 5:30 am taking Soil Samples. State Man here at 10:00 everything OK no questions from State Man, he also took some Soil Samples. Laigue here at 12:11. I ant called him at 12:40 asked him about moving the chain 50 feet West so it will come out on the West side of RR Culvert, he said OK. Laigue also said not to do any more work on the line between Pond 2 & 5. I called the SUTD-1015 that will be here in the Morning.

LF Loads = 9

WORK Complete TO DATE!

1) Exc Pond Resin	X TONS	TTD: 5,329 TONS	\$22,381.50
2) Load & Haul Resin	196.32 TONS	\$1824.54	TTD: 3,409.99 Tons
3) Backfill Rockfill	X CY	TTD: 0 CY	0
4) Soil CIP	X CY	TTD: 0 CY	0
5) T.D.M.	X 3	TTD: 0	\$2.12
6) Hauling LF	196.32 TONS	\$4,510.30	TTD: 3,409.99 Tons
			\$79,130.9

Visitors on site:

George Gregory
Laigue
T.D.M.

Changes in Plans or Specifications:

Weather Conditions:

Clear 70S

No Rain

Important Phone Calls:

DERS Personnel on site:

George Gregory, Laigue, Dennis Dubbel

Site Supervisor:

Dennis R. Dubbel, Kenneth R. L. L. L.

DAILY FIELD ACTIVITY REPORT

Project Name: POND 2 CLOSURE, CONDEA VISTA	Project No.: 4041
Field Activity: SITE VISIT - BOTTOM SAMPLING	Date: 7/15/97
	Page: 1

ARRIVE ON SITE AT 1200. WORKERS AT LUNCH
 ORANGE COLORED WATER PONDED ON THE NW CORNER
 NO VISIBLE WHITE / PRODUCT ON THE SOUTH SLOPE
 SOME REDDISH LIQUID AT THE SOUTH DIKE (3' D)

BOTTOM DOES NOT NEED GEORID REINFORCEMENT
 SLOPE DOES NOT NEED REINFORCEMENT AS LONG
 AS WE DON'T CUT ANY MORE SOUTH SLOPE. THE POTENTIAL
 TO BREAK! CARE SHALL BE EXERCISED IN EXCAVATING
 SOUTH SLOPE. SOME RED SEEPAGE AREA ON THE
 SOUTH SLOPE. REDDISH COLORED WATER AT THE NE CORNER

DENNIS SAID GEORGE FINISH SAMPLING AND STATE GUY
 TONY RUSSEL CAME AND DUG THE BOTTOM. REDDISH/ORANGE
 COLORED G.W. IS OK BY STATE. DON'T NEED TO
 REMOVE THAT STUFF. RESULTS BE BACK IN 7 DAYS
 NO CUTTING OF THE SOUTH DIKE FROM TOP IS
 RECOMMENDED DUE TO POTENTIAL INSTABILITY OF THE DIKE.
 DENNIS IS WORKING WITH FUG. 28.75 CLOSURE PLAN.

L. HALLER, PE
 7/15/97

Visitors on site: TONY RUSSEL, MOER	Changes in Plans or Specifications: Move the 30-50 30-50 west to the into the embankment
Weather Conditions: P. Cloudy 90°	Important Phone Calls:
DERS Personnel on site: L. HALLER, PE; GEORGE GREGORY	
Site Supervisor: DENNIS DOUGLAS	

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 CLOSURE

Project No.:

4041

Date:

7/16/97

Page:

Field Activity:

Load / Haul Resin To Landfill / Surveying
2:00 - 4:30

Surveyors here at 8:00, I told them I need a good existing topo on the pond & also they need to shoot in all the flags from our Soil Samples. John JR here at 8:45 to load Pops, Billy here with tandem at 9:35. Loading Resin From North West Stockpile. Jacob picked up the Bob CAT Track hoe. Surveyors here till 11:15 they shot in all the Soil sample flags, then I had them shoot the toe all the way around.

LF Stockpile

Work Complete To DATE

1) Exc Pond Resin	x TNS	TTN 5,229 TONS \$22,261.60
2) Load & Haul Resin	133.96 TONS \$562.63	TTN 3,543.95 TONS \$14,884.59
3) Borrow Backfill	x CY	TTN x CY \$
4) Topsoil	x CY	TTN x CY \$
5) T.E.M	x S	TTN \$2.12
6) CRUSHED L	133.96 TONS \$3,081.06	TTN 3,543.95 TONS \$82,212.00

Visitors on site:

Continental Engineering

Changes In Plans or Specifications:

Weather Conditions:

CLEAR
90S
NO RAIN

Important Phone Calls:

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 CLOSURE

Project No.:

4041

Date:

7/17 & 18/97

Page:

Field Activity:

Load / Haul Resin to Landfill

Loaded Resin From the Northwest Stockpile
 & hauled to the Houston Landfill. I was
 out Thursday & Friday. Hanna Ran Two
 trucks, one trailer, one tandem. No other
 work. Pops trailer broke down Friday.

LF Loads 16

WORK COMPLETE TO DATE:

- | | | | |
|----------------------|-------------|--------------------|-------------|
| 1) Exc Pond Resin | 8 TONS | TTD: 5,329 TONS | \$22,381.00 |
| 2) Load & Haul Resin | 318.00 TONS | TTD: 3,862.75 TONS | \$16,223.55 |
| 3) Borrow Backfill | 8 CY | TTD: 8 CY | \$0 |
| 4) Clay Cap | 8 CY | TTD: 8 CY | \$0 |
| 5) Topsoil | 8 CY | TTD: 8 CY | \$0 |
| 6) T&M | 8 CY | TTD: 8 CY | \$0 |
| 7) Hauling LF | 318.00 TONS | TTD: 3,862.75 TONS | \$16,223.55 |

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear

90S
NO RAIN

Important Phone Calls:

DERS Personnel on site:

Site Supervisor:

Dennis A. Dubbel (phone redacted)

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 CLOSURE

Project No.:

4041

Date:

7/21/97

Page:

Field Activity:

Load / Haul Resin to Landfill

7:00 - 3:30

Loaded Resin from West Stockpile. R. 224
 here at 9:45 - Fops getting eyes checked.
 John JR & I measured the top & bottom of the
 Pond & spot grades to come up with quantities
 we show 19,500cy to top of grade. Billy
 only made two trips, had a flat after
 first load. I called George to find out
 when he thought our test results would be
 back he said probably Thursday.

LF Loads = 2

WORK COMPLETE TO DATE:

1.) Exc Pond Resin	TONS	TTD:	5,329 TONS	\$22,381.80
2.) Load & Haul Resin	43.81 TONS	\$184	TTD:	3,906.54 TONS
3.) Borrow Backfill	0 CY	TTD:	0 CY	0
4.) Clay Cap	0 CY	TTD:	0 CY	0
5.) Top Soil	0 CY	TTD:	0 CY	0
6.) T & M	0 S	TTD:	0 S	0
7.)	43.81	19501,007,63	3,906.54 TONS	\$90,553.00

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear 90S

Important Phone Calls:

George

1/2" Rain after 6:00 PM

OERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 CLOSURE

Project No.:

4041

Date:

7/22/97

Page:

Field Activity:

Load / Haul Resin to Landfill

7:00 - 3:30

Turn here at 7:20 with Tandem, Billy on way to Landfill, Pops getting glasses in Toledo. Rained about 1/2" last night. Loading Resin from West Stockpile. John JR & I went to Continental Engineering. I asked about our Proctor results & Survey results. John JR said he took the samples from the lower part of the borrow pit. This will not give us a good composite. Since the upper layer has clay, heavy loam & sandy loam. John & I took Composite Samples including all of the above. I told the Engineer I wanted quantities up to the existing ground level. I talked to Jeff Baker, gave him an up-date on all of the above & how much more resin we have to haul off.

LF Loads 8

WORK COMPLETE TO DATE:

1) Exc Pond Resin	8 TONS	TTD: 5,329 TONS	23,781.68
2) Load & Haul Resin	151.16 TONS	TTD: 4,057.72 TONS	17,042.42
3) Borrow Backfill	8 CY	TTD: 8 CY	8
4) Clay CAP	8 CY	TTD: 8 CY	8
5) Top Soil	8 CY	TTD: 8 CY	8
6) T & M	8	TTD: 8	8
7) Excavation LF	151.16 TONS	TTD: 4,057.72 TONS	17,042.42

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

CLEAR 90S

MR. ROW

Important Phone Calls:

OERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 CLOSURE

Project No.:

4041

Date:

7/23/97

Page:

Field Activity:

Load / HAUL RESIN TO LANDFILL

7:00 - 4:30

Jim & Billy here at 9:00. Loading from WEST Stockpile, here at Noon. I had John JR Stockpile the "Clean" Material from the North Stockpile, to reuse in the Pond. I had John Call on the dozer, he said it should be finished by Thursday afternoon. I also told him I wanted all the Stockpiled Resin hauled off by Friday of this week. Jacob asked me about using the berm material at the North West Stockpile area, to build him a Lagoon. I told him that was fine with me because we hauled off all of the Resin. I also told him he could use the material in the berm at the West Stockpile area, that we should be finished hauling by Thursday afternoon.

LF Loads = 10

WORK Complete TO DATE

1) Exc Pond Resin	to TANK	TTN: 5,329 TONS	\$22,381.6
2) Load & Haul Resin	19359 TONS	\$1,180.90	TTN: 4,251.31 TONS \$25,932.99
3) Borrow Rockfill	to CV	TTN: 0	CV 0
4) Load C&P	to CV	TTN: 0	CV 0
5) T&E	to CV	TTN: 0	CV 0
6) T&E	to CV	TTN: 0	CV 0
7) T&E	to CV	TTN: 0	CV 0
8) T&E	to CV	TTN: 0	CV 0
9) T&E	to CV	TTN: 0	CV 0
10) T&E	to CV	TTN: 0	CV 0
11) T&E	to CV	TTN: 0	CV 0
12) T&E	to CV	TTN: 0	CV 0
13) T&E	to CV	TTN: 0	CV 0
14) T&E	to CV	TTN: 0	CV 0
15) T&E	to CV	TTN: 0	CV 0
16) T&E	to CV	TTN: 0	CV 0
17) T&E	to CV	TTN: 0	CV 0
18) T&E	to CV	TTN: 0	CV 0
19) T&E	to CV	TTN: 0	CV 0
20) T&E	to CV	TTN: 0	CV 0
21) T&E	to CV	TTN: 0	CV 0
22) T&E	to CV	TTN: 0	CV 0
23) T&E	to CV	TTN: 0	CV 0
24) T&E	to CV	TTN: 0	CV 0
25) T&E	to CV	TTN: 0	CV 0
26) T&E	to CV	TTN: 0	CV 0
27) T&E	to CV	TTN: 0	CV 0
28) T&E	to CV	TTN: 0	CV 0
29) T&E	to CV	TTN: 0	CV 0
30) T&E	to CV	TTN: 0	CV 0
31) T&E	to CV	TTN: 0	CV 0
32) T&E	to CV	TTN: 0	CV 0
33) T&E	to CV	TTN: 0	CV 0
34) T&E	to CV	TTN: 0	CV 0
35) T&E	to CV	TTN: 0	CV 0
36) T&E	to CV	TTN: 0	CV 0
37) T&E	to CV	TTN: 0	CV 0
38) T&E	to CV	TTN: 0	CV 0
39) T&E	to CV	TTN: 0	CV 0
40) T&E	to CV	TTN: 0	CV 0
41) T&E	to CV	TTN: 0	CV 0
42) T&E	to CV	TTN: 0	CV 0
43) T&E	to CV	TTN: 0	CV 0
44) T&E	to CV	TTN: 0	CV 0
45) T&E	to CV	TTN: 0	CV 0
46) T&E	to CV	TTN: 0	CV 0
47) T&E	to CV	TTN: 0	CV 0
48) T&E	to CV	TTN: 0	CV 0
49) T&E	to CV	TTN: 0	CV 0
50) T&E	to CV	TTN: 0	CV 0
51) T&E	to CV	TTN: 0	CV 0
52) T&E	to CV	TTN: 0	CV 0
53) T&E	to CV	TTN: 0	CV 0
54) T&E	to CV	TTN: 0	CV 0
55) T&E	to CV	TTN: 0	CV 0
56) T&E	to CV	TTN: 0	CV 0
57) T&E	to CV	TTN: 0	CV 0
58) T&E	to CV	TTN: 0	CV 0
59) T&E	to CV	TTN: 0	CV 0
60) T&E	to CV	TTN: 0	CV 0
61) T&E	to CV	TTN: 0	CV 0
62) T&E	to CV	TTN: 0	CV 0
63) T&E	to CV	TTN: 0	CV 0
64) T&E	to CV	TTN: 0	CV 0
65) T&E	to CV	TTN: 0	CV 0
66) T&E	to CV	TTN: 0	CV 0
67) T&E	to CV	TTN: 0	CV 0
68) T&E	to CV	TTN: 0	CV 0
69) T&E	to CV	TTN: 0	CV 0
70) T&E	to CV	TTN: 0	CV 0
71) T&E	to CV	TTN: 0	CV 0
72) T&E	to CV	TTN: 0	CV 0
73) T&E	to CV	TTN: 0	CV 0
74) T&E	to CV	TTN: 0	CV 0
75) T&E	to CV	TTN: 0	CV 0
76) T&E	to CV	TTN: 0	CV 0
77) T&E	to CV	TTN: 0	CV 0
78) T&E	to CV	TTN: 0	CV 0
79) T&E	to CV	TTN: 0	CV 0
80) T&E	to CV	TTN: 0	CV 0
81) T&E	to CV	TTN: 0	CV 0
82) T&E	to CV	TTN: 0	CV 0
83) T&E	to CV	TTN: 0	CV 0
84) T&E	to CV	TTN: 0	CV 0
85) T&E	to CV	TTN: 0	CV 0
86) T&E	to CV	TTN: 0	CV 0
87) T&E	to CV	TTN: 0	CV 0
88) T&E	to CV	TTN: 0	CV 0
89) T&E	to CV	TTN: 0	CV 0
90) T&E	to CV	TTN: 0	CV 0
91) T&E	to CV	TTN: 0	CV 0
92) T&E	to CV	TTN: 0	CV 0
93) T&E	to CV	TTN: 0	CV 0
94) T&E	to CV	TTN: 0	CV 0
95) T&E	to CV	TTN: 0	CV 0
96) T&E	to CV	TTN: 0	CV 0
97) T&E	to CV	TTN: 0	CV 0
98) T&E	to CV	TTN: 0	CV 0
99) T&E	to CV	TTN: 0	CV 0
100) T&E	to CV	TTN: 0	CV 0

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear 90S

Important Phone Calls:

No Rain

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

FOND 2 CLOSURE

Project No.:

21041

Date:

7/24/97

Page:

Field Activity:

Load / Haul Resin to Landfill

7:00 - 4:30

Fops here at 6:50 & got his first Load!
 Billy & Jim here at 7:25 for their first Load!
 Loading from the West Stockpile. Billy had
 a break down with his tractor trailer on the
 3rd Load, down for the day. Fops had a break
 down on his 4th Load, down for the day. John R
 & I went to Continental Engineering to get their Surveyor
 quantities for the Fond, they showed 23,206 cy to
 the top of existing ground. Jacob came by in
 the afternoon, we looked at the berm around the
 West Stockpile, he told me a lot of it was
 built with Resin mixed with dirt, I dug into
 it & found Resin down to the existing ground.
 I called Jeff to find out if we had results
 yet on the Fond. he said by Morning.

LF Loads = 11

WORK COMPLETE TO DATE:

1.) Exc Fond Resin	x TONS	TTD: 5,329 TONS	\$22,381.97
2.) Load & Haul Resin	230 TONS	\$1,403	TTD: 4,481.31 TONS \$27,335.99
3.) Borrow Rockfill	x CY	TTD: x CY	\$x
4.) Clay Cap	x CY	TTD: x CY	\$x
5.) Top Soil	x CY	TTD: x CY	\$x
6.) T & M	x \$	TTD: x \$	\$2,150
7.) Foundation	230 TONS	5,290	TTD: 4,481.31 TONS \$103,771.29

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

CLEAR 90S

Important Phone Calls:

NO RAIN

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 CLOSURE

Project No.:

4041

Date:

7/25/97

Field Activity:

Load / Haul Resin to Land Fill

Page:

2:00 - 4:00

Billy here at 7:20, Jim at 9:45, Pops still broke down. Loading from west stockpile. Jacob adding material that he dried out from Concrete Sump to our west stockpile. I told John JR to remove the rest of the berm around the west stockpile. John JR & I went to Continental Eng to find out if the Proctor for the clay that is being used on the R.R. will pass ours. It does pass & I also told them to get two more per our records. I called George at 2:45 he said that he was still waiting on results. Some might be over - he will wait till Monday & review them. Billy had two flats after noon

LF Loads = 7

WORK COMPLETE TO DATE:

1.) Exc Land Resin	2 TONS	TTD: 5,329 TONS	\$22,381.5
2.) Load & Haul Resin	146.21 TONS	\$891.68	TTD: 4,627.52 TONS
3.) Borrow Backfill	0 CY	TTD: 0 CY	0
4.) Clay CAP	0 CY	TTD: 0 CY	0
5.) TOLSON	0 CY	TTD: 0 CY	0
6.) TAM	0 S	TTD: 0 S	0
7.) Johnston R	146.21 TONS	32/2.83	TTD: 1,167.21 TONS

Visitors on site:

Changes in Plans or Specifications:

we are changing the 11' x 11' f.s
to a 1' x 1' f.s

Weather Conditions:

Clear 90S

Important Phone Calls:

NO Rain

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name: Pond 2 Closure

Project No.: 4041

Date: 7/28/97

Page:

Field Activity:

7:00 - 3:30

John JR came by at 7:20 said they would not be hauling today, but he has the other Contractor coming in the Morning to haul off all the rest of the Resin. I used the backhoe to level around the west stock pile. I used the track hoe to remove the berm around the North Stock pile & clean up the Resin. I called George, he said we could start backfilling the West end. I called TSI, asked her to do a quantity takeoff on the new Cross Sections.

LF Loads = 0

OCCR COMPLETE TO DATE:

1) Exc Pond Resin	0 TONS	TTD: 5,329 TONS ^{\$22.38/}
2) Load & Haul Resin	0 TONS	TTD: 4,627 ⁵² TONS ^{\$28.22/}
3) Borrow Backfill	0 CY	TTD: 0 CY ^{\$}
4) Clay CAP	0 CY	TTD: 0 CY ^{\$}
5) Trench	0	TTD: 0
6) Trench	0	TTD: 0
7) Trench	0	TTD: 0

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear 90s

Important Phone Calls:

George
TSI

No Rain

OERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

Lemuel R. Schell

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 CLOSURE

Project No.:

4041

Date:

7/29/97

Field Activity:

Load / Haul Resin to Landfill

7:00 - 3:30

I'm here at 7:50 with Tandem & Lill at 8:05 with trailer. Kenny Atkins came by at 8:15, asked about how many truck loads of backfill it will take, I told him around 1200. PARHAM Trucking started coming in at 9:45 to haul off the Resin. Finished hauling all the Resin. John said he will move out the trackhoe to Parham's pit & bring in his dozer. I called George, he said we can backfill at the East end, everything passed for the total price. John said he will start hauling in backfill material Thursday.

LF Loads: 14

WORK COMPLETE TO DATE:

1) Exc Pond Resin & TONS	TTD: 4,954.4 TONS \$29,808.52
2) Load & Haul Resin 326.89 TONS \$1,994.03	TTD: 4,954.4 TONS \$30,221.90
3) Borrow Backfill & CY	TTD: & CY \$
4) 1" CRP & CY	TTD: & CY \$

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

CLOUDY AM

Important Phone Calls:

George

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

Dennis R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

7/30/97

Page:

Field Activity:

Push Stock Piled dirt into Pond

7:00 - 4:00

John IP was here at 8:00, then brought in the cozer last night. I had him start pushing in the East Stockpile & compacting it with the cozer. John pulled out the cozer for the night & collected in the East Stockpile in three areas. I also had John push in the North Stockpile material that was "clean". I went to Continental Eng. to find out how I was coming up with 19,500 cy & they showed 23,000 cy. Later pulled it up on the computer & it showed 19,750 cy. So Sam added Compaction to that. John finished pushing in the North Stockpile & part of the East Stockpile.

Borrow Backfill = 300 cy

WORK Complete TO DATE:

1.) Exc Pond Resin	TONS	TTD: 4,954.41 TONS	\$ 20,808.52
2.) Load & Haul Resin	TONS	TTD: 4,954.41 TONS	\$ 30,721.90
3.) Borrow Backfill	300 CY	TTD: 300 CY	\$ 2,430
4.) Clay Cap	TONS	TTD: 0 CY	\$ 0
5.) Topsoil	TONS	TTD: 0 CY	\$ 0
6.) T & M	\$	TTD: 5	\$ 2,150
7.) Hooster LF	TONS	TTD: 4,954.41 TONS	\$ 114,652.59

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Overcast
80s
NO RAIN

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 CLOSURE

Project No.:

4041

Date:

7/31/07

Field Activity:

Push in East Stockpile/ Compact

2:00 - 4:30

John & I were at 2:00 pushing in East Stockpile material & compacting with roller. I used Macch's backhoe to dig around the Gov wire. The Doc buried in the East Stockpile. I put the new warning tape on the Gov wire. John is making a level area west of the former pole & Gov wire so the trucks can make their turn & dump on level ground. Macch had forms typed out for the truckers to sign stating the safety on plant. About 12:45 we noticed water & ground coming out of the South yard close to the former pit halfway down the road. We found out the water was coming from an 18" red pipe coming from pond #1 going to pond #3. Macch dug around the pipe & put a rubber sleeve & bands around it. This happened because Pond #3 was overfilled.

Borrow Backfill 400

WORK Complete TO DATE:

1.) Exc Pond Resin	x TONS x	TTD: 4,954.41	TONS \$20,808.52
2.) Load & Haul Resin	x TONS x	TTD: 4,954.41	TONS \$30,226.90
3.) Borrow Backfill	400 CY \$3,240	TTD: 700	CY \$5,670.00
4.) Clay CAP	x CY	TTD: x	CY \$x
5.) T&M	x CY	TTD: x	CY \$x
6.) T&M	x CY	TTD: x	CY \$2,100
7.) HOUSTON LE	x TONS x	TTD: 4,954.41	TONS \$14,652.55

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Overcast
Low 80s
No Rain

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

Dennis R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 CLOSURE

Project No.:

4041

Date:

8/1/97

Field Activity:

HAUL Borrow Backfill / Spread / Compact

7:00 - 5:00

I had a meeting with John Jacob at 7:00 to go over the safety scope of the trucks. I told them I plan to put them on the road before they drive off. I told them to call Continental Eng when he is ready for Compaction tests. We cleaned out the dirt under the Guy wire & around the power pole. The anchor of the Guy wire started to move out of the ground (8:30). I had Jacob put his tractor with the heavy Resin trailer behind the pole on the South Side. He called the Plant Electrician who came out & said, Gee looks like the Guy wire is loose, I told him they need to get somebody out here ASAP to run another Guy wire all the weight is on the South side of the power pole.

26 Loads Borrow Backfill = 312 cy

WORK COMPLETE TO DATE:

1.) Exc Pond Resin	0 TONS	TTD: 4,954.41 \$ 20,808.52
2.) Load & Haul Resin	0 TONS	TTD: 4,954.41 \$ 20,808.52
3.) Borrow Backfill	312 CY @ 2.527, ²⁰	TTD: 1,012 CY @ 8197.20
4.) Clay CAP	0 CY	TTD: 0 CY @ 0
5. Top Soil	0 CY	TTD: 0 CY @ 0
6. T & M	0 \$	TTD: 0 \$ 2,180
7. Houston LF	0 TONS	TTD: 4,954.41 TONS @ 114,652.50

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear EOS

Important Phone Calls:

No RAIN

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel L Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 CLOSURE

Project No.:

4041

Date:

8/4, 8/5/97

Field Activity:

HAUL BORROW BACKFILL / SPREAD / COMPACT

March 1st dug up the Gay Curve & anchor inches it over six feet, reset it & poured concrete around it. The 2nd set - 1st set was reset by the Gay Curve anchor & one by the Manhole. Hanna Corp. had a total of 123 Loads Monday & Tuesday. John Jr. is pushing from the East end ramp to the West end. The lift in the bottom is 6" - 8" thick. He is also having the tandem back down the ramp & dump down in the bottom.

I was off Monday, got here Tuesday afternoon. The Compaction looks good & the material looks good, just need more trucks. Jacob Watered the road coming into the plant by RUST Monday

62 Loads

WORK COMPLETE TO DATE:

1.)	Exc POND RESIN	0 TONS	TTD:	4,954.91 TONS	\$20,808.52	
2.)	Load & Haul RESIN	0 TONS	TTD:	4,954.91 TONS	\$30,231.92	
3.)	Borrow Backfill	744 CY	16,026.40	TTD:	1,756 CY	\$14,223.60
4.)	Clay CAP	0 CY	TTD:	0 CY	\$0	
5.)	TOPSOIL	0 CY	TTD:	0 CY	\$0	
6.)	T&M	0 \$	TTD:		\$2,180	
7.)	LOSS TON LF		TTD:	4,954.91	\$14,652.57	

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear
003
No Rain

Important Phone Calls:

DERS Personnel on site:

Site Supervisor:

Dennis R. Dubbel & James R. Calhoun

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 CLOSURE

Project No.:

4041

Date:

8/6/97

Page:

Field Activity:

Haul Borrow / Spread / Compact

7:00 - 4:30

Started with 3 End Dumps & 1 Tardum. Material has good moisture in it & compacted well. John & I started dumping at the West end. In pond & road. Jack watered road at construction entrance, & road around the pond. Two more tardums showed up late afternoon. I faxed Lisa my Vuly Manhours for the Contractors. I talked to Jacob about coming through the main gate after 5:00 pm. The Contractors gate closes at 5:00 pm. Said it will be ok. This will give us an extra 1 1/2 hours to run trucks.

Loads = 51

WORK COMPLETE TO DATE:

1.) EXC. Pond Resin	TTD: 4,954.41 TONS #20.895
2.) Load & haul Resin	TTD: 4,954.41 TONS #30.221.90
3.) Borrow Backfill 612 CY #4,957.20	TTD: 2,368 CY #19,180.8
4.) Clay CAP 0 CY	TTD: 0 CY #0
5.) Top Soil 0 CY	TTD: 0 CY #0
6.) T&M 0 #	TTD: \$2,180
7.) HOUSTON IF	TTD: 4,954.41 TONS #114,525

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear 80s

Important Phone Calls:

No Rain

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

8/17/97

Page:

Field Activity:

Haul Borrow / Spread / Compact

7:00 - 4:30

Working pond at west end, started with 2 team
Tandems & one trailer, by mid morning 4 trailers.
Jacob entering haul road by connectors gate &
by Pond. John R. closed the west ramp at the
north end (one time) and he would have to
go at least two blades wide before we can
have the trucks drive down. Jacob came by
in the afternoon & said starting tomorrow, all
trucks will have to come through the main gate.
Some of the neighbors were complaining about
too much noise & dust.

Loads = 72

WORK COMPLETE TO DATE:

- | | | |
|------------------------------------|--------------------|--------------|
| 1.) EXC POND RESIN | TTD: 4,954.41 TONS | \$20,808.52 |
| 2.) Load & Haul RESIN | TTD: 4,954.41 TONS | \$20,808.52 |
| 3.) Borrow Backfill 864 CY @ 6.998 | TTD: 3,232 CY | \$26,179.20 |
| 4.) CLAY CAP & CY | TTD: & CY | & |
| 5.) TOPSOIL & CY | TTD: & CY | & |
| 6.) T&M & \$ | TTD: | \$2,180 |
| 7.) HOUSTON LF | TTD: 4,954.41 TONS | \$114,652.57 |

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Overcast EOS

Important Phone Calls:

No Rain

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

8/8/07

Field Activity:

Page:

Haul Borrow / Spread / Compact

7:00 -

Light drizzle at 7:00 - Trucks started coming in at 7:30, by 8:20 - had 4 trailers hauling & 4 front-enders hauling - Working the 1st ramp. Getting bottom & over road in low zone area. Started to rain hard at 9:30, shutting trucks off with last loads. Had 4 more loads come in around 10:15. Raining hard. Jack used Bobcat to build a berm around north-west corner at the top.

Loads = 21

WORK COMPLETE TO DATE:

1.) Exc. Pond Resin		TTD: 4,954.41 TONS	20,888.52
2.) Load & Haul Resin		TTD: 4,954.41 TONS	30,221.90
3.) Borrow Rock 1/4	252 CY @ 2.041 ²⁰	TTD: 3,484 CY	28,220.40
4.) Clay CAP	X CY	TTD: X CY	X
5.) TOPSOIL	X CY	TTD: X CY	X
6.) T&M	X	TTD:	\$ 2,180
7.) HOUSTON LF		TTD: 4,954.41 TONS	114,652.59

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

drizzle early am
hard rain after
9:30 am

Important Phone Calls:

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

8/11/07

Field Activity:

HAUL BORROW / SPREAD / COMPACT

7:00 - 5:30

Page:

Traveled Pond 2 & Surrounding Area. Found pond bottom most in south side. First truck leaving at 7:00. Last truck leaving at 5:30. Pond is 110 feet long & 10 feet wide. Two trailers for haul of the soil. Having John H. Wick a worker area at the top of the West end. This will help us unload the trailers safer & stay off the gravel road for 115 ft. This will also be safer than unloading at the 60 ft end where the former line is. The bottom is pumped out but is still very wet. I am having John H. Wick over it.

Loads = 97

WORK COMPLETE TO DATE:

1) Exc Pond Resin		TTD: 4,954.4 TONS 20,809.5
2) Load & Haul Resin		TTD: 4,954.4 TONS 30,221.90
3) Borrow Backfill 1,164 CY \$9,428.40		TTD: 4,648 CY \$37,648.80
4) Clay Cap	X CY	TTD: X CY X
5) Top Soil	X CY	TTD: X CY X
6) 15 RI	X	TTD: X 2,180
7) Liner Material		TTD: 4,954.4 TONS 114.5

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear 90s

Important Phone Calls:

No Rain

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

Loren R. Tubel

DAILY FIELD ACTIVITY REPORT

Project Name:

POND 2 Closure

Project No.:

4041

Date:

8/12/97

Page:

Field Activity:

Haul Borrow / Spread / Compact

7:00 - 3:30

Started out with 3 trailers & 1 tandem at 7:00 AM. Hauler at 8:30 5th hauler at 9:00 6th hauler at 9:30. John L. loading a road & 1st hauler at 10:00. Hauling to back of pit. Start at 10:00 AM. Hauler at 10:30 & hauler at 11:00. Down to 4 trailers & one tandem after lunch. IT rained about 10 minutes at 12:30. It rained at the pit at 2:20, they shut down the muddy. I had John R. start off the bottom on the road. Water will start off the bottom side. We had the last two haulers & one tandem going down the west bank.

Loads = 58

WORK Complete TO DATE:

1) Exc POND RESIN		TTD: 4,955 Tons 20 SRS 5
2) Load & Haul Resin		TTD: 4,955 Tons 30, 221, 90
3) Borrow Backfill	696 CY @ 5,637.60	TTD: 5,344 CY @ 43,286.40
4) CLAY CAP	5 CY	TTD: 5 CY @ 5
5) TAPSAI	5 CY	TTD: 5 CY @ 5
6) TAM	58	TTD: 58 Tons
7) HOUSTON LF		TTD: 1,955 Tons 1, 25

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Overcast
Rain at pit 2:20
Heavy rain at plant
6:00 PM

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

James R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

8/13/2017

Page:

Field Activity:

Haul Borrow / Place / Compact

7:00 - 4:30

NO WORK 8/12 Rained out & from the day
 out & muddy to do in & out. I moved to the
 4 trucks. Thursday morning I had 4 haul
 trucks with the 1st one in the day & 3 more
 trucks to do the work. I had 4 trucks to do the work.

Fr. had to stop by the office to get a WE started
 2 Tractors than 2 more, ended up with 2
 Haul for the day. We got our road across
 the bottom finished by 1:30 & started driving
 the trucks in at the west end, dumping at
 the bottom & driving out to the east end. Continental
 Engineering here at 1:40 - 2:40. Doser
 blew a ring at 3:45, shut down last loads
 by 4:30. Continental Engineering took 12
 tests.

Loads = 70

WORK Complete TO DATE:

- | | |
|------------------------------------|-----------------------------|
| 1.) Exc Pond Resin | TTDI 4955 TONS 20,808.52 |
| 2.) Load Haul Resin | TTDI 4955 TONS 30,221.72 |
| 3.) Borrow Backfill 840 cy @ 6,804 | TTDI (6,184) CY @ 50,090.40 |
| 4.) Clay Cap | TTDI 0 CY @ 0 |
| 5.) Top Soil | TTDI 0 CY @ 0 |
| 6.) T&M | TTDI 0 CY @ 0 |
| 7.) Liner Soil LF | TTDI 4955 TONS 20,808.52 |

Visitors on site:

Continental Eng.

Changes in Plans or Specifications:

Weather Conditions:

Clear

90S

No Rain

Important Phone Calls:

OERS Personnel on site:

Dennis R. Duhon

Site Supervisor:

Dennis R. Duhon

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 closure

Project No.:

4041

Date:

8/15/97

Field Activity:

Haul Borrow / Place / Compact

7:00 - 4:30

Started hauling at 7:40 with two trailers
 & one tandem. Two more trailers at 8:40.
 I had John & Peter & Dave in the South
 West end. So the water meter showed 100%
 & the South end was dry. The day, 1-200 =
 & Ring again at 10:15 got it up & running by
 11:30. I called Continental Engineering to
 get results from yesterday's 13 tests.
 Jacob is pumping out the water at the
 South West end. Continental Eng here at
 1:30 took 2 tests, all above 90%
 & all passed moisture. Yesterday 11 passed
 90%. The loader at the pit shut down
 at 4:00. Out last trucks here at 4:30

Loads = 57

WORK COMPLETE TO DATE:

1.) Exc Pond Resin		TTD: 49.55 Tons @ 20, 808.52
2.) Load & Place Resin		TTD: 49.55 Tons @ 20, 221.90
3.) Borrow Backfill 672 cy @ 5.493. ²⁰		TTD: 6,856 cy @ 53, 533.60
4.) Clay CAP	0 cy	TTD: 0 cy @ 0
5.) Topsoil	0 cy	TTD: 0 cy @ 0
6.) TAM	0 cy	TTD: 0 cy @ 0
7.) Haulston LF		TTD: 21.95 Tons @ 10, 655.00

Visitors on site:

Continental Engineering

Changes in Plans or Specifications:

Weather Conditions:

Clear 90s
No Rain

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel & Brian R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name: Ford 200000	Project No.: 4041
Field Activity: Haul Broom / Place / Compact	Date: 8/12/97
7:00 - 4:00	Page:

Started filling in the South Pond and in bridge area the east area from today. Then started filling back along the South Pond. A number of small holes were found in the pond. One more Tandon afternoon - Pit shot down last load at 2:40. Rained out. Continental Engineering here at 2:10 took 13 tests on South Side from East Pond to West Pond. All tests passed on Compaction & Moisture. I called Jeff Baker, gave him an update on the project told him it looks like I will be here through September.

Load 51

WORK COMPLETE TO DATE:

1.) Exc. Pond Resin	TTN: 4,955 TONS ²⁰ FRAS ²⁰
2.) Load & Drive Resin	TTN: 4,955 TONS ²⁰ FRAS ²⁰
3.) Broomed Backfill 612 CY @ 4957.20	TTN: 7,468 CY @ 60,490.80
4.) Clay Cap	TTN: X CY @ X
5.) Top Soil	TTN: X CY @ X
6.) T&M	TTN: X CY @ X
7.) Houston LF	TTN: 4,955 TONS ²⁰ FRAS ²⁰

Visitors on site: Continental Engineering	Changes in Plans or Specifications:
Weather Conditions: Clear AM Overcast PM by 2:30 No Rain on Site	Important Phone Calls:
DERS Personnel on site: Dennis R Dubbel	
Site Supervisor: Dennis R Dubbel	

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

8/11/07

Field Activity:

Haul Borrow / Place / Compact

Page:

7:00 - 5:30

Started with one trailer at 7:00. Tied it
and some mud & water from yesterday. It
did not get on the line. Ended up with
10 trailers & 1 tandem. Finished working
left at Pond Side. It was 2:00 - 3:00. Now
have complete lift across bottom. Started
next lift on South Side, working north.
Continental Eng. took 20 tests, all passed
Compaction & moisture. I told them to
come back again tomorrow afternoon we will
test the lift we are working on now. Now
across South to North.

Loads: 86

WORK COMPLETE TO DATE:

1) Exc Pond Resin		TID: 4,955 TONS	20,808.52
2) Load & Haul Resin		TID: 4,955 TONS	30,221.90
3) Borrow Backfill 1,032 cy	\$8,359.20	TID: 8,500 CY	68,850.00
4) Clay CAP	0 CY	TID: 0 CY	0
5) Top Soil	0 CY	TID: 0 CY	0
6) T & M	0 \$	TID: 0 \$	0
7) Houston LF		TID: 0 LF	0

Visitors on site:

Continental Engineering

Changes in Plans or Specifications:

Weather Conditions:

Clear - hot 90s

Important Phone Calls:

No Rain

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

Dennis R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

8/20/97

Page:

Field Activity:

Haul Borrow / Place / Compact

7:00 - 9:30

8:20 - Started to rain at 7:10 at site and heavier rain at 7:20 and later at 7:30. Total of 8 loads put down for 98. I lined up borrow to start the trucks when it started raining. Eng. Allen is also ready for compaction tests. I changed my airline tickets from Friday to today & flew home. It rained hard for several hours.

Loads = 8

WORK COMPLETE TO DATE:

1.) Exc. Pond Resin		TTD: 4,955 TONS @ 20,808.52
2.) Load & Haul Resin		TTD: 4,955 TONS @ 30,221.70
3.) Borrow Backfill 96 CY @ 777.60		TTD: 8,596 CY @ 69,627.60
4.) Clay CAP	X CY	TTD: X CY @ X
5.) Top Soil	X CY	TTD: X CY @ X
6.) T & M	X Y	TTD: X Y @ X
7.) Houston LF		TTD: 4,955 TONS @ 112,162.50

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Started to rain at 7:10 -

Important Phone Calls:

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date: 8/22 - 9/5 - 97

Field Activity:

Haul Borrow / Place / Compact

Page:

I was not on site from 8/22 - 9/5 - I had George Sfor - he - runs with a I call your Continental Engineering for Compaction - was same day - he - took up to 100 yds. I called Jacob on 9/3 to let him know I would be back - he - said - he - was going to get a cart to the top of the pond with the laenetal fill. I called Jacob again on 9/3 - 9/4, I told him to call the Surveyors & have them set the finish grade stakes to the bottom of the clay.

Loads hauled & CYS

CY

8-22 =

912

8-22 = 912

8-23 =

480

9-2 = 912

8-25 =

708

9-3 = 600

8-26 =

984

9-4 = 1,344

8-27 =

876

9-5 = 540

8-28 =

288

Loads = 701

WORK Complete TO DATE:

1.) Exc. Pond Resin		TTD: 4,955 Tons \$20,808.52
2.) Load & haul Resin		TTD: 4,955 Tons \$30,221.90
3.) Borrow Backfill	8,412 CY \$68,137.20	TTD: 17,008 Tons \$137,764.80
4.) Clay CAP	0 CY	TTD: 0 CY \$0
5.) Top Soil	0 CY	TTD: 0 CY \$0
6.) T & M	0 \$	TTD: \$2,180
7.) Hooster LF	0	TTD: 4,955 Tons \$11,652.50

Visitors on site:

Continental Eng.

Changes In Plans or Specifications:

Weather Conditions:

NO Rain during work days

Important Phone Calls:

OERS Personnel on site:

Site Supervisor:

Dennis R. Dubbel Dennis R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name: Pond 2 Closure	Project No.: 4041
Field Activity: Haul Borrow / Place / Compact	Date: 9/8/97
7:00 - 5:30	Page:

I called the Surveyors at 7:15 to have them come back out & explain to me what they had done. I also requested the Surveyor to go out & get another sample of the Clay to rep 2 cylinders. Some of the Survey stakes were not in the right place, the hills were wrong. I had the Surveyors go back to their office & replot the stakes to match the Center Lines of the ditch curve. The stakes all got re-plotted & set so I could understand them. I had six compaction tests run. Five passed. We started placing our first lift of Clay in some areas.

Borrow Loads: 50 Clay Loads 47

WORK Complete TO DATE:

1.) Exc Pond Resin	TTD: 4,855 T 3 32, 21.5
2.) Load & haul Resin	TTD: 4055 tons 32 221.90
3.) Borrow Backfill 600 cy @ 4,860	TTD: 17,604 cy @ 142,592.40
4.) Clay CAP 564 cy @ 4,568 ⁴⁰	TTD: 564 cy @ 4,568.40
5.) Top Soil 5 cy	TTD: 5 cy @ 4
6.) T & M 8 cy	TTD: 8 cy @ 2.19
7.) Houston 2 F	TTD: 255 T 3 11.12

Visitors on site:	Changes in Plans or Specifications:
Weather Conditions:	Important Phone Calls:
DERS Personnel on site: Dennis R Dubbel	
Site Supervisor: Dennis R Dubbel - <i>[Signature]</i>	

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.: 4041

Date: 7/9/97

Field Activity:

Haul Clay / Place / Compact

7:00 - 3:30

Page:

Placing Clay starting at East end working West. core had 9 Tons of 2-10mm. I had John SR Tie into the South slope & the one finished structure. I told John SR not to plant & tie's hanging for him to keep to proper Compaction. John SR came out at 12:45. We talked about getting the proper moisture & Compaction on the clay. I told them now perfect it is to have the moisture - 3% John wanted to know the real factor was with moisture. It started raining at 1:15 we shut down after all the trucks made their Loads. I went to Continental Engineering to get new planters & valves, they will have them Wednesday

Loads = 25

WORK COMPLETE TO DATE:

1.) Exc Pond Resin	TTD: 4,055 TONS # 20, 828.50
2.) Load & Haul Resin	TTD: 4,955 TONS # 30, 221.90
3.) Borrow Rackfill 5 CY	TTD: 17,604 CY # 142,592.40
4.) Clay Cap 900 CY # 7,290	TTD: 1,464 CY #
5.) Top Soil 2 CY	TTD: 2 CY # 2
6.) T & M 0 #	TTD: \$ 2,180
7.) Planter LF	TTD: 4,955 TONS # 114,655.50

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

overcast am
Rain PM

Important Phone Calls:

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.: 4041

Date: 9/10/97

Field Activity:

Haul Clay / Place / compact

7:00 - 6:00

NO Hauling Wednesday, too wet. John & I worked the morning & afternoon. Graded the road to the south side of the pond. Hauling 2 trailers & 3 trailers. Hauling dirt up the south side from the pond #5 to ELU 217 & back down to ELU 215.5. Worked in the curve at East End to first lift at ELU 217, first lift on south side. Worked West end slope to toe & 1st lift.

I had Continental Engineering run 4 tests to find out how close were on moisture & compaction on the north side. All 4 tests were fines - 3% high on moisture - OK on compaction.

Loads = 600

WORK COMPLETE TO DATE:

1.) Exc Pond Resin	TTD: 4,955 Tons	30,221.90
2.) Load & Haul Resin	TTD: 4,955 Tons	30,221.90
3.) Borrow Backfill 8 CY	TTD: 17,604 CY	142,592.40
4.) Clay Cap 720 CY	TTD: 2,184 CY	17,690.40
5.) Top Soil 8 CY	TTD: 8 CY	
6.) T&M 8 CY	TTD: 8 CY	
7.) L&S LF	TTD: 4,955 Tons	14,653.50

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear Low 80s

Important Phone Calls:

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel & Dennis R Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 CLOSURE

Project No.: 41041

Date: 9/12/97

Field Activity:

WORKING 1ST LIFT OF CLAY

Page:

7:00 - 4:30

John IP using water to lower clay compact. I went to use for compacting. I talked to Jacob about getting a new piece of the cap reformed. For John IP, I went to Continental Engineering to get final survey results on the Barrack Backfill. The total was 20,632 CY - I adjusted the difference today. Jacob rented his tractor & placed clay with operator, to John IP, they placed up the whole cap. We let it set for 2 1/2 hrs before leveling it & re-compacting it with the tandem Continental Engineering here at 2:30. They ran 20 compaction tests that were recorded for us. We re-tested some areas, Wayne Const field for these.

Leads = 2

WORK COMPLETE TO DATE:

1) Exc Pond Resin	TTD: 4,955 Tons @ 20.008.50
2) Load & Haul Resin	TTD: 4,955 Tons @ 22.90
3) Barrack Backfill 3,028 CY @ 24.50	TTD: 20,632 CY @ 167,119.20
4) Clay Cap 8 CY	TTD: 2,100 CY @ 1-200.00
5) Top Soil 8 CY	TTD: 8 CY @ 5
6) T&M 8 CY	TTD: 8 CY @ 120

Visitors on site:

Continental Engineering

Changes in Plans or Specifications:

Weather Conditions:

Clear
80S No Rain

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubbel

Site Supervisor:

Dennis R. Dubbel

Dennis R. Dubbel

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 Closure

Project No.:

4041

Date:

9/15/97

Field Activity:

Haul Clay / Place / Compact

7:00 - 6:00

Page:

Trucks started hauling at 9:15. Started with one truck at the pond, then another, then a third. South East and West. Then a fourth truck. Working East end & North East end. I called top Surveyors to be here in the morning to verify grade. I called Jeff Baker to let him know I am driving home this Friday & coming back the 28th to start work on the 29th. I told Jeff we should look for the start of Wednesday & put the main claim in Thursday.

Lands: 50

WORK COMPLETE TO DATE!

1) Exc form Resin

TTD: 4,955 Tons \$20,608.3

2) Load & Haul Resin

TTD: 4,955 Tons \$20,221.9

3) Bottom Rock fill

x cv

TTD: 20,622 CV \$11,512.2

4) Clay Cap

600 CV \$4,860

TTD: 2,784 CV \$22,550.0

5) Topsoil

8 CV

TTD: 8 CV \$8

6) T & M

8 CV

TTD: 8 CV \$2,180

Bottom Landfill

TTD: 4,955 Tons \$111,652.2

Visitors on site:

Changes in Plans or Specifications:

Weather Conditions:

Clear

90°

No Rain

Important Phone Calls:

DERS Personnel on site:

Dennis R. Dubber

Site Supervisor:

Dennis R. Dubber

Dennis R. Dubber

DAILY FIELD ACTIVITY REPORT

Project Name:

Pond 2 closure

Project No.:

41041

Date:

9/16/97

Field Activity:

Haul Clay / Place / Compact

Page:

100 - 5.30

Started out with two trailers one tandem
one tri-axle. We had a lot of work to do
concerning a lot of work that we had to do.
I had the surveyor set up the stakes. They
set all the stakes & agreed with me. I
had them set the stakes on the contour lines
all the points. I called Continental
Engineering to have our compaction tests run
Wednesday at 1:30, & also set up for our
final survey on the 29th PM.

Leads: 88

WORK COMPLETE TO DATE:

1) Exc Pond Resin	TTN: 4,955 Tons	20,508.00
2) Load & Haul Resin	TTN: 4,955 Tons	30,221.9
3) Borrow Backfill	TTN: 20,632 CY	117,119.2
4) Clay CAP 1n56	TTN: 3,940 CY	31,104.00
5) Top Soil	TTN: 2 CY	5
6) T&M	TTN: 2	180
7) Houston L.F	TTN: 4,955 TON	14,652.1

Visitors on site:

Continental Engineering

Changes in Plans or Specifications:

Weather Conditions:

Clear
80s
No Rain

Important Phone Calls:

Continental Engineering

DERS Personnel on site:

Dennis R Dubbel

Site Supervisor:

Dennis R Dubbel

James R. L. L. L.

DAILY FIELD ACTIVITY REPORT

Project Name: Pond 2 Closure	Project No.: 4041
Field Activity: Haul Clay / Place / Compact	Date: 9/17/97
7:00 - 3:30	Page:

John & R here at 7:15 to run the dozer
to grade. John & R arrived - they needed
grade to be on grade, so he got the dozer
to finish the clay & sand. The dozer
grade. We had two trailers & five
trucks hauling a total 47 loads of
clay. This finished the clay to
final grade. Continental Engineering
here to run 20 compaction tests on the
final lift. All the tests passed.
Laigue was here from the Houston office
at the same time. He said everything looked
good.

WORK Complete to Date Loads = 47

1.) Exc Pond Resin	Final	TTD: 4,955 Tons ²⁰ FOS
2.) Load & Haul Resin	Final	TTD: 4,955 Tons ³⁰ 221.9
3.) Borrow Backfill	Final	TTD 20 632 CY 119.2
4.) Clay CAP	Shovel & 4 1/2 A 40	TTD 4 1/4 CY 256.7 4
5.) TOPSOIL	& CY	TTD & CY &
6.) TAM	& &	TTD & 2 180
7.) Final LT	Final	TTD 4,955 Tons ²⁰ 155.5

Visitors on site: Laigue Haider Continental Engineering	Changes in Plans or Specifications:
Weather Conditions: Clear Eos No Rain	Important Phone Calls:
DERS Personnel on site: Dennis Dubbel, Laigue Haider	
Site Supervisor: Dennis R Dubbel	

DAILY FIELD ACTIVITY REPORT

Project Name: ABERDEEN POND 2 CLOSURE	Project No.: 4041
Field Activity: SITE INSPECTION	Date: 9/17/97
	Page: 1 of 1

Arrive at site — 1300

The subcontractor was using Model 3411 B Nuclear density gauge for in-place moisture density measurements. Tests were performed correctly.

Final lift on the east side was completed and compacted. Clay (sandy/silty) was placed by a trackhoe on the west side and compacted by a loaded rubber-tired dump truck. The compacted density measure was well over 95% for next measurement. 20 tests were taken for the final as well as the first lift. The field work was performed satisfactorily.

Dennis will go back on 29th to check for vegetation and final survey. The Terra Cell drainage product is still to be installed. Final survey for as-built is also scheduled for 29th. Project completion schedule is O.K.

In general, everything works O.K.

Larone/Harden Pt

Visitors on site: —	Changes in Plans or Specifications: One Moisture — 4% below optimum Speed $\pm 3\%$. Passed O.K. — 95% compact
Weather Conditions: Clear Sunny — 90°	Important Phone Calls: —
DERS Personnel on site: Dennis Dubbel, Larone, Harden, P.E.	
Site Supervisor: Dennis Dubbel	

DAILY FIELD ACTIVITY REPORT

Project Name: <u>Pond 2 Closure</u>	Project No.: <u>41041</u>
Field Activity: <u>Haul Topsoil / Spread - Fertilize & Seed</u>	Date: <u>9/19-24/95</u>
	Page:

Clanna Construction hauled & spread topsoil & seed. The seeding was complete on the 24 of Sept. IT rained for the 26 & 27.

A total of 75 loads topsoil was hauled & placed. I had Jacob Lee use one of his people for a spotter while they dumped the topsoil. I was not on the site during this time.

Leads 25

WORK COMPLETE TO DATE,

1.) Exc. Pond Basin	Final	TTD: 4,955 Tons \$20,000.00
2.) Lead & Haul Basin	Final	TTD: 4,955 Tons \$30,231.90
3.) Borrow Backfill	Final	TTD: 20,632 CY \$167,119.20
4.) Clay Cap	8 CY	TTD: 4,004 CY \$25,622.40
5.) Topsoil	910 CY	TTD: 910 CY \$2825.00
6.) TB M	85	TTD: 85 \$2,180.00
7.) Shovel LF	Final	TTD: 4,955 Tons \$114,653.59

Visitors on site:	Changes in Plans or Specifications:
Weather Conditions:	Important Phone Calls:

DERS Personnel on site:
Site Supervisor: <u>Dennis R. Dubbel</u> & <u>James R. Dubbel</u>

DAILY FIELD ACTIVITY REPORT

Project Name: Pond 2 CLOSURE	Project No.: 4041
Field Activity: Install down drain & R.P. Rap	Date: 9/29 & 30/97
	Page:

I USED Jacob Lee Crew to install the down drain & R.P. Rap. We installed four panels of Terracell 8' x 20'. We installed a 4" x 4" pipe under the panels & 3" rock inside the panels. We installed R.P. Rap in the ditch bottom & both sides. I had Continental Eng do the Final Survey on Monday afternoon. Tuesday I had Ed place gravel on the road between Pond #2 & Pond #5 & finish dressing up the area. Grass was already growing on the top soil. I finalized the job report to Continental Eng to get the final area for the Clay cap & top soil. The clay was 3,800 cy & top soil 900 cy for the final.

WORK Complete TO DATE:

1.) Exc Pond Resin	Final	TTD: 4,955 Tons @ 20, 99,100.00
2.) Load & haul Resin	Final	TTD: 4,955 Tons @ 30, 148,650.00
3.) Backfill Backfill	Final	TTD: 20,632 CY @ 167, 119.20
4.) Clay CAP	Final	TTD: 3,800 CY @ 30, 114,600.00
5.) TOP SOIL	Final	TTD: 900 CY @ 7, 6,225.00
6.) T & M	# 4,570	TTD: \$ 6,690.00
7.) Houston LF	Final	TTD: 4,955 Tons @ 114, 652.50

Visitors on site: Continental Engineering	Changes in Plans or Specifications:
Weather Conditions: Clear 80s No Rain	Important Phone Calls:
DERS Personnel on site: Dennis R. Dubbel	
Site Supervisor: Dennis R. Dubbel & Leonard R. Lickel	

APPENDIX G

APPENDIX G
PROJECT CORRESPONDENCE
(DUPONT/CONDEA VISTA/MDEQ)

Vista Polymers
A Division of
Vista Chemical Company

Highway 25
Post Office Box 91

Aberdeen, Mississippi 39730-0091
Phone (601) 369-8111

February 2, 1993

VISTA

Mr. Tony Russell
Office of Pollution Control
P.O. Box 10385
Jackson, MS 39289-0385

Dear Mr. Russell:

The purpose of this letter is to clarify the source of any residual vinyl chloride monomer (VCM) that may be present in the polyvinyl chloride (PVC) resin contained in Pond 2. Pond 2 is the abandoned wastewater treatment lagoon that is filled with PVC resin that is being reclaimed for sale.

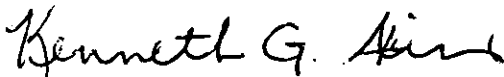
VCM is the raw material for the manufacture of PVC by polymerization in a reactor. PVC particles are porous and can retain residual, unreacted VCM. Most of this residual VCM is removed by steam stripping in the reactor.

This residual VCM in the PVC is the source of any VCM that might be present in the soils to be disposed of. The VCM is not from commercially pure, off-specification, container residue, or spills of VCM. Therefore, the waste is not a listed waste as identified in 40CFR 261.33(f).

Because trace amounts of VCM can remain in PVC resin, a TCLP test was conducted to determine if the waste was characteristically toxic due to VCM. As indicated in the attached TCLP test, VCM was not detected above the detection limits. The TCLP test was ran only for volatiles as process knowledge indicated no concern for semi-volatiles.

If you have any further questions regarding the this waste stream, please call me at (601) 369-3637.

Sincerely,



Kenneth G. Akins
Senior Environmental Coordinator

c: Mr. Chip Nemeth
Waste Management



October 09, 1992

KAREN BROWN
CONOCO, INC.
P O DRAWER 1267
PONCA CITY, OK 74601

Re: VISTA ABERDEEN POND 2 CAP

Dear KAREN BROWN:

On October 07, 1992, the following samples were received at the ITAS Austin laboratory:

ABD-POND2

ABD-POND2

MATRIX SPIKE

They were checked into our sample tracking system as work order number B2-10-092 and assigned testing for the following parameters:

TCLP Volatiles

Zero Headspace Extraction

When the above analyses are completed, your report will be issued to the address shown above. If you need to arrange for other reporting, please contact me.

We appreciate the opportunity to participate in this program of analytical work, and look forward to working with you in the future. Again, please contact me if you have any questions or special requirements.

Sincerely,

A handwritten signature in cursive script that reads 'Cindy'.

Cindy L. Quay
Project Manager

A handwritten signature in cursive script that reads 'Aberdeen Spetseris'.

DATE RECEIVED	
OCT 14 1992	
SAM	BY
CEP	BY

Charge # ?

Regional Office

5307 Industrial Oaks Boulevard • Suite 160 • Austin, Texas 78735 • 512-892-6684

IT Corporation is a wholly owned subsidiary of International Technology Corporation



INTERNATIONAL
TECHNOLOGY
CORPORATION

ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

CONOCO, INC.
P O DRAWER 1267
PONCA CITY, OK 74601
KAREN BROWN

Date: 10/26/92

Work Order: B2-10-092

This is the Certificate of Analysis for the following samples:

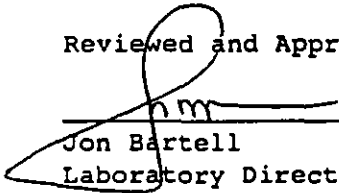
Client Work ID: VISTA ABERDEEN POND 2 CAP
Date Received: 10/07/92
Number of Samples: 2
Sample Type: SOIL

I. Introduction

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
ABD-POND2	B2-10-092-01
ABD-POND2 MATRIX SPIKE	B2-10-092-02

Reviewed and Approved:


Jon Bartell
Laboratory Director

DATE RECEIVED	
OCT 27 1992	
SAM	BY
CED 10/27	BY 

American Council of Independent Laboratories
International Association of Environmental Testing Laboratories
American Association for Laboratory Accreditation

Page: 2 of 7

Company: CONOCO, INC.

Date: 10/26/92

Client Work ID: VISTA ABERDEEN POND 2 CAP

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B2-10-092

II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Page: 3 of 7

Company: CONOCO, INC.

Date: 10/26/92

Client Work ID: VISTA ABERDEEN POND 2 CAP

IT ANALYTICAL SERVICES
AUSTIN, TX

(512) 892-6684

Work Order: B2-10-092

SAMPLE ID: ABD-POND2
SAMPLE DATE: 10/06/92
SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
Zero Headspace Extraction		10/12/92		Date	10/12/92	EPA1311

Page: 4 of 7

Company: CONOCO, INC.

Date: 10/26/92

Client Work ID: VISTA ABERDEEN POND 2 CAP

IT ANALYTICAL SERVICES
AUSTIN, TX
(512) 892-6684

Work Order: B2-10-092

TEST NAME: TCLP Volatiles

METHOD REFERENCE: EPA8240

SAMPLE ID: ABD-POND2

SAMPLE DATE: 10/06/92

SAMPLE MATRIX: SOIL

ANALYSIS DATE: 10/19/92

DILUTION FACTOR: 5.0

UNITS: mg/L

	Result	Reporting Limit
Vinyl chloride	ND	0.05
1,1-Dichloroethylene	ND	0.03
Chloroform	ND	0.03
1,2-Dichloroethane	ND	0.03
2-Butanone	ND	0.5
Carbon tetrachloride	ND	0.03
Trichloroethylene	ND	0.03
Benzene	ND	0.03
Tetrachloroethylene	ND	0.03
Chlorobenzene	ND	0.03
Surrogates	% Recovery	
Toluene-D8	101	
Bromofluorobenzene	97	
1,2-Dichloroethane-D4	98	

Results have NOT been adjusted for matrix spike recoveries.

Page: 5 of 7

Company: CONOCO, INC.

Date: 10/26/92

Client Work ID: VISTA ABERDEEN POND 2 CAP

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B2-10-092

SAMPLE ID: ABD-POND2 MATRIX SPIKE

SAMPLE DATE: 10/06/92

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
Zero Headspace Extraction		10/12/92		Date	10/12/92	EPA1311

Page: 6 of 7

Company: CONOCO, INC.

Date: 10/26/92

Client Work ID: VISTA ABERDEEN POND 2 CAP

IT ANALYTICAL SERVICES
AUSTIN, TX

(512) 892-6684

Work Order: B2-10-092

TEST NAME: TCLP Volatiles

METHOD REFERENCE: EPA8240

SAMPLE ID: ABD-POND2 MATRIX SPIKE

SAMPLE DATE: 10/06/92

SAMPLE MATRIX: SOIL

ANALYSIS DATE: 10/19/92

DILUTION FACTOR: 1

UNITS: % Rec

Result

Vinyl chloride	97
1,1-Dichloroethylene	109
Chloroform	116
1,2-Dichloroethane	103
2-Butanone	53
Carbon tetrachloride	112
Trichloroethylene	106
Benzene	95
Tetrachloroethylene	98
Chlorobenzene	94

Surrogates	% Recovery
Toluene-D8	99
Bromofluorobenzene	98
1,2-Dichloroethane-D4	103

Results have NOT been adjusted for matrix spike recoveries.

Page: 7 of 7

Company: CONOCO, INC.

Date: 10/26/92

Client Work ID: VISTA ABERDEEN POND 2 CAP

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B2-10-092

IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TCLP Volatiles

TEST CODE TCLP_V

TCLP-Volatiles

Method 8240, SW-846, Test Methods for Evaluating Solid Wastes, Third Edition. Purge and trap GC/MS analysis.

TEST NAME Zero Headspace Extraction TEST CODE ZHE

TCLP Preparation
Zero Headspace

USEPA Method 1311-Federal Register Vol. 55, No. 126., June 29, 1990. Solid phase is extracted with a extraction fluid number one, equal to twenty times the weight of the solid phase. Extraction is performed in a zero-headspace apparatus meeting the specifications described in the method.

2/6/11 11:11 AM [Signature]

INTEROFFICE MEMORANDUM

Date: 10-Jan-1996 02:51pm
From: DENNIS R DUBBEL
 DUBBELDR
Dept: DERS
Tel No: 713 - 586-5831

TO: JOHN T. LEETHEM (LEETHEJT)
TO: DOUGLAS C. DENNY (DENNYDC)
TO: STEVEN D HALL (HALLSD)

Subject: Revised Vista Aberdeen SOW for pond #2

REGARDING POND #2, THE FOLLOWING ASSUMPTIONS ARE MADE AFTER
 TALKING TO JACOB LEE, THE ON-SITE CONTRACTOR:
 I ALSO TALKED TO KENNY ATKINS ON JAN 9 FOR MORE INFO:

- 1) The "stockpiled material" from the overburden is
 "non-hazardous"
 Kenny told me it is possible this material can be sent to a local
 landfill, he is checking on prices for me. (I am using \$3.50 cy)
- 2) The amount of stockpiled material is about 2,800 cubic
 yards, this is based on excavating 18" of overburden.
 The weight of stockpiled material from cubic yards to tons will
 be a 1.1 conversion. One cubic yard = one ton of material.
- 3) The depth of the pond is about 12 feet with 2:1 side slopes
- 4) The existing pontentially affected soil averages 12" thick on
 the sides & bottom of pond #2 . The weight of the material from
 cubic yards to tons will be a 1:1 conversion. one cubic yard =
 one ton of material.
- 5) Disposal fees at the Houston Ms. landfill are \$27.00 ton, the
 material is non-hazardous (per Kenny Atkins)
- 6) There is a "borrow area" about one mile from the site on 25-30
 acres of land. I am not sure if this material will cost anything
 to purchase, I used \$1.50 cubic yard for fill material/ \$2.00 a
 cubic yard for clay & \$2.00 cubic yard for topsoil.
- 7) Material being hauled to the landfill now is "non-hazardous"
 the charge for hauling a load is \$125.00 based on 18 cy truck.
 Jacob adds 10% for billing.
- 8) Handling of the material does not require special PPE
- 9) Jacob does not own much equipment, but he rents what is needed
 for the job and adds 10% to his billing.
 I used his hourly rates for operators and used hourly rates from

Associated rental of Houston for the equipment rates.

10) The volume of the pond (taken from the blue prints) and using 12 feet deep with 2:1 side slopes, is 17,520 cubic yards.

11) The borrow pit will have the material needed / clay / topsoil/ general fill & will meet the specs.

12) If we need to purchase fill material, the source will be within a 30 minute one way drive for the haul truck
I used average costs for the material, I did not get quotes
clay \$5.50 cubic yard at source, haul \$3.12 cubic yard
fill material \$4.00 cubic yard at source, haul \$3.12 cubic yard
topsoil \$5.75 cubic yard at source, haul \$3.12 cubic yard
all of the above costs are before markup

13) For option one "Fill in Place" we will use the "stockpiled material" for part of the fill. General fill will be used to within 3 feet of the top of cap, then 2 feet of clay with 1 foot of topsoil will be used.

14) For option two "Clay liner with 60 mil HDPE liner" the clay liner will be 2 feet thick on the bottom and sides. the "stockpiled material" will be hauled off site to the borrow source (for option (a) or hauled to the local landfill that takes

"clean dirt" (for option (b)). The 60 mil HDPE liner will be placed in trenches on the sides of the pond. No other liner will be required.

15) Option three, "Clean remaining potentially affected soil/ turn over to Vista" Haul off stockpiled material to local landfill (option (a) or hauled off site to borrow area for option (b)

16) After cleaning the remaining potentially affected soil from the sides and bottom, tests will be ran to determine if the soil is "clean" before preceding to options one, two or three.

17) I assumed the following compaction rates (shrinkage)
for the materials being placed in the pond.

clay 25 %
fill material 15 %
topsoil 10%

COSTS FOR OPTIONS ONE (a) (b), TWO (a) (b) (c) (d)
AND THREE (a) (b)

OPTION ONE: FILL IN PLACE

a) Load, haul, place, compact stockpiled material into pond #2
2,780 cubic yards @ \$3.25 per cubic yard

sub-total \$ 9,035

- b) Excavate fill material from off site borrow pit, load, haul
9,180 cubic yards @ \$3.05 per cubic yard
plus \$1.50 cubic yard for material.

sub-total \$41,769

- c) Place fill material and compact in place 9,180 cubic yards
@ \$2.20 per cubic yard

sub-total \$20,196

- d) Excavate clay from off site borrow pit, load, haul
3,700 cubic yards @ \$3.25 per cubic yard
plus \$2.00 cubic yard for material.

sub-total \$19,425

- e) Place clay and compact in place 3,700 cubic yards
@ \$2.35 per cubic yard

sub-total \$ 8,695

- f) Excavate topsoil from off site borrow pit, load, haul
1,850 cubic yards @ \$2.70 per cubic yard
plus \$2.00 cubic yard for material.

sub-total \$ 8,695

- g) Place topsoil / compact with dozer/ 1,850 cubic yards
@ \$2.15 per cubic yard

sub-total \$ 3,978

- h) Purchase fill material/ haul 9,180 cubic yards
@ \$9.55 cubic yard (includes 15% compaction)

sub-total \$87,699

- i) Purchase clay material / haul 3,700 cubic yards
@ \$12.60 cubic yard (includes 25% compaction)

sub-total \$46,620

- j) Purchase topsoil material / haul 1,850 cubic yards
@ \$11.40 cubic yard (includes 10% compaction)

sub-total \$21,090

- k) Excavating potentially affected soil / load / haul to landfill
1850 cubic yards @ \$14.55 cubic yard

sub-total \$26,918

- l) landfill fee (Houston, Ms.) 1,850 tons
@ \$27.00 ton

sub-total \$49,950

- m) Seeding the cap
50,000 square feet @ \$0.12 square foot

sub-total \$ 6,000

- n) Testing for clay to meet specs / 3 tests @ \$500 each

plus sampling @ \$600	sub-total \$ 2,100
o) Testing for fill material to meet specs / 3 tests @ \$333 each, plus sampling @ \$600	sub-total \$ 1,600
p) Surveying one lump sum	sub-total \$ 4,500
q) Compaction tests one lump sum	sub-total \$ 2,500
r) Analytical tests one lump sum	sub-total \$ 7,200
s) Perdiem 45 days @ \$30 day	sub-total \$ 1,350
t) Room 45 days @ \$60 day	sub-total \$ 2,700
u) Travel 5 trips @ \$400 trip	sub-total \$ 2,000
v) Pickup 6 weeks @ \$250 week	sub-total \$ 1,500
 (a) TOTAL FOR OPTION ONE (USING BORROW MATERIAL)	sub-total \$220,111
(b) TOTAL FOR OPTION ONE (USING PURCHASED MATERIAL)	sub-total \$305,631

OPTION TWO: TWO FOOT CLAY LINER WITH 60 MIL HDPE LINER

a) Excavate clay from off site borrow pit/ load / haul 3,700 cubic yards @ \$3.25 cubic yard plus \$ 2.00 cubic yard for material	sub-total \$19,425
b) Place clay and compact in place 3,700 cubic yards @ 2.35 cubic yard	sub-total \$ 8,695
c) 60 mil HDPE liner in place 6,650 square yards @ \$8.05 square yard	sub-total \$53,533
d) Excavate potentially affected soil / load / haul to landfill	

1,850 cubic yards @ \$14.55 cubic yard	sub-total \$26,918
e) Landfill fee (Houston, Ms) 1,850 tons @ \$27.00 ton	sub-total \$49,950
f) Loading stockpiled material/ hauling off site to borrow area 2,780 cubic yards @ \$3.00 cubic yard	sub-total \$ 8,340
g) Loading stockpiled material/hauling to local landfill 2,780 cubic yards @ \$8.50 cubic yard	sub-total \$23,630
h) Local landfill fee 2,780 cubic yards @ \$ 3.50 cubic yard	sub-total \$ 9,730
i) Purchase clay material / haul 3,700 cubic yards @ \$12.60 cubic yard (includes 25% compaction)	sub-total \$46,620
j) Testing clay to meet specs / 3 tests @ \$500 each plus sampling @ \$600	sub-total \$ 2,100
k) Surveying one lump sum	sub-total \$ 4,500
l) Compaction tests one lump sum	sub-total \$ 2,500
m) Analytical tests one lump sum	sub-total \$ 7,200
n) Perdiem 38 days @ \$30 day	sub-total \$ 1,140
o) Room 38 days @ \$60 day	sub-total \$ 2,280
p) Travel 5 trips @ \$400 trip	sub-total \$ 2,000
q) Pickup 5 weeks @ \$250 week	sub-total \$ 1,250
(a) TOTAL FOR OPTION TWO /using borrow clay / and hauling stockpiled material to borrow area.	

sub-total \$189,831

- (b) TOTAL FOR OPTION TWO / using borrow clay/ and hauling
stockpiled material to local landfill
sub-total \$214,851
- (c) TOTAL FOR OPTION TWO / using purchased clay / and hauling
stockpiled material to borrow area.
sub-total \$236,451
- (d) TOTAL FOR OPTION TWO / using purchased clay / and hauling
stockpiled material to local landfill.
sub-total \$261,471

OPTION THREE: CLEAN REMAINING POTENTIALLY AFFECTED SOIL / HAUL
OFF STOCKPILED MATERIAL/ TURN OVER TO VISTA.

- a) Excavate potentially affected soil / load / haul to landfill
1,850 cubic yards @ \$14.55 cubic yard
sub-total \$26,918
- b) Landfill fee (Houston Ms.) 1,850 tons
sub-total \$49,950
- c) Loading stockpiled material/ hauling off site to borrow area
2,780 cubic yards @ \$ 3.00 cubic yard
sub-total \$ 8,340
- d) Loading stockpiled material/ hauling to local landfill
2,780 cubic yards @ \$8.50 cubic yard
sub-total \$23,630
- e) Local Landfill fee 2,780 cubic yards
@ \$3.50 cubic yard
sub-total \$ 9,730
- f) Surveying one lump sum
sub-total \$ 2,125
- g) Analytical tests one lump sum
sub-total \$ 7,200
- h) Perdiem 15 days @ \$30 day
sub-total \$ 450
- i) Room 15 days @ \$60 day
sub-total \$ 900
- j) Travel 2 trips @ \$400 trip
sub-total \$ 800

k) Pickup 2 weeks @ \$250 week

sub-total \$ 500

(a) TOTAL FOR OPTION THREE / hauling stockpiled material
to local landfill

sub-total \$122,203

(b) TOTAL FOR OPTION THREE / hauling stockpiled material
to borrow area

sub-total \$ 95,058

INTEROFFICE MEMORANDUM

Date: 15-Jul-1996 04:31pm
 From: Rick N. Johnson
 JOHNSORN
 Dept: SPEC
 Tel No: 713-586-5819

TO: See Below

Subject: Vista Pond 2 Risk Based Standards

Project Team,

I have calculated a site-specific, risk-based soil standard for Pond 2 at Vista. Using a construction worker scenario, which includes an exposure duration of three months instead of 25 years and a soil ingestion rate of 480 mg/day, I have calculated a standard of 860 mg/kg. You can see that this is over 2X the Direct Contact value and five samples from the pond (four top and one bottom) exceed this value.

*← cleanup level
3 months
exposure rate*

If I assume a normally distributed data set and calculate the upper confidence limit, I come up with 3042.5 mg/kg UCL for the pond. This exceeds the acceptable level, therefore removal is required.

← stat. for pond

However, based on this analysis, we can assume that removing the top foot of material will be sufficient to reduce the risk to acceptable levels.

Rick N. Johnson

Distribution:

TO: JOHN L RIDDLE
 TO: STEVEN D HALL
 TO: LARRY J. DZIUK
 TO: JOHN T. LEETHEM, C.P.G.
 TO: MARY S. STARRETT
 TO: Rick N. Johnson

(RIDDLEJL)
 (HALLSD)
 (DZIUKLJ)
 (LEETHEJT)
 (STARREMS)
 (JOHNSORN)

*be prepared
to explain difference
in clean
up
1860 vs 25*

INTEROFFICE MEMORANDUM

Date: 09-Jul-1996 08:58am
From: LARRY J. DZIUK
DZIUKLJ
Dept: SPEC
Tel No: 586-5691

TO: MARY S. STARRETT (STARREMS)

CC: Rick N. Johnson (JOHNSORN)

Subject: Vista Aberdeen Screening Risk Assessment Result - POND

I have performed the screening risk assessment that we agreed to (the EPA Region III screening values) for evaluation of the need to further excavate the pond at Vista Aberdeen. There is a need to continue excavation if the EPA Region III screening values for worker protection are assumed to be relevant indicators of acceptable risk. If groundwater protection is an issue, there is an even greater need to continue excavation. The result of the s deliver to you. A summary of the result is as follows:

Vinyl chloride - Workers directly contacting the soil will not be risk. Groundwater protection values were exceeded in three of twelve samples analyzed but, as you pointed out, the vinyl chloride might have entered the pond by way of migrating groundwater.

Trichloroethylene - The concentration of this substance (detected in only one of twelve samples) was within the allowable levels for worker protection and protection of groundwater.

Bis(2-ethylhexyl)phthalate - The screening criterion for protection of workers was exceeded in half of the samples analyzed. Ten of twelve samples exceeded the criterion for protection of groundwater.

Di-n-octyl phthalate - The concentrations of this substance (detected in three of twelve samples analyzed) was within the allowable levels for worker protection and groundwater protection.

Assuming that barium, cadmium, and lead were elevated above area background (I didn't see any background concentrations in the data set), all are below screening criteria established for worker protection. Barium concentrations in twelve of twelve samples were in excess of the groundwater protection values. Three of five detected cadmium samples exceeded groundwater protection criteria. There was no groundwater protection screening criterion for lead.

VISTA ABERDEEN POND II CLOSURE - SCREENING RISK ASSESSMENT						
SAMPLE #	Substance a)	Sample Result (mg/kg)	Industrial Screening Value (mg/kg) b)	Direct Contact	GW Protection	
PND2-3-2 Bottom	Vinyl Chloride	0.85		3 Pass	0.01 Fail	
PND2-3-2 Top	"	0.23		3 Pass	0.01 Fail	
PND2-4-2 Top	"	0.15		3 Pass	0.01 Fail	
PND2-4-2 Top	TCE	0.011		520 Pass	0.02 Pass	
PND2-1-2 Bottom	DEHP	0.9/1.9 (Duplicate)		410 Pass	11 Pass	
PND2-1-2 Top	"	210/260 (Duplicate)		410 Pass	11 Fail	
PND2-2-2 Bottom	"	63		410 Pass	11 Fail	
PND2-2-2 Top	"	4,900		410 Fail	11 Fail	
PND2-3-2 Bottom	"	2,600		410 Fail	11 Fail	
PND2-3-2 Top	"	3,400		410 Fail	11 Fail	
PND2-4-2 Bottom	"	11		410 Pass	11 Pass	
PND2-4-2 Top	"	6,400		410 Fail	11 Fail	
PND2-5-2 Bottom	"	71		410 Pass	11 Fail	
PND2-5-2 Top	"	1,200		410 Fail	11 Fail	
PND2-6-2 Bottom	"	120		410 Pass	11 Fail	
PND2-6-2 Top	"	830		410 Fail	11 Fail	
PND2-1-2 Top	Di-n-Octyl Phthalate	7.2		41,000 Pass	>1E+06 Pass	
PND2-2-2 Bottom	"	2.1		41,000 Pass	>1E+06 Pass	
PND2-3-2 Bottom	"	67		41,000 Pass	>1E+06 Pass	
a) TCE = trichloroethylene; DEHP = bis(2-ethylhexyl)phthalate						
b) Source of Screening Values - Risk-Based concentration Table, July-December 1995						
U.S. EPA Region III, Roy L. Smith, Ph.D., Office of RCRA.						

Sheet1

VISTA ABERDEEN POND II CLOSURE - SCREENING RISK ASSESSMENT									
SAMPLE #	Substance	Sample (mg/kg)	Bkgnd (mg/kg)	>Bkgnd ?	Industrial Screening Value (mg/kg) a)	Direct Contact	GW Protection		
PND2-1-2 Bottom	Barium	50/45.6 b)	?	?	140,000	Pass	32	Fail	
PND2-1-2 Top	"	70.9/124b)	?	?	140,000	Pass	32	Fail	
PND2-2-2 Bottom	"	38.9 ?	?	?	140,000	Pass	32	Fail	
PND2-2-2 Top	"	90 ?	?	?	140,000	Pass	32	Fail	
PND2-3-2 Bottom	"	66 ?	?	?	140,000	Pass	32	Fail	
PND2-3-2 Top	"	119 ?	?	?	140,000	Pass	32	Fail	
PND2-4-2 Bottom	"	57 ?	?	?	140,000	Pass	32	Fail	
PND2-4-2 Top	"	176 ?	?	?	140,000	Pass	32	Fail	
PND2-5-2 Bottom	"	85.1 ?	?	?	140,000	Pass	32	Fail	
PND2-5-2 Top	"	48.5 ?	?	?	140,000	Pass	32	Fail	
PND2-6-2 Bottom	"	74.1 ?	?	?	140,000	Pass	32	Fail	
PND2-6-2 Top	"	81.9 ?	?	?	140,000	Pass	32	Fail	
PND2-2-2 Top	Cadmium	1.82 ?	?	?	1,000	Pass	6	Pass	
PND2-3-2 Bottom	"	8.5 ?	?	?	1,000	Pass	6	Fail	
PND2-3-2 Top	"	7.44 ?	?	?	1,000	Pass	6	Fail	
PND2-4-2 Top	"	7.24 ?	?	?	1,000	Pass	6	Fail	
PND2-5-2 Top	"	1.74 ?	?	?	1,000	Pass	6	Pass	
PND2-1-2 Bottom	Lead	8.3/8.2 b)	?	?	400+	Pass	?	?	
PND2-1-2 Top	"	7.96/12 b)	?	?	400+	Pass	?	?	
PND2-2-2 Bottom	"	7.5 ?	?	?	400+	Pass	?	?	
PND2-2-2 Top	"	11.2 ?	?	?	400+	Pass	?	?	
PND2-3-2 Bottom	"	6.83 ?	?	?	400+	Pass	?	?	
PND2-3-2 Top	"	8.99 ?	?	?	400+	Pass	?	?	
PND2-4-2 Bottom	"	6.54 ?	?	?	400+	Pass	?	?	
PND2-4-2 Top	"	18.1 ?	?	?	400+	Pass	?	?	
PND2-5-2 Bottom	"	8.74 ?	?	?	400+	Pass	?	?	
PND2-5-2 Top	"	7.4 ?	?	?	400+	Pass	?	?	
PND2-6-2 Bottom	"	8.84 ?	?	?	400+	Pass	?	?	
PND2-6-2 Top	"	9.3 ?	?	?	400+	Pass	?	?	

INTEROFFICE MEMORANDUM

Date: 07-Aug-1996 11:38am
From: STEVEN D HALL
HALLSD
Dept: SPEC
Tel No: 7135865830

TO: JOHN L. RIDDLE
TO: LINDA J. RUDISELL

(RIDDLEJL AT A1 AT BMOA)
(RUDISELJ AT A1 AT BMOA)

Subject: Vista Aberdeen

I called Kenny Akins at the plant and informed him of the change in DuPont Environmental personnel. I told him that Linda would take over the project next week, and that John Leethem and I were being removed from the project. I told him that the Pond 2 closure plan was on schedule and that he should get it for review around August 19. I asked Kenny to contact MDEQ and confirm the meeting for 10:00 AM on September 5 to present the closure plan.

Kenny stated that the profile for the Pond 2 waste at the Houston Mississippi landfill has expired. A new sample needs to be collected for TCLP analyses. Kenny stated that Vista would collect the sample and requested that DuPont setup a lab with direct billing to DuPont (normally Vista would send the bill to DuPont to be reimbursed). I stated that we could setup the analyses with Quanterra and would get back to him.

CONDEA Vista Company
Highway 25
Aberdeen, Mississippi 39730-0091
(601) 369-8111



FAX NUMBER: 601-369-3630

FACSIMILE TRANSMISSION

DATE: 8/28/96
FROM: Kenny Akins
TELEPHONE NUMBER: 601-369-3637
LOCATION: Aberdeen
TO: Linda Rudisell
LOCATION: DEPS-Houston
NUMBER OF PAGES: 5 (including cover)

If transmission is unreadable or has missing pages, please contact sender as soon as possible.

Message: This is all the written documentation I could find.
Leathan can provide details on recent verbal agreements.
Looks like we estimate 80 yd³ (25-30,000 lbs). Let
me know if you have questions and I appreciate
your prompt action.

Thanks

Kenny

To: K. G. Akins

From: W. D. McComb

Date: August 11, 1992

Interoffice
Communication

Subject: POND 2 RESIN RECLAIM--CENTRIFUGE EFFLUENT SOLIDS

VISTA

Recently, questions have arisen regarding the drying of Pond 2 resin in the V-10 dryer area. Concerns were that large quantities of resin and soil are escaping through the Byrd centrifuge and being loaded back into Pond 1 settling basin.

On August 3, 1992 a sample of Byrd effluent was taken during a period in which Pond 2 resin was being dried. This sample was analyzed in the GC lab for weight percent solids, and an ash test was conducted. The specific gravity of the effluent mixture was also determined. The results of these tests were as follows:

solids:	0.263%
ash:	57.6%
SG:	1.00

Based on a normal flow rate of 10 GPM (determined by use of a velocity flow meter), these results show that 0.22 lb./min., or 300 lb./day of solids are sent to Pond 1 during normal drying of Pond 2 resin (see attached calculation sheet). Of these solids, only about 42.4% is resin, with the remainder being inorganic matter.

I have recently noticed a decrease in the depth of the Pond 1 inlet sump, due to a high level of settled solids. It is possible that large deposits during drying of Pond 2 resin are part of the problem.

There is also reason for concern that this high level of inorganic solids being returned to Pond 1 could degrade the quality of our pond resin. It is also possible that these solids could go through Pond 1 and settle in Ponds 3 and 4.

I will continue to monitor this operation with periodic sampling to determine the effect on our pond resin operation.

If you have any questions concerning this matter, please contact me at extension 3594.

Dwight

Dwight McComb
Co-op Process Engineer

CC: RWS, DCS, JEN, JDO, DEK, DFJ, RAC

↓
In actuality, this is what happened. Our operation system prevents settling in Pond 3 but material did settle in Pond 4.

To K. G. Akins
From D. McComb

Calculation Sheet

VISTA[®]

solids: 0.263 %
ash: 57.6 %
density: 1.00 g/cm³

Flow: 10 GPM

$$\frac{1.00 \text{ g}}{\text{cm}^3} \left| \frac{10^6 \text{ cm}^3}{264.17 \text{ gal}} \right| \left| \frac{1 \text{ lb.}}{454 \text{ g}} \right| = 8.35 \frac{\text{lb.}}{\text{gal.}}$$

$$\frac{8.35 \text{ lb.}}{\text{gal.}} \left| \frac{10 \text{ gal.}}{\text{min.}} \right| = \frac{83.5 \text{ lb.}}{\text{min.}}$$

$$\frac{83.5 \text{ lb.}}{\text{min.}} \left| \frac{0.00263 \text{ lb. solid}}{\text{lb.}} \right| = 0.22 \frac{\text{lb. solid}}{\text{min.}} = 316 \frac{\text{lb. solid}}{\text{day}}$$

$$(316)(0.576) = 182 \frac{\text{lb. dirt}}{\text{day}}$$

$$(316)(424) = 134 \frac{\text{lb. resin}}{\text{day}}$$

Made By W. D. McComb
Date 8-10-92
Page 1 of 1

Job No. _____
Title POND 2 RESIN RECLAIM -
CENTRIFUGE EFFLUENT SOLIDS

**REMEDIATION PROGRAM PROJECT REVIEW MINUTES
CONDEA VISTA COMPANY
Aberdeen, Mississippi
Thursday, February 29, 1996
8:00 - 1:00 p.m.**

I. Meeting Attendees

- ☐ Joe Ledvina - CONDEA Vista (Corp.), Manager of Safety and Environment
- ☐ Kenny Akins - CONDEA Vista (Site), Environmental and Laboratory Manager
- ☐ Dr. John Riddle - DuPont Remediation Program Manager
- ☐ Steve Hall - DERS Project Manager
- ☐ John Leethem - DERS Technical Lead

II. Meeting Purpose and Desired Outcome

The meeting purposes were:

- ☐ To review the site remediation program, and
- ☐ To present new team members.

The desired outcome was to leave the meeting with a strategy and path forward for Pond 2, TCE Plume and VC Plume.

III. Meeting Notes

VC Plume

Meet with MDEQ in next few weeks to discuss TCE plume and finish IBR for VC plume.

- ☐ IBR was accepted by MDEQ on February 14, 1996, contingent on DERS making six modifications.
 1. Submit schedule for development of contingency plan to MDEQ;
 2. Modify Plate 1 to include contingency plan; and
 3. Revise monitoring program then get revision in monitoring program to Conoco EVSD (prior to April or May sampling event)

Property Transaction Update by Vista (Kenny)

- ☐ Tenneco property actually two tracts (2.2 acres to south and 6.02 acres to west side of plant).
- ☐ Vista attorney is drafting deed to property. Kenny will check with Lynn Zimmerman to determine what the letter agreement contains.
- ☐ The Sykes Estate consists of 130.5 acres south of plant. The acquisition is moving slower (in estate) because of numerous owners (children) and banks for estate. Estate is likely to make counter offer for original offer.

Pond 2

- ☐ Set up Pond 2 discussion with MDEQ when Pond 2 Closure Plan is ready for presentation.
- ☐ Approximately six feet of water in excavation; previous water samples have not shown metals.
- ☐ Kenny expects Pond 2 closure to parallel drum area project (closure to risk-based concentrations for phthalate - ~28 ppm).
- ☐ Vista expectations are to remove visually impacted material (i.e., white material) and sample in a similar manner to drum area.
- ☐ PVC resin was removed voluntarily. MDEQ wants to return to closure process after resin is removed (need to propose a closure plan).
- ☐ Vista suggested possible future use of Pond 2 as a wastewater treatment facility.
- ☐ Vista expects MDEQ to accept risk-based levels (MDEQ likely to initially want IRIS levels).
- ☐ Vista budgeted\$1.685 MM
 spent.....\$1.686 MM

expects one to two more invoices for \$ 10 to 15M (not included in initial budget).

- ☐ Approximately 80 cubic yards (~75 percent resin) of very fine resin from recovery process remains in wastewater in Pond 4.
- ☐ Vista requests clean out and disposal be conducted at same time as Pond 2.
- ☐ Vista suggests using trash pump or dredge to remove PVC resin from Pond 4; transfer and let settle out in Pond 2; dewater; then dispose.
- ☐ Also need to address stockpiled soil.
- ☐ Site is out of RCRA as small quantity generator.

DuPont Environmental Remediation Services
140 Cypress Station Drive, Suite 140
Houston, TX 77090
Tel. (713) 586-5600
Fax (713) 586-5650



DuPont Environmental Remediation Services

August 29, 1996

Mr. Joe Ledvina
CONDEA Vista Company
900 Threadneedle
Houston, TX 77079

POND 2 CLOSURE PLAN
CONDEA Vista Company
Aberdeen, Mississippi

Dear Mr. Ledvina:

Please find enclosed the Vista Aberdeen *Pond 2 Closure Plan* for your review. Risk-based closure option 2, pond backfill, and cap is presented as the sole recommended alternative.

I look forward to working with you both; I will have a letter ready to submit to you requesting your approval of change in DuPont Environmental Remediation Services (DERS) project managers to me from Ms. Linda Rudisell. Additionally, I will forward draft overheads to both of you Friday for your comments. I'll then incorporate the comments received on Tuesday, finalize the presentation, and mail the *Pond 2 Closure Plan* to the state for Wednesday delivery.

Please call me at (713) 586-5626 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeffrey M. Baker", followed by the word "FOR" in capital letters.

Jeffrey M. Baker
ES Section Manager

JMB:skt
Enclosures
vista\403576\025271tr.doc

cc: John Riddle

DuPont Environmental Remediation Services

140 Cypress Station Drive, Suite 140

Houston, TX 77090

(713) 586-5600 • (713) 586-5650

Date: 9-3-96

Number of Pages Being Sent (Including Cover): 36

Please Confirm Receipt: ☐ Yes ☒ No

Hand Deliver Upon Receipt: ☒ Yes ☐ No

To: Joe Leduine
Kenny Atkins

Phone: _____
Fax: _____

From: Jeff Baker

Phone: (713) 586-5626
Fax: _____

REMARKS: ☐ Urgent ☒ For your review ☐ Reply ASAP ☐ Please Comment

FYI - copies of the Pond 2 Closure Plan were mailed overnight to the two MDEQ Reps attached. The Plan was not modified from the draft sent you last week, therefore no new copies were forwarded to Vista. I have attached 3 tables that are for your information only. MDEQ may want to discuss results and these tables will serve as a good reference. Analytical results for metals look OK. Applying the 20x dilution rule for converting Etal 7 to ETCLP indicates we don't need to run metals analyses during confirmatory sampling. we can discuss tomorrow. THX JMB

Facsimile

DuPont Environmental Remediation Services
140 Cypress Station Drive, Suite 140
Houston, TX 77090
Tel. (713) 586-5600
Fax (713) 586-5650



DuPont Environmental Remediation Services

September 3, 1996

Mr. Tony Russell
Environmental Engineer
Mississippi Department of Environmental Quality
Office of Pollution Control
2380 Highway 80 West
Jackson, MS 39204

Dear Mr. Russell:

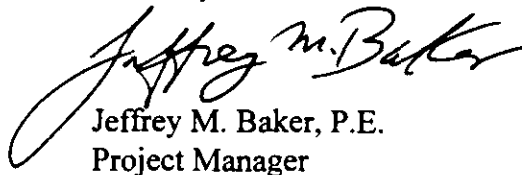
Enclosed please find copies of *Pond 2 Closure Plan* for the CONDEA Vista Company facility in Aberdeen, Mississippi, for your review. CONDEA Vista Company and DuPont representatives will participate in a review of this closure plan and project progress in general, at your offices on September 5, 1996, at 10:00 a.m. I look forward to discussing project issues with you at that time.

I have been designated as DuPont Environmental Remediation Services' Project Manager for the duration of the project. I may be reached at the following address and telephone number:

Mr. Jeffrey M. Baker, P.E.
DuPont Environmental Remediation Services
140 Cypress Station Drive, Suite 140
Houston, TX 77090
Phone (713) 586-5626 • Fax (713) 586-5650

Please call me with any questions or information concerning this project. Project team members are interested in gaining your concurrence with the proposed Pond 2 closure strategy and moving forward with closure implementation. Thank you for your cooperation in this matter.

Sincerely,


Jeffrey M. Baker, P.E.
Project Manager

JMB:skt
Enclosures
vista\403794-01\02543ltr.doc

VISTA - Abd.



STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR
October 22, 1996

2380 Hwy 80 W & 39204

Mr. Kenny G. Akins
Vista Chemical Company
P. O. Box 91
Aberdeen, MS 39730-0091

Post-It® Fax Note	7671	Date	10/28/96	# of pages	2
To	JEFF BAKER		From	KENNY AKINS	
Co./Dept.	DERS		Co.	CONDEGA VISTA	
Phone #			Phone #	601-369-3637	
Fax #	713-586-5650		Fax #	369-3630	

RE: Vista Chemical Company Site
Pond 2 Closure Plan
Aberdeen, Mississippi

Dear Mr. Akins:

The Office of Pollution Control (OPC) has reviewed the Pond 2 Closure Plan prepared by DuPont Environmental Remediation Services (DERS) and dated August 29, 1996. The OPC concurs with the use of a construction worker scenario in the calculation of a target cleanup value for di(ethylhexyl)phthalate (DEHP). This scenario is acceptable for contamination at this depth and the lack of evidence of a release to groundwater of this contaminate. An error was found in the calculations, the dermal absorption coefficient should have been .01. The actual target cleanup value for DEHP is 3050 parts per million. The OPC approval of the closure plan is contingent on incorporation of the following requirements:

1. The pond be divided into 100 by 100 foot grids and that all confirmation samples be collected from those areas within each grid that show obvious resin contamination.
2. The two side wall samples be collected from the outer wall of each grid and composited for analyses (Grids on the corners will have two walls). The plan states that confirmation samples are to be collected from the side walls of the pond; however, the plan did give any details on collecting these samples.
2. The DERS decontamination procedures do not follow those procedures set forth in Appendix B of the Standard Operating Procedures and Quality Assurance Manual prepared by USEPA Region 4 and dated May 1996. The decontamination procedures in Appendix B shall be adhered to during the scope of this project.

F (601) 961-5741

Mr. Kenny G. Akins
October 22, 1996
Page 2

3. The OPC be given a minimum of a weeks notice prior to implementation of any field activities.

Please direct any questions you have, regarding this matter, to Mr. Tony Russell at (601) 961-5318.

Sincerely,



Russell H. Smith, P. E., Chief
Uncontrolled Sites Section

RHS:05_94

(1)

INTEROFFICE MEMORANDUM

Date: 28-Oct-1996 05:08pm
From: LARRY J. DZIUK
DZIUKLJ
Dept: SPEC
Tel No: 586-5691

TO: JEFFREY M BAKER

(BAKERJM)

CC: Rick N. Johnson

(JOHNSORN)

Subject: Mississippi DEQ Statement of Miscalculation - Letter of 10/22

Mississippi DEQ stated in a letter dated October 22, 1996 that a calculation error was made in derivation of the cleanup level for DEHP at the Vista Aberdeen site. The MDEQ said we should have used a 1% dermal absorption value for DEHP rather than a 10% value. Therefore, the DEHP cleanup level should be 3,050 mg/kg rather than the 860 mg/kg level that we calculated.

We do not know where MDEQ obtained the 1% dermal absorption value (there was no statement of source of the value in their letter of October 22). When we started the Vista Aberdeen project in late 1993 or early 1994, the MDEQ advised that we use their guidance document, Guidance for Remediation of Uncontrolled Hazardous Substance Sites in Mississippi (published in September 1990), as a guide for evaluating need for remediation. Section 3 of that document presents the risk assessment method to be used in calculation of cleanup levels. Although MDEQ indicated in their guidance document that the dermal route should be considered when exposure to soil is evaluated, there was no default dermal absorption value presented.

We first calculated a dermal absorption value using EPA's dermal algorithm. However, the result of the calculation was that DEHP is 99% absorbed. We know the EPA's algorithm is very conservative and decided that 99% dermal absorption is a gross overestimate of the dermal absorption potential for DEHP. As an alternative, we chose a 10% default value recommended by TNRCC for use with semivolatile compounds.

I have checked our calculations and have found them to be correct. I also calculated and reproduced MDEQ's 3,050 cleanup level based on 1% dermal absorption. As a final check, I calculated the noncancer-based cleanup levels at 1% and 10% dermal absorption and found them to be the same as the cancer-based levels. Therefore, there is no concern that use of cancer risk-based cleanup level of 3,050 mg/kg compromises the health of workers from a noncancer perspective.

In summary, we do not know where the 1% absorption value came from but have no problem with its use in deriving a cleanup level

INTEROFFICE MEMORANDUM

Date: 29-Oct-1996 08:31am
From: LARRY J. DZIUK
DZIUKLJ
Dept: SPEC
Tel No: 586-5691

TO: JEFFREY M BAKER (BAKERJM)

CC: Rick N. Johnson (JOHNSORN)

Subject: Apparent Source of MDEQ's 1% Dermal Absorption Value

I believe I've located MDEQ's source of the 1% dermal absorption value. It is EPA Region IV's:

Supplemental Guidance to RAGS: Region 4 Bulletins - Human Health Risk Assessment. November 1995.

On page 3-4 of the supplemental guidance it is stated: "Where chemical-specific information is not available, dermal absorption factors of 1.0% for organics and 0.1% for inorganics should be used as defaults in determining the uptake associated with dermal exposure to contaminated soils (this includes the soil matrix effect)."

Apparently MDEQ mixes and matches their sources of risk-based information. They use EPA Region III's screening values (i.e., the Roy Smith tables), they have their own guidance (the 1990 guidance I cited in my earlier E-Mail to you), and they apparently use some or all of EPA Region IV's guidance.

Hopefully, it is not too late to rethink our approach to the DEHP issue.

INTEROFFICE MEMORANDUM

Date: 29-Oct-1996 06:37am
From: LARRY J. DZIUK
DZIUKLJ
Dept: SPEC
Tel No: 586-5691

TO: JEFFREY M BAKER (BAKERJM)

CC: Rick N. Johnson (JOHNSORN)

Subject: Vista Aberdeen - Ramification of a Higher Remedial Level-DEHP

Mississippi DEQ stated in a letter dated October 22, 1996 that the target cleanup value for DEHP is 3,050 mg/kg. Rick Johnson stated in an E-Mail dated 15 July 1996 that the 95% upper confidence limit concentration for DEHP remaining in the bottom of the excavated area was 3,042.5 mg/kg.

Assuming that we have not already removed the material, it appears that our cleanup objective has been attained. Perhaps we should reevaluate the situation if the final remediation has not been performed.

Pond 2 Analytical Results

Sample Location	Sample Analytical Result (mg/kg)						
	Barium	Cadmium	Lead	Vinyl Chloride	Trichloro-ethene	bis(2-ethyl-hexyl) phthalate	Di-n-Octyl Phthalate
PND2-1-2 Bottom	50	< 0.989	8.3	< 0.01	< 0.005	0.91	< 0.33
PND2-1-2 Top	70.9	< 0.985	7.96	< 0.01	< 0.005	210	7.2
PND2-2-2 Bottom	38.9	< 0.928	7.5	< 0.01	< 0.005	63	2.1
PND2-2-2 Top	90	1.82	11.2	< 0.01	< 0.005	4900	< 670
PND2-3-2 Bottom	66	8.5	6.83	0.85	< 0.025	2600	67
PND2-3-2 Top	119	7.44	8.99	0.23	< 0.025	3400	< 270
PND2-4-2 Bottom	57	< 0.927	6.54	< 0.01	< 0.005	11	< 1.7
PND2-4-2 Top	176	7.24	18.1	0.15	0.011	6400	< 670
PND2-5-2 Bottom	85.1	< 0.974	8.74	< 0.01	< 0.005	71	< 6.7
PND2-5-2 Top	48.5	1.74	7.4	< 0.01	< 0.005	1200	< 130
PND2-6-2 Bottom	74.1	< 0.988	8.84	< 0.01	< 0.005	120	< 13
PND2-6-2 Top	81.9	< 0.962	9.3	< 0.01	< 0.005	830	< 130
Mean	79.783	5.348	9.142	0.410	0.011	1650.493	25.433
Standard Deviation	37.283	3.292	3.086	0.383	0.008	2190.829	36.088
n	12	12	12	12	12	12	12
Maximum	176	8.5	18.1	0.85	0.025	6400	670
Minimum	38.9	0.927	6.54	0.01	0.005	0.91	0.33

Interoffice Memo

Date: 10/30/96
To: John Riddle
CC: Vista Aberdeen Pond 2 Closure File
From: Jeffrey M. Baker
Subject: MDEQ Response Letter to Pond 2 Closure Plan

Attached is the Response letter from the MDEQ dated October 22, 1996. The correspondence alleges that we made an error in calculating a protective cleanup level for DEHP. Attached also are some e-mails from Larry Dziuk that address this accusation. In short, MDEQ seems to have used a different guidance document during their review of the Closure Plan than they used in directing our work in preparing the Plan. The upshot is that the target number proposed by MDEQ is less conservative than our original target (3050 mg/kg vs. 860 mg/kg).

The new target DEHP concentration will impact task size for cleanup of any remaining off-spec resin prior to closure, in that we won't have to clean as many hot spot areas as were originally planned. However, since we were going to reexcavate to a depth of only 1 foot in the original Plan, this impact should be minor, albeit a cost savings nonetheless (see attached pond bottom analytical table).

The comment on grid size and number of confirmatory samples will result in an increase in number of grids from which to collect samples from 6 to 8, number of composite floor samples from 6 to 8 and number of composite sidewall samples from 6 to 10. Therefore, we will see a slight increase in cost for this task.

All tolled, the decrease in the reexcavation task and increase in sampling and analysis tasks should be about a wash in the total budget for Pond 2 Closure.

I will contact Kenny and draft a positive response letter to MDEQ following any input you may have.



Jeff Baker

Attachments

VISTA - Ab



STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR
October 22, 1996

Mr. Kenny G. Akins
Vista Chemical Company
P. O. Box 91
Aberdeen, MS 39730-0091

RE: Vista Chemical Company Site
Pond 2 Closure Plan
Aberdeen, Mississippi

Post-It® Fax Note	7671	Date	10/28/96	# of Pages	2
To	JEFF BAKER		From	KENNY AKINS	
Co./Dept	DERS		Co.	CONDEA VISTA	
Phone #			Phone #	601-364-3637	
Fax #	713-586-5650		Fax #	364-3630	

Dear Mr. Akins:

The Office of Pollution Control (OPC) has reviewed the Pond 2 Closure Plan prepared by DuPont Environmental Remediation Services (DERS) and dated August 29, 1996. The OPC concurs with the use of a construction worker scenario in the calculation of a target cleanup value for di(ethylhexyl)phthalate (DEHP). This scenario is acceptable for contamination at this depth and the lack of evidence of a release to groundwater of this contaminate. An error was found in the calculations, the dermal absorption coefficient should have been .01. The actual target cleanup value for DEHP is 3050 parts per million. The OPC approval of the closure plan is contingent on incorporation of the following requirements:

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2. The DERS decontamination procedures do not follow those procedures set forth in Appendix B of the Standard Operating Procedures and Quality Assurance Manual prepared by USEPA Region 4 and dated May 1996. The decontamination procedures in Appendix B shall be adhered to during the scope of this project.

Mr. Kenny G. Akins
October 22, 1996
Page 2

3. The OPC be given a minimum of a weeks notice prior to implementation of any field activities.

Please direct any questions you have, regarding this matter, to Mr. Tony Russell at (601) 961-5318.

Sincerely,



Russell H. Smith, P. E., Chief
Uncontrolled Sites Section

RHS:rs_34

①

INTEROFFICE MEMORANDUM

Date: 28-Oct-1996 05:08pm
From: LARRY J. DZIUK
DZIUKLJ
Dept: SPEC
Tel No: 586-5691

TO: JEFFREY M BAKER

(BAKERJM)

CC: Rick N. Johnson

(JOHNSORN)

Subject: Mississippi DEQ Statement of Miscalculation - Letter of 10/22

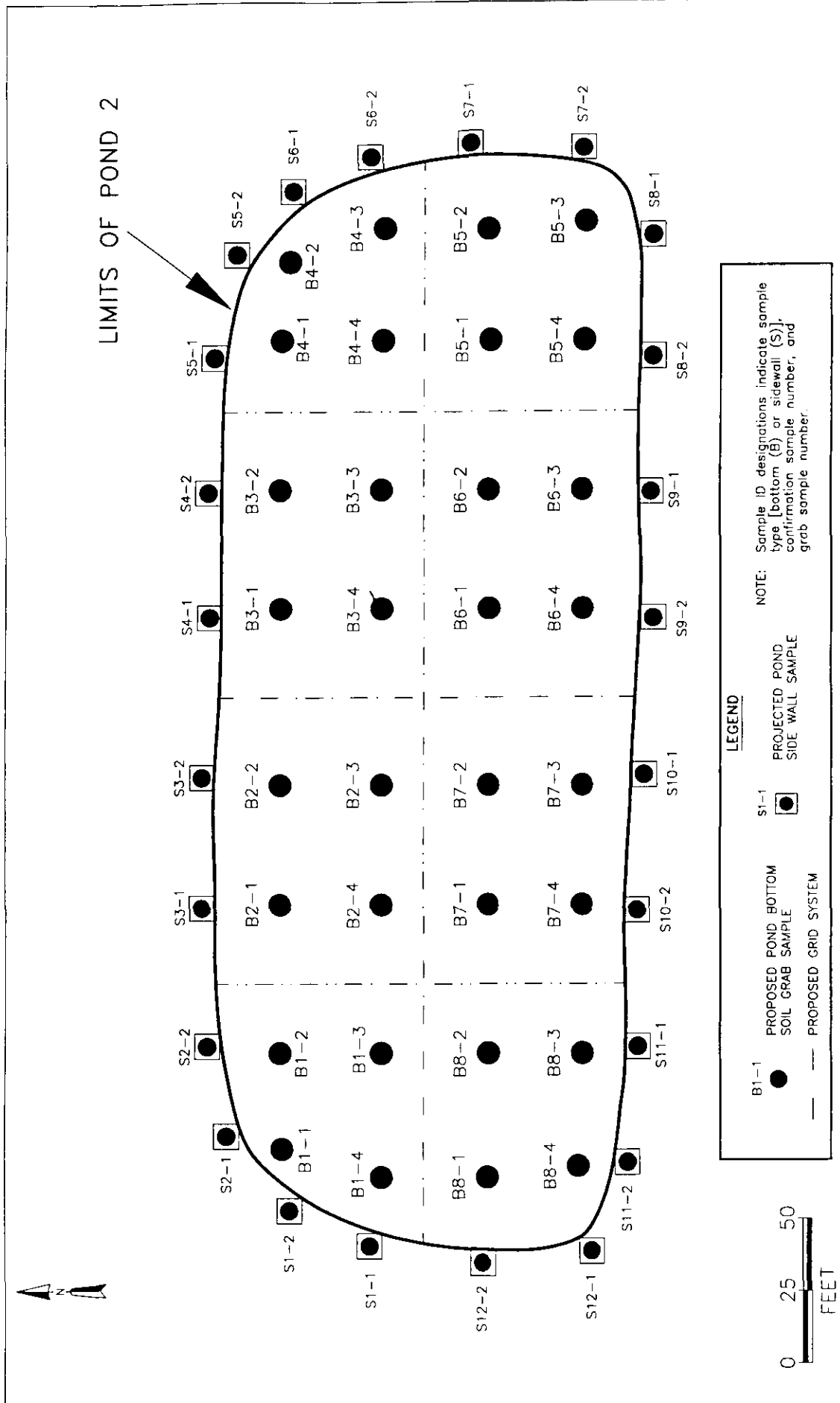
Mississippi DEQ stated in a letter dated October 22, 1996 that a calculation error was made in derivation of the cleanup level for DEHP at the Vista Aberdeen site. The MDEQ said we should have used a 1% dermal absorption value for DEHP rather than a 10% value. Therefore, the DEHP cleanup level should be 3,050 mg/kg rather than the 860 mg/kg level that we calculated.

We do not know where MDEQ obtained the 1% dermal absorption value (there was no statement of source of the value in their letter of October 22). When we started the Vista Aberdeen project in late 1993 or early 1994, the MDEQ advised that we use their guidance document, Guidance for Remediation of Uncontrolled Hazardous Substance Sites in Mississippi (published in September 1990), as a guide for evaluating need for remediation. Section 3 of that document presents the risk assessment method to be used in calculation of cleanup levels. Although MDEQ indicated in their guidance document that the dermal route should be considered when exposure to soil is evaluated, there was no default dermal absorption value presented.

We first calculated a dermal absorption value using EPA's dermal algorithm. However, the result of the calculation was that DEHP is 99% absorbed. We know the EPA's algorithm is very conservative and decided that 99% dermal absorption is a gross overestimate of the dermal absorption potential for DEHP. As an alternative, we chose a 10% default value recommended by TNRCC for use with semivolatile compounds.

I have checked our calculations and have found them to be correct. I also calculated and reproduced MDEQ's 3,050 cleanup level based on 1% dermal absorption. As a final check, I calculated the noncancer-based cleanup levels at 1% and 10% dermal absorption and found them to be the same as the cancer-based levels. Therefore, there is no concern that use of cancer risk-based cleanup level of 3,050 mg/kg compromises the health of workers from a noncancer perspective.

In summary, we do not know where the 1% absorption value came from but have no problem with its use in deriving a cleanup level



FILE: ABERDEEN\GEO\MAPS\PN2CLOS



DuPont Environmental
Remediation Services

Houston, Texas

TITLE:

Proposed Confirmatory Sample Location Map
CONDEA Vista Company
Aberdeen, Mississippi

DES:

DWN: RAH

APPD:

CHKD:

REV:

DATE: 3/7/97

PROJECT NO.:

4041-01

FIGURE NO.:

2

Vista

INTEROFFICE MEMORANDUM

Date: 14-Jan-1997 03:49pm
From: JEFFREY M BAKER
BAKERJM
Dept: spec
Tel No: 713/586-5626

TO: DENNIS R. DUBBEL (DUBBELDR AT A1 AT BMOA)
TO: LAIQUE HAIDER,, P.E. (HAIDERLZ AT A1 AT BMOA)
CC: JEFFREY M BAKER (BAKERJM)

Subject: Survey of Ponds 2 and 4, Vista Aberdeen

I just got off the phone with Kenny Akins at Vista. Information for your use:

No useable topographic maps exist for the ponds. Kenny understands the concept of the closure sloping to the north and knows we need a survey to proceed. Continental is the survey company he uses. Sam Jaynes is his main contact.

Would the two of you put your heads together and create a scope of work that describes the survey of the land and pond bottom elevations so that we can get this going asap? Then get with Ronnie Kallus to get a PO cut for the work (I have not done any P.O.'s so whomever of you two is more familiar with how the process works and whether we need to get a big deal contract set up with Continental as a DuPont contractor can take the lead.) and get a bid for preclosure elevations and final as-builts. I think we'll get better service up front if we give them the "more work down the road" carrot.

Kenny expects Jacob Lee to start the \$20,000 Pond 4 dredge/muck out this week. Jacob Lee will contact me as he goes to work, but we're fast tracking the job, so no bidding, etc. We will need a P.O. for this, so maybe Ronnie can set up a blanket P.O. for this work also.

John Riddle agreed to sole source the work, so we're off and running. Let's get together Thursday morning around 9:00 in my office to discuss.

Thanks

JMBAKER

INTEROFFICE MEMORANDUM

Date: 07-Jan-1997 02:14pm
 From: DENNIS R DUBBEL
 DUBBELDR
 Dept: spec
 Tel No: 713 - 586-5831

TO: CAROL A. ABLES
 TO: JEFFREY M BAKER

(ABLESCA)
 (BAKERJM)

Subject: BUDGET/ ABERDEEN

THIS IS MY COST ESTIMATE FOR THE VISTA ABERDEEN SOW
 FOR JACOB LEE (ON - SITE CONTRACTOR)

- | | | | | |
|--|---|----|-----------|---------|
| 1.) Mobilization / demobilization | 1 | LS | 1,200 | 4500 |
| <i>maintain street</i> | | | | 4300 |
| 2.) Pump water from pond # 2 | 1 | LS | 2,800 | 8400 |
| 3.) Excavate resin from pond #2 and the
concrete sumps/ stockpile and dry | quantity: 3,070 Tons | | | |
| | unit price 12.00 ton | | 36,840 | 13,020 |
| | <i>collect samples for (confirmation)</i> | | | 2,250 |
| 4.) Load / haul/dispose of dry resin | quantity: 3,070 Tons | | | |
| | unit price 9.75 ton | | 29,932.50 | 18,916 |
| 5.) Load / haul /dispose of existing
on-site stockpiled material. | quantity: 3,150 Tons | | | |
| | unit price 9.75 ton | | 30,712.50 | 17,080 |
| 6.) Furnish and install geo grid | quantity: 7,050 SY | | | |
| | unit price 1.80 SY | | 12,690 | 12,900 |
| 7.) Furnish and install fill material | quantity: 20,930 CY | | | |
| | unit price 8.20 CY | | 171,626 | 153,900 |
| 8.) Furnish and install clay cap | quantity: 3,350 CY | | | |
| | unit price 10.20 CY | | 34,170 | 32,400 |
| 9.) Furnish and install topsoil | quantity: 840 CY | | | |
| | unit price 10.70 CY | | 8,988 | 8,750 |
| 10) Seeding | | | | |

quantity:	5,000	SY			
unit price		.50	SY	2,500	3250
SUB	TOTAL			\$331,459	

ADDITIONAL COSTS PAID BY DERS:

a) Houston landfill dump fee	quantity:	6,220	Tons				✓
	unit price		27.00	Ton	167,940		
b) Surveying	quantity:	50	Hr				
	unit price		70.00	HR	3,500		✓
c) Compaction testing							
D-2922 Nuclear field density	quantity:	30	EA				
	unit price		25.00	EA	750		✓
Tech	quantity:	20	HR				
	unit price		27.75	HR	555		✓
Proctor (modified)	quantity:	3	EA				
	unit price		285.00	EA	855		✓
Gradation/liquid limit/plastic limit	quantity:	3	EA				
	unit price		125.00	EA	375		✓
SUB	TOTAL				\$173,975		

TOTAL SUB (JACOB LEE) AND a,b,c above	\$505,434
---------------------------------------	-----------

BASIS OF ESTIMATE:

a) I used Jacob Lee labor & operator rates markup of 10% (per Jacob Lee) (601) 369-8111 ex 2233

b) Rental rates from Striblig equipment inc. Dean Hennigan (601) 939-1000

c) Fill material from Eutaw Construction Tom Elmore (601) 369-8868

- 1.) sandy clay delivered to site \$3.50 (truck yard)
- 2.) topsoil delivered to site \$5.00 (truck yard)
- 3.) clay delivered to site \$4.00 (truck yard)

d) I used 50% shrink from truck yard to compacted in place cubic yards. I used 1,100 cubic yards a day compacted in place.

e) I used Continental Engineering Service for both surveying and soil compaction testing. Larry Kilgore (601) 369-8944

f) I based my schedule on working 10 hours a day 5 days a week, using Saturdays as make up days. I have a total of 52 working days. If we can mobilize by Feb 17 it will take till March 29 to demobilize. NOTE: THIS SCHEDULE IS BASED ON HAVING POND #4 PUMPED INTO POND #2 BY FEB 14. JACOB LEE SAID IT WILL TAKE HIM ABOUT ONE MONTH TO CLEAN POND #4.

g) I used Tensar for my quote on the geo grid Karrie Witt (512) 352-8592

Thanks

Dennis

INTEROFFICE MEMORANDUM

Date: 06-Jan-1997 04:55pm
From: DENNIS R DUBBEL
DUBBELDR
Dept: spec
Tel No: 713 - 586-5831

TO: CAROL A. ABLES
TO: JEFFREY M BAKER

(ABLESCA)
(BAKERJM)

Subject: Aberdeen Bid package

Bid Items and quantities for Vista Aberdeen:

1. Mobilization / demobilization

1 LS

2. Pump water from pond #2

1 LS

3. Excavate resin from pond #2 and the concrete
sumps / stockpile and dry.

approximately: 3,070 Tons

4. Load / haul / dispose of dry resin.

approximately: 3,070 Tons

5. Load / haul / dispose of existing on-site
stockpiled material.

approximately: 3,150 Tons

6. Furnish and install geo grid.

approximately: 9,000 SY

7. Furnish and install fill material.

approximately: 20,930 CY

8. Furnish and install clay cap.

	approximately:	3,350	CY
9. Furnish and install topsoil.			
	approximately:	840	CY
10. Seeding / mulching / fertilizer			
	approximately:	5,000	SY

ADDITIONAL PRICES:

- a.) Daily rate to furnish labor and equipment to pump out pond #2 after initial pumping has been completed.

MEASUREMENT AND PAYMENT:

ITEM 1: Mobilization /Demobilization

This item includes but is not limited to the following:

- + Mobilizing and demobilizing equipment, portable toilets, insurance, drinking water and PPE (personal protective equipment)
- + Reviewing and complying with DERS Health and Safety Plan (HASP) and plant site conditions.

METHOD OF MEASUREMENT AND PAYMENT:

No measurement
Payment will be one lump sum

ITEM 2: Pump water from pond #2

This item includes but is not limited to the following:

- + Furnishing labor and equipment necessary to pump the water from pond #2 to the treatment pond, includes pumps, fuel, necessary hoses and safety required to pump #2 pond.

METHOD OF MEASUREMENT AND PAYMENT:

Measurement will be after pond is pumped dry. (Any additional pumping will be charged at the daily rate provided above)

Payment will be one lump sum

ITEM 3: Excavate resin from pond #2 and the concrete sumps
/ stockpile and dry.

This item includes but is not limited to the following:

- + Furnishing labor and equipment necessary to excavate existing resin on the sides and bottom of pond #2 (a visual inspection will be made by the DERS representative to determine what the excavation limits will be).
- + Loading and hauling the wet resin to a laydown area east of pond #2 and spreading out the wet resin to dry.
- + Preparing the laydown area to be used for the wet resin.
- + Furnishing labor and equipment necessary to clean the concrete sumps.
- + Pumping any excess water from the concrete sumps to the treatment ponds.
- + Loading and hauling the wet resin from the concrete sumps to the laydown area.
- + Working the wet resin with equipment, as necessary, to pass the paint filter test (test will be performed by DERS).
- + Providing a cover over the resin to help keep it dry.
- + Providing the necessary PPE to perform the work in a safe workman like manner.
- + Taking caution to not overexcavate the dike between pond #2 and pond #4.

METHOD OF MEASUREMENT AND PAYMENT:

Payment will be made by the ton, based on the total tons of dry resin sent to the Houston Ms. landfill.

Measurement will be made by the total tons of dry resin, weighed at the Houston, Ms landfill.

ITEM 4: Load / haul / dispose of dry resin .

This item includes but is not limited to the following:

- + Furnishing labor and equipment necessary to load the dry resin onto the haul trucks.
- + Providing the necessary cover for the haul trucks.
- + Furnishing the Haul trucks for transporting the dry resin

to the Houston Ms. landfill.

METHOD OF MEASUREMENT AND PAYMENT:

Measurement will be made by the ton of dry resin, weighed at the Houston Ms. landfill.

Payment will be made by the ton of dry resin.

ITEM 5: Load / haul / dispose of existing on-site stockpiled material.

This item includes but is not limited to the following:

- + Furnishing labor and equipment necessary to load the existing stockpiled material onto the haul trucks.
- + Furnishing the Haul trucks for transporting the existing stockpiled material to the Houston Ms. landfill.
- + Providing the necessary cover for the haul trucks.

METHOD OF MEASUREMENT AND PAYMENT:

Measurement will be made by the ton of the existing stockpiled material weighed at the Houston Ms. landfill.

Payment will be made by the ton.

ITEM 6: Furnish and install geo grid.

This item includes but is not limited to the following:

- + Furnishing labor and equipment necessary to install the geo grid.
- + Furnishing the geo grid (approximately 9,000 sy).

METHOD OF MEASUREMENT AND PAYMENT:

Measurement will be made by the square yard of geo grid installed in place.

Payment will be made by the square yard.

ITEM 7: Furnish and install fill material.

This item includes but is not limited to the following:

- + Furnishing fill material (approximately 20,930 in-place cubic yards.)
- + Furnishing labor and equipment necessary to, spread, level and compact the fill material into pond #2.(compact to 90

percent standard proctor with moisture content of ± 3 percent optimum.)

- + Providing compaction retests for any compaction tests that fail
- + Providing berms and drainage to keep water from draining into pond #2
- + Providing spotters for dump trucks.
- + Providing water truck for dust control and compaction requirements.

METHOD OF MEASUREMENT AND PAYMENT:

Measurement will be made by surveyed in-place cubic yards of fill material. DERS will provide the surveyor

Payment will be made by cubic yard of in-place fill material.

ITEM 8: Furnish and install clay cap.

This item includes but is not limited to the following:

- + Furnishing clay for the cap (approximately 3,350 in-place cubic yards).
- + Furnishing labor and equipment necessary to spread, level and compact two feet of clay. (compact to 90 percent standard proctor with moisture content of ± 3 percent optimum)
- + Providing compaction retests for any compaction tests that fail.
- + Providing spotters for dump trucks
- + Providing water truck for dust control and compaction requirements

METHOD OF MEASUREMENT AND PAYMENT:

Measurement will be made by surveyed in-place cubic yards of clay for the cap. DERS will provide the surveyor.

Payment will be made by the cubic yard of in-place clay.

ITEM 9: Furnish and install topsoil

This item includes but is not limited to the following:

- + Furnishing topsoil (approximately 840 in-place cubic yards)

- + Furnishing labor and equipment necessary to, spread, level and compact six inches of topsoil using track equipment.
- + Providing spotters for dump trucks.
- + Providing water truck for dust control

METHOD OF MEASUREMENT AND PAYMENT:

Measurement will be made by in-place cubic yards of topsoil based on six inches thick.

Payment will be made by the cubic yard of in-place topsoil

ITEM 10: Seeding and grassing

This item includes but is not limited to the following:

- + Furnishing labor and equipment necessary to spread fertilizer mulch and seeds
- + Furnishing fertilizer, mulch and seeds

METHOD OF MEASUREMENT AND PAYMENT:

Measurement will be made by the square yard

Payment will be made by the square yard.

DERS will provide the following:

Construction oversite (would like to work 10 hours a day six days a week.

Surveying

Soil testing

Compaction tests

Dump fees at Houston, Ms. landfill

ITEMS NEEDED FROM JACOB LEE

SCHEDULE

UNIT PRICES

DuPont Environmental Remediation Services
140 Cypress Station Drive, Suite 140
Houston, TX 77090
Tel. (713) 586-5600
Fax (713) 586-5650



DuPont Environmental Remediation Services

April 28, 1997

Mr. Kenny Akins
Environmental and Laboratory Manager
CONDEA Vista Company
New Highway 25
Aberdeen, MS 39730

Dear Mr. Akins:

PROJECT UPDATE AND SCHEDULE FOR TCE DELINEATION AND POND 2 CLOSURE

This correspondence summarizes current project status and path forward for the following tasks:

- ☐ Routine groundwater monitoring,
- ☐ TCE plume delineation, and
- ☐ Pond 2 closure.

Routine Groundwater Monitoring

DuPont and contract personnel have completed first and second quarter sampling and analyses of groundwater quality on-site. Groundwater quality observations continue to support ongoing intrinsic biodegradation of the vinyl chloride (VC) plume as well as trichloroethylene (TCE) plume. Barring significant changes in TCE plume dynamics, we should be able to make a great case for TCE intrinsic bioremediation when our two-year, data-gathering window concludes in 1999.

Monitoring Well No. MW-112 could not be sampled because a concrete slab had been constructed atop this location. Do you know if the well was plugged and abandoned (P&A) according to Mississippi regulations? If not, is there a way to access this well bore to complete the P&A process?

Several monitoring wells appeared to be incorrectly labeled during the sampling task. These wells included: MW-103 and MW-203 labels seemed to be reversed and IW-102, MW's 114, 120, 121, and 122 were not labeled at all. We will attempt to rectify this situation when we are on-site.

Mr. Kenny Akins
CONDEA Vista Company
April 28, 1997
Page 2

TCE Plume Delineation

George Gregory and Tri-States Testing Services, Inc., will be on-site on May 5, 1997, to complete plume delineation for TCE and VC. We anticipate that completion of four soil borings and installation of two monitoring wells; MW-133 and MW-134. One well will be installed in the southeast corner of the plant to complete the VC plume nondetect boundary and the other well will be installed east of the railroad tracks in line with the southern boundary of Pond 2. These wells should complete the monitoring network for both plumes and any Pond 2 post-closure monitoring requirements imposed by MDEQ.

A site safety orientation will be needed for George and the Tri-States drillers since the drilling contractor will be new to the site. We anticipate that plume delineation will require three to four days. Sample bottles should arrive sometime during the middle of this week and are being shipped to your attention.

Pond 2 Closure Implementation

MDEQ comments have been addressed and we are ready to implement closure. A Bis(2-ethylhexyl)phthalate (DEHP) cleanup target concentration of 3050 mg/Kg (ppm) has been specified by MDEQ. This DEHP concentration will be both protective of human health and the environment as well as readily achievable in the field. We have sampled the stockpiles surrounding the pond and this material will require off-site transport and disposal at a non-hazardous solid waste landfill.

Bid documents have been received from Jacob Lee and a purchase order was cut on April 25, 1997, to provide notice to proceed with the work. First order of business will be to dewater Pond 2, which I am told currently contains about 10 feet of accumulated water. I'd like to get Jacob Lee started on dewatering as soon as is practicable so that we can begin removal of resin "hot-spots" by mid-May. Please let me know if this is not acceptable to Vista.

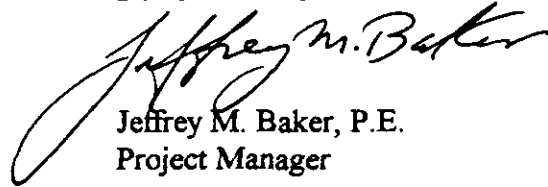
George Gregory will collect three soil/sediment samples from the pond and soil stockpile while on site. These samples will be analyzed for TCLP metals: lead (Pb), cadmium (Cd) and barium (Ba) and reported to the Houston, Mississippi, landfill to update waste profile requirements prior to shipping waste off-site during closure. We will get a fast turnaround on these analyses so that we can forward profiles to Chem Waste in a timely manner.

Dennis Dubbel of DERS will be on site May 12 or 19, 1997 (we will let you know the exact date this week) to oversee closure operations. Although Dennis has been on site before, he also will need a safety orientation to ensure proper management and care for this project. We anticipate that closure can be completed in five to seven weeks, barring weather or plant schedule conflicts for Jacob Lee.

Mr. Kenny Akins
CONDEA Vista Company
April 28, 1997
Page 3

I will call you after you have reviewed this to discuss any project specifics or additional information needs prior to DERS arriving in Aberdeen. I am optimistic that we'll be able to get the closure wrapped up in short order and reduce site activities to routine monitoring. Please call with questions at (281) 239-0304. Thank you for your ongoing cooperation on this project.

Sincerely,
DuPont Environmental Remediation Services



Jeffrey M. Baker, P.E.
Project Manager

JMB:mk

cc: Mr. Joe Ledvina - CONDEA Vista
Dr. John Riddle - DuPont
George Gregory - DERS
Dennis Dubbel - DERS
File: Vista-ab\4041-01\4-28ltr.doc

DuPont Environmental Remediation Services
140 Cypress Station Drive, Suite 140
Houston, TX 77090
Tel: (281) 586-5600
Fax: (281) 586-5650



DuPont Environmental Remediation Services

June 18, 1997

Mr. Russell H. Smith, P.E.
Chief of the Office of Pollution Control
Uncontrolled Sites Section
Mississippi Department of Environmental Quality
P. O. Box 10385
Jackson, MS 39289-0385

Pond 2 Closure Implementation

Dear Mr. Smith:

This correspondence provides notice to Mississippi Department of Environmental Quality (MDEQ) that DuPont Environmental Remediation Services (DERS) has mobilized to the field and is beginning to implement closure of Pond 2 at CONDEA Vista, Aberdeen, Mississippi. Pond closure will include the following tasks:

- Pond 2 dewatering,
- Excavation and stockpiling of resin-affected soils,
- Characterization of resin-affected soils exhumed from Pond 2,
- Transport and disposal of soils at Houston, MS Chemwaste Management Inc. Landfill,
- Confirmation sampling and analysis of Pond 2 bottom and sidewalls,
- Certification that Pond 2 bottom and sidewalls achieve MDEQ target cleanup value of 3050 parts per million (ppm) for di(ethylhexyl)phthalate (DEHP),
- Backfilling and compacting of Pond 2 basin,
- Construction of an infiltration control clay/soil/vegetative cap,
- Final site survey, and
- Closure Report submission to MDEQ.

Mr. Russell H. Smith, P.E.

Page 2

June 18, 1997

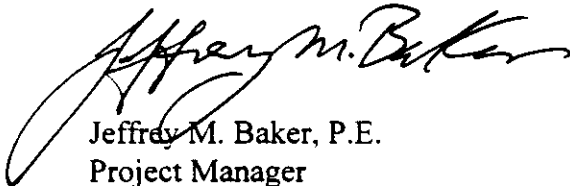
Pond water has been pumped from the pond and into the facility wastewater treatment system to dewater the basin and allow excavation of material to commence. Inclement weather has resulted in pond dewatering to become an iterative task that is still in progress. DERS determined to time this project startup notification to coincide with implementation of excavation rather than pond dewatering since we believe the MDEQ is interested with this and subsequent phases of work on this project.

Excavation and stockpiling of resin-affected soils has commenced, although off-site transport has been kept to a minimum by recurring rain. Excavation, stockpiling and off-site disposal is expected to continue for approximately four more weeks, through July 18, 1997, followed by confirmation sampling and certification. Pond 2 backfilling and actual closure is anticipated to begin in the first week of August, barring additional weather delays.

Please call me with any questions or concerns related to this project at (281) 586-5626. Thank you for your ongoing cooperation and guidance on this project.

Sincerely,

DUPONT ENVIRONMENTAL REMEDIATION SERVICES



Jeffrey M. Baker, P.E.
Project Manager

cc: Kenny Akins, CONDEA Vista
John Riddle, DuPont, Houston
g:\vista-ab\4041-03\61897\tr.doc

DuPont Environmental Remediation Services

140 Cypress Station Drive, Suite 140

Houston, TX 77090

(281) 586-5600 • (281) 586-5650

Date: June 18, 1997Number of Pages Being Sent (Including Cover): 3Please Confirm Receipt: ☐ Yes ☒ NoHand Deliver Upon Receipt: ☒ Yes ☐ NoTo: Tony Russell
Russell H. Smith

Phone:

Fax: (601) 961-5741From: Jeff BakerPhone: (281) 586-5626

Fax:

REMARKS: ☒ Urgent ☐ For your review ☐ Reply ASAP ☐ Please Comment

Closure Implementation Notification
letter. We've dewatered Pond 2,
are fighting the rain and are
stockpiling soil.

Please visit the site at your
convenience.

JB/Kr

Facsimile

DuPont Environmental Remediation Services

140 Cypress Station Drive, Suite 140

Houston, TX 77090

(281) 586-5600 • (281) 586-5650

Date: July 9, 1997Number of Pages Being Sent (Including Cover): 34Please Confirm Receipt: ☐ Yes ☒ NoHand Deliver Upon Receipt: ☒ Yes ☐ NoTo: Tony Russell
&Russell H. SmithPhone: (601) 961-5318

Fax: _____

From: Jeff BakerPhone: (281) 586-5626

Fax: _____

REMARKS: ☒ Urgent ☐ For your review ☐ Reply ASAP ☐ Please Comment

Attached is the notice that we will be sampling the Pond 2 bottoms and sidewalls next week. The project is going along smoothly.

Thanks

J.M. Baker



DUPONT ENVIRONMENTAL REMEDIATION SERVICES
140 Cypress Station Drive, Suite 140
Houston, Texas 77090

July 9, 1997

Mr. Russell H. Smith, P.E.
Chief of the Office of Pollution Control
Uncontrolled Sites Section
Mississippi Department of Environmental Quality
P. O. Box 10385
Jackson, MS 39289-0385

**Pond 2 Closure Implementation
Confirmation Soil Sample Collection**

Dear Mr. Smith:

This correspondence provides notice to Mississippi Department of Environmental Quality (MDEQ) that DuPont Environmental Remediation Services (DERS) will mobilize to CONDEA Vista, Aberdeen, Mississippi, on July 14, 1997 to collect Pond 2 confirmation soil samples on July 15 and 16, 1997. This date is approximately one week earlier than previously identified in my letter to you of June 18, 1997, which notified you of Pond 2 Closure implementation. We have experienced excellent weather conditions of late and have made great progress towards completing closure in a timely and environmentally effective manner.

The soil samples will be collected pursuant to the confirmation sampling plan presented in the Pond 2 Closure Plan originally submitted to MDEQ in August, 1996 and amended pursuant to MDEQ comments contained in correspondence dated October 22, 1996. The sampling grid has been modified to incorporate 100 by 100 foot grid quadrants, two side wall samples will be collected using a clean trowel from the outer wall of each grid and decontamination procedures will adhere to EPA Region IV **Standard Operating Procedures and Quality Assurance Manual**. Please see attached Figure 2 from the Pond 2 Closure Plan for reference.

The results of the confirmation soil sampling task will be compiled and forwarded to MDEQ upon completion of appropriate QA/QC procedures. I will contact you upon receipt of the analytical results to expedite closure, if target cleanup goals have been achieved. If the target level of di(ethylhexyl)phthalate of 3050 parts per million is not achieved, based on confirmation soil samples, DuPont will remobilize, re-excavate the hot spots and collect additional samples to assure the target levels are achieved.

Mr. Russell H. Smith, P.E.

Page 2

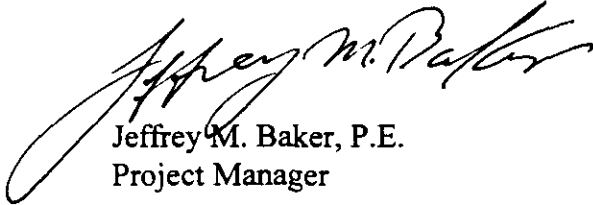
June 18, 1997

Pond 2 closure via backfilling and cap emplacement will not occur until results have been received that indicate soil quality in the floor and sidewalls of Pond 2 has achieved the target cleanup standard as stipulated in the referenced MDEQ correspondence.

As always, MDEQ personnel are welcome to visit the site to observe the confirmation soil sampling event. Please call me with any questions or concerns related to this project at (281) 586-5626. Thank you for your ongoing cooperation and guidance on this project.

Sincerely,

DUPONT ENVIRONMENTAL REMEDIATION SERVICES



Jeffrey M. Baker, P.E.
Project Manager

cc: Kenny Akins, CONDEA Vista
John Riddle, DuPont, Houston
g:\vista-ab\4041-03\61897ltr.doc

DuPont Environmental Remediation Services
140 Cypress Station Drive, Suite 140
Houston, TX 77090
Tel. (281) 586-5600
Fax (281) 586-5650



DuPont Environmental Remediation Services

July 10, 1997

Mr. Russell H. Smith, P.E.
Chief of the Office of Pollution Control
Uncontrolled Sites Section
Mississippi Department of Environmental Quality
P. O. Box 10385
Jackson, MS 39289-0385

**POND 2 CLOSURE IMPLEMENTATION
CONFIRMATION SOIL SAMPLE COLLECTION**

Dear Mr. Smith:

This correspondence provides notice to Mississippi Department of Environmental Quality (MDEQ) that DuPont Environmental Remediation Services (DERS) will mobilize to CONDEA Vista, Aberdeen, Mississippi, on July 14, 1997, to collect Pond 2 confirmation soil samples on July 15 and 16, 1997. This date is approximately one week earlier than previously identified in my letter to you of June 18, 1997, which notified you of Pond 2 Closure implementation. We have experienced excellent weather conditions of late and have made great progress towards completing closure in a timely and environmentally effective manner.

The soil samples will be collected pursuant to the confirmation sampling plan presented in the Pond 2 Closure Plan originally submitted to MDEQ in August, 1996 and amended pursuant to MDEQ comments contained in correspondence dated October 22, 1996. The sampling grid has been modified to incorporate 100 by 100 foot grid quadrants, two side wall samples will be collected using a clean trowel from the outer wall of each grid and decontamination procedures will adhere to EPA Region IV Standard Operating Procedures and Quality Assurance Manual. Please see attached Figure 2 from the Pond 2 Closure Plan for reference.

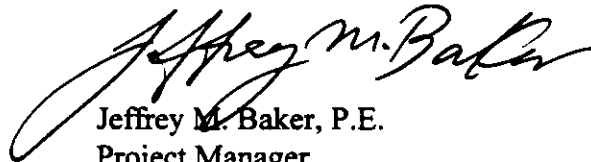
The results of the confirmation soil sampling task will be compiled and forwarded to MDEQ upon completion of appropriate QA/QC procedures. I will contact you upon receipt of the analytical results to expedite closure, if target cleanup goals have been achieved. If the target level of di(ethylhexyl)phthalate of 3050 parts per million is not achieved, based on confirmation soil samples, DuPont will remobilize, re-excavate the hot spots and collect additional samples to assure the target levels are achieved.

Mr. Russell H. Smith, P.E.
Mississippi Department of Environmental Quality
July 10, 1997
Page 2

Pond 2 closure via backfilling and cap emplacement will not occur until results have been received that indicate soil quality in the floor and sidewalls of Pond 2 has achieved the target cleanup standard as stipulated in the referenced MDEQ correspondence.

As always, MDEQ personnel are welcome to visit the site to observe the confirmation soil sampling event. Please call me with any questions or concerns related to this project at (281) 586-5626. Thank you for your ongoing cooperation and guidance on this project.

Sincerely,
DuPont Environmental Remediation Services


Jeffrey M. Baker, P.E.
Project Manager

JMB:mk
Attachment

cc: Mr. Kenny Akins
CONDEA Vista Company
New Highway 25
Aberdeen, MS 39730

Mr. John Riddle - DuPont, Houston

File: G:\Vista-ab\4041-03\soilsamp.doc

DuPont Environmental Remediation Services
140 Cypress Station Drive, Suite 140
Houston, TX 77090
Tel. (281) 586-5600
Fax (281) 586-5650



DuPont Environmental Remediation Services

August 15, 1997

Mr. Russell H. Smith, P.E.
Chief of the Office of Pollution Control
Uncontrolled Sites Section
Mississippi Department of Environmental Quality
P. O. Box 10385
Jackson, MS 39289-0385

**POND 2 CLOSURE IMPLEMENTATION
CONFIRMATION SOIL SAMPLE ANALYTICAL RESULTS**

Dear Mr. Smith:

This correspondence provides a summary to Mississippi Department of Environmental Quality (MDEQ) of analytical results obtained by DuPont Environmental Remediation Services (DERS) from confirmation sampling performed at CONDEA Vista, Aberdeen, Mississippi, on July 15 and 16, 1997. The soil samples were collected pursuant to the confirmation sampling plan presented in the Pond 2 Closure Plan originally submitted to MDEQ in August, 1996 and amended pursuant to MDEQ comments contained in correspondence dated October 22, 1996.

The sampling grid was modified, as requested to incorporate 100 by 100-foot grid quadrants and also two side wall samples per quadrant face. Soil samples were collected using a clean trowel from the outer wall of each grid and decontamination procedures were performed to adhere to EPA Region IV Standard Operating Procedures and Quality Assurance Manual. Please see attached Figure 2 from the Pond 2 Closure Plan for reference.

The results of the confirmation soil sampling task have been compiled and appropriate QA/QC procedures have been completed. I am pleased to report that all of the soil sample analytical results passed the remediation goal of 3050 ppm for Bis(2-ethylhexyl)phthalate (DEHP). The highest sample analytical concentrations reported were 2600 ppm (Sample Number B4) and 2400 ppm (Sample Number B5) in the eastern portion of Pond 2, which were well below the 3050 ppm goal established for this project.

The analytical data for Pond 2 are attached as Table 1 and graphically presented on Figure 1. Data for Di-n-Octyl Phthalate (DNOP), total barium, cadmium, and lead are also presented on Table 1.

Mr. Russell H. Smith, P.E.
Mississippi Department of Environmental Quality
August 15, 1997
Page 2

Pond 2 closure via backfilling and cap emplacement has commenced. Approximately 20,000 in-place yards of fill and clay cap will be placed in the excavation. Backfilling to current ground surface is expected to take three weeks. Cap construction, seeding, and fertilization should require approximately two additional weeks.

A complete Closure Report, including data attached herewith, P.E. certification, and final survey data will be forwarded to MDEQ when the project is completed. I appreciate your continued cooperation, guidance, and patience during this project. Please call me with any questions or concerns related to this project at (281) 586-5626.

Sincerely,
DuPont Environmental Remediation Services



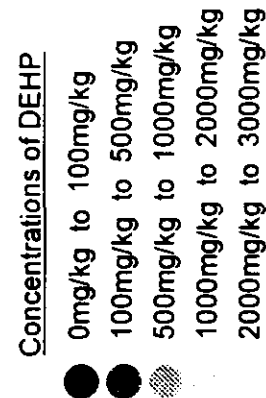
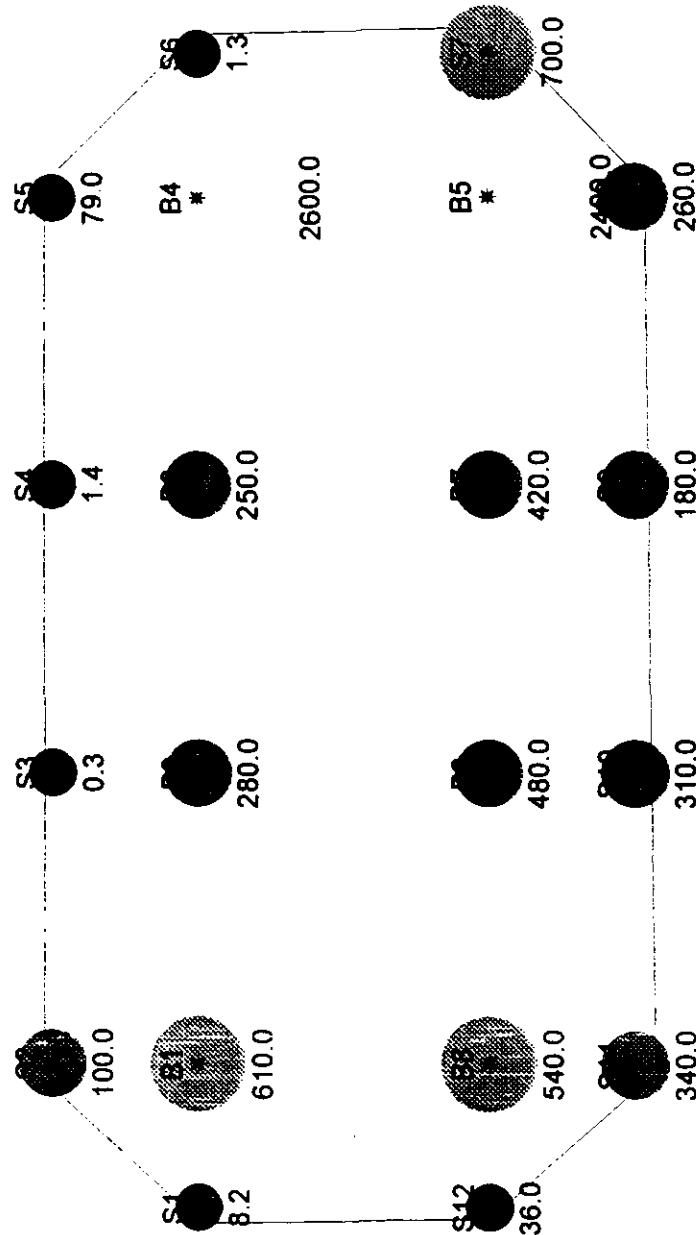
Jeffrey M. Baker, P.E.
Project Manager

JMB:mk
Attachments

cc: Mr. Kenny Akins
CONDEA Vista Company
New Highway 25
Aberdeen, MS 39730

Dr. John Riddle - DuPont, Houston

File: G:\Vista-ab\4041-03\8-15ltr.doc



Drawing not to scale

FILE: c:/george/projects/vista/abar/dehp.srf



DuPont Environmental
Remediation Services
Houston, Texas

TITLE:

DEHP Concentrations in Soil
Pond 2 Confirmatory Sampling
Vista Aberdeen Plant

DWN: _____

DES: _____

CHKD: _____

APPD: _____

DATE: 8/12/97

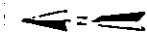
REV: _____

PROJECT NO:

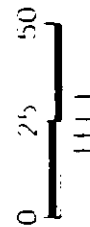
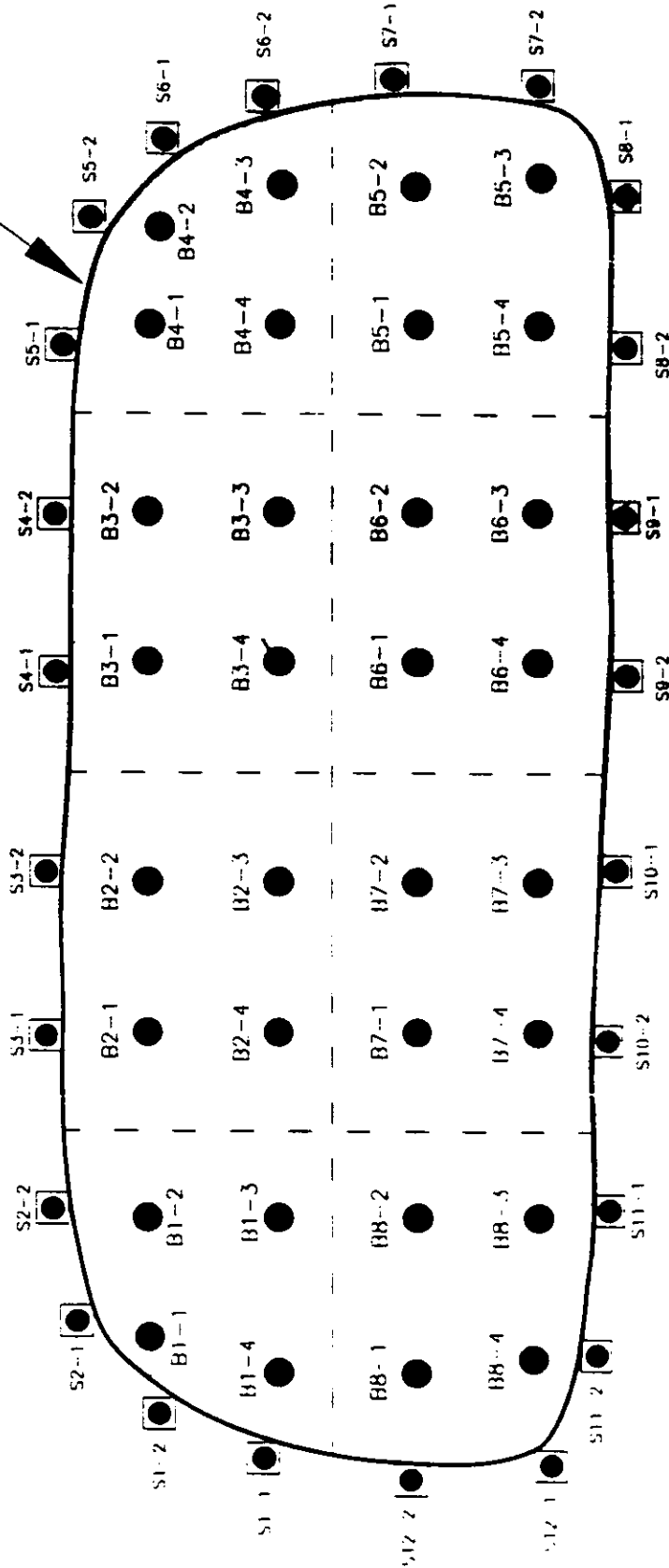
4041

FIGURE NO:

1



LIMITS OF POND 2



LEGEND

B1-1 PROPOSED POND BOTTOM SOIL GRAB SAMPLE
 S1-1 PROJECTED POND SIDE WALL SAMPLE
 NOTE: Sample ID designations indicate sample type (bottom (B) or sidewall (S)), confirmation sample number, and grab sample number.

FILE: ABERDEEN/GDA/MAAPS/PROJ2CLOS

DuPont Environmental Remediation Services Houston, Texas	PROJECT NO: 4041-01		
	FIGURE NO. 2		
TITLE: Proposed Confirmatory Sample Location Map		DES: RAH	APPD:
CONDCA Vista Company Aberdeen, Mississippi		DATE: 5/1/97	REV:

Table 1
Confirmatory Sampling July 1997
Vista, Aberdeen, MS
Pond 2 Closure

	Metals (Total)				Phthalates		
	Barium	Cadmium	Lead		B2EP		DNOP
S1	186.0 mg/kg	< 0.5 mg/kg	12.4 mg/kg		8,200	ug/kg < 330	ug/kg
S2	43.2 mg/kg	< 0.5 mg/kg	< 10 mg/kg		100,000	ug/kg	ug/kg
S3	95.6 mg/kg	< 0.5 mg/kg	< 10 mg/kg		340	ug/kg < 330	ug/kg
S4	21.4 mg/kg	0.5 mg/kg	< 10 mg/kg		1,400	ug/kg < 330	ug/kg
S5	58.0 mg/kg	0.94 mg/kg	11.6 mg/kg		79,000	ug/kg	ug/kg
S6	69.2 mg/kg	< 0.5 mg/kg	< 10 mg/kg		1,300	ug/kg < 330	ug/kg
S7	74.0 mg/kg	< 0.5 mg/kg	< 10 mg/kg		700,000	ug/kg	ug/kg
S8	80.8 mg/kg	< 0.5 mg/kg	< 10 mg/kg		260,000	ug/kg	ug/kg
S9	90.7 mg/kg	< 0.5 mg/kg	10.2 mg/kg		180,000	ug/kg	ug/kg
S9DUP	79.0 mg/kg	< 0.5 mg/kg	< 10 mg/kg		210,000	ug/kg	ug/kg
S10	107.0 mg/kg	< 0.5 mg/kg	13.5 mg/kg		310,000	ug/kg	ug/kg
S11	126.0 mg/kg	< 0.5 mg/kg	12.6 mg/kg		340,000	ug/kg	ug/kg
S12	73.9 mg/kg	< 0.5 mg/kg	15.5 mg/kg		36,000	ug/kg	ug/kg
B1	75.7 mg/kg	1 mg/kg	14.6 mg/kg		610,000	ug/kg	ug/kg
B2	134.0 mg/kg	< 0.5 mg/kg	< 10 mg/kg		280,000	ug/kg	ug/kg
B3	92.7 mg/kg	< 0.5 mg/kg	< 10 mg/kg		250,000	ug/kg	ug/kg
B4	63.8 mg/kg	1.7 mg/kg	< 10 mg/kg		2,600,000	ug/kg	ug/kg
B5	48.5 mg/kg	0.73 mg/kg	15.8 mg/kg		2,400,000	ug/kg	ug/kg
B6	78.3 mg/kg	< 0.5 mg/kg	10.4 mg/kg		480,000	ug/kg	ug/kg
B7	106.0 mg/kg	0.68 mg/kg	12 mg/kg		420,000	ug/kg	ug/kg
B7dup	NA mg/kg	NA mg/kg	NA mg/kg		460,000	ug/kg	ug/kg
B8	83.8 mg/kg	< 0.5 mg/kg	13.9 mg/kg		540,000	ug/kg	ug/kg
EQBLNK-2	< 0.2 mg/L	< 0.005 mg/L	< 0.1 mg/L		270	ug/L < 10	ug/L
TBLNK-2	NA	NA	NA		NA	NA	NA

REMEDATION GOAL

3,050,000	ug/kg	NA	ug/kg
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NA: Not analyzed