



**REMOVAL ACTION WORK PLAN FOR
THE STOCKPILED SOIL EXCAVATED
FROM THE SOFTBALL FIELDS AT THE
OXFORD LAKE SOFTBALL COMPLEX
OXFORD, ALABAMA**

Solutia Inc. – Anniston Facility

USEPA I.D. No. ALD 004 019 048

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1.0 INTRODUCTION

Oxford Lake Softball Complex (Complex) is a city-owned community recreational area located in Oxford, Alabama. The Complex includes approximately 25 acres and is situated east of Snow Creek, near its confluence with Choccolocco Creek. There are two activity areas at the Complex: (1) an athletic field area in the eastern portion (approximately 9 acres), and (2) an open area located in the western portion nearest to Snow Creek (approximately 16 acres). The athletic area consists of four fenced softball fields that are also used for football and soccer by both adult and youth athletic leagues.

Information obtained during Solutia Inc.'s (Solutia) Phase I Off-Site Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) indicated that there was a potential for polychlorinated biphenyls (PCBs) to have been deposited in the Snow Creek floodplain at the Complex. Therefore, Solutia conducted a preliminary investigation of the area to determine if PCBs were present. Since the preliminary investigation indicated that low levels of PCBs were present, a more thorough investigation was carried out to characterize the distribution of PCB-containing soils.

A RFI Results and Interim Measures (IMs) Plan for the softball fields at the Complex was submitted to the Alabama Department of Environmental Management (ADEM) and the United States Environmental Protection Agency (USEPA) on January 4, 2001, and has been implemented over the last few months. As part of the IMs for the softball fields, PCB-impacted surficial soil was removed from the fields and stockpiled in the open area adjacent to the fields. This report provides the results of the investigations conducted in the open area of the Complex in the vicinity of the soil stockpile and the proposed removal action for containing the stockpiled soils on site. A Remedial Investigation/Feasibility Study will be prepared at a later date to present all the investigation results for the Complex and to address the final remedy for the other portions of the Complex that were investigated.

Portions of the Complex are located within the 100-year floodplain of Snow Creek. Solutia is currently investigating this portion of the floodplain pursuant to the requirements of a RCRA Post Closure Permit issued to Solutia, dated January 7, 1997, by ADEM (Permit No. ALD 004 019 048). Although that investigation is ongoing, Solutia has agreed to prepare this report in

accordance with Appendix C of the permit and in response to a request by USEPA and the City of Oxford. Currently, it is understood that USEPA and ADEM are working together through a draft memorandum of understanding and USEPA has been given the responsibility of overseeing the remedial activities at the Complex.

2.0 BACKGROUND

Interim Measures completed at the softball fields included the excavation of the near-surface soil from the three softball fields that had PCB-impacted surficial soil. Implementation of these IMs resulted in removal of the PCB-impacted soil and its replacement with clean soil. The IMs included excavating the top 12 inches of soil from the infield areas of the softball fields, and the surface vegetation and the top 3 inches of soil from the outfield areas. Prior to excavating, sampling was performed to delineate areas in the outfields that contained soil with PCB concentrations greater than or equal to 10 mg/kg. These areas were excavated to a depth of 12 inches.

The material was stockpiled on site in the open area of the Complex and covered with a synthetic cover material on a temporary basis. Erosion and sedimentation control measures were implemented in accordance with the Best Management Practices (BMP) Plan developed for the site to address migration of sediment from the stockpile. Throughout the course of delineating soil as described above, some soil was encountered with PCB concentrations exceeding 50 mg/kg. This material was disposed of at the TSCA-approved PCB landfill at Emelle, Alabama.

After completing the excavation, a multi-layer cover system was constructed to address potential erosion of underlying PCB-impacted soil. This cover system included a geotextile fabric that was covered by 12 inches of soil in the infield areas. In the outfield areas, the excavations were backfilled with clean soil and covered with sod. A Final Interim Measures Report summarizing all work on the softball fields will be submitted under separate cover at a later date.

3.0 REMEDIAL INVESTIGATION

3.1 Characterization Results

The Complex is located on the east side of Snow Creek immediately north of Interstate 20 (Figure 1). Soil sampling activities at the Complex were completed in two phases. Phase I, which consisted of a preliminary screening of the entire Complex, was completed in June 2000. A summary of the Phase I results was submitted to both ADEM and the USEPA on August 4, 2000, and was included in the Sampling and Analysis Quality Assurance Plan for Soil Sampling at the Oxford Lake Softball Complex (Work Plan), Oxford, Alabama, dated August 9, 2000. The Phase II sampling was completed in August 2000 in accordance with the protocols set forth in the Work Plan. Phase II provided a more thorough characterization of the Complex.

3.1.1 Phase I Investigation

The Phase I preliminary screening was initiated on June 23, 2000. The purpose of the screening was to determine whether PCB-impacted soils were present within the property boundaries of the Complex and, if necessary, to provide the information needed to develop an additional investigation program to complete the evaluation of the Complex.

Following a review of relevant data, an approximate grid spacing of 300 feet was selected for the Phase I screening event. The sampling grid began near Snow Creek and proceeded eastward towards the softball fields. At each of the 28 selected locations a sample was collected from the surface to a depth of 6 inches using a hand auger. Additional samples were collected from 12 to 18 inches deep at selected locations. The locations of the Phase I samples collected from the vicinity of the soil stockpile (OLHA-6, OLHA-10, and OLHA-11) are shown on Figure 2.

3.1.2 Phase II Investigation

The Phase II sampling event for the open area of the Complex (within the vicinity of the soil stockpile) was performed between August 10 and August 11, 2000. This area was sampled on a 100-foot grid spacing. Soil sampling points OLGP-50 to OLGP-58, OLGP-69 to OLGP-74, and OLGP-80 to OLGP-85 were completed using direct push technology (DPT) provided by Environmental Services Network (ESN) as specified in the Work Plan. Soil samples were

collected from depth intervals of 0 to 6 inches, 12 to 18 inches, 24 to 30 inches, and 42 to 48 inches. The depth of the last sampling interval (42 to 48 inches) varied based on the subsurface conditions encountered at each location.

The sample locations were recorded using Global Positioning System (GPS) surveying. The sample locations are presented on Figure 2.

3.1.3 Soil Sample Analyses and Results

The locations of the Phase I and II samples collected in the open area of the Complex within the vicinity of the soil stockpile are shown on Figure 2. The results of PCB analyses of the soil samples are summarized in Table 1 and shown on Figures 3 through 6. The complete laboratory analytical results are included in Appendix A. Some of the soil samples collected were analyzed in the field for PCBs using immunoassay techniques (USEPA Method 4020) with standards of 1 and 50 mg/kg. Soil samples with PCB concentrations greater than 1 mg/kg as determined with the immunoassay technique were submitted to STL Savannah Laboratories for PCB analysis by USEPA Method 8082. Soil samples that were not analyzed in the field for PCBs were also submitted to STL Savannah Laboratories for PCB analysis by USEPA Method 8082.

PCB-impacted soil was encountered in this area to depths of four feet. The PCB concentrations in the soil were generally uniform throughout the upper 2.5-foot depth with a slight decrease in PCB concentrations below 2.5 feet. No PCB concentrations were detected above 50 mg/kg. As shown on Figures 3 through 6, the PCB concentration distribution for samples collected near the soil stockpile is as follows:

Number of Samples With Reported
PCB Concentrations

Depth Below Ground Surface	<1 mg/kg	1 to < 10 mg/kg	10 to < 50 mg/kg	≥ 50 mg/kg
0 to 0.5 feet	14	8	2	0
1 to 1.5 feet	13	6	3	0
2 to 2.5 feet	13	6	2	0
> 2.5 feet	17	3	1	0

3.2 Interim Measures Characterization Results

During the implementation of the IMs at the softball fields, composite soil samples were collected from the excavated material to verify the PCB concentrations in the soil for disposal and soil management purposes. Soil samples were collected from the excavator buckets approximately every 30 minutes. These samples were combined to form a composite soil sample that represented the material excavated over a two to three hour period. Each sample was collected utilizing a decontaminated spoon and thoroughly mixed in a stainless steel bowl prior to being placed into a clean sample jar.

All composite soil samples collected from the excavated material were analyzed in the field for PCBs using immunoassay techniques (USEPA Method 4020) with standards of 10 and 50 mg/kg. Additionally, each sample was submitted to STL Savannah Laboratories for PCB analysis by USEPA Method 8082.

If soil sample results measured greater than 50 mg/kg with the immunoassay technique, the representative soil that was excavated was segregated from the other material pending laboratory evaluation. Laboratory results from only one composite sample (SR-31) measured PCB concentrations greater than 50 mg/kg. The segregated soil was disposed of at the TSCA-approved PCB landfill at Emelle, Alabama. The results of PCB analyses for all composite soil

samples that are representative of the soil stockpiled on site are summarized in Table 2. The complete laboratory analytical results are included in Appendix A.

Following the removal of the surficial soil, post excavation samples were collected from the bottom of the excavations. The size of the sampling grid varied based on the surface concentrations encountered in the initial characterization. In areas where the surface PCB concentrations were less than 50 mg/kg, the excavated surface was sampled on a 25-foot square grid pattern. In areas with surface PCB concentrations greater than or equal to 50 mg/kg, the excavated surface was sampled on a 5-foot square grid pattern. Each sample was collected at a depth of 0 to 3 inches from the post excavation surface utilizing a decontaminated spoon. The samples were collected from the center of each grid square. The samples were composited by thoroughly mixing the soil in a stainless steel bowl prior to placing in a clean sample jar. Each composite sample collected was representative of a maximum of eight contiguous grid squares.

All post excavation samples except one had PCB concentrations less than 50 mg/kg. Sample EX-102 (50.6 mg/kg) was collected in the outfield area of Field C within an area that had surface PCB concentrations greater than 50 mg/kg. The complete results from the post excavation sampling will be provided in the Final Interim Measures Report.

4.0 REMOVAL ACTION

The removal activities for the soil stockpile will consist of relocating and compacting the soil from the stockpile to form an embankment, and constructing a multi-layer cover system to permanently contain the material. The embankment will be located west of the softball fields and south of Recreation Drive as shown on Figure 7. As part of the cover system, a parking lot and a landscaped area have been incorporated into the design. The existing stockpile will be excavated to the full depth and the material will be placed and compacted in approximately 8-inch thick lifts. A geotextile was placed beneath the existing stockpile and will be used as a marker to ensure that excavation does not extend into the underlying soils.

The stockpiled material will be placed to an average height of about 3 feet within the proposed parking lot area. Design drawings and technical specifications for the project are included as Appendix B and C. The multi-layer cover systems proposed to contain the soil are described in Sections 4.1 and 4.2. At the end of construction, the soil will be effectively isolated beneath the cover systems. Any additional excavated material will be managed according to Section 4.3.

Erosion and sedimentation control as described in Section 4.4 will be used to address migration of sediment from the construction area during implementation of the removal measures. Additionally, dust control measures and health and safety aspects for the project are described in Sections 4.5 and 4.6. Lastly, a schedule for implementing the removal activities is included in Section 4.7.

4.1 Asphalt Cover System

As shown on Figure 7, the majority of the regraded stockpile will be covered with an asphalt cover system to address potential erosion of PCB-impacted soil. This cover system will include a geotextile fabric, 8 inches of crushed aggregate base course, and 3 inches of hot mix asphalt. The effectiveness and reliability of this type of cover system in isolating the affected soil and in preventing erosion are supported by long-term performance experience with similar systems at a number of sites elsewhere.

4.2 Soil Cover System

A soil cover system is proposed for the landscaped area to address potential erosion of PCB-impacted soil. The landscaped area will be located on the sideslopes of the parking lot and the area adjacent to the entrance road providing access from Recreation Drive. This cover system will include a geotextile fabric that will be covered by a minimum of 12 inches of soil with grass vegetation. The grass vegetation for this area will be established by sodding. The effectiveness and reliability of this type of cover system in isolating the affected soil and in preventing erosion are also supported by long-term performance experience.

Prior to transporting soil on site for use in the cover system, the material will be tested for PCBs. Any material with PCB concentrations exceeding 1 mg/kg will not be used on site.

4.3 Excavation of PCB-Impacted Soil

To the extent practical, excavation below the existing ground surface will be minimized. However, some incidental excavation will be required to complete construction of the parking lot and access road. All required excavation will be performed prior to the completion of the cover system. The material will be characterized in place for disposal purposes then excavated and stockpiled. All material excavated with PCB concentrations less than 50 mg/kg will be incorporated into the embankment for the parking lot. If PCB concentrations are equal to or greater than 50 mg/kg, the material will be disposed off site at a TSCA-approved disposal facility. Based on the previous characterization results for the soils underlying the proposed area of construction, it is anticipated that all or most of the material will be contained on site.

Some tree removal will be required prior to constructing the embankment. These trees will be cut down at ground surface and the stumps and roots will be excavated. The stumps and roots will be incorporated under the soil cover in the landscaped area or disposed of off site. The trees will be disposed of in accordance with the applicable regulations governing the handling of landscape debris.

4.4 Erosion and Sedimentation Control

The relocation, placement and subsequent covering of the PCB-impacted soil will isolate the material from future contact and prevent the migration of sediment. Additionally, potential impacts from downstream transport of fugitive sediment during construction will be mitigated by the use of effective erosion and sediment controls. A BMP plan has been prepared for the site and is included as Appendix D. The BMP plan describes practices to prevent/minimize the discharge of all sources of pollution in stormwater runoff to State waters. Prior to the implementation of the removal activities, all erosion control measures required by the BMP plan will be installed. At the end of construction, all areas outside the limits of the parking lot and landscaped area that are disturbed during construction will be grassed and mulched. Erosion control features will remain in place until the vegetation is established.

As required by ADEM regulations under the National Pollution Discharge Elimination System (NPDES) General Stormwater Permit, a Spill Prevention Control and Countermeasures Plan (SPCC) was also prepared for the site. The SPCC, included as Appendix E, details measures that will be undertaken to prevent and control possible releases of pollutants as a result of construction related activities associated with the removal action.

4.5 Dust Control

During implementation of the removal action, dust from construction activities will be minimized to the extent practical. A Dust Control Plan, included as Appendix F, has been prepared for the site to describe the strategies for controlling the release of dust from the construction activities. Throughout construction, dust control measures described in the plan will be implemented and monitoring will be performed as required.

4.6 Health and Safety

A sample Health and Safety Plan (HASP) has been developed for implementation of the removal action at the Complex. The sample HASP presents the minimum guidelines that the contractor must follow during execution of the work. Prior to beginning work at the site, the selected contractor will be required to develop a site specific HASP to be implemented during the removal action. The sample HASP, presented as Appendix G, was developed in accordance with

requirements set forth in 29 CFR 1910.120 and the activities proposed to complete the project. Identification of the project team, required training and responsibilities of each team member and of site workers are detailed in the HASP. Emergency response procedures are identified along with procedures for air monitoring, PPE, decontamination, and for specific tasks that are planned.

4.7 Schedule

The estimated schedule for implementing the removal activities is as follows:

<u>TASK</u>	<u>SCHEDULED DATE</u>
Submit Removal Action Work Plan	April 24, 2001
Solicit Prospective Bidders	April 25, 2001
Review Bids	May 21, 2001
Award Contract	May 28, 2001
Mobilize to Site	June 4, 2001
Complete Construction Activities	August 31, 2001

5.0 OPERATION AND MAINTENANCE PLAN

This Operation and Maintenance (O&M) Plan for the Complex has been developed to ensure that, once completed, the remedial measures continue to operate as intended, and to assure the appropriate management and containment of soil and run-off of stormwater. This plan will be reviewed annually, or more frequently as dictated by facility changes or inspection results, to assure that it reflects current O&M procedures and needs. Any revisions required to update the plan should be completed within 30 days of the annual review or event that triggers a more frequent review.

Inspections will be performed at semi-annual intervals and following significant storm events (greater than 3 inches in 24 hours) to observe the condition of the cover system and slopes. The area will be inspected for cover and slope conditions such as settlement, erosion, cracking, and bare spots. The structural integrity of the parking lot will be evaluated during each inspection. Mowing and fertilization needs will also be examined. The existing drainage ditches at the site will be examined to be free of debris and obstructions, and all culverts will be checked for debris and blockage. The inspection will be conducted by the Site Remediation Coordinator, the Environmental Specialist or their designee and recorded on an appropriate O&M Inspection Log. Any needed repairs identified during the inspection will be recorded by the inspector.

Periodic maintenance will be required to maintain the integrity of the cover system at the Complex. Mowing and fertilizing will be done as required. Since the area will be used as an active parking lot for the Complex, it is anticipated that most of these routine maintenance activities will be performed regularly by the Complex owners. In addition, the vegetation on the cover system will be maintained to ensure that healthy growth is sustained.

Areas or items requiring attention or repair will be clearly identified. Within two weeks of the completion of the inspection, the inspector will submit work order requests to address the repairs or action items identified. Either Solutia personnel or properly trained and qualified contract personnel will complete the necessary repairs. The O&M Inspection Log sheets should include sections for tracking repairs or action items completed. Inspection log sheets will be recorded and maintained for a period of ten years in a central file at the Solutia site.

6.0 SUMMARY

The relocation and placement of the PCB-impacted soil from the existing stockpile and construction of a multi-layer cover system will minimize the potential long-term risk of human and ecological exposure to these materials and effectively cover any impacted soil at depth. Additionally, the use of BMP during construction will minimize migration of impacted soil during implementation of the removal measures. Incorporating the parking lot into the design as part of the cover system will provide an additional benefit to the community.

TABLE 1

**Analytical Results for Soil Samples Collected from
Oxford Lake Softball Complex (Open Areas), Oxford, Alabama**

**Table 1. Analytical Results for Soil Samples Collected
from Oxford Lake Softball Complex (Open Area), Oxford, Alabama**

Sample ID	Sample Depth	Date Sampled	Screening Results	Dry Weight %	Polychlorinated Biphenyls (mg/kg dw)								Total PCBs
					USEPA Method 8082								
					Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268	
OLHA-6	(0-6)	6/23/00	>50	76	<0.43	<0.88	<0.43	<0.43	3.2	6.8	5.9	5.0	20.9
OLHA-6	(12-18)	6/29/00	>1	82	<0.040	<0.082	<0.040	<0.040	0.16	0.25	0.26	0.66	1.3
OLHA-10	(0-6)	6/29/00	>1	80	<0.41	<0.84	<0.41	<0.41	<0.41	3.6	2.6	2.5	8.7
OLHA-11	(0-6)	6/29/00	>1	86	<0.38	<0.78	<0.38	<0.38	<0.38	3.5	2.6	2.3	8.4
OLGP-50	(0-6)	8/10/00	<1										
OLGP-50	(12-18)	8/10/00	>1	84	<0.20	<0.40	<0.20	<0.20	1.8	4.6	2.9	0.61	9.9
OLGP-50	(24-30)	8/10/00	>50	72	<0.23	<0.46	<0.23	<0.23	<0.23	6.6	5.7	1.0	13.3
OLGP-50	(34-40)	8/10/00		71	<0.046	<0.094	<0.046	<0.046	0.33	0.51	0.35	0.11	1.3
OLGP-51	(0-6)	8/10/00	<1										
OLGP-51	(12-18)	8/10/00	<1										
OLGP-51	(24-30)	8/10/00	>1	70	<0.047	<0.096	<0.047	<0.047	0.74	1.0	0.63	0.12	2.5
OLGP-51	(42-48)	8/10/00		84	<0.039	<0.080	<0.039	<0.039	0.062	0.14	0.12	0.061	0.38
OLGP-52	(0-6)	8/10/00	<1										
OLGP-52	(12-18)	8/10/00	>1	91	<0.18	<0.37	<0.18	<0.18	2.2	4.6	3.0	0.49	10.3
OLGP-52	(12-18) DUP	8/10/00	>1	91	<0.18	<0.37	<0.18	<0.18	2.4	4.8	2.8	0.50	10.5
OLGP-52	(24-30)	8/10/00		75	<0.44	<0.89	<0.44	2.2	<0.44	4.9	3.3	<0.44	10.4
OLGP-52	(42-48)	8/10/00		82	<0.040	<0.082	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	BDL
OLGP-53	(0-6)	8/10/00	<1										
OLGP-53	(12-18)	8/10/00	<1										
OLGP-53	(24-30)	8/10/00		64	<0.052	<0.10	<0.052	<0.052	<0.052	0.073	0.031	<0.052	0.10
OLGP-53	(32-38)	8/10/00		71	<0.046	<0.094	<0.046	0.70	<0.046	0.73	0.76	0.14	2.3
OLGP-54	(0-6)	8/10/00	<1										
OLGP-54	(12-18)	8/10/00	<1										
OLGP-54	(24-30)	8/10/00		88	<0.038	<0.076	<0.038	<0.038	<0.038	<0.038	<0.038	<0.038	BDL
OLGP-54	(42-48)	8/10/00		75	<0.044	<0.089	<0.044	<0.044	0.057	0.18	0.20	0.088	0.52
OLGP-55	(0-6)	8/10/00	<1										
OLGP-55	(12-18)	8/10/00	<1										
OLGP-55	(24-30)	8/10/00		73	<0.45	<0.92	<0.45	<0.45	1.9	3.4	2.0	<0.45	7.3

**Table 1. Analytical Results for Soil Samples Collected
from Oxford Lake Softball Complex (Open Area), Oxford, Alabama**

Sample ID	Sample Depth	Date Sampled	Screening Results	Dry Weight %	Polychlorinated Biphenyls (mg/kg dw)								Total PCBs
					USEPA Method 8082								
					Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268	
OLGP-55	(33-39)	8/10/00		81	<0.041	<0.083	<0.041	<0.041	<0.041	0.11	0.10	<0.041	0.21
OLGP-56	(0-6)	8/10/00	<1										
OLGP-56	(12-18)	8/10/00	<1										
OLGP-56	(24-30)	8/10/00		80	<0.041	<0.084	<0.041	<0.041	<0.041	<0.041	<0.041	<0.041	BDL
OLGP-56	(34-40)	8/10/00		73	<0.045	<0.092	<0.045	<0.045	0.19	0.80	0.70	<0.045	1.7
OLGP-57	(0-6)	8/10/00	>1	88	<.038	<.076	<.038	<.038	<.038	0.12	0.083	<.038	0.20
OLGP-57	(12-18)	8/10/00	<1										
OLGP-57	(24-30)	8/10/00		87	<0.076	<0.15	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	BDL
OLGP-57	(32-38)	8/10/00		72	<0.46	<0.93	<0.46	<0.46	12.0	15.0	8.4	<0.46	35.4
OLGP-58	(0-6)	8/10/00	>1	79	<0.084	<0.17	<0.084	<0.084	0.90	2.4	1.6	0.44	5.3
OLGP-58	(12-18)	8/10/00	>1	82	<0.040	<0.082	<0.040	<0.040	0.45	0.58	0.48	0.17	1.7
OLGP-58	(24-30)	8/10/00		77	<0.13	<0.26	<0.13	<0.13	2.9	3.2	2.5	0.43	9.0
OLGP-58	(42-48)	8/10/00		85	<0.039	<0.079	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	BDL
OLGP-69	(0-6)	8/11/00		72	<0.046	<0.093	<0.046	<0.046	0.91	1.7	1.3	<0.046	3.9
OLGP-69	(12-18)	8/11/00		78	<0.042	<0.086	<0.042	<0.042	0.20	0.53	0.43	0.11	1.3
OLGP-69	(24-30)	8/11/00		79	<0.042	<0.085	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	BDL
OLGP-69	(42-48)	8/11/00		82	<0.040	<0.082	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	BDL
OLGP-70	(0-6)	8/11/00		86	<0.038	<0.078	<0.038	<0.038	<0.038	<0.038	<0.038	<0.038	BDL
OLGP-70	(12-18)	8/11/00		80	<0.041	<0.084	<0.041	<0.041	<0.041	<0.041	<0.041	<0.041	BDL
OLGP-70	(24-30)	8/11/00		84	<0.039	<0.080	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	BDL
OLGP-70	(42-48)	8/11/00		76	<0.043	<0.088	<0.043	<0.043	<0.043	0.41	0.31	0.057	0.78
OLGP-71	(0-6)	8/11/00		88	<0.038	<0.076	<0.038	<0.038	<0.038	<0.038	<0.038	<0.038	BDL
OLGP-71	(12-18)	8/11/00		91	<0.036	<0.074	<0.036	<0.036	0.066	0.11	0.052	<0.036	0.23
OLGP-71	(24-30)	8/11/00		88	<0.038	<0.076	<0.038	<0.038	<0.038	<0.038	<0.038	<0.038	BDL
OLGP-71	(42-48)	8/11/00		74	<0.044	<0.090	<0.044	<0.044	0.11	0.29	0.17	0.039	0.61
OLGP-72	(0-6)	8/11/00		92	<0.036	<0.073	<0.036	<0.036	0.18	0.28	0.20	<0.036	0.66
OLGP-72	(12-18)	8/11/00		92	<0.036	<0.073	<0.036	<0.036	<0.036	0.043	<0.036	<0.036	0.043

**Table 1. Analytical Results for Soil Samples Collected
from Oxford Lake Softball Complex (Open Area), Oxford, Alabama**

Sample ID	Sample Depth	Date Sampled	Screening Results	Dry Weight %	Polychlorinated Biphenyls (mg/kg dw)								Total PCBs
					USEPA Method 8082								
					Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268	
OLGP-72	(24-30)	8/11/00		73	<0.045	<0.092	<0.045	<0.045	<0.045	0.42	0.27	0.056	0.75
OLGP-72	(42-48)	8/11/00		82	<0.040	<0.082	<0.040	<0.040	<0.040	0.13	0.10	0.065	0.30
OLGP-73	(0-6)	8/11/00		86	<0.038	<0.078	<0.038	<0.038	<0.038	<0.038	<0.038	<0.038	BDL
OLGP-73	(12-18)	8/11/00		85	<0.039	<0.079	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	BDL
OLGP-73	(24-30)	8/11/00		84	<0.039	<0.080	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	BDL
OLGP-73	(42-48)	8/11/00		83	<0.040	<0.081	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	BDL
OLGP-74	(0-6)	8/11/00		81	<0.041	<0.083	<0.041	<0.041	0.82	1.9	1.8	0.35	4.9
OLGP-74	(12-18)	8/11/00		80	<0.041	<0.084	<0.41	<0.041	<0.041	0.34	0.25	0.086	0.68
OLGP-74	(24-30)	8/11/00		80	<0.041	<0.084	<0.041	<0.041	<0.041	0.070	0.073	<0.041	0.14
OLGP-74	(42-44)	8/11/00		82	<0.040	<0.082	<0.040	<0.040	<0.040	0.070	0.071	<0.040	0.14
OLGP-80	(0-6)	8/11/00		73	<0.045	<0.092	<0.045	<0.045	0.73	1.4	1.2	0.24	3.6
OLGP-80	(12-18)	8/11/00		80	<0.041	<0.084	<0.041	<0.041	0.24	0.36	0.35	0.16	1.1
OLGP-80	(12-18) DUP	8/11/00		85	<0.039	<0.079	<0.039	<0.039	0.16	0.30	0.30	0.074	0.83
OLGP-80	(24-30)	8/11/00		77	<0.043	<0.087	<0.043	<0.043	<0.043	<0.043	<0.043	<0.043	BDL
OLGP-80	(42-48)	8/11/00		81	<0.041	<0.083	<0.041	<0.041	<0.041	<0.041	<0.041	<0.041	BDL
OLGP-81	(0-6)	8/11/00		85	<0.039	<0.079	<0.039	<0.039	<0.039	0.12	0.085	<0.039	0.20
OLGP-81	(12-18)	8/11/00		85	<0.039	<0.079	<0.039	<0.039	<0.039	0.087	0.045	<0.039	0.13
OLGP-81	(24-30)	8/11/00		84	<0.039	<0.080	<0.039	<0.039	0.13	0.48	0.32	0.044	0.97
OLGP-81	(42-48)	8/11/00		85	<0.039	<0.079	<0.039	<0.039	<0.039	0.091	0.075	<0.039	0.17
OLGP-82	(0-6)	8/11/00		89	<0.037	<0.075	<0.037	<0.037	0.15	0.39	0.24	0.049	0.83
OLGP-82	(12-18)	8/11/00		86	<0.038	<0.078	<0.038	<0.038	<0.038	<0.038	<0.038	<0.038	BDL
OLGP-82	(24-30)	8/11/00		80	<0.082	<0.17	<0.082	0.33	<0.082	0.50	0.38	<0.082	1.2
OLGP-82	(42-48)	8/11/00		81	<0.041	<0.083	<0.041	<0.041	<0.041	<0.041	<0.041	<0.041	BDL
OLGP-83	(0-6)	8/11/00		91	<0.036	<0.074	<0.036	<0.036	1.3	1.6	0.91	0.20	4.0
OLGP-83	(12-18)	8/11/00		83	<0.040	<0.081	<0.040	<0.040	0.68	0.81	0.53	0.21	2.2
OLGP-83	(24-30)	8/11/00		77	<0.086	<0.17	<0.086	<0.086	2.4	3.9	2.8	0.68	9.8
OLGP-83	(32-38)	8/11/00		82	<0.040	<0.082	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	BDL
OLGP-84	(0-6)	8/11/00		75	<0.44	<0.89	<0.44	<0.44	<0.44	7.3	4.8	1.4	13.5

**Table 1. Analytical Results for Soil Samples Collected
from Oxford Lake Softball Complex (Open Area), Oxford, Alabama**

Sample ID	Sample Depth	Date Sampled	Screening Results	Dry Weight %	Polychlorinated Biphenyls (mg/kg dw)								Total PCBs
					USEPA Method 8082								
					Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268	
OLGP-84	(0-6) DUP	8/11/00		81	<0.16	<0.33	<0.16	<0.16	3.6	6.6	3.8	1.1	15.1
OLGP-84	(12-18)	8/11/00		76	<0.87	<1.8	<0.87	<0.87	<0.87	12.0	7.3	<0.87	19.3
OLGP-84	(24-30)	8/11/00		80	<0.041	<0.084	<0.041	<0.041	<0.041	<0.041	<0.041	<0.041	BDL
OLGP-84	(42-48)	8/11/00		80	<0.041	<0.084	<0.041	<0.041	<0.041	<0.041	<0.041	<0.041	BDL
OLGP-85	(0-6)	8/11/00		79	<0.042	<0.085	<0.042	<0.042	0.31	0.51	0.32	0.066	1.2
OLGP-85	(12-18)	8/11/00		75	<0.44	<0.89	<0.44	<0.44	4.9	6.6	4.0	1.5	17.0
OLGP-85	(24-30)	8/11/00		81	<0.041	<0.083	<0.041	<0.041	0.28	0.56	0.41	0.12	1.4
OLGP-85	(42-48)	8/11/00		84	<0.039	<0.080	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	BDL

Notes:

mg/kg dw - milligrams per kilogram dry weight

< - Analyte was not detected at or above the indicated concentration

BDL - below detection limit

TABLE 2

**Analytical Results for Soil Samples Collected during the Implementation
of Interim Measures at the Oxford Lake Softball Complex, Oxford, Alabama**

Table 2. Analytical Results for Soil Samples Collected during the Implementation of Interim Measures at the Oxford Lake Softball Complex, Oxford, Alabama

Sample ID	Date Sampled	Screening Results	Dry Weight %	Polychlorinated Biphenyls (mg/kg dw)									Total PCBs
				USEPA Method 8082									
				Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268		
SR-1	1/24/01	<10	88	<0.19	<0.38	<0.19	<0.19	1.3	1.8	1.6	0.40	5.1	
SR-2	1/25/01	<10	80	<0.21	<0.42	<0.21	<0.21	2.4	2.3	2.4	0.58	7.7	
SR-3	1/25/01	<10	91	<0.18	<0.37	<0.18	<0.18	0.47	2.1	1.6	0.40	4.6	
SR-4	1/25/01	>10	89	<0.93	<1.9	<0.93	<0.93	6.2	10	9.6	2.3	28.1	
SR-5	1/26/01	<10	91	<0.072	<0.15	<0.072	<0.072	0.33	1.0	0.86	0.20	2.4	
SR-6	1/26/01	>10	92	<0.18	<0.36	<0.18	<0.18	1.4	3.5	3.6	0.83	9.3	
SR-7	1/26/01	<10	89	<0.074	<0.15	<0.074	<0.074	0.72	1.1	0.81	0.15	2.8	
SR-8	1/29/01	<10	89	<0.15	<0.30	<0.15	<0.15	0.31	2.0	1.4	0.30	4.0	
SR-9	1/31/01	>10	86	<0.38	<0.78	<0.38	<0.38	0.52	2.8	2.0	0.49	5.8	
SR-10	1/31/01	>50	88	<0.38	<0.76	<0.38	<0.38	0.84	4.4	3.4	0.93	9.6	
SR-11	1/31/01	<10	86	<0.19	<0.39	<0.19	<0.19	0.74	3.0	1.9	0.60	6.2	
SR-12	2/1/01	<10	82	<0.080	<0.16	<0.080	<0.080	0.16	1.4	0.80	0.19	2.6	
SR-13	2/1/01	>10	87	<0.19	<0.38	<0.19	<0.19	0.46	2.8	3.4	0.58	7.2	
SR-14	2/1/01	<10	86	<0.077	<0.16	<0.077	<0.077	0.27	0.98	1.1	0.18	2.5	
SR-15	1/31/01	>10	89	<0.18	<0.38	<0.18	<0.18	0.91	4.0	3.5	0.90	9.3	
SR-16	2/3/01	>10	86	<0.38	<0.78	<0.38	<0.38	1.2	5.2	3.5	0.80	10.7	
SR-17	2/3/01	>10	88	<0.38	<0.76	<0.38	<0.38	2.6	6.9	4.0	0.99	14.5	
SR-18	2/8/01	>10	88	<0.15	<0.30	<0.15	<0.15	0.65	3.1	2.4	0.54	6.7	
SR-19	2/8/01	>10	82	<0.40	<0.82	<0.40	<0.40	1.3	6.4	4.5	1.1	13.3	
SR-19A	2/18/01	>50	87	<0.76	<1.5	<0.76	<0.76	2.1	10	13	3.2	28.3	
SR-20	2/18/01	>10	87	<0.76	<1.5	<0.76	<0.76	1.7	8.5	7.0	1.9	19.1	
SR-21	2/19/01	>10	85	<0.39	<0.79	<0.39	<0.39	0.85	4.8	4.3	0.79	10.7	
SR-21 DUP	2/19/01	<10	84	<0.20	<0.40	<0.20	<0.20	0.65	3.8	3.2	0.67	8.3	
SR-22	2/19/01	<10	88	<0.038	<0.076	<0.038	<0.038	0.089	0.55	0.52	0.14	1.3	
SR-23	2/19/01	<10	88	<0.38	<0.76	<0.38	<0.38	0.63	5.5	3.6	0.76	10.5	
SR-24	2/20/01	>50	88	<3.8	<7.6	<3.8	<3.8	6.4	21	22	<3.8	49.4	
SR-25	2/20/01	<10	85	<0.039	<0.079	<0.039	<0.039	0.087	0.48	0.37	0.099	1.0	
SR-26	2/21/01	<10	81	<0.081	<0.16	<0.081	<0.081	0.28	1.2	1.2	0.31	3.0	
SR-27	2/21/01	>50	84	<0.39	<0.80	<0.39	<0.39	0.66	4.7	3.7	1.0	10.1	
SR-28	2/21/01	>10	83	<0.40	<0.81	<0.40	<0.40	0.65	3.9	3.5	0.68	8.7	

Table 2. Analytical Results for Soil Samples Collected during the Implementation of Interim Measures at the Oxford Lake Softball Complex, Oxford, Alabama

Sample ID	Date Sampled	Screening Results	Dry Weight %	Polychlorinated Biphenyls (mg/kg dw)								Total PCBs
				USEPA Method 8082								
				Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268	
SR-29	2/21/01	>10	87	<0.19	<0.38	<0.19	<0.19	0.85	2.5	2.2	0.61	6.2
SR-30	2/27/01	>10	85	<0.39	<0.79	<0.39	<0.39	1.7	6.7	6.2	1.1	15.7
SR-32	3/6/01	<10	85	<0.16	<0.32	<0.16	<0.16	<0.16	1.5	1.2	0.22	2.9
SR-33	3/7/01	<10	86	<0.077	<0.16	<0.077	<0.077	<0.077	0.68	0.53	0.12	1.3
SR-34	3/7/01	<10	83	<0.20	<0.40	<0.20	<0.20	<0.20	2.4	1.6	0.38	4.4

FOOTNOTES:

mg/kg dw - milligrams per kilogram dry weight

< - Analyte was not detected at or above the indicated concentration

BDL - below detection limit

FIGURES



Quintard Avenue

Snow Creek

Recreation Drive

Softball Fields

Oxford Lake Softball Complex



Site Location Map

Solutia Inc.
Oxford, Alabama

NOTES

Oxford Lakes image provided by BBL, Inc.

SCALE

1:3600 (1" = 300')

Created by: MCG

Checked by: SJM

FILE

DATE

FIGURE

Q:\1\10062.apr\ySiteLoc Fig1.eps

24-Apr-2001

1

Soil Sample Locations Oxford Lake Complex

Solutia Inc.
Oxford, Alabama



FEATURES

- Sample Locations (labeled with name)

NOTES

Oxford Lake image provided by BBL, Inc.

Sample Locations and Results provided by
Genesis Project

SCALE

1:900 (1" = 75')



Created by: MCG/BSL

Checked by: SJM

FILE

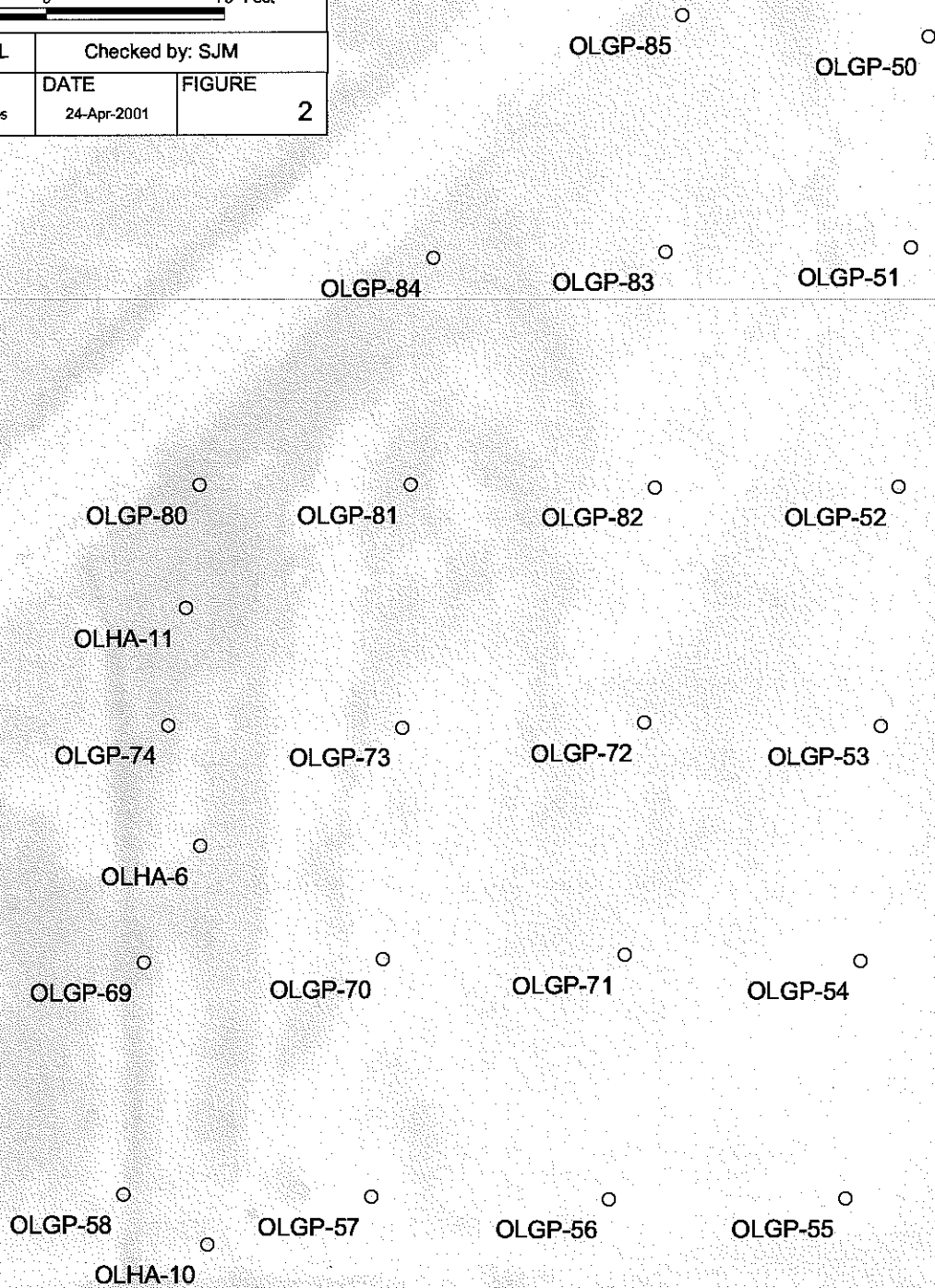
Q:\...0084 lytParkLot Park.eps

DATE

24-Apr-2001

FIGURE

2



**Results for Samples Taken
Less Than 0.5 Foot
Below Ground Surface**

*Based on Minimum Depth
Oxford, Alabama*

Immunoassay Samples

Classified according to detection level:

- Non-detections or < 1 ppm
- Detections > 1 ppm

Chemistry Samples

Classified according to detection level:

- BDL (below detection limit) or < 1 ppm
- 1 to 10 ppm
- 10 to 50 ppm

NOTES

Oxford Lake image provided by BBL, Inc.

Sample Locations and Results provided by
Genesis Project

Note: Immunoassay results are shown only if a chemistry result
does not exist for a particular location at the specified depth.

SCALE

1:900 (1" = 75')



Created by: BSL

Checked by: SJM

FILE

Q:\10084 - JytParkLot-01
= Park01.eps

DATE

24-Apr-2001

FIGURE

3



**Results for Samples Taken
Between 1 and 1.5 Feet
Below Ground Surface**

*Based on Minimum Depth
Oxford, Alabama*

Immunoassay Samples

Classified according to detection level:

- Non-detections or < 1 ppm
- Detections > 1 ppm

Chemistry Samples

Classified according to detection level:

- BDL (below detection limit) or < 1 ppm
- 1 to 10 ppm
- 10 to 50 ppm

NOTES

Oxford Lake image provided by BBL, Inc.

Sample Locations and Results provided by
Genesis Project

Note: Immunoassay results are shown only if a chemistry result
does not exist for a particular location at the specified depth.

SCALE

1:900 (1" = 75')

75 0 75 Feet

Created by: BSL

Checked by: SJM

FILE

Q:\10084 = lvtParkLot-02
= Park02.eps

DATE

24-Apr-2001

FIGURE

4



**Results for Samples Taken
Between 2 and 2.5 Feet
Below Ground Surface**

*Based on Minimum Depth
Oxford, Alabama*

Immunoassay Samples

Classified according to detection level:

- Non-detections or < 1 ppm
- Detections > 1 ppm

Chemistry Samples

Classified according to detection level:

- BDL (below detection limit) or < 1 ppm
- 1 to 10 ppm
- 10 to 50 ppm

NOTES

Oxford Lake image provided by BBL, Inc.

Sample Locations and Results provided by
Genesis Project

Note: Immunoassay results are shown only if a chemistry result
does not exist for a particular location at the specified depth.

SCALE

1:900 (1" = 75')

75 0 75 Feet

Created by: BSL

Checked by: SJM

FILE

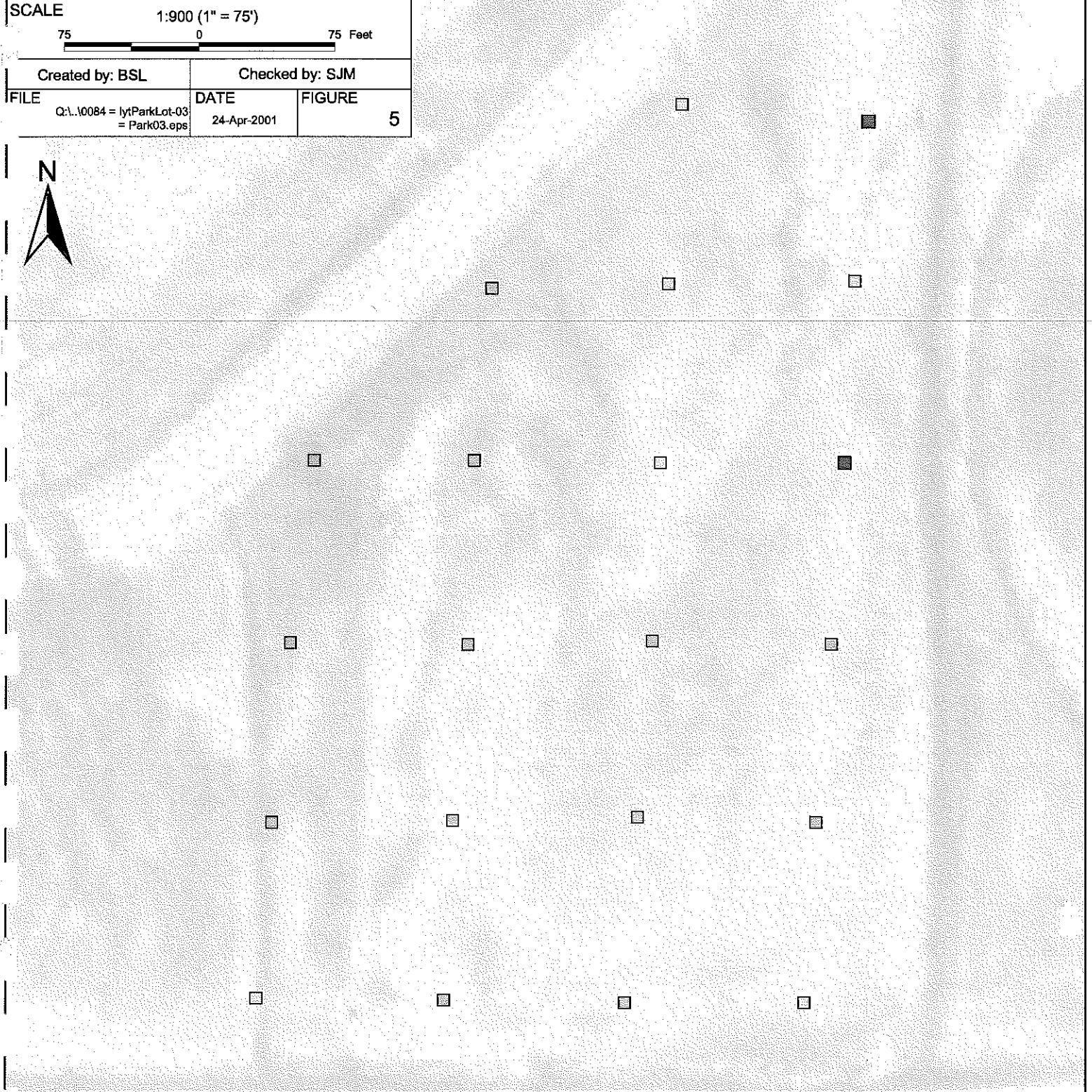
Q:\1.10084 = lytParkLot-03
= Park03.eps

DATE

24-Apr-2001

FIGURE

5



**Results for Samples Taken
Greater Than 2.5 Feet
Below Ground Surface**

Based on Minimum Depth
Oxford, Alabama

Immunoassay Samples

Classified according to detection level:

- Non-detections or < 1 ppm
- Detections > 1 ppm

Chemistry Samples

Classified according to detection level:

- BDL (below detection limit) or < 1 ppm
- 1 to 10 ppm
- 10 to 50 ppm

NOTES

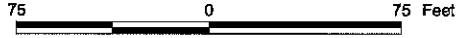
Oxford Lake image provided by BBL, Inc.

Sample Locations and Results provided by
Genesis Project

Note: Immunoassay results are shown only if a chemistry result
does not exist for a particular location at the specified depth.

SCALE

1:900 (1" = 75')



Created by: BSL

Checked by: SJM

FILE

Q:\1.0084 = IytParkLot-04
= Park04.eps

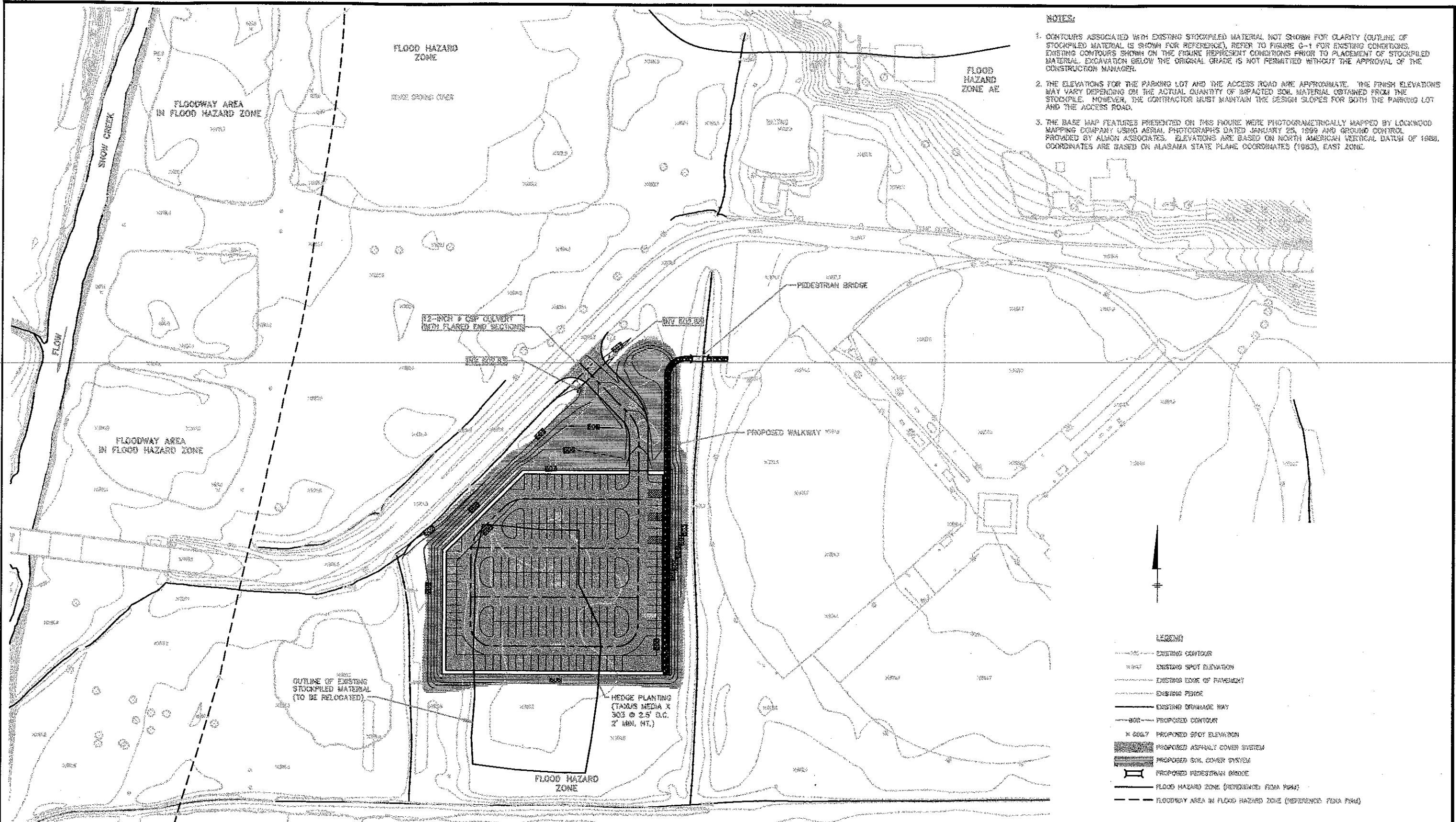
DATE

24-Apr-2001

FIGURE

6





- NOTES:**
1. CONTOURS ASSOCIATED WITH EXISTING STOCKPILED MATERIAL NOT SHOWN FOR CLARITY (OUTLINE OF STOCKPILED MATERIAL IS SHOWN FOR REFERENCE). REFER TO FIGURE G-1 FOR EXISTING CONDITIONS. EXISTING CONTOURS SHOWN ON THE FIGURE REPRESENT CONDITIONS PRIOR TO PLACEMENT OF STOCKPILED MATERIAL. EXCAVATION BELOW THE ORIGINAL GRADE IS NOT PERMITTED WITHOUT THE APPROVAL OF THE CONSTRUCTION MANAGER.
 2. THE ELEVATIONS FOR THE PARKING LOT AND THE ACCESS ROAD ARE APPROXIMATE. THE FINISH ELEVATIONS MAY VARY DEPENDING ON THE ACTUAL QUANTITY OF IMPACTED SOIL MATERIAL OBTAINED FROM THE STOCKPILE. HOWEVER, THE CONTRACTOR MUST MAINTAIN THE DESIGN SLOPES FOR BOTH THE PARKING LOT AND THE ACCESS ROAD.
 3. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE WERE PHOTOGRAMMETRICALLY MAPPED BY LOCKWOOD MAPPING COMPANY USING AERIAL PHOTOGRAPHS DATED JANUARY 25, 1999 AND GROUND CONTROL PROVIDED BY ALMON ASSOCIATES. ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. COORDINATES ARE BASED ON ALABAMA STATE PLANE COORDINATES (1983), EAST ZONE.

- LEGEND**
- EXISTING CONTOUR
 - EXISTING SPOT ELEVATION
 - EXISTING EDGE OF PAVEMENT
 - EXISTING FENCE
 - EXISTING DRAINAGE WAY
 - EXISTING DRIVEWAY
 - PROPOSED CONTOUR
 - PROPOSED SPOT ELEVATION
 - PROPOSED ASPHALT COVER SYSTEM
 - PROPOSED SOIL COVER SYSTEM
 - PROPOSED PEDESTRIAN BRIDGE
 - FLOOD HAZARD ZONE (REFERENCED FEMA FIRM)
 - FLOODWAY AREA IN FLOOD HAZARD ZONE (REFERENCED FEMA FIRM)

X: 10284X00, 10284X01.DWG
 L: 0N=*, OFF=REF
 P: STD-PCP/CONT-DJD
 4/18/01 SYR-54-GMS CDM KMD
 10284001/10284001.DWG



No.	Date	Revisions	Init

Project Mgr. A. Fowler
 Designed by M. Grovelling
 Drawn by G. Stowell
 Checked by J. Holden
 Prof. Eng. Edward Richard Lynch
 PE License 22310



SOLUTIONIA INC. • ANNISTON, AL.
 OXFORD LAKE SOFTBALL COMPLEX
PARKING AREA GENERAL ARRANGEMENT

File Number
 102.84.02F
 Date
 APRIL 2001
 Blasland, Bouck & Lee, Inc.
 Corporate Headquarters
 6723 Towpath Road
 Syracuse, NY 13214
 315-446-9120

APPENDIX A

Laboratory Analytical Results

APPENDIX A.1

Phase I/Phase II Characterization Results



LOG NO: S0-04175
 Received: 24 JUN 00
 Reported: 13 JUL 00

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Project: Solutia
 Sampled By: Client
 Code: 161400713
 Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
04175-6	HA-3 (12-18") N/A	06-23-00/05:27
04175-7	HA-4 (0-6") N/A	06-23-00/05:26
04175-8	HA-4 (12-18") N/A	06-23-00/05:30
04175-9	HA-5 (0-6") N/A	06-23-00/05:38
04175-10	HA-6 (0-6")	06-23-00/05:44

PARAMETER	04175-6	04175-7	04175-8	04175-9	04175-10
	N/A	N/A	N/A	N/A	
PCB's (8082)					
Aroclor-1016, ug/kg dw	<3800	<390	<3800	<1000	<430
Aroclor-1221, ug/kg dw	<7600	<800	<7600	<2100	<880
Aroclor-1232, ug/kg dw	<3800	<390	<3800	<1000	<430
Aroclor-1242, ug/kg dw	<3800	<390	<3800	<1000	<430
Aroclor-1248, ug/kg dw	5800P	3700	58000	2900P	3200P
Aroclor-1254, ug/kg dw	11000	6600	72000P	12000	6800
Aroclor-1260, ug/kg dw	11000	4200	49000	7700	5900
Aroclor 1268, ug/kg dw	6100	3700	41000	7600	5000
Surrogate - TCX	*F33	*F33	*F33	*F33	*F33
Dilution Factor	100	10	100	20	10
Prep Date	06.27.00	06.27.00	06.27.00	06.27.00	06.27.00
Analysis Date	07.13.00	07.12.00	07.13.00	07.13.00	07.12.00
Batch ID	06270	06270	06270	06270	06270
Percent Solids	88	84	88	63	76



LOG NO: S0-04175
Received: 24 JUN 00
Reported: 13 JUL 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Project: Solutia
Sampled By: Client
Code: 161400713
Page 4

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED		
04175-12	Method Blank			
04175-13	Lab Control Standard % Recovery			
04175-14	LCS Accuracy Control Limit (%R)			
PARAMETER		04175-12	04175-13	04175-14
PCB's (8082)				
Aroclor-1016, ug/kg dw		<33	73 %	34-138 %
Aroclor-1221, ug/kg dw		<67	---	---
Aroclor-1232, ug/kg dw		<33	---	---
Aroclor-1242, ug/kg dw		<33	---	---
Aroclor-1248, ug/kg dw		<33	---	---
Aroclor-1254, ug/kg dw		<33	---	---
Aroclor-1260, ug/kg dw		<33	79 %	39-138 %
Aroclor 1268, ug/kg dw		<33	---	---
Surrogate - TCX		59 %	70 %	---
Dilution Factor		1	1	---
Prep Date		06.27.00	06.27.00	---
Analysis Date		06.30.00	06.30.00	---
Batch ID		06270	06270	---



LOG NO: S0-04175
Received: 24 JUN 00
Reported: 13 JUL 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Project: Solutia
Sampled By: Client
Code: 161400713
Page 5

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/	TIME SAMPLED
04175-12	Method Blank		
04175-13	Lab Control Standard % Recovery		
04175-14	LCS Accuracy Control Limit (%R)		

PARAMETER	04175-12	04175-13	04175-14
-----------	----------	----------	----------

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III.

*F33 = Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.


Angie Stewart, Project Manager

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD



5102 LaRoche Avenue, Savannah, GA 31404 Phone: (912) 354-7858 Fax: (912) 352-0165
 2846 Industrial Plaza Drive, Tallahassee, FL 32301 Phone: (850) 878-3994 Fax: (850) 878-9504
 900 Lakeside Drive, Mobile, AL 36693 Phone: (334) 686-6633 Fax: (334) 666-6696
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE: **Solutia** PROJECT NO.: _____ PROJECT LOCATION (STATE): **AL**
 STL (LAB) PROJECT MANAGER: **A. Stewart** P.O. NUMBER: _____ CONTRACT NO.: _____
 CLIENT (SITE) PM: **Genesis Protect, Inc.** CLIENT PHONE: **770 319 7217** CLIENT FAX: **770 319 7219**
 CLIENT NAME: **MIKE PRICE** CLIENT EMAIL: _____
 CLIENT ADDRESS: _____

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX TYPE				REQUIRED ANALYSES	PAGE OF
			COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)		
6/23/00	0503	HA-1 (0-6")	X	X	X	X	1	
	0508	HA-1 (12-18")	X	X	X	X	1	
	0510	HA-2 (0-6")	X	X	X	X	1	
	0514	HA-2 (12-18")	X	X	X	X	1	
	0522	HA-3 (0-6")	X	X	X	X	1	
	0527	HA-3 (12-18")	X	X	X	X	1	
	0528	HA-4 (0-6")	X	X	X	X	1	
	0530	HA-4 (12-18")	X	X	X	X	1	
	0538	HA-5 (0-6")	X	X	X	X	1	
	0544	HA-6 (0-6")	X	X	X	X	1	
	0548	HA-7 (0-6")	X	X	X	X	1	

NUMBER OF CONTAINERS SUBMITTED: _____

STANDARD REPORT DELIVERY: _____ DATE DUE: **7/21/00**

EXPEDITED REPORT DELIVERY (SURCHARGE): _____ DATE DUE: _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: **1**

REMARKS: **Screened/Remarks**

RELINQUISHED BY: (SIGNATURE) _____ DATE: **6/23/00** TIME: **1508**

RECEIVED BY: (SIGNATURE) _____ DATE: _____ TIME: _____

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE) **J Swafford** DATE: **6/24/00** TIME: **11:15**

CUSTODY INTACT: SEAL NO. **5004175**

STL-SL LOG NO. **5004175**

LABORATORY REMARKS:





**Savannah
Laboratories**
a division of Severn Trent Laboratories, Inc.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165 • www.stlsavlab.com

LOG NO: S0-04327A
Received: 30 JUN 00
Reported: 14 JUL 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Project: Solutia
Sampled By: Client
Code: 102500714

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
04327A-1	HA-5 (12-18") N/A	06-29-00/05:29
04327A-2	HA-6 (12-18")	06-29-00/05:48
04327A-3	HA-7 (12-18") N/A	06-29-00/05:48
04327A-4	HA-8 (0-6") N/A	06-29-00/05:10
04327A-5	HA-9 (0-6") N/A	06-29-00/05:14

PARAMETER	04327A-1	04327A-2	04327A-3	04327A-4	04327A-5
	N/A		N/A	N/A	N/A
PCB's (8082)					
Aroclor-1016, ug/kg dw	<390	<40	<39	<390	<750
Aroclor-1221, ug/kg dw	<800	<82	<80	<790	<1500
Aroclor-1232, ug/kg dw	<390	<40	<39	<390	<750
Aroclor-1242, ug/kg dw	<390	<40	<39	<390	<750
Aroclor-1248, ug/kg dw	1600	160	<39	1000	1800P
Aroclor-1254, ug/kg dw	4300	250	<39	2600	7500
Aroclor-1260, ug/kg dw	4400	260	41	2500	5300
Aroclor 1268, ug/kg dw	4500	660	<39	2700	4800
Surrogate - TCX	*F33	50 %	50 %	*F33	*F33
Surrogate - DCB	*F33	365 %X	65 %	*F33	*F33
Dilution Factor	10	1	1	10	20
Prep Date	07.03.00	07.03.00	07.03.00	07.03.00	07.03.00
Analysis Date	07.12.00	07.10.00	07.10.00	07.12.00	07.12.00
Batch ID	0703Q	0703Q	0703Q	0703Q	0703Q
Percent Solids	84	82	84	85	88



LOG NO: S0-04327A
Received: 30 JUN 00
Reported: 14 JUL 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Project: Solutia
Sampled By: Client
Code: 102500714
Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
04327A-6	HA-10 (0-6")	06-29-00/05:11				
04327A-7	HA-11 (0-6")	06-29-00/05:15				
04327A-8	HA-12 (0-6") N/A	06-29-00/05:31				
04327A-9	HA-13 (0-6") N/A	06-29-00/05:29				
04327A-10	HA-14 (0-6") N/A	06-29-00/06:12				
PARAMETER	04327A-6	04327A-7	04327A-8 N/A	04327A-9 N/A	04327A-10 N/A	
PCB's (8082)						
Aroclor-1016, ug/kg dw	<410	<380	<36	<370	<35	
Aroclor-1221, ug/kg dw	<840	<780	<74	<750	<72	
Aroclor-1232, ug/kg dw	<410	<380	<36	<370	<35	
Aroclor-1242, ug/kg dw	<410	<380	<36	<370	<35	
Aroclor-1248, ug/kg dw	<410	<380	<36	<370	<35	
Aroclor-1254, ug/kg dw	3600	3500	<36	2900	<35	
Aroclor-1260, ug/kg dw	2600	2600	<36	2400	53	
Aroclor 1268, ug/kg dw	2500	2300	<36	1800	<35	
Surrogate - TCX	*F33	*F33	51 %	*F33	45 %	
Surrogate - DCB	*F33	*F33	47 %	*F33	72 %	
Dilution Factor	10	10	1	10	1	
Prep Date	07.03.00	07.03.00	07.03.00	07.03.00	07.03.00	
Analysis Date	07.12.00	07.12.00	07.10.00	07.12.00	07.10.00	
Batch ID	0703Q	0703Q	0703Q	0703Q	0703Q	
Percent Solids	80	86	91	89	93	



LOG NO: S0-04327A
Received: 30 JUN 00
Reported: 14 JUL 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Project: Solutia
Sampled By: Client
Code: 102500714
Page 5

REPORT OF RESULTS

LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

04327A-21 Method Blank
04327A-22 Lab Control Standard % Recovery
04327A-23 LCS Accuracy Control Limit (%R)

PARAMETER	04327A-21	04327A-22	04327A-23
PCB's (8082)			
Aroclor-1016, ug/kg dw	<33	61 %	45-134 %
Aroclor-1221, ug/kg dw	<67	---	---
Aroclor-1232, ug/kg dw	<33	---	---
Aroclor-1242, ug/kg dw	<33	---	---
Aroclor-1248, ug/kg dw	<33	---	---
Aroclor-1254, ug/kg dw	<33	---	---
Aroclor-1260, ug/kg dw	<33	88 %	41-144 %
Aroclor 1268, ug/kg dw	<33	---	---
Surrogate - TCX	65 %	70 %	---
Surrogate - DCB	70 %	82 %	---
Dilution Factor	1	1	---
Prep Date	07.03.00	07.03.00	---
Analysis Date	07.10.00	07.10.00	---
Batch ID	0703Q	0703Q	---

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III.

*F33 = Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

Angie Stewart, Project Manager

Serial Number **UT8209**

ORIGINAL

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD



5102 LaRoche Avenue, Savannah, GA 31404 Phone: (912) 354-7858 Fax: (912) 352-0165
 2846 Industrial Plaza Drive, Tallahassee, FL 32301 Phone: (850) 878-3994 Fax: (850) 878-9504
 300 Lakeside Drive, Mobile, AL 36683 Phone: (334) 666-6633 Fax: (334) 666-6696
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSES	PAGE	OF
STL (LAB) PROJECT MANAGER <i>Steward</i>	P.O. NUMBER	CONTRACT NO.	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)		1	2
CLIENT (SITE) PIM <i>Jocay Hopper</i>	CLIENT PHONE	CLIENT FAX	SOLID OR SEMISOLID			0
CLIENT NAME <i>Solutia</i>	CLIENT EMAIL		AQUEOUS (WATER)			
CLIENT ADDRESS			COMPOSITE (C) OR GRAB (G) INDICATE			
COMPANY CONTRACTING THIS WORK (if applicable): <i>Games's Project</i>						
DATE	TIME	SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS SUBMITTED	REMARKS	
6/29/00	0529	HA-5 (12-18")	G		Screen Levels	
	0548	HA-6 (12-18")			~50	
	0548	HA-7 (12-18")			<1	
	0510	HA-8 (0-6")			>1	
	0514	HA-9 (0-6")			~50	
	0511	HA-10 (0-6")			>1	
	0515	HA-11 (0-6")			>1	
	0531	HA-12 (0-6")			<1	
	0529	HA-13 (0-6")			>1	
	0612	HA-14 (0-3")			<1	
	0617	HA-15 (0-6")			>1	
6/29/00	0610	HA-16 (0-6")	G		<1	
RELINQUISHED BY: (SIGNATURE) <i>Swafford</i>	DATE 6/29/00	TIME 9:00	RELINQUISHED BY: (SIGNATURE) <i>Swafford</i>	DATE 6/29/00	TIME 1512	
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	

RUSH

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL-SL LOG NO.	LABORATORY REMARKS:
<i>F Swafford</i>	6/30/00	9:00	YES		5004327	

LABORATORY USE ONLY





LOG NO: S0-05600C
Received: 17 AUG 00
Reported: 29 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 12020103

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES					DATE/ TIME SAMPLED
05600C-11	OLGP-50 (24-30")					08-10-00/10:50
05600C-12	OLGP-51 (24-30")					08-10-00/11:05
05600C-13	OLGP-63 (0-6") N/A					08-10-00/16:44
05600C-14	OLGP-63 (12-18") N/A					08-10-00/16:44
05600C-15	OLGP-62 (12-18") DUP N/A					08-10-00/16:30
PARAMETER	05600C-11	05600C-12	05600C-13	05600C-14	05600C-15	
PCB's (8082)			N/A	N/A	N/A	
Aroclor-1016, ug/kg dw	<230Y	<47	<200	<410	<900	
Aroclor-1221, ug/kg dw	<460	<96	<400	<830	<1800	
Aroclor-1232, ug/kg dw	<230	<47	<200	<410	<900	
Aroclor-1242, ug/kg dw	<230	<47	<200	<410	<900	
Aroclor-1248, ug/kg dw	<230	740	2100	17000	29000	
Aroclor-1254, ug/kg dw	6600	1000	3600	18000	38000	
Aroclor-1260, ug/kg dw	5700	630	2000	7300	22000	
Aroclor 1268, ug/kg dw	1000	120	490	1300	4900	
Surrogate - TCX	48 %	35 %	34 %	*F33	*F33	
Surrogate - DCB	*F36	96 %	*F36	*F33	*F33	
Dilution Factor	5	1	5	10	25	
Prep Date	08.21.00	08.21.00	08.21.00	08.21.00	08.21.00	
Analysis Date	09.10.00	09.10.00	09.10.00	09.10.00	09.13.00	
Batch ID	0821NN	0821NN	0821NN	0821NN	0821NN	
Percent Solids	72	70	83	81	92	



LOG NO: S0-05600C
 Received: 17 AUG 00
 Reported: 29 SEP 00

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 12020103
 Page 5

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600C-21	OLGP-66 (12-18") N/A	08-10-00/17:24
05600C-22	OLGP-67 (0-6") N/A	08-11-00/07:28
05600C-23	OLGP-67 (12-18") N/A	08-11-00/07:28
05600C-24	OLGP-69 (0-6")	08-11-00/08:00
05600C-25	OLGP-50 (34-40")	08-10-00/10:50

PARAMETER	05600C-21	05600C-22	05600C-23	05600C-24	05600C-25
	N/A	N/A	N/A		
PCB's (8082)					
Aroclor-1016, ug/kg dw	<2200	<430	<2000	<46	<46
Aroclor-1221, ug/kg dw	<4500	<870	<4100	<93	<94
Aroclor-1232, ug/kg dw	<2200	<430	<2000	<46	<46
Aroclor-1242, ug/kg dw	<2200	<430	<2000	<46	<46
Aroclor-1248, ug/kg dw	41000	5500	49000	910	330
Aroclor-1254, ug/kg dw	58000	10000	61000	1700	510
Aroclor-1260, ug/kg dw	83000	5600	89000	1300	350
Aroclor 1268, ug/kg dw	7200	1500	8700	<46	110P
Surrogate - TCX	*F33	*F33	*F33	26 %	18 %
Surrogate - DCB	*F33	*F33	*F33	148 %	*F36
Dilution Factor	50	10	50	1	1
Prep Date	08.21.00	08.21.00	08.21.00	08.22.00	08.22.00
Analysis Date	09.13.00	09.19.00	09.13.00	09.10.00	09.10.00
Batch ID	0821NN	0821NN	0821NN	0822P	0822S
Percent Solids	75	77	82	72	71



LOG NO: S0-05600C
Received: 17 AUG 00
Reported: 29 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 12020103

REPORT OF RESULTS

Page 6

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
05600C-26	OLGP-51 (42-48")	08-10-00/11:05				
05600C-27	OLGP-70 (0-6")	08-11-00/08:20				
05600C-28	OLGP-70 (12-18")	08-11-00/08:20				
05600C-29	OLGP-71 (0-6")	08-11-00/08:34				
05600C-30	OLGP-71 (12-18")	08-11-00/08:34				
PARAMETER	05600C-26	05600C-27	05600C-28	05600C-29	05600C-30	
PCB's (8082)						
Aroclor-1016, ug/kg dw	<39	<38	<41	<38	<36	
Aroclor-1221, ug/kg dw	<80	<78	<84	<76	<74	
Aroclor-1232, ug/kg dw	<39	<38	<41	<38	<36	
Aroclor-1242, ug/kg dw	<39	<38	<41	<38	<36	
Aroclor-1248, ug/kg dw	62	<38	<41	<38	66	
Aroclor-1254, ug/kg dw	140	<38	<41	<38	110	
Aroclor-1260, ug/kg dw	120	<38	<41	<38	52	
Aroclor 1268, ug/kg dw	61	<38	<41	<38	<36	
Surrogate - TCX	37 %	26 %	48 %	36 %	27 %	
Surrogate - DCB	*F36	32 %	57 %	43 %	39 %	
Dilution Factor	1	1	1	1	1	
Prep Date	08.22.00	08.22.00	08.22.00	08.22.00	08.22.00	
Analysis Date	09.10.00	09.10.00	09.10.00	09.10.00	09.10.00	
Batch ID	0822S	0822P	0822P	0822P	0822P	
Percent Solids	84	86	80	88	91	



LOG NO: S0-05600C
Received: 17 AUG 00
Reported: 29 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 12020103

REPORT OF RESULTS

Page 7

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600C-31	OLGP-72 (0-6")	08-11-00/08:44
05600C-32	OLGP-72 (12-18")	08-11-00/08:44
05600C-33	OLGP-73 (0-6")	08-11-00/09:05
05600C-34	OLGP-73 (12-18")	08-11-00/09:05
05600C-35	OLGP-74 (0-6")	08-11-00/09:17

PARAMETER	05600C-31	05600C-32	05600C-33	05600C-34	05600C-35
PCB's (8082)					
Aroclor-1016, ug/kg dw	<36	<36	<38	<39	<41
Aroclor-1221, ug/kg dw	<73	<73	<78	<79	<83
Aroclor-1232, ug/kg dw	<36	<36	<38	<39	<41
Aroclor-1242, ug/kg dw	<36	<36	<38	<39	<41
Aroclor-1248, ug/kg dw	180	<36	<38	<39	820
Aroclor-1254, ug/kg dw	280	43	<38	<39	1900
Aroclor-1260, ug/kg dw	200	<36	<38	<39	1800
Aroclor 1268, ug/kg dw	<36	<36	<38	<39	350
Surrogate - TCX	35 %	44 %	29 %	28 %	27 %
Surrogate - DCB	78 %	48 %	40 %	39 %	*F36
Dilution Factor	1	1	1	1	1
Prep Date	08.22.00	08.22.00	08.22.00	08.22.00	08.22.00
Analysis Date	09.10.00	09.10.00	09.10.00	09.10.00	09.10.00
Batch ID	0822P	0822P	0822P	0822P	0822P
Percent Solids	92	92	86	85	81



LOG NO: S0-05600C
 Received: 17 AUG 00
 Reported: 29 SEP 00

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 12020103
 Page 8

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600C-36	OLGP-74 (12-18")	08-11-00/09:17
05600C-37	OLGP-69 (12-18")	08-11-00/08:00
05600C-38	OLGP-80 (12-18")	08-11-00/10:41
05600C-39	OLGP-81 (0-6")	08-11-00/11:40
05600C-40	OLGP-81 (12-18")	08-11-00/11:40

PARAMETER	05600C-36	05600C-37	05600C-38	05600C-39	05600C-40
PCB's (8082)					
Aroclor-1016, ug/kg dw	<41	<42	<41	<39	<39
Aroclor-1221, ug/kg dw	<84	<86	<84	<79	<79
Aroclor-1232, ug/kg dw	<41	<42	<41	<39	<39
Aroclor-1242, ug/kg dw	<41	<42	<41	<39	<39
Aroclor-1248, ug/kg dw	<41	200P	240	<39	<39
Aroclor-1254, ug/kg dw	340	530	360	120	87
Aroclor-1260, ug/kg dw	250	430	350	85	45
Aroclor 1268, ug/kg dw	86	110	160	<39	<39
Surrogate - TCX	24 %	31 %	26 %	40 %	28 %
Surrogate - DCB	67 %	*F36	*F36	55 %	42 %
Dilution Factor	1	1	1	1	1
Prep Date	08.23.00	08.23.00	08.23.00	08.23.00	08.23.00
Analysis Date	09.11.00	09.11.00	09.11.00	09.11.00	09.11.00
Batch ID	0823Q	0823Q	0823Q	0823Q	0823Q
Percent Solids	80	78	80	85	85



LOG NO: S0-05600C
Received: 17 AUG 00
Reported: 29 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 12020103

REPORT OF RESULTS

Page 9

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
05600C-41	OLGP-82 (0-6")	08-11-00/12:00				
05600C-42	OLGP-82 (12-18")	08-11-00/12:00				
05600C-43	OLGP-83 (0-6")	08-11-00/12:10				
05600C-44	OLGP-83 (12-18")	08-11-00/12:10				
05600C-45	OLGP-84 (0-6")	08-11-00/12:21				
PARAMETER	05600C-41	05600C-42	05600C-43	05600C-44	05600C-45	
PCB's (8082)						
Aroclor-1016, ug/kg dw	<37	<38	<36	<40	<440	
Aroclor-1221, ug/kg dw	<75	<78	<74	<81	<890	
Aroclor-1232, ug/kg dw	<37	<38	<36	<40	<440	
Aroclor-1242, ug/kg dw	<37	<38	<36	<40	<440	
Aroclor-1248, ug/kg dw	150P	<38	1300	680	<440	
Aroclor-1254, ug/kg dw	390	<38	1600	810	7300	
Aroclor-1260, ug/kg dw	240	<38	910	530	4800	
Aroclor 1268, ug/kg dw	49P	<38	200	210	1400P	
Surrogate - TCX	32 %	45 %	140 %	42 %	*F33	
Surrogate - DCB	68 %	58 %	133 %	100 %	*F33	
Dilution Factor	1	1	1	1	10	
Prep Date	08.23.00	08.23.00	08.23.00	08.23.00	08.23.00	
Analysis Date	09.11.00	09.11.00	09.11.00	09.11.00	09.12.00	
Batch ID	0823Q	0823Q	0823Q	0823Q	0823Q	
Percent Solids	89	86	91	83	75	



LOG NO: S0-05600C
Received: 17 AUG 00
Reported: 29 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 12020103
Page 10

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES					DATE/ TIME SAMPLED
05600C-46	OLGP-84 (12-18")					08-11-00/12:21
05600C-47	OLGP-85 (0-6")					08-11-00/12:37
05600C-48	OLGP-85 (12-18")					08-11-00/12:37
05600C-49	OLGP-75 (0-6") N/A					08-11-00/09:17
05600C-50	OLGP-75 (0-6") DUP N/A					08-11-00/09:17
PARAMETER	05600C-46	05600C-47	05600C-48	05600C-49	05600C-50	
PCB's (8082)				N/A	N/A	
Aroclor-1016, ug/kg dw	<870	<42	<440	<200	<42	
Aroclor-1221, ug/kg dw	<1800	<85	<890	<410	<85	
Aroclor-1232, ug/kg dw	<870	<42	<440	<200	<42	
Aroclor-1242, ug/kg dw	<870	<42	<440	<200	<42	
Aroclor-1248, ug/kg dw	<870	310	4900	1300	550	
Aroclor-1254, ug/kg dw	12000	510	6600	2900	1000	
Aroclor-1260, ug/kg dw	7300	320	4000	2300	770	
Aroclor 1268, ug/kg dw	<870	66	1500	380P	120P	
Surrogate - TCX	*F33	18 %	*F33	41 %	28 %	
Surrogate - DCB	*F33	44 %	*F33	*F36	90 %	
Dilution Factor	20	1	10	5	1	
Prep Date	08.23.00	08.23.00	08.23.00	08.23.00	08.23.00	
Analysis Date	09.12.00	09.13.00	09.12.00	09.12.00	09.13.00	
Batch ID	0823Q	0823Q	0823Q	0823Q	0823Q	
Percent Solids	76	79	75	82	79	



LOG NO: S0-05600C
 Received: 17 AUG 00
 Reported: 29 SEP 00

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 12020103
 Page 12

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES					DATE/ TIME SAMPLED
05600C-56	OLGP 78 (0-6") N/A					08-11-00/10:08
05600C-57	OLGP 78 (12-18") N/A					08-11-00/10:08
05600C-58	OLGP 79 (0-6") N/A					08-11-00/10:28
05600C-59	OLGP 79 (12-18") N/A					08-11-00/10:28
05600C-60	OLGP-80 (0-6")					08-11-00/10:41
PARAMETER	05600C-56	05600C-57	05600C-58	05600C-59	05600C-60	
	N/A	N/A	N/A	N/A		
PCB's (8082)						
Aroclor-1016, ug/kg dw	<41	<84	<40	<76	<45	
Aroclor-1221, ug/kg dw	<84	<170	<81	<150	<92	
Aroclor-1232, ug/kg dw	<41	<84	<40	<76	<45	
Aroclor-1242, ug/kg dw	<41	<84	<40	<76	<45	
Aroclor-1248, ug/kg dw	900P	2700	250P	2200	730	
Aroclor-1254, ug/kg dw	2000	3800	930	3600	1400	
Aroclor-1260, ug/kg dw	1600	2200P	780	2100	1200	
Aroclor 1268, ug/kg dw	260P	670	170	530	240	
Surrogate - TCX	25 %	26 %	20 %	26 %	31 %	
Surrogate - DCB	148 %	*F36	90 %	*F36	148 %	
Dilution Factor	1	2	1	2	1	
Prep Date	08.23.00	08.23.00	08.23.00	08.23.00	08.23.00	
Analysis Date	09.11.00	09.12.00	09.12.00	09.12.00	09.12.00	
Batch ID	0823R	0823R	0823R	0823R	0823R	
Percent Solids	80	79	83	87	73	



LOG NO: S0-05600C
Received: 17 AUG 00
Reported: 29 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 12020103
Page 13

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600C-61	OLGP-80 (12-18") DUP	08-11-00/10:44
05600C-62	OLGP-84 (0-6") DUP	08-11-00/12:21

PARAMETER	05600C-61	05600C-62
PCB's (8082)		
Aroclor-1016, ug/kg dw	<39	<160
Aroclor-1221, ug/kg dw	<79	<330
Aroclor-1232, ug/kg dw	<39	<160
Aroclor-1242, ug/kg dw	<39	<160
Aroclor-1248, ug/kg dw	160	3600
Aroclor-1254, ug/kg dw	300	6600
Aroclor-1260, ug/kg dw	300	3800
Aroclor 1268, ug/kg dw	74P	1100
Surrogate - TCX	21 %	32 %
Surrogate - DCB	125 %	*F36
Dilution Factor	1	4
Prep Date	08.23.00	08.23.00
Analysis Date	09.11.00	09.19.00
Batch ID	0823R	0823R
Percent Solids	85	81



LOG NO: S0-05600C
Received: 17 AUG 00
Reported: 29 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 12020103
Page 14

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID				
05600C-63	Method Blank				
05600C-64	Lab Control Standard % Recovery				
05600C-65	LCS Accuracy Control Limit (%R)				
05600C-66	Method Blank				
05600C-67	Lab Control Standard % Recovery				
PARAMETER	05600C-63	05600C-64	05600C-65	05600C-66	05600C-67
PCB's (8082)					
Aroclor-1016, ug/kg dw	<33	61 %	34-138 %	<33	54 %
Aroclor-1221, ug/kg dw	<67	---	---	<67	---
Aroclor-1232, ug/kg dw	<33	---	---	<33	---
Aroclor-1242, ug/kg dw	<33	---	---	<33	---
Aroclor-1248, ug/kg dw	<33	---	---	<33	---
Aroclor-1254, ug/kg dw	<33	---	---	<33	---
Aroclor-1260, ug/kg dw	<33	64 %	39-138 %	<33	58 %
Aroclor 1268, ug/kg dw	<33	---	---	<33	---
Surrogate - TCX	59 %	56 %	30-150 %	43 %	51 %
Surrogate - DCB	82 %	70 %	30-150 %	54 %	65 %
Dilution Factor	1	1	---	1	1
Prep Date	08.21.00	08.21.00	---	08.21.00	08.21.00
Analysis Date	09.10.00	09.10.00	---	09.10.00	09.10.00
Batch ID	0821R	0821R	---	0821NN	0821NN



LOG NO: S0-05600C
 Received: 17 AUG 00
 Reported: 29 SEP 00

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 12020103
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID				
05600C-68	Method Blank				
05600C-69	Lab Control Standard % Recovery				
05600C-70	Method Blank				
05600C-71	Lab Control Standard % Recovery				
05600C-72	Method Blank				
PARAMETER	05600C-68	05600C-69	05600C-70	05600C-71	05600C-72
PCB's (8082)					
Aroclor-1016, ug/kg dw	<33	70 %	<33	48 %	<33
Aroclor-1221, ug/kg dw	<67	---	<67	---	<67
Aroclor-1232, ug/kg dw	<33	---	<33	---	<33
Aroclor-1242, ug/kg dw	<33	---	<33	---	<33
Aroclor-1248, ug/kg dw	<33	---	<33	---	<33
Aroclor-1254, ug/kg dw	<33	---	<33	---	<33
Aroclor-1260, ug/kg dw	<33	73 %	<33	52 %	<33
Aroclor 1268, ug/kg dw	<33	---	<33	---	<33
Surrogate - TCX	50 %	58 %	42 %	49 %	56 %
Surrogate - DCB	76 %	76 %	50 %	58 %	70 %
Dilution Factor	1	1	1	1	1
Prep Date	08.23.00	08.23.00	08.23.00	08.23.00	08.22.00
Analysis Date	09.11.00	09.11.00	09.11.00	09.11.00	09.09.00
Batch ID	0823Q	0823Q	0823R	0823R	0822S



LOG NO: S0-05600C
Received: 17 AUG 00
Reported: 29 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 12020103
Page 16

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID		
05600C-73	Lab Control Standard % Recovery		
05600C-74	Method Blank		
05600C-75	Lab Control Standard % Recovery		
PARAMETER	05600C-73	05600C-74	05600C-75
PCB's (8082)			
Aroclor-1016,	61 %	<33	79 %
Aroclor-1260,	64 %	<33	82 %
Surrogate - TCX	56 %	76 %	76 %
Surrogate - DCB	76 %	82 %	88 %
Aroclor-1221, ug/kg dw	---	<67	---
Aroclor-1232, ug/kg dw	---	<33	---
Aroclor-1242, ug/kg dw	---	<33	---
Aroclor-1248, ug/kg dw	---	<33	---
Aroclor-1254, ug/kg dw	---	<33	---
Aroclor 1268, ug/kg dw	---	<33	---
Dilution Factor	1	1	1
Prep Date	08.22.00	08.22.00	08.22.00
Analysis Date	09.09.00	09.09.00	09.09.00
Batch ID	0822S	0822P	0822P



LOG NO: S0-05600C
Received: 17 AUG 00
Reported: 29 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 12020103
Page 17

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID
PARAMETER	

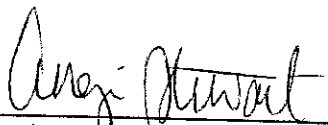
Methods: EPA SW-846, Update III.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

*F36 = Surrogate recovery was outside established limits due to a coeluting matrix interference in the sample.

Y = Multippeak pattern present that does not match the laboratory reference standards and therefore was not quantified.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.


Angie Stewart, Project Manager

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD



Phone: (912) 354-7856 Fax: (912) 352-0165
 Phone: (912) 354-7856 Fax: (912) 352-0165
 Phone: (950) 878-3994 Fax: (850) 878-9504
 Phone: (334) 866-6633 Fax: (334) 666-6696
 Phone: (913) 885-2027 Fax: (813) 885-7049

5102 LaRoche Avenue, Savannah, GA 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

PROJECT REFERENCE: Oxford Lakes

STL (LAB) PROJECT MANAGER: Angie Stewart

CLIENT (SITE) PMI: Jerry Hepper

CLIENT NAME: Solutia

CLIENT ADDRESS: _____

PROJECT NO.: _____

P.O. NUMBER: _____

CLIENT PHONE: _____

CLIENT EMAIL: _____

PROJECT LOCATION (STATE): _____

CONTRACT NO.: _____

CLIENT FAX: _____

COMPANY CONTRACTING THIS WORK (if applicable): _____

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX TYPE				REQUIRED ANALYSES	PAGE # OF
			COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)		
8/4/00	16:30	OLCP-38 (24-30")	✓				125 ml amber	6
8/4/00	16:50	OLCP-39 (24-30")	✓					0
8/4/00	07:15	OLCP-40 (24-30")	✓					
8/4/00	07:25	OLCP-41 (24-30")	✓					
8/4/00	07:45	OLCP-42 (24-30")	✓					
8/4/00	09:00	OLCP-43 (24-30")	✓					
8/4/00	08:50	OLCP-44 (24-30")	✓					
8/4/00	09:00	OLCP-45 (24-30")	✓					
8/4/00	09:00	OLCP-47 (24-30")	✓					
8/4/00	10:10	OLCP-48 (24-30")	✓					
8/4/00	08:50	OLCP-50 (24-30")	✓					
8/4/00	11:05	OLCP-51 (24-30")	✓					

RELINQUISHED BY: (SIGNATURE) _____ DATE _____ TIME _____

RECEIVED BY: (SIGNATURE) _____ DATE _____ TIME _____

RELINQUISHED BY: (SIGNATURE) _____ DATE _____ TIME _____

RECEIVED BY: (SIGNATURE) _____ DATE _____ TIME _____

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE) F. Swafford DATE 8/17/00 TIME 8:55

CUSTODY INTACT: YES NO

CUSTODY SEAL NO. 50056000

STL-SL LOG NO. _____

LABORATORY REMARKS: _____

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD



6102 LarRoche Avenue, Savannah, GA 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSES	PAGE	OF
Oxford Lakes Stewart					2	6
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC.)	STANDARD REPORT DELIVERY		
CLIENT (SITE) P.M. Jerry Hooper	CLIENT PHONE	CLIENT FAX	AIR	DATE DUE		
CLIENT NAME Solutia	CLIENT EMAIL		SOLID OR SEMISOLID	EXPEDITED REPORT DELIVERY (SURCHARGE)		
CLIENT ADDRESS			AQUEOUS (WATER)	DATE DUE		
COMPANY CONTRACTING THIS WORK (if applicable): Genesis Project, Inc			COMPOSITE (C) OR GRAB (G) INDICATE	NUMBER OF COOLERS SUBMITTED PER SHIPMENT:		
SAMPLE	SAMPLE IDENTIFICATION					
DATE	TIME					
8-10-00	1644	066P-63 (0-6")				
8-10-00	1644	066P-63 (12-18")				
8-10-00	1630	066P-62 (0-6") Dup				
8-10-00	1703	066P-64 (0-6")				
8-10-00	1703	066P-64 (12-18")				
8-10-00	1712	066P-65 (12-18")				
8-10-00	1712	066P-65 (0-6")				
8-10-00	1724	066P-66 (0-6")				
8-10-00	1724	066P-66 (12-18")				
8-11-00	0728	066P-67 (0-6")				
8-11-00	0728	066P-67 (12-18")				
8-11-00	0800	066P-69 (0-6")				
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE) *J. Swafford* DATE *8/17/00* TIME *8:55* YES NO

CUSTODY INTACT

CUSTODY SEAL NO. *5005600 C*

STL-SL LOG NO. *5005600 C*

LABORATORY REMARKS:

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD



5102 LaRoche Avenue, Savannah, GA 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

Phone: (912) 354-7858 Fax: (912) 352-0165
 Phone: (850) 878-3994 Fax: (850) 878-9504
 Phone: (334) 666-6633 Fax: (334) 666-6696
 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE: Oxford Lakes PROJECT NO.: _____ MATRIX TYPE: _____

STL (LAB) PROJECT MANAGER: Alexie Stewart P.O. NUMBER: _____

CLIENT (SITE) PM: Jerry Hopper CLIENT PHONE: _____

CLIENT NAME: Solutia CLIENT EMAIL: _____

CLIENT ADDRESS: _____

PROJECT LOCATION (STATE): _____ CONTRACT NO.: _____

REQUIRED ANALYSES: _____

STANDARD REPORT DELIVERY: _____ DATE DUE: _____

EXPEDITED REPORT DELIVERY (SURCHARGE): _____ DATE DUE: _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: _____

COMPANY CONTRACTING THIS WORK (if applicable): _____

SAMPLE DATE	TIME	SAMPLE IDENTIFICATION	MATRIX TYPE				REMARKS
			COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	
8/10/00	1050	OLCP-50 (31-40")			✓		
8/10/00	1105	OLCP-51 (42-48")			✓		
8/10/00	0820	OLCP-70 (0-6")			✓		
8/10/00	0830	OLCP-70 (12-18")			✓		
8/10/00	0834	OLCP-71 (0-6")			✓		
8/10/00	0834	OLCP-71 (12-18")			✓		
8/10/00	0844	OLCP-72 (0-6")			✓		
8/10/00	0844	OLCP-72 (12-18")			✓		
8/10/00	0905	OLCP-73 (0-6")			✓		
8/10/00	0905	OLCP-73 (12-18")			✓		
8/10/00	0917	OLCP-74 (0-6")			✓		
8/10/00	0917	OLCP-74 (12-18")			✓		

RELINQUISHED BY: (SIGNATURE) _____ DATE _____ TIME _____

RECEIVED BY: (SIGNATURE) _____ DATE _____ TIME _____

RELINQUISHED BY: (SIGNATURE) _____ DATE _____ TIME _____

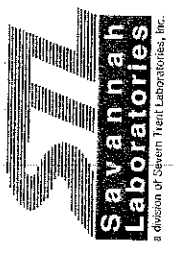
RECEIVED BY: (SIGNATURE) _____ DATE _____ TIME _____

RECEIVED FOR LABORATORY BY: (SIGNATURE) L Swafford DATE 8/17/00 TIME 8:55

CUSTODY INTACT: YES SEAL NO. _____

STL-SL LOG NO. 5005600C LABORATORY REMARKS: _____

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD



5102 LaRoche Avenue, Savannah, GA 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

Phone: (912) 354-7858 Fax: (912) 352-0165
 Phone: (950) 878-3994 Fax: (950) 878-9504
 Phone: (934) 566-6633 Fax: (334) 566-6696
 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSES	PAGE	OF			
Oxford Lakes		FL			4	8			
A. Stewart									
Jerry Hopper									
Solutia									
COMPANY CONTRACTING THIS WORK (if applicable): Genesis Project									
SAMPLE	DATE	TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	ACQUEOUS (WATER)	SOLID OR SEMISOLID	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
8/11/00	0800		OLGP-69 (12-18")	G	✓				
	1041		OLGP-80 (12-18")	G	✓				
	1140		OLGP-81 (0-6")	G	✓				
	1140		OLGP-81 (12-18")	G	✓				
	1200		OLGP-82 (0-6")	G	✓				
	1200		OLGP-82 (12-18")	G	✓				
	1210		OLGP-83 (0-6")	G	✓				
	1210		OLGP-83 (12-18")	G	✓				
	1221		OLGP-84 (0-6")	G	✓				
	1221		OLGP-84 (12-18")	G	✓				
	1237		OLGP-85 (0-6")	G	✓				
	1237		OLGP-85 (12-18")	G	✓				
RELINQUISHED BY: (SIGNATURE)				DATE	TIME	RELINQUISHED BY: (SIGNATURE)		DATE	TIME
[Signature]				8/11/00	1700	[Signature]		8/11/00	1700
RECEIVED BY: (SIGNATURE)				DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME
[Signature]				8/11/00		[Signature]			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL-SL LOG NO.	LABORATORY REMARKS:
[Signature]	8/11/00	8:55	YES	NO	5005600C	

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD



5102 LaRoche Avenue, Savannah, GA 31404
 2946 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

Phone: (912) 354-7658 Fax: (912) 352-0165
 Phone: (950) 878-3994 Fax: (950) 878-8504
 Phone: (334) 866-6633 Fax: (334) 666-6696
 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSES	PAGE	OF
OK FOR LABS		AL			5	
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	STANDARD REPORT DELIVERY		
Stewart			AIR	DATE DUE		
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX	SOLID OR SEMISOLID	EXPEDITED REPORT DELIVERY (SURCHARGE)		
Jeffrey Hopper			AQUEOUS (WATER)	DATE DUE		
CLIENT NAME	CLIENT EMAIL		COMPOSITE (C) OR GRAB (G) INDICATE	NUMBER OF COOLERS SUBMITTED PER SHIPMENT:		
Solutia						
CLIENT ADDRESS	SAMPLE IDENTIFICATION					
	DATE	TIME				
	8/14/00	0917	OLGR-75 (0-6")			
		0917	OLGR-75 (0-6") dup			
	8/14/00	0917	OLGR-75 (12-18")			
		0950	OLGR-76 (0-6")			
		0950	OLGR-76 (12-18")			
		1000	OLGR-77 (0-6")			
		1000	OLGR-77 (12-18")			
		1008	OLGR-78 (0-6")			
		1008	OLGR-78 (12-18")			
		1020	OLGR-79 (0-6")			
		1028	OLGR-79 (12-18")			
8/11/00	1041		OLGR-80 (0-6")			
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	
			Robert J. Hopper	8/16/00	1700	
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL-SL LOG NO.	LABORATORY REMARKS:
J. Swafford	8/17/00	8:55	<input checked="" type="checkbox"/>	EB	80056002	



LOG NO: S0-05498
Received: 12 AUG 00
Reported: 26 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Contract No.: S7219
Project: OXFORD LAKES/SOLUTIA
Sampled By: Client
Code: 164500926

REPORT OF RESULTS

Page 11

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES					DATE/ TIME SAMPLED
05498-51	OLGP-49 (0-6") N/A					08-10-00/10:30
05498-52	OLGP-49 (12-18") N/A					08-10-00/10:30
05498-53	OLGP-50 (12-18")					08-10-00/10:50
05498-54	OLGP-52 (12-18")					08-10-00/11:26
05498-55	OLGP-52 (12-18" DUP)					08-10-00/11:26
PARAMETER:	05498-51	05498-52	05498-53	05498-54	05498-55	
	N/A	N/A				
PCB's (8082)						
Aroclor-1016, ug/kg dw	<190	<390	<200	<180	<180	
Aroclor-1221, ug/kg dw	<380	<790	<400	<370	<370	
Aroclor-1232, ug/kg dw	<190	<390	<200	<180	<180	
Aroclor-1242, ug/kg dw	<190	<390	<200	<180	<180	
Aroclor-1248, ug/kg dw	1600	7400	1800	2200	2400	
Aroclor-1254, ug/kg dw	3800	13000	4600	4600	4800	
Aroclor-1260, ug/kg dw	2700	8800	2900	3000	2800	
Aroclor 1268, ug/kg dw	500P	1500P	610P	490P	500P	
Surrogate - TCX	41 %	*F33	46 %	50 %	52 %	
Surrogate - DCB	*F36	*F33	*F36	*F36	*F36	
Dilution Factor	5	10	5	5	5	
Prep Date	08.19.00	08.19.00	08.19.00	08.19.00	08.19.00	
Analysis Date	09.21.00	09.21.00	09.21.00	09.21.00	09.21.00	
Batch ID	0819P	0819P	0819P	0819P	0819P	
Percent Solids	87	85	84	91	91	



LOG NO: S0-05498
 Received: 12 AUG 00
 Reported: 26 SEP 00

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Contract No.: S7219
 Project: OXFORD LAKES/SOLUTIA
 Sampled By: Client
 Code: 164500926
 Page 12

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05498-56	OLGP-57 (0-6")	08-10-00/14:50
05498-57	OLGP-26 (24-30") N/A	08-09-00/11:45
05498-58	OLGP-27 (24-32") N/A	08-09-00/11:52
05498-59	OLGP-28 (24-30") N/A	08-09-00/12:20
05498-60	OLGP-29 (24-30") N/A	08-09-00/12:30

PARAMETER	05498-56	05498-57	05498-58	05498-59	05498-60
		N/A	N/A	N/A	N/A
PCB's (8082)					
Aroclor-1016, ug/kg dw	<38	<39	<38	<1000	<42
Aroclor-1221, ug/kg dw	<76	<80	<76	<2100	<85
Aroclor-1232, ug/kg dw	<38	<39	<38	<1000	<42
Aroclor-1242, ug/kg dw	<38	<39	<38	<1000	<42
Aroclor-1248, ug/kg dw	<38	540	570	5400	720
Aroclor-1254, ug/kg dw	120	1200	1300	15000	1700
Aroclor-1260, ug/kg dw	83	760	970	14000	1200
Aroclor 1268, ug/kg dw	<38	200	500P	2800P	310P
Surrogate - TCX	33 %	32 %	32 %	*F33	25 %
Surrogate - DCB	46 %	*F36	*F36	*F33	*F36
Dilution Factor	1	1	1	25	1
Prep Date	08.19.00	08.19.00	08.19.00	08.19.00	08.19.00
Analysis Date	09.21.00	09.21.00	09.21.00	09.21.00	09.21.00
Batch ID	0819P	0819P	0819P	0819P	0819P
Percent Solids	88	84	88	78	79



LOG NO: S0-05498
 Received: 12 AUG 00
 Reported: 26 SEP 00

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Contract No.: S7219
 Project: OXFORD LAKES/SOLUTIA
 Sampled By: Client
 Code: 164500926
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05498-61	OLGP-30 (24-30") N/A	08-09-00/14:00
05498-62	OLGP-58 (0-6")	08-10-00/15:10
05498-63	OLGP-58 (12-18")	08-10-00/15:10
05498-64	OLGP-59 (0-6") N/A	08-10-00/15:50
05498-65	OLGP-59 (12-18") N/A	08-10-00/15:50

PARAMETER	05498-61	05498-62	05498-63	05498-64	05498-65
	N/A			N/A	N/A
PCB's (8082)					
Aroclor-1016, ug/kg dw	<400	<84	<40	<200	<200
Aroclor-1221, ug/kg dw	<820	<170	<82	<400	<410
Aroclor-1232, ug/kg dw	<400	<84	<40	<200	<200
Aroclor-1242, ug/kg dw	<400	<84	<40	<200	<200
Aroclor-1248, ug/kg dw	7800	900P	450	2300P	7700
Aroclor-1254, ug/kg dw	11000	2400	580	4700	8000
Aroclor-1260, ug/kg dw	11000	1600	480	3100	6000
Aroclor 1268, ug/kg dw	1700	440	170	770	1000
Surrogate - TCX	*F33	38 %	31 %	38 %	36 %
Surrogate - DCB	*F33	*F36	85 %	*F36	*F36
Dilution Factor	10	2	1	5	5
Prep Date	08.21.00	08.21.00	08.21.00	08.21.00	08.17.00
Analysis Date	09.06.00	09.06.00	09.02.00	09.06.00	08.23.00
Batch ID	0821R	0821R	0821R	0821R	0817S
Percent Solids	82	79	82	83	82



LOG NO: S0-05498
Received: 12 AUG 00
Reported: 26 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Contract No.: S7219
Project: OXFORD LAKES/SOLUTIONIA
Sampled By: Client
Code: 164500926
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/	TIME	SAMPLED
05498-72	Method Blank			
05498-73	Lab Control Standard % Recovery			
05498-74	LCS Accuracy Control Limit (%R)			
05498-75	Method Blank			
05498-76	Lab Control Standard % Recovery			

PARAMETER	05498-72	05498-73	05498-74	05498-75	05498-76
PCB's (8082)					
Aroclor-1016, ug/kg dw	<33	76 %	34-138 %	<33	45 %
Aroclor-1221, ug/kg dw	<67	---	---	<67	---
Aroclor-1232, ug/kg dw	<33	---	---	<33	---
Aroclor-1242, ug/kg dw	<33	---	---	<33	---
Aroclor-1248, ug/kg dw	<33	---	---	<33	---
Aroclor-1254, ug/kg dw	<33	---	---	<33	---
Aroclor-1260, ug/kg dw	<33	85 %	39-138 %	<33	52 %
Aroclor 1268, ug/kg dw	<33	---	---	<33	---
Surrogate - TCX	58 %	59 %	30-150 %	37 %	33 %
Surrogate - DCB	70 %	70 %	30-150 %	48 %	47 %
Dilution Factor	1	1	---	1	1
Prep Date	08.17.00	08.17.00	---	08.19.00	08.19.00
Analysis Date	08.20.00	08.20.00	---	08.25.00	08.25.00
Batch ID	0817S	0817S	---	08190	08190



LOG NO: S0-05498
Received: 12 AUG 00
Reported: 26 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Contract No.: S7219
Project: OXFORD LAKES/SOLUTIA
Sampled By: Client
Code: 164500926
Page 17

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
05498-77	Method Blank	
05498-78	Lab Control Standard % Recovery	
05498-79	Method Blank	
05498-80	Lab Control Standard % Recovery	
05498-81	Method Blank	

PARAMETER	05498-77	05498-78	05498-79	05498-80	05498-81
PCB's (8082)					
Aroclor-1016, ug/kg dw	<33	72 %	<33	79 %	<33
Aroclor-1221, ug/kg dw	<67	---	<67	---	<67
Aroclor-1232, ug/kg dw	<33	---	<33	---	<33
Aroclor-1242, ug/kg dw	<33	---	<33	---	<33
Aroclor-1248, ug/kg dw	<33	---	<33	---	<33
Aroclor-1254, ug/kg dw	<33	---	<33	---	<33
Aroclor-1260, ug/kg dw	<33	72 %	<33	82 %	<33
Aroclor 1268, ug/kg dw	<33	---	<33	---	<33
Surrogate - TCX	66 %	64 %	45 %	59 %	44 %
Surrogate - DCB	77 %	74 %	70 %	70 %	70 %
Dilution Factor	1	1	1	1	1
Prep Date	08.21.00	08.21.00	08.19.00	08.19.00	08.19.00
Analysis Date	08.30.00	08.30.00	08.25.00	08.25.00	08.25.00
Batch ID	0821R	0821R	0819P	0819P	0819N



LOG NO: S0-05498
Received: 12 AUG 00
Reported: 26 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Contract No.: S7219
Project: OXFORD LAKES/SOLUTIA
Sampled By: Client
Code: 165600926
Page 18

REPORT OF RESULTS

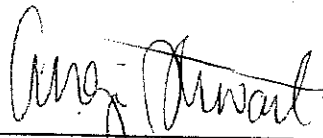
LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
05498-82	Lab Control Standard % Recovery	
PARAMETER	05498-82	
PCB's (8082)		
Aroclor-1016,	54 %	
Aroclor-1260,	70 %	
Surrogate - TCX	41 %	
Surrogate - DCB	70 %	
Dilution Factor	1	
Prep Date	08.19.00	
Analysis Date	08.25.00	
Batch ID	0819N	

Methods: EPA SW-846, Update III.

*F33 = Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

*F36 = Surrogate recovery was outside established limits due to coeluting matrix interference in the sample.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.


Angie Stewart, Project Manager



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRoche Avenue, Savannah, GA, 31404
 2846 Industrial Plaza Drive, Tallahassee, FL, 32301
 900 Lakeside Drive, Mobile, AL, 36693
 8712 Benjamin Rd., Suite 100, Tampa, FL, 33634

Phone: (912) 354-7858
 Phone: (912) 352-0165
 Phone: (850) 870-3994
 Phone: (334) 866-6633
 Phone: (813) 885-7427
 Fax: (850) 878-9504
 Fax: (334) 866-6696
 Fax: (813) 885-7043

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSES	PAGE OF
Solvent Extraction			NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)		5 OF 6
Project Manager: Angie Stewart			SOLID OR SEMISOLID		
Client Name: Mike Price			AQUEOUS (WATER)		
Client Address: General Contractor			COMPOSITE (C) OR GRAB (G) INDICATE		
Client Phone: 770-319-7217					
Client Email:					
Client Fax: 770-319-7215					
COMPANY CONTRACTING THIS WORK (if applicable):					
NUMBER OF CONTAINERS SUBMITTED					
REMARKS					
DATE	TIME	SAMPLE IDENTIFICATION			
8/10/00	1010	OLGP-48 (0-6")			
	1010	OLGP-48 (12-18")			
	1030	OLGP-49 (0-6")			
	1030	OLGP-49 (12-18")			
	1050	OLGP-50 (12-18")			
	1126	OLGP-52 (12-18")			
	1124	OLGP-52 (12-18" DCP)			
	1450	OLGP-57 (0-6")			
	1145	OLGP-26 (2A-30")			
	1152	OLGP-27 (2A-32")			
	1220	OLGP-28 (2A-30")			
	1270	OLGP-29 (2A-30")			
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	8/12/00	10:01	Received by: [Signature]	8/10/00	10:50
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
	8/12/00	10:01			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: [Signature]

DATE: 8/12/00

TIME: 10:01

CUSTODY INTACT: YES () NO ()

CUSTODY SEAL NO. []

STL-SL LOG NO. []

LABORATORY REMARKS: []

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD



5102 LaRoche Avenue, Savannah, GA 31404 Phone: (912) 354-7858 Fax: (912) 352-0165
 2846 Industrial Plaza Drive, Tallahassee, FL 32301 Phone: (904) 878-3994 Fax: (904) 878-9504
 900 Lakeside Drive, Mobile, AL 36693 Phone: (334) 666-6633 Fax: (334) 666-6696
 6712 Benjamin Rd., Suite 100, Tarpon, FL 33634 Phone: (813) 845-7427 Fax: (813) 885-7049

PROJECT REFERENCE: Solutia - Oxford Lake PROJECT NO.: _____ PROJECT LOCATION (STATE): AL OF 6 PAGE 6

STL (LAB) PROJECT MANAGER: Stewart P.O. NUMBER: _____ CONTRACT NO.: _____

CLIENT (SITE) PM: Mike Price CLIENT PHONE: 770 319 7217 CLIENT FAX: 770 319 7219

CLIENT NAME: Genex Process, Inc CLIENT EMAIL: _____

CLIENT ADDRESS: _____

COMPANY CONTRACTING THIS WORK (if applicable): _____

SAMPLE DATE	TIME	SAMPLE IDENTIFICATION	MATRIX TYPE				REQUIRED ANALYSES	PAGE	OF	REMARKS
			COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)				
8/9/00	1400	OLGP-30 (24-20")	/	/	/	/				
8/10/00	1510	OLGP-58 (0-6")	/	/	/	/				
8/10/00	1510	OLGP-58 (12-18")	/	/	/	/				
8/10/00	1550	OLGP-59 (0-6")	/	/	/	/				
8/10/00	1550	OLGP-59 (12-18")	/	/	/	/				
8/10/00	1600	OLGP-60 (0-6")	/	/	/	/				
8/10/00	1622	OLGP-61 (12-18")	/	/	/	/				
8/10/00	1650	OLGP-60 (12-18")	/	/	/	/				
8/10/00	1622	OLGP-61 (0-6")	/	/	/	/				
8/10/00	1630	OLGP-62 (0-6")	/	/	/	/				
8/10/00	1630	OLGP-62 (12-18")	/	/	/	/				
RELINQUISHED BY: (SIGNATURE) <u>[Signature]</u>			RELINQUISHED BY: (SIGNATURE)				DATE	TIME	DATE	TIME
RECEIVED BY: (SIGNATURE) <u>[Signature]</u>			RECEIVED BY: (SIGNATURE)				DATE	TIME	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE) _____ DATE: 8/12/00 TIME: 10:01

CUSTODY INTACT: YES (YES/NO)

CUSTODY SEAL NO. _____ STL-SL LOG NO. _____ LABORATORY REMARKS: _____





LOG NO: S0-05600A
 Received: 17 AUG 00
 Reported: 02 OCT 00

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 15430103

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600A-1	OLGP-58 (42-48")	08-10-00/15:10
05600A-2	OLGP-59 (24-30") N/A	08-10-00/15:50
05600A-3	OLGP-59 (42-48") N/A	08-10-00/15:50
05600A-4	OLGP-60 (24-30") N/A	08-10-00/16:00
05600A-5	OLGP-60 (42-48") N/A	08-10-00/16:00

PARAMETER	05600A-1	05600A-2	05600A-3	05600A-4	05600A-5
PCB's (8082)		N/A	N/A	N/A	N/A
Aroclor-1016, ug/kg dw	<39	<39	<40	<400	<1000
Aroclor-1221, ug/kg dw	<79	<80	<81	<820	<2000
Aroclor-1232, ug/kg dw	<39	<39	<40	<400	<1000
Aroclor-1242, ug/kg dw	<39	<39	<40	<400	<1000
Aroclor-1248, ug/kg dw	<39	<39	<40	4300	<1000
Aroclor-1254, ug/kg dw	<39	<39	42	6800	<1000
Aroclor-1260, ug/kg dw	<39	<39	<40	5000	<1000
Aroclor 1268, ug/kg dw	<39	<39	<40	1200	<1000
Surrogate - TCX	22 %	20 %	25 %	*F33	*F33
Surrogate - DCB	34 %	34 %	38 %	*F33	*F33
Dilution Factor	1	1	1	10	25
Prep Date	08.21.00	08.21.00	08.21.00	09.21.00	08.21.00
Analysis Date	09.22.00	09.12.00	09.12.00	09.13.00	09.12.00
Batch ID	0821S	0821S	0821S	0821S	0821S
Percent Solids	85	84	83	82	82



LOG NO: S0-05600A
 Received: 17 AUG 00
 Reported: 02 OCT 00

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 15430103
 Page 5

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600A-21	OLGP-58 (24-30")	08-10-00/18:10
05600A-22	OLGP-6 (42-48") N/A	08-08-00/16:54
05600A-23	OLGP-7 (42-48") N/A	08-08-00/17:15
05600A-24	OLGP-8 (42-48") N/A	08-08-00/17:27

PARAMETER	05600A-21	05600A-22 N/A	05600A-23 N/A	05600A-24 N/A
PCB's (8082)				
Aroclor-1016, ug/kg dw	<130	<120	<120	<40
Aroclor-1221, ug/kg dw	<260	<240	<240	<81
Aroclor-1232, ug/kg dw	<130	<120	<120	<40
Aroclor-1242, ug/kg dw	<130	<120	<120	<40
Aroclor-1248, ug/kg dw	2900	<120	300	90P
Aroclor-1254, ug/kg dw	3200	<120	370	210
Aroclor-1260, ug/kg dw	2500	<120	250	210
Aroclor 1268, ug/kg dw	430	<120	<120	<40
Surrogate - TCX	37 %	20 %	30 %	18 %X
Surrogate - DCB	128 %	44 %	37 %	28 %X
Dilution Factor	1	1	1	1
Prep Date	08.21.00	08.19.00	08.19.00	08.19.00
Analysis Date	08.29.00	08.29.00	08.29.00	09.01.00
Batch ID	0821R	0819Q	0819Q	0819Q
Percent Solids	77	85	84	83



LOG NO: S0-05600A
Received: 17 AUG 00
Reported: 02 OCT 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 15430103
Page 13

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/	TIME	SAMPLED
05600A-54	Method Blank			
05600A-55	Lab Control Standard % Recovery			
05600A-56	LCS Accuracy Control Limit (%R)			
05600A-57	Method Blank			
05600A-58	Lab Control Standard % Recovery			

PARAMETER	05600A-54	05600A-55	05600A-56	05600A-57	05600A-58
PCB's (8082)					
Aroclor-1016, ug/kg dw	<33	49 %	34-138 %	<33	72 %
Aroclor-1221, ug/kg dw	<67	---	---	<67	---
Aroclor-1232, ug/kg dw	<33	---	---	<33	---
Aroclor-1242, ug/kg dw	<33	---	---	<33	---
Aroclor-1248, ug/kg dw	<33	---	---	<33	---
Aroclor-1254, ug/kg dw	<33	---	---	<33	---
Aroclor-1260, ug/kg dw	<33	58 %	39-138 %	<33	74 %
Aroclor 1268, ug/kg dw	<33	---	---	<33	---
Surrogate - TCX	50 %	38 %	30-150 %	66 %	64 %
Surrogate - DCB	60 %	58 %	30-150 %	76 %	74 %
Dilution Factor	1	1	---	1	1
Prep Date	08.19.00	08.19.00	---	08.21.00	08.21.00
Analysis Date	08.30.00	08.30.00	---	08.30.00	08.30.00
Batch ID	0819Q	0819Q	0819Q	0821R	0821R



LOG NO: S0-05600A
Received: 17 AUG 00
Reported: 02 OCT 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 15430103

REPORT OF RESULTS

Page 14

DATE/

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID TIME SAMPLED	
05600A-59	Method Blank	
05600A-60	Lab Control Standard % Recovery	
PARAMETER	05600A-59	05600A-60
PCB's (8082)		
Aroclor-1016, ug/kg dw	<33	39 %
Aroclor-1221, ug/kg dw	<67	---
Aroclor-1232, ug/kg dw	<33	---
Aroclor-1242, ug/kg dw	<33	---
Aroclor-1248, ug/kg dw	<33	---
Aroclor-1254, ug/kg dw	<33	---
Aroclor-1260, ug/kg dw	<33	45 %
Aroclor 1268, ug/kg dw	<33	---
Surrogate - TCX	38 %	29 %
Surrogate - DCB	54 %	48 %
Dilution Factor	1	1
Prep Date	08.21.00	08.21.00
Analysis Date	09.12.00	09.12.00
Batch ID	0821S	0821S



LOG NO: S0-05600A
Received: 17 AUG 00
Reported: 02 OCT 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 15430103
Page 15

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
-----	-----	-----
-----	-----	-----

PARAMETER

Methods: EPA SW-846, Update III.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

*F36 = Surrogate recovery was outside established limits due to a coeluting matrix interference in the sample.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.

Angie Stewart, Project Manager



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRoche Avenue, Savannah, GA, 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36683
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

Phone: (912) 354-7958 Fax: (912) 352-0165
 Phone: (850) 878-3994 Fax: (850) 878-9504
 Phone: (334) 666-6633 Fax: (334) 666-6696
 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE OXFORD LAKES		PROJECT NO.	PROJECT LOCATION (STATE) AL	MATRIX TYPE	REQUIRED ANALYSES		PAGE 1 OF 5
STL (LAB) PROJECT MANAGER A Stewart		P.O. NUMBER	CONTRACT NO.	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)			STANDARD REPORT DELIVERY
CLIENT (SITE) PM MIKE PRICE		CLIENT PHONE 770 347 217	CLIENT FAX 770 347 219	SOLID OR SEMISOLID			DATE DUE
CLIENT NAME		CLIENT EMAIL		AQUEOUS (WATER)			EXPEDITED REPORT DELIVERY (SURCHARGE)
CLIENT ADDRESS				COMPOSITE (C) OR GRAB (G) INDICATE			DATE DUE
COMPANY CONTRACTING THIS WORK (if applicable):							
SAMPLE DATE		SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS SUBMITTED		REMARKS	
8/10/00	1510	OLGR-58 (42-48")		1			
	1550	OLGR-59 (24-30")		1			
	1550	OLGR-59 (42-48")		1			
	1600	OLGR-60 (24-30")		1			
	1600	OLGR-60 (42-48")		1			
	1622	OLGR-61 (24-30")		1			
	1622	OLGR-61 (42-48")		1			
	1630	OLGR-62 (24-30")		1			
	1630	OLGR-62 (32-38")		1			
	1644	OLGR-63 (24-30")		1			
	1644	OLGR-63 (42-48")		1			
	1703	OLGR-64 (24-30")		1			
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE
<i>[Signature]</i>	8/4/00		<i>[Signature]</i>	8/16/00	1446		
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE
<i>[Signature]</i>	8/17/00		<i>[Signature]</i>				

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL-SL LOG NO.	LABORATORY REMARKS:
<i>[Signature]</i>	8/17/00	8:55	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5005600	

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD



Phone: (912) 364-7658 Fax: (912) 352-0165
 Phone: (912) 364-7658 Fax: (912) 352-0165
 Phone: (912) 364-7658 Fax: (912) 352-0165
 Phone: (912) 364-7658 Fax: (912) 352-0165

5102 LaRoche Avenue, Savannah, GA, 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36683
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

PROJECT REFERENCE: **oxford lakes**

STL (LAB) PROJECT MANAGER: **Devoart**

CLIENT (SITE) PM: **Nike Piro**

CLIENT NAME: **Genovis Tracet, Inc**

CLIENT ADDRESS: _____

PROJECT NO.: _____

P.O. NUMBER: _____

CLIENT PHONE: **7703197217**

CLIENT FAX: **7703197219**

PROJECT LOCATION (STATE): **AL**

CONTRACT NO.: _____

MATRIX TYPE: _____

REQUIRED ANALYSES: _____

PAGE **2** OF **5**

STANDARD REPORT DELIVERY: _____

DATE DUE: _____

EXPEDITED REPORT DELIVERY (SURCHARGE): _____

DATE DUE: _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: _____

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX TYPE			REMARKS
			COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	
8/10/00	1703	OLGR-64 (36-42")		/		
1712		OLGR-65 (24-30")		/		
1712		OLGR-65 (30-36")		/		
1724		OLGR-66 (24-30")		/		
1724		OLGR-66 (42-48")		/		
8/11/00	0751	OLGR-68 (6-6")		/		
8/11/00	0751	OLGR-68 (6-6") DUP		/		
8/11/00	0751	OLGR-68 (12-18")		/		
8/10/00	1810	OLGR-58 (24-30")		/		
8/9/00	1654	OLGR-6 (42-48")		/		
8/9/00	1715	OLGR-7 (42-48")		/		
8/9/00	1727	OLGR-8 (42-48")		/		

RELINQUISHED BY: (SIGNATURE) _____ DATE: 8/16/00 TIME: 1446

RECEIVED BY: (SIGNATURE) _____ DATE: _____ TIME: _____

RELINQUISHED BY: (SIGNATURE) _____ DATE: _____ TIME: _____

RECEIVED BY: (SIGNATURE) _____ DATE: _____ TIME: _____

LABORATORY USE ONLY

STL-SL LOG NO. 5005600

CUSTODY INTACT: YES

CUSTODY SEAL NO. NO

LABORATORY REMARKS:





LOG NO: S0-05600
Received: 17 AUG 00
Reported: 29 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 09300103

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600-1	OLGP-57 (32-38")	08-10-00/14:50
05600-2	OLGP-57 (24-30")	08-10-00/14:50
05600-3	OLGP-56 (24-30")	08-10-00/14:37
05600-4	OLGP-56 (34-40")	08-10-00/14:37
05600-5	OLGP-55 (24-30")	08-10-00/12:10

PARAMETER	05600-1	05600-2	05600-3	05600-4	05600-5
PCB's (8082)					
Aroclor-1016, ug/kg dw	<460	<76	<41	<45	<450
Aroclor-1221, ug/kg dw	<930	<150	<84	<92	<920
Aroclor-1232, ug/kg dw	<460	<76	<41	<45	<450
Aroclor-1242, ug/kg dw	<460	<76	<41	<45	<450
Aroclor-1248, ug/kg dw	12000	<76	<41	190P	1900
Aroclor-1254, ug/kg dw	15000	<76	<41	800	3400
Aroclor-1260, ug/kg dw	8400	<76	<41	700	2000
Aroclor 1268, ug/kg dw	<460	<76	<41	<45	<450
Surrogate - TCX	*F33	29 %	32 %	25 %	*F33
Surrogate - DCB	*F33	38 %	52 %	139 %	*F33
Dilution Factor	10	2	1	1	10
Prep Date	08.22.00	08.22.00	08.22.00	08.22.00	08.22.00
Analysis Date	09.20.00	09.20.00	09.09.00	09.09.00	09.20.00
Batch ID	0822S	0822S	0822S	0822S	0822S
Percent Solids	72	87	80	73	73



LOG NO: S0-05600
Received: 17 AUG 00
Reported: 29 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 09300103
Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600-6	OLGP-55 (33-39")	08-10-00/12:10
05600-7	OLGP-54 (24-30")	08-10-00/11:54
05600-8	OLGP-54 (42-48")	08-10-00/11:54
05600-9	OLGP-53 (24-30")	08-10-00/11:40
05600-10	OLGP-53 (32-38")	08-10-00/11:40

PARAMETER	05600-6	05600-7	05600-8	05600-9	05600-10
PCB's (8082)					
Aroclor-1016, ug/kg dw	<41	<38	<44	<52	<46
Aroclor-1221, ug/kg dw	<83	<76	<89	<100	<94
Aroclor-1232, ug/kg dw	<41	<38	<44	<52	<46
Aroclor-1242, ug/kg dw	<41	<38	<44	<52	700
Aroclor-1248, ug/kg dw	<41	<38	57P	<52	<46
Aroclor-1254, ug/kg dw	110	<38	180	73	730
Aroclor-1260, ug/kg dw	100	<38	200	31P	760
Aroclor 1268, ug/kg dw	<41	<38	88	<52	140
Surrogate - TCX	37 %	28 %	34 %	26 %	16 %
Surrogate - DCB	100 %	36 %	164 %	33 %	91 %
Dilution Factor	1	1	1	1	1
Prep Date	08.22.00	08.22.00	08.22.00	08.22.00	08.22.00
Analysis Date	09.09.00	09.09.00	09.09.00	09.09.00	09.09.00
Batch ID	0822S	0822S	0822S	0822S	0822S
Percent Solids	81	88	75	64	71



5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165 • www.stlsavlab.com

LOG NO: S0-05600
Received: 17 AUG 00
Reported: 29 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 09300103

Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600-11	OLGP-52 (24-30")	08-10-00/11:26
05600-12	OLGP-52 (42-48")	08-10-00/11:26
05600-12-RE	OLGP-52 (42-48")	08-10-00/11:26

PARAMETER	05600-11	05600-12	05600-12-RE
PCB's (8082)			
Aroclor-1016, ug/kg dw	<440	<40	<40
Aroclor-1221, ug/kg dw	<890	<82	<82
Aroclor-1232, ug/kg dw	<440	<40	<40
Aroclor-1242, ug/kg dw	2200P	<40	<40
Aroclor-1248, ug/kg dw	<440	<40	<40
Aroclor-1254, ug/kg dw	4900P	<40	<40
Aroclor-1260, ug/kg dw	3300P	<40	<40
Aroclor 1268, ug/kg dw	<440	<40	<40
Surrogate - TCX	*F33	23 %X	34 %
Surrogate - DCB	*F33	26 %X	42 %
Dilution Factor	10	1	1
Prep Date	08.22.00	08.22.00	09.20.00
Analysis Date	09.20.00	09.09.00	09.25.00
Batch ID	0822S	0822S	09200
Percent Solids	75	82	82



LOG NO: S0-05600
Received: 17 AUG 00
Reported: 29 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 09300103

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
05600-13	Method Blank	
05600-14	Lab Control Standard % Recovery	
05600-15	LCS Accuracy Control Limit (%R)	

PARAMETER	05600-13	05600-14	05600-15
PCB's (8082)			
Aroclor-1016, ug/kg dw	<33	61 %	34-138 %
Aroclor-1221, ug/kg dw	<67	---	---
Aroclor-1232, ug/kg dw	<33	---	---
Aroclor-1242, ug/kg dw	<33	---	---
Aroclor-1248, ug/kg dw	<33	---	---
Aroclor-1254, ug/kg dw	<33	---	---
Aroclor-1260, ug/kg dw	<33	64 %	39-138 %
Aroclor 1268, ug/kg dw	<33	---	---
Surrogate - TCX	55 %	56 %	30-150 %
Surrogate - DCB	65 %	65 %	30-150 %
Dilution Factor	1	1	---
Prep Date	08.22.00	08.22.00	---
Analysis Date	09.09.00	09.09.00	---
Batch ID	0822S	0822S	---



LOG NO: S0-05600
Received: 17 AUG 00
Reported: 29 SEP 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 09300103
Page 5

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED

PARAMETER

Methods: EPA SW-846, Update III.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

X = Due to low surrogate recoveries, the sample was reextracted and reanalyzed. Both sets of data are provided.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.

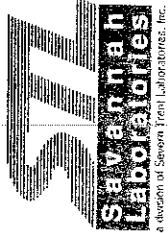
Angie Stewart, Project Manager

This portion can be removed for Recipient's records.
8-16-00 FedEx Tracking Number 813828007170
Jerry Hopper Phone 256 231-8447
SOLUTIONIA INC 5005600
702 CLYDESDALE AVE
ANNISTON State AL ZIP 36201
Internal Billing Reference 7143-ANN 93585

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8-16-00 FedEx Tracking Number 813828007207
Jerry Hopper Phone 256 231-8447
SOLUTIONIA INC 5005600
702 CLYDESDALE AVE
ANNISTON State AL ZIP 36201
Internal Billing Reference 7143-ANN 93585

This portion can be removed for Recipient's records.
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Jerry Hopper Phone 256 231-8447
SOLUTIONIA INC 5005600
702 CLYDESDALE AVE
ANNISTON State AL ZIP 36201
Internal Billing Reference 7143-ANN 93585

This portion can be removed for Recipient's records.
8-16-00 FedEx Tracking Number 813828007192
Jerry Hopper Phone 256 231-8447
SOLUTIONIA INC 5005600
702 CLYDESDALE AVE
ANNISTON State AL ZIP 36201
Internal Billing Reference 7143-ANN 93585



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRoche Avenue, Savannah, GA, 31404
 2846 Industrial Plaza Drive, Tallahassee, FL, 32301
 900 Lakeside Drive, Mobile, AL 36683
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

Phone: (912) 354-7958 Fax: (912) 352-0165
 Phone: (850) 878-3994 Fax: (850) 878-9504
 Phone: (334) 686-6633 Fax: (334) 686-6896
 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE		PROJECT NO.		PROJECT LOCATION (STATE)		MATRIX TYPE		REQUIRED ANALYSES		PAGE		OF					
OXFORD LAKES		P.O. NUMBER		CONTRACT NO.		NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)				STANDARD REPORT DELIVERY		1					
Angie Stewart		CLIENT PHONE		CLIENT FAX		SOLID OR SEMISOLID				DATE DUE		2					
JERRY HOPPER		CLIENT EMAIL				AQUEOUS (WATER)				EXPEDITED REPORT DELIVERY (SURCHARGE)		0					
Solivia						COMPOSITE (C) OR GRAB (G) INDICATE				DATE DUE							
CLIENT ADDRESS										NUMBER OF COOLERS SUBMITTED PER SHIPMENT:							
COMPANY CONTRACTING THIS WORK (if applicable):		SAMPLE IDENTIFICATION		DATE		TIME		NUMBER OF CONTAINERS SUBMITTED		REMARKS							
Savannah Project		DATE		TIME													
8/10/00	1450	OLGP-57	(32-38")					1									
	1450	OLGP-57	(24-30")					1									
	1437	OLGP-56	(24-30")					1									
	1437	OLGP-56	(34-40")					1									
	1210	OLGP-55	(24-30")					1									
	1210	OLGP-55	(33-39")					1									
	1154	OLGP-54	(24-30")					1									
	1154	OLGP-54	(42-48")					1									
	1140	OLGP-53	(24-30")					1									
	1140	OLGP-53	(32-38")					1									
	1126	OLGP-52	(24-30")					1									
8/10/00	1126	OLGP-52	(42-48")					1									
RELINQUISHED BY: (SIGNATURE)		DATE		TIME		RELINQUISHED BY: (SIGNATURE)		DATE		TIME		RELINQUISHED BY: (SIGNATURE)		DATE		TIME	
[Signature]		8/17/00		8:55		[Signature]		8/16/00		1700		[Signature]					
RECEIVED BY: (SIGNATURE)		DATE		TIME		RECEIVED BY: (SIGNATURE)		DATE		TIME		RECEIVED BY: (SIGNATURE)		DATE		TIME	
[Signature]		8/17/00		8:55		[Signature]						[Signature]					

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL-SL LOG NO.	LABORATORY REMARKS:
[Signature]	8/17/00	8:55	YES	5005600		

ORIGINAL





LOG NO: S0-05600B
 Received: 17 AUG 00
 Reported: 03 OCT 00

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 12030103

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600B-1	OLGP-67 (24-30") N/A	08-11-00/07:28
05600B-2	OLGP-67 (42-48") N/A	08-11-00/07:28
05600B-3	OLGP-68 (24-30") N/A	08-11-00/07:51
05600B-4	OLGP-68 (42-48") N/A	08-11-00/07:51
05600B-5	OLGP-69 (24-30")	08-11-00/08:00

PARAMETER	05600B-1	05600B-2	05600B-3	05600B-4	05600B-5
PCB's (8082)	N/A	N/A	N/A	N/A	
Aroclor-1016, ug/kg dw	<39	<40	<40	<38	<42
Aroclor-1221, ug/kg dw	<79	<81	<81	<77	<85
Aroclor-1232, ug/kg dw	<39	<40	<40	<38	<42
Aroclor-1242, ug/kg dw	<39	<40	<40	<38	<42
Aroclor-1248, ug/kg dw	220	260P	<40	200	<42
Aroclor-1254, ug/kg dw	270	580	62	200	<42
Aroclor-1260, ug/kg dw	200	410	52	120	<42
Aroclor 1268, ug/kg dw	130	120	<40	<38	<42
Surrogate - TCX	20 %	38 %	33 %	29 %	24 %
Surrogate - DCB	*F36	70 %	55 %	47 %	31 %
Dilution Factor	1	1	1	1	1
Prep Date	08.22.00	08.22.00	08.22.00	08.22.00	08.22.00
Analysis Date	09.09.00	09.09.00	09.09.00	09.09.00	09.09.00
Batch ID	0822S	0822S	0822S	0822S	0822S
Percent Solids	85	83	83	87	79



LOG NO: S0-05600B
Received: 17 AUG 00
Reported: 03 OCT 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 12030103

Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600B-6	OLGP-69 (42-48")	08-11-00/08:00
05600B-7	OLGP-70 (24-30")	08-11-00/08:20
05600B-7-RE	OLGP-70 (24-30")	08-11-00/08:20
05600B-8	OLGP-70 (42-48")	08-11-00/08:20

PARAMETER	05600B-6	05600B-7	05600B-7-RE	05600B-8
PCB's (8082)				
Aroclor-1016, ug/kg dw	<40	<39	<39	<43
Aroclor-1221, ug/kg dw	<82	<80	<80	<88
Aroclor-1232, ug/kg dw	<40	<39	<39	<43
Aroclor-1242, ug/kg dw	<40	<39	<39	<43
Aroclor-1248, ug/kg dw	<40	<39	<39	<43
Aroclor-1254, ug/kg dw	<40	<39	<39	410
Aroclor-1260, ug/kg dw	<40	<39	<39	310
Aroclor 1268, ug/kg dw	<40	<39	<39	57
Surrogate - TCX	38 %	14 %X	24 %	23 %
Surrogate - DCB	50 %	19 %X	31 %	59 %
Dilution Factor	1	1	1	1
Prep Date	08.22.00	08.22.00	09.27.00	08.22.00
Analysis Date	09.09.00	09.09.00	10.02.00	09.09.00
Batch ID	0822S	0822S	0927Q	0822S
Percent Solids	82	84	84	76



LOG NO: S0-05600B
Received: 17 AUG 00
Reported: 03 OCT 00

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
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Code: 12030103

Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600B-9	OLGP-71 (24-30")	08-11-00/08:34
05600B-10	OLGP-71 (42-48")	08-11-00/08:34
05600B-11	OLGP-72 (24-30")	08-11-00/08:44
05600B-12	OLGP-72 (42-48")	08-11-00/08:44
05600B-13	OLGP-73 (24-30")	08-11-00/09:05

PARAMETER	05600B-9	05600B-10	05600B-11	05600B-12	05600B-13
PCB's (8082)					
Aroclor-1016, ug/kg dw	<38	<44	<45Y	<40Y	<39
Aroclor-1221, ug/kg dw	<76	<90	<92	<82	<80
Aroclor-1232, ug/kg dw	<38	<44	<45	<40	<39
Aroclor-1242, ug/kg dw	<38	<44	<45	<40	<39
Aroclor-1248, ug/kg dw	<38	110P	<45	<40	<39
Aroclor-1254, ug/kg dw	<38	290	420	130	<39
Aroclor-1260, ug/kg dw	<38	170	270	100	<39
Aroclor 1268, ug/kg dw	<38	39	56	65	<39
Surrogate - TCX	40 %	29 %	32 %	35 %	25 %
Surrogate - DCB	49 %	54 %	70 %	85 %	32 %
Dilution Factor	1	1	1	1	1
Prep Date	08.22.00	08.22.00	08.22.00	08.22.00	08.22.00
Analysis Date	09.09.00	09.09.00	09.09.00	09.09.00	09.09.00
Batch ID	0822S	0822S	0822S	0822S	0822S
Percent Solids	88	74	73	82	84



LOG NO: S0-05600B
 Received: 17 AUG 00
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Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 12030103
 Page 4

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600B-14	OLGP-73 (42-48")	08-11-00/09:05
05600B-14-RE	OLGP-73 (42-48")	08-11-00/09:05
05600B-15	OLGP-74 (24-30")	08-11-00/09:17
05600B-16	OLGP-74 (42-44")	08-11-00/09:17

PARAMETER	05600B-14	05600B-14-RE	05600B-15	05600B-16
PCB's (8082)				
Aroclor-1016, ug/kg dw	<40	<40	<41	<40
Aroclor-1221, ug/kg dw	<81	<81	<84	<82
Aroclor-1232, ug/kg dw	<40	<40	<41	<40
Aroclor-1242, ug/kg dw	<40	<40	<41	<40
Aroclor-1248, ug/kg dw	<40	<40	<41	<40
Aroclor-1254, ug/kg dw	<40	<40	70	<40
Aroclor-1260, ug/kg dw	<40	<40	73	<40
Aroclor 1268, ug/kg dw	<40	<40	<41	<40
Surrogate - TCX	14 %X	29 %	6 %	12 %X
Surrogate - DCB	18 %X	39 %	81 %	23 %X
Dilution Factor	1	1	1	1
Prep Date	08.22.00	09.27.00	08.22.00	08.22.00
Analysis Date	09.09.00	10.02.00	09.09.00	09.09.00
Batch ID	0822S	0927Q	0822Q	0822Q
Percent Solids	83	83	80	82



LOG NO: S0-05600B
 Received: 17 AUG 00
 Reported: 03 OCT 00

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 12030103
 Page 5

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600B-16-RE	OLGP-74 (42-44")	08-11-00/09:17
05600B-17	OLGP-75 (24-30") N/A	08-11-00/09:28
05600B-18	OLGP-75 (42-48") N/A	08-11-00/09:28
05600B-19	OLGP-76 (24-30") N/A	08-11-00/09:50

PARAMETER	05600B-16-RE	05600B-17	05600B-18	05600B-19
PCB's (8082)		N/A	N/A	N/A
Aroclor-1016, ug/kg dw	<40	<810	<39	<840
Aroclor-1221, ug/kg dw	<82	<1600	<79	<1700
Aroclor-1232, ug/kg dw	<40	<810	<39	<840
Aroclor-1242, ug/kg dw	<40	<810	<39	<840
Aroclor-1248, ug/kg dw	<40	12000P	51P	5400
Aroclor-1254, ug/kg dw	70	25000	110	10000
Aroclor-1260, ug/kg dw	71	15000	96	7800
Aroclor 1268, ug/kg dw	<40	2900	<39	<840
Surrogate - TCX	22 %	*F33	22 %	*F33
Surrogate - DCB	60 %	*F33	42 %	*F33
Dilution Factor	1	20	1	20
Prep Date	09.27.00	08.22.00	08.22.00	08.22.00
Analysis Date	10.02.00	09.09.00	09.09.00	09.26.00
Batch ID	0927Q	0822Q	0822Q	0822Q
Percent Solids	82	81	85	79



LOG NO: S0-05600B
 Received: 17 AUG 00
 Reported: 03 OCT 00

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 12030103

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION, SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600B-25	OLGP-79 (24-30") N/A	08-11-00/10:28
05600B-25-RE	OLGP-79 (24-30") N/A	08-11-00/10:28
05600B-26	OLGP-79 (42-48") N/A	08-11-00/10:28
05600B-27	OLGP-80 (24-30")	08-11-00/10:41

PARAMETER	05600B-25	05600B-25-RE	05600B-26	05600B-27
	N/A	N/A	N/A	
PCB's (8082)				
Aroclor-1016, ug/kg dw	<400Y	<400	<82	<43
Aroclor-1221, ug/kg dw	<820	<820	<170	<87
Aroclor-1232, ug/kg dw	<400	<400	<82	<43
Aroclor-1242, ug/kg dw	<400	<400	<82	<43
Aroclor-1248, ug/kg dw	<400	3700	280	<43
Aroclor-1254, ug/kg dw	9100P	9200	540	<43
Aroclor-1260, ug/kg dw	13000	8800	340	<43
Aroclor 1268, ug/kg dw	3900	2300	440	<43
Surrogate - TCX	*F33	*F33	28 %	27 %
Surrogate - DCB	*F33	*F33	*F36	40 %
Dilution Factor	10	10	1	1
Prep Date	08.22.00	09.27.00	08.22.00	08.22.00
Analysis Date	09.09.00	10.03.00	09.26.00	09.09.00
Batch ID	0822Q	0927Q	0822Q	0822Q
Percent Solids	82	--	80	77



LOG NO: S0-05600B
 Received: 17 AUG 00
 Reported: 03 OCT 00

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 12030103

REPORT OF RESULTS

Page 8

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600B-28	OLGP-80 (42-48")	08-11-00/10:41
05600B-29	OLGP-81 (24-30")	08-11-00/11:40
05600B-30	OLGP-81 (42-48")	08-11-00/11:40
05600B-31	OLGP-82 (24-30")	08-11-00/12:00
05600B-32	OLGP-82 (42-48")	08-11-00/12:00

PARAMETER	05600B-28	05600B-29	05600B-30	05600B-31	05600B-32
PCB's (8082)					
Aroclor-1016, ug/kg dw	<41	<39	<39	<82	<41
Aroclor-1221, ug/kg dw	<83	<80	<79	<170	<83
Aroclor-1232, ug/kg dw	<41	<39	<39	<82	<41
Aroclor-1242, ug/kg dw	<41	<39	<39	330	<41
Aroclor-1248, ug/kg dw	<41	130P	<39	<82	<41
Aroclor-1254, ug/kg dw	<41	480	91	500	<41
Aroclor-1260, ug/kg dw	<41	320	75	380	<41
Aroclor 1268, ug/kg dw	<41	44	<39	<82	<41
Surrogate - TCX	22 %	39 %	20 %	20 %	29 %
Surrogate - DCB	60 %	80 %	38 %	71 %	48 %
Dilution Factor	1	1	1	2	1
Prep Date	08.22.00	08.22.00	08.22.00	08.22.00	08.22.00
Analysis Date	09.09.00	09.09.00	09.09.00	09.09.00	09.09.00
Batch ID	0822Q	0822Q	0822Q	0822Q	0822Q
Percent Solids	81	84	85	80	81



LOG NO: S0-05600B
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 1258 Concord Road
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Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 12030103

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600B-33	OLGP-83 (24-30")	08-11-00/12:10
05600B-34	OLGP-83 (32-38")	08-11-00/12:10
05600B-35	OLGP-85 (24-30")	08-11-00/12:37
05600B-36	OLGP-85 (42-48")	08-11-00/12:37
05600B-37	OLGP-84 (24-30")	08-11-00/12:21

PARAMETER	05600B-33	05600B-34	05600B-35	05600B-36	05600B-37
PCB's (8082)					
Aroclor-1016, ug/kg dw	<86	<40	<41	<39	<41
Aroclor-1221, ug/kg dw	<170	<82	<83	<80	<84
Aroclor-1232, ug/kg dw	<86	<40	<41	<39	<41
Aroclor-1242, ug/kg dw	<86	<40	<41	<39	<41
Aroclor-1248, ug/kg dw	2400	<40	280	<39	<41
Aroclor-1254, ug/kg dw	3900	<40	560	<39	<41
Aroclor-1260, ug/kg dw	2800	<40	410	<39	<41
Aroclor 1268, ug/kg dw	680	<40	120	<39	<41
Surrogate - TCX	38 %	30 %	41 %	25 %	26 %
Surrogate - DCB	*F36	55 %	*F36	35 %	40 %
Dilution Factor	2	1	1	1	1
Prep Date	08.22.00	08.22.00	08.22.00	08.22.00	08.22.00
Analysis Date	09.11.00	09.09.00	09.09.00	09.09.00	09.09.00
Batch ID	0822P	0822P	0822P	0822P	0822P
Percent Solids	77	82	81	84	80



LOG NO: S0-05600B
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 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

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Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 12030103
 Page 10

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05600B-38	OLGP-84 (42-48")	08-11-00/12:21
05600B-39	EQ BLK-10 N/A	08-11-00/10:40
05600B-40	EQ BLK-11 N/A	08-11-00/12:20
05600B-41	EQ BLK-7 N/A	08-10-00/16:29
05600B-42	EQ BLK-8 N/A	08-11-00/07:50

PARAMETER	05600B-38	05600B-39	05600B-40	05600B-41	05600B-42
PCB's (8082)		N/A	N/A	N/A	N/A
Aroclor-1016, ug/kg dw	<41	<33	<33	<33	<34
Aroclor-1221, ug/kg dw	<84	<68	<68	<68	<68
Aroclor-1232, ug/kg dw	<41	<33	<33	<33	<34
Aroclor-1242, ug/kg dw	<41	<33	<33	<33	<34
Aroclor-1248, ug/kg dw	<41	<33	<33	<33	<34
Aroclor-1254, ug/kg dw	<41	<33	<33	<33	<34
Aroclor-1260, ug/kg dw	<41	<33	<33	<33	<34
Aroclor 1268, ug/kg dw	<41	<33	<33	<33	<34
Surrogate - TCX	35 %	38 %	29 %	40 %	44 %
Surrogate - DCB	52 %	49 %	41 %	46 %	49 %
Dilution Factor	1	1	1	1	1
Prep Date	08.22.00	08.22.00	08.22.00	08.22.00	08.22.00
Analysis Date	09.09.00	09.09.00	09.09.00	09.10.00	09.10.00
Batch ID	0822P	0822P	0822P	0822S	0822P
Percent Solids	80	99	99	99	98



LOG NO: S0-05600B
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Code: 12030103
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID				
05600B-44	Method Blank				
05600B-45	Lab Control Standard % Recovery				
05600B-46	LCS Accuracy Control Limit (%R)				
05600B-47	Method Blank				
05600B-48	Lab Control Standard % Recovery				
PARAMETER	05600B-44	05600B-45	05600B-46	05600B-47	05600B-48
PCB's (8082)					
Aroclor-1016, ug/kg dw	<33	61 %	34-138 %	<33	70 %
Aroclor-1221, ug/kg dw	<67	---	---	<67	---
Aroclor-1232, ug/kg dw	<33	---	---	<33	---
Aroclor-1242, ug/kg dw	<33	---	---	<33	---
Aroclor-1248, ug/kg dw	<33	---	---	<33	---
Aroclor-1254, ug/kg dw	<33	---	---	<33	---
Aroclor-1260, ug/kg dw	<33	64 %	39-138 %	<33	73 %
Aroclor 1268, ug/kg dw	<33	---	---	<33	---
Surrogate - TCX	56 %	56 %	---	56 %	58 %
Surrogate - DCB	70 %	76 %	---	70 %	76 %
Dilution Factor	1	1	---	1	1
Prep Date	08.22.00	08.22.00	---	08.22.00	08.22.00
Analysis Date	09.09.00	09.09.00	---	09.09.00	09.09.00
Batch ID	0822S	0822S	---	0822R	0822R



LOG NO: S0-05600B
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Sampled By: Client
Code: 12030103
Page 13

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	
05600B-49	Method Blank	
05600B-50	Lab Control Standard % Recovery	
PARAMETER	05600B-49	05600B-50
PCB's (8082)		
Aroclor-1016, ug/kg dw	<33	52 %
Aroclor-1221, ug/kg dw	<67	---
Aroclor-1232, ug/kg dw	<33	---
Aroclor-1242, ug/kg dw	<33	---
Aroclor-1248, ug/kg dw	<33	---
Aroclor-1254, ug/kg dw	<33	---
Aroclor-1260, ug/kg dw	<33	61 %
Aroclor 1268, ug/kg dw	<33	---
Surrogate - TCX	40 %	42 %
Surrogate - DCB	65 %	65 %
Dilution Factor	1	1
Prep Date	08.22.00	08.22.00
Analysis Date	09.09.00	09.09.00
Batch ID	0822Q	0822Q



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Page 14

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID
PARAMETER	

Methods: EPA SW-846, Update III.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

*F36 = Surrogate recovery was outside established limits due to a coeluting matrix interference in the sample.

Y= Multipeak pattern present that does not match the laboratory reference standards and therefore was not quantified.

X = Due to low surrogate recoveries the sample was reextracted and reanalyzed. Both sets of data are provided.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.

Angie Stewart

Angie Stewart, Project Manager

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD



5102 LaRoche Avenue, Savannah, GA. 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

Phone: (912) 354-7858 Fax: (912) 352-0165
 Phone: (850) 878-3894 Fax: (850) 878-9504
 Phone: (334) 866-6633 Fax: (334) 866-6696
 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE: Oxley Lakes
 STL (LAB) PROJECT MANAGER: Stewart
 CLIENT (SITE) PM: Jerry Hopper
 CLIENT NAME: Mike Price
 CLIENT ADDRESS: Solution

PROJECT NO.: _____
 P.O. NUMBER: _____
 CONTRACT NO.: _____
 CLIENT PHONE: _____
 CLIENT FAX: _____
 CLIENT EMAIL: _____

PROJECT LOCATION (STATE): AL
 MATRIX TYPE: _____
 COMPOSITE (C) OR GRAB (G) INDICATE: _____
 AQUEOUS (WATER): _____
 SOLID OR SEMISOLID: _____
 AIR: _____
 NONAQUEOUS LIQUID (OIL, SOLVENT, ETC): _____

COMPANY CONTRACTING THIS WORK (if applicable): Genesis Project

DATE	TIME	SAMPLE IDENTIFICATION	MATRIX TYPE	REQUIRED ANALYSES	PAGE	OF	STANDARD REPORT DELIVERY	DATE DUE	EXPEDITED REPORT DELIVERY (SURCHARGE)	DATE DUE	NUMBER OF COOLERS SUBMITTED PER SHIPMENT:	REMARKS
8-11-00	0728	026P-67 (24-30")	-		1	4					1	
8-11-00	0728	026P-67 (42-48")	-									
8-11-00	0751	026P-68 (24-30")	-									
8-11-00	0751	026P-68 (42-48")	-									
8-11-00	0800	026P-69 (24-30")	-									
8-11-00	0800	026P-69 (42-48")	-									
8-11-00	0820	026P-70 (24-30")	-									
8-11-00	0820	026P-70 (42-48")	-									
8-11-00	0831	026P-71 (24-30")	-									
8-11-00	0834	026P-71 (42-48")	-									
8-11-00	0844	026P-72 (24-30")	-									
8-11-00	0844	026P-72 (42-48")	-									
RELINQUISHED BY: (SIGNATURE) _____ DATE: <u>8/16/00</u> TIME: <u>1432</u> RECEIVED BY: (SIGNATURE) _____ DATE: _____ TIME: _____												

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: J. Sewafford DATE: 8/17/00 TIME: 8:55
 SEAL NO.: 5005600B

LABORATORY REMARKS: _____

* Container made 8/24

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD



a Division of Southern Frost Laboratories, Inc.

5102 LaRoche Avenue, Savannah, GA 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

Phone: (912) 354-7858 Fax: (912) 352-0165
 Phone: (850) 878-3994 Fax: (850) 878-9504
 Phone: (334) 666-6633 Fax: (334) 666-6696
 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE: **Oxford Lakes**
 STL (LAB) PROJECT MANAGER: **Stewart**
 CLIENT (SITE) PM: **Serry Hopper**
 CLIENT NAME: **Solutia**
 CLIENT ADDRESS: _____

PROJECT NO.: _____
 P.O. NUMBER: _____
 CLIENT PHONE: _____
 CLIENT EMAIL: _____

PROJECT LOCATION (STATE): **AL**
 CONTRACT NO.: _____
 CLIENT FAX: _____

MATRIX TYPE: _____
 AQUEOUS (WATER) _____
 SOLID OR SEMISOLID _____
 NONAQUEOUS LIQUID (OIL, SOLVENT, ETC) _____

REQUIRED ANALYSES: _____

PAGE **2** OF **4**

STANDARD REPORT DELIVERY: _____
 DATE DUE: _____
 EXPEDITED REPORT DELIVERY (SURCHARGE): **0**
 DATE DUE: _____
 NUMBER OF COOLERS SUBMITTED PER SHIPMENT: **1**

COMPANY CONTRACTING THIS WORK (if applicable): **Genesis Project, Inc**

SAMPLE DATE	TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX TYPE	NUMBER OF CONTAINERS SUBMITTED	REMARKS	RELINQUISHED BY: (SIGNATURE)		RECEIVED BY: (SIGNATURE)			
							DATE	TIME	DATE	TIME		
8-11-00	0905	OLGP-73 (24-30")	✓	AIR	1							
8-11-00	0905	OLGP-73 (42-48")	✓	AIR	1							
8-11-00	0917	OLGP-74 (24-30")	✓	AIR	1							
8-11-00	0917	OLGP-74 (42-48")	✓	AIR	1							
8-11-00	0928	OLGP-75 (24-30")	✓	AIR	1							
8-11-00	0928	OLGP-75 (42-48")	✓	AIR	1							
8-11-00	0950	OLGP-76 (24-30")	✓	AIR	1							
8-11-00	0950	OLGP-76 (42-48")	✓	AIR	1							
8-11-00	1000	OLGP-77 (24-30")	✓	AIR	1							
8-11-00	1000	OLGP-77 (42-48")	✓	AIR	1							
8-11-00	1008	OLGP-78 (24-30")	✓	AIR	1							
8-11-00	1008	OLGP-78 (42-48")	✓	AIR	1							
8-11-00	1008	OLGP-78 (94-32")	✓	AIR	1							
8-11-00	1008	OLGP-78 (42-48")	✓	AIR	1							
							RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
							<i>[Signature]</i>	8/16/00	1432			
							RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: *[Signature]* DATE: 8/17/00 TIME: 8:55
 CUSTODY INTACT: YES
 CUSTODY SEAL NO.: **5005600B**

STL-SL LOG NO.: _____
 LABORATORY REMARKS: _____

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD



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 Phone: (334) 668-6633 Fax: (334) 668-6696
 Phone: (813) 865-7427 Fax: (813) 865-7049

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 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36693
 8712 Benjamin Rd., Suite 100, Tampa, FL 33634

PROJECT REFERENCE		PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSES	PAGE 3 OF 4
STL (LAB) PROJECT MANAGER		P.O. NUMBER	CONTRACT NO.	AQUEOUS (WATER)	STANDARD REPORT DELIVERY	DATE DUE
CLIENT (SITE) PM		CLIENT PHONE	CLIENT FAX	SOLID OR SEMISOLID	EXPEDITED REPORT DELIVERY (SURCHARGE)	DATE DUE
CLIENT NAME		CLIENT EMAIL		NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)		
CLIENT ADDRESS				AIR		
COMPANY CONTRACTING THIS WORK (if applicable):						
Genesis Project, Inc						
SAMPLE		SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS SUBMITTED		
DATE	TIME					REMARKS
8-11-00	1023	OLGP-75	(24-30")	1		
8-11-00	1028	OLGP-75	(42-48")	1		
8-11-00	1041	OLGP-80	(24-30")	1		
8-11-00	1041	OLGP-80	(42-48")	1		
8-11-00	1140	OLGP-81	(24-30")	1		
8-11-00	1140	OLGP-81	(42-48")	1		
8-11-00	1200	OLGP-82	(24-30")	1		
8-11-00	1200	OLGP-82	(42-48")	1		
8-11-00	1210	OLGP-83	(24-30")	1		
8-11-00	1210	OLGP-83	(42-48") (32-38")	1		
8-11-00	1237	OLGP-85	(24-30")	1		
8-11-00	1237	OLGP-85	(42-48")	1		
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)
				8/16/00	1432	
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	STL-SL LOG NO.	LABORATORY REMARKS:
J. Swafford	8/17/00	8:55	YES	5005600B	

APPENDIX A.2

Interim Measures Characterization Results

STL Savannah

LOG NO: S1-10547B
Received: 29 JAN 01
Reported: 06 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 114910214

Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
10547B-1	SR-1 COMP	01-24-01/15:04				
10547B-2	SR-2 COMP	01-25-01/12:07				
10547B-3	SR-3 COMP	01-25-01/15:00				
10547B-4	SR-4 COMP	01-25-01/17:00				
10547B-5	SR-5 COMP	01-26-01/10:00				

PARAMETER	10547B-1	10547B-2	10547B-3	10547B-4	10547B-5
PCB's (8082)					
Aroclor-1016, ug/kg dw	<190	<210	<180	<930	<72
Aroclor-1221, ug/kg dw	<380	<420	<370	<1900	<150
Aroclor-1232, ug/kg dw	<190	<210	<180	<930	<72
Aroclor-1242, ug/kg dw	<190	<210	<180	<930	<72
Aroclor-1248, ug/kg dw	1300	2400	470	6200	330P
Aroclor-1254, ug/kg dw	1800	2300P	2100	10000	1000
Aroclor-1260, ug/kg dw	1600	2400	1600	9600	860
Aroclor 1268, ug/kg dw	400	580	400	2300	200
Surrogate - TCX	74 %	67 %	56 %	*F33	72 %
Surrogate - DCB	216 %	210 %	256 %	*F33	156 %
Dilution Factor	5	5	5	25	2
Prep Date	02.08.01	02.08.01	02.08.01	02.08.01	02.08.01
Analysis Date	02.12.01	02.12.01	02.10.01	02.10.01	02.10.01
Batch ID	0208P	0208P	0208P	0208P	0208P
Percent Solids	88	80	91	89	91

STL Savannah

LOG NO: S1-10547B
 Received: 29 JAN 01
 Reported: 06 FEB 01

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 114910214
 Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
10547B-6	SR-6 COMP	01-26-01/12:00
PARAMETER		10547B-6
PCB's (8082)		
Aroclor-1016, ug/kg dw		<180
Aroclor-1221, ug/kg dw		<360
Aroclor-1232, ug/kg dw		<180
Aroclor-1242, ug/kg dw		<180
Aroclor-1248, ug/kg dw		1400
Aroclor-1254, ug/kg dw		3500
Aroclor-1260, ug/kg dw		3600
Aroclor 1268, ug/kg dw		830
Surrogate - TCX		89 %
Surrogate - DCB		333 %
Dilution Factor		5
Prep Date		02.08.01
Analysis Date		02.10.01
Batch ID		0208P
Percent Solids		92



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STL Savannah

LOG NO: S1-10547B
 Received: 29 JAN 01
 Reported: 06 FEB 01

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 114910214

Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
10547B-7	Method Blank	
10547B-8	Lab Control Standard % Recovery	
10547B-9	LCS Accuracy Control Limit (%R)	

PARAMETER	10547B-7	10547B-8	10547B-9
PCB's (8082)			
Aroclor-1016, ug/kg dw	<33	94 %	34-138 %
Aroclor-1221, ug/kg dw	<67	---	---
Aroclor-1232, ug/kg dw	<33	---	---
Aroclor-1242, ug/kg dw	<33	---	---
Aroclor-1248, ug/kg dw	<33	---	---
Aroclor-1254, ug/kg dw	<33	---	---
Aroclor-1260, ug/kg dw	<33	---	---
Aroclor 1268, ug/kg dw	<33	112 %	39-138 %
Surrogate - TCX	70 %	---	---
Surrogate - DCB	94 %	76 %	30-150 %
Dilution Factor	94 %	94 %	30-150 %
Prep Date	1	1	---
Analysis Date	02.08.01	02.08.01	---
Batch ID	02.09.01	02.09.01	---
	0208P	0208P	---

STL Savannah

LOG NO: S1-10547B
Received: 29 JAN 01
Reported: 06 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 114910214
Page 4

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
10547B-7	Method Blank	
10547B-8	Lab Control Standard % Recovery	
10547B-9	LCS Accuracy Control Limit (%R)	

PARAMETER	10547B-7	10547B-8	10547B-9
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These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.
SW-846, Test Method for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

P = Identification of target analytes using LC methodology is based on retention time. Although two dissimilar LC detectors confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.

for Angie Stewart
Angie Stewart, Project Manager

Serial Number 003939

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD



5102 LaRoche Avenue, Savannah, GA 31404
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Phone: (850) 878-3994 Fax: (850) 878-9504
Phone: (334) 666-6633 Fax: (334) 666-6696
Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE	PROJECT NO	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSES	PAGE	OF					
Oxford Lakes					1	1					
STL (LAB) PROJECT MANAGER	NO. NUMBER	CONTRACT NO.									
A. Stewart											
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX									
Jerry Hopper											
CLIENT NAME	CLIENT EMAIL										
Solution											
CLIENT ADDRESS											
COMPANY CONTRACTING THIS WORK (if applicable): Genesis Project, Inc.											
SAMPLE	DATE	TIME	SAMPLE IDENTIFICATION	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	AIR	SOLID OR SEMISOLID	AQUEOUS (WATER)	COMPOSITE (G) OR GRAB (G) INKDATE	SCREENING LEADS	PC# 8082	185 ml glass
1126/01	1509		SR-1 Comp	✓		✓			<10		
1125/01	1207		SR-2 Comp	✓		✓			<10		
1125/01	1500		SR-3 Comp	✓		✓			<10		
1125/01	1700		SR-4 Comp	✓		✓			>10		
1126/01	1000		SR-5 Comp	✓		✓			<10		
1126/01	1200		SR-6 Comp	✓		✓			>10		
NUMBER OF CONTAINERS SUBMITTED											
REMARKS											
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:											
DATE DUE											
EXPEDITED REPORT DELIVERY (SURCHARGE)											
DATE DUE 2/9/01											
STANDARD REPORT DELIVERY											

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[Signature]	1/27/01	1300	[Signature]		
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
[Signature]	1/29/01	8:35	[Signature]		
LABORATORY USE ONLY					
RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTOMY INTACT	CUSTOMY SEAL NO.	LABORATORY REMARKS:
[Signature]	1/29/01	8:35	YES		51-10547



LOG NO: S1-10561A
Received: 30 JAN 01
Reported: 06 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 094710213

Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
10561A-6	SR-7 COMP	01-26-01/15:15
10561A-7	EX-43 COMP N/A	01-29-01/09:00
10561A-7-DL	EX-43 COMP N/A	01-29-01/09:00
10561A-8	EX-44 COMP N/A	01-29-01/10:40

PARAMETER	10561A-6	10561A-7 N/A	10561A-7-DL N/A	10561A-8 N/A
PCB's (8082)				
Aroclor-1016, ug/kg dw	<74	<190	<380	<77
Aroclor-1221, ug/kg dw	<150	<380	<760	<160
Aroclor-1232, ug/kg dw	<74	<190	<380	<77
Aroclor-1242, ug/kg dw	<74	<190	<380	<77
Aroclor-1248, ug/kg dw	720P	2400	2300D	250P
Aroclor-1254, ug/kg dw	1100	2100	1900D	1700
Aroclor-1260, ug/kg dw	810	2200	1800D	1600
Aroclor 1268, ug/kg dw	150P	550	390DP	480
Surrogate - TCX	68 %	68 %	*F33	46 %
Surrogate - DCB	174 %	316 %	*F33	274 %
Dilution Factor	2	5	10	2
Prep Date	02.08.01	02.08.01	02.08.01	02.08.01
Analysis Date	02.08.01	02.10.01	02.08.01	02.08.01
Batch ID	02080	02080	02080	02080
Percent Solids	89	88	88	86



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LOG NO: S1-10561A
 Received: 30 JAN 01
 Reported: 06 FEB 01

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 094710213

Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID		
10561A-9	Method Blank		
10561A-10	Lab Control Standard % Recovery		
10561A-11	LCS Accuracy Control Limit (%R)		
PARAMETER	10561A-9	10561A-10	10561A-11
PCB's (8082)			
Aroclor-1016, ug/kg dw	<33	64 %	34-138 %
Aroclor-1221, ug/kg dw	<67	---	---
Aroclor-1232, ug/kg dw	<33	---	---
Aroclor-1242, ug/kg dw	<33	---	---
Aroclor-1248, ug/kg dw	<33	---	---
Aroclor-1254, ug/kg dw	<33	---	---
Aroclor-1260, ug/kg dw	<33	106 %	39-138 %
Aroclor 1268, ug/kg dw	<33	<33	---
Surrogate - TCX	59 %	57 %	30-150 %
Surrogate - DCB	82 %	100 %	30-150 %
Dilution Factor	1	1	---
Prep Date	02.08.01	02.08.01	---
Analysis Date	02.09.01	02.09.01	---
Batch ID	02080	02080	---

Serial Number 003940

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD



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 900 Lakeside Drive, Mobile, AL 36693
 Phone: (334) 666-6633 Fax: (334) 666-6696
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634
 Phone: (813) 885-7427 Fax: (813) 885-7048

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSES	PAGE	OF
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	STANDARD REPORT DELIVERY		
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX	AIR	DATE DUE		
CLIENT NAME	CLIENT EMAIL		SOLID OR SEMISOLID	EXPEDITED REPORT DELIVERY (SURCHARGE)		
CLIENT ADDRESS			AQUEOUS (WATER)	DATE DUE		
COMPANY CONTRACTING THIS WORK (if applicable):			COMPOSITE (C) OR GRAB (G) INDICATE	NUMBER OF COOLERS SUBMITTED PER SHIPMENT		
Genesis Project Inc.						
SAMPLE	DATE	TIME	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED	REMARKS	
12261	1/10		HA-386 0-3"			
12661	1/5/5		HA-388 0-3"			
12661	1/10		HA-389 0-3"			
12661	1/26		HA-392 0-3"			
12661	1/33		HA-394 0-3"			
12661	1/5/5		SR-7 Comp			
12961	1/9/1		EX-43 Comp			
12961	1/9/1		EX-34 Comp			
RUSSH						
RELINQUISHED BY: (SIGNATURE)			DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE
RECEIVED BY: (SIGNATURE)			DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE

RECEIVED FOR LABORATORY BY: *C. Williams* DATE: 1/30/11 TIME: 8:25

CUSTODY INTACT: YES

LABORATORY USE ONLY

STL-SL LOG NO. LABORATORY REMARKS: 8-10 SFS

ORIGINAL

STL Savannah

LOG NO: S1-10577A
Received: 31 JAN 01
Reported: 06 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 124810219

Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
10577A-6	HA-406-0-3" DUP N/A	01-30-01/10:02
10577A-7	HA-407-0-3" N/A	01-30-01/10:05
10577A-8	HA-408-0-3" N/A	01-30-01/14:41
10577A-9	HA-410-0-3" N/A	01-30-01/14:53
10577A-10	SR-8 COMP	01-29-01/10:31

PARAMETER	10577A-6	10577A-7	10577A-8	10577A-9	10577A-10
PCB's (8082)	N/A	N/A	N/A	N/A	
Aroclor-1016, ug/kg dw	<210	<900	<820	<210	<150
Aroclor-1221, ug/kg dw	<440	<1800	<1700	<420	<300
Aroclor-1232, ug/kg dw	<210	<900	<820	<210	<150
Aroclor-1242, ug/kg dw	<210	<900	<820	<210	<150
Aroclor-1248, ug/kg dw	290	<900	<820	730	310P
Aroclor-1254, ug/kg dw	2000	7700	5000	2900	2000
Aroclor-1260, ug/kg dw	1600	5600	5000	3700	1400
Aroclor 1268, ug/kg dw	270P	940P	2100	530	300P
Surrogate - TCX	64 %	*F33	*F33	62 %	53 %
Surrogate - DCB	218 %	*F33	*F33	186 %	253 %
Dilution Factor	5	20	20	5	4
Prep Date	02.08.01	02.08.01	02.08.01	02.08.01	02.08.01
Analysis Date	02.09.01	02.09.01	02.09.01	02.12.01	02.09.01
Batch ID	02080	02080	02080	02080	02080
Percent Solids	77	73	80	79	89

LOG NO: S1-10577A
 Received: 31 JAN 01
 Reported: 06 FEB 01

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 124810219

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
10577A-11	Method Blank	
10577A-12	Lab Control Standard % Recovery	
10577A-13	LCS Accuracy Control Limit (%R)	

PARAMETER	10577A-11	10577A-12	10577A-13
PCB's (8082)			
Aroclor-1016, ug/kg dw	<33	64 %	34-138 %
Aroclor-1221, ug/kg dw	<67	---	---
Aroclor-1232, ug/kg dw	<33	---	---
Aroclor-1242, ug/kg dw	<33	---	---
Aroclor-1248, ug/kg dw	<33	---	---
Aroclor-1254, ug/kg dw	<33	---	---
Aroclor-1260, ug/kg dw	<33	106 %	39-138 %
Aroclor 1268, ug/kg dw	<33	---	---
Surrogate - TCX	59 %	57 %	30-150 %
Surrogate - DCB	82 %	100 %	30-150 %
Dilution Factor	1	1	---
Prep Date	02.08.01	02.08.01	---
Analysis Date	02.09.01	02.09.01	---
Batch ID	02080	02080	---

LOG NO: S1-10577A
 Received: 31 JAN 01
 Reported: 06 FEB 01

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 124810219

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
10577A-11	Method Blank	
10577A-12	Lab Control Standard % Recovery	
10577A-13	LCS Accuracy Control Limit (%R)	

PARAMETER	10577A-11	10577A-12	10577A-13
-----------	-----------	-----------	-----------

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

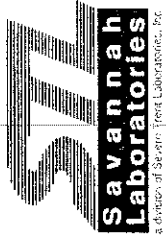
SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.

for K. Michelle Owens
 Angie Stewart, Project Manager

Serial Number 003941



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Phone: (912) 354-7858 Fax: (912) 352-0165
 Phone: (850) 878-3994 Fax: (850) 878-9504
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 900 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634

PROJECT REFERENCE <i>Labored Lakes</i>	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSES	PAGE	OF
STL (LAB) PROJECT MANAGER <i>Al Stewart</i>	P.O. NUMBER	CONTRACT NO.	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	STANDARD REPORT DELIVERY		
CLIENT (SITE): PM <i>West Lakes</i>	CLIENT PHONE	CLIENT FAX	AIR	DATE DUE		
CLIENT NAME <i>Solida</i>	CLIENT EMAIL		SOLID OR SEMISOLID	EXPEDITED REPORT DELIVERY (SURCHARGE)		
CLIENT ADDRESS <i>Solida</i>			COMPOSITE (C) OR GRAB (G) INDICATE	DATE DUE		

COMPANY CONTRACTING THIS WORK (if applicable): *Greene Project, Inc*

SAMPLE DATE	TIME	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED	REMARKS
<i>1/21/01</i>	<i>11:00 AM</i>	<i>114-119-1000</i>		
<i>1/21/01</i>	<i>11:00 AM</i>	<i>114-119-1001</i>		
<i>1/21/01</i>	<i>11:00 AM</i>	<i>114-119-1002</i>		
<i>1/21/01</i>	<i>10:31</i>	<i>SR-8 Coop</i>		

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
<i>[Signature]</i>	<i>1/21/01</i>	<i>11:00</i>	<i>[Signature]</i>	<i>1/21/01</i>	<i>11:00</i>

RECEIVED FOR LABORATORY BY: *[Signature]* DATE: *1/21/01* TIME: *8:45*

LABORATORY USE ONLY

CUSTODY INTACT	YES	NO
CUSTODY SEAL NO.	<i>5110577</i>	
STL-SL LOG NO.	<i>5110577</i>	

LABORATORY REMARKS:



STL Savannah

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

LOG NO: S1-10678D
Received: 05 FEB 01
Reported: 19 FEB 01

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 130710220

Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
10678D-1	SR-9 COMP	01-31-01/09:30				
10678D-2	SR-10 COMP	01-31-01/11:50				
10678D-3	SR-11 COMP	01-31-01/14:06				
10678D-4	SR-12 COMP	02-01-01/09:55				
10678D-5	SR-13 COMP	02-01-01/11:20				
PARAMETER	10678D-1	10678D-2	10678D-3	10678D-4	10678D-5	
PCB's (8082)						
Aroclor-1016, ug/kg dw	<380	<380	<190	<80	<190	
Aroclor-1221, ug/kg dw	<780	<760	<390	<160	<380	
Aroclor-1232, ug/kg dw	<380	<380	<190	<80	<190	
Aroclor-1242, ug/kg dw	<380	<380	<190	<80	<190	
Aroclor-1248, ug/kg dw	520P	840	740P	160P	460P	
Aroclor-1254, ug/kg dw	2800	4400	3000	1400	2800	
Aroclor-1260, ug/kg dw	2000	3400	1900	800	3400	
Aroclor 1268, ug/kg dw	490	930	600	190P	580P	
Surrogate - TCX	*F33	*F33	58 %	60 %	53 %	
Surrogate - DCB	*F33	*F33	163 %	125 %	305 %	
Dilution Factor	10	10	5	2	5	
Prep Date	02.14.01	02.14.01	02.14.01	02.14.01	02.14.01	
Analysis Date	02.16.01	02.16.01	02.16.01	02.16.01	02.16.01	
Batch ID	0214N	0214N	0214N	0214N	0214N	
Percent Solids	86	88	86	82	87	

STL Savannah

LOG NO: S1-10678D
Received: 05 FEB 01
Reported: 19 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 130710220

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
10678D-6	SR-14 COMP	02-01-01/16:45	
10678D-7	SR-15 COMP	01-31-01/15:00	
PARAMETER		10678D-6	10678D-7
PCB's (8082)			
Aroclor-1016, ug/kg dw		<77	<180
Aroclor-1221, ug/kg dw		<160	<380
Aroclor-1232, ug/kg dw		<77	<180
Aroclor-1242, ug/kg dw		<77	<180
Aroclor-1248, ug/kg dw		270	910P
Aroclor-1254, ug/kg dw		980	4000
Aroclor-1260, ug/kg dw		1100	3500
Aroclor 1268, ug/kg dw		180P	900
Surrogate - TCX		68 %	43 %
Surrogate - DCB		400 %	253 %
Dilution Factor		2	5
Prep Date		02.14.01	02.14.01
Analysis Date		02.16.01	02.15.01
Batch ID		0214N	0214N
Percent Solids		86	89

STL Savannah

LOG NO: S1-10678D
 Received: 05 FEB 01
 Reported: 19 FEB 01

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 130710220
 Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
10678D-8	Method Blank	
10678D-9	Lab Control Standard % Recovery	
10678D-10	LCS Accuracy Control Limit (%R)	

PARAMETER	10678D-8	10678D-9	10678D-10
PCB's (8082)			
Aroclor-1016, ug/kg dw	<33	70 %	34-138 %
Aroclor-1221, ug/kg dw	<67	---	---
Aroclor-1232, ug/kg dw	<33	---	---
Aroclor-1242, ug/kg dw	<33	---	---
Aroclor-1248, ug/kg dw	<33	---	---
Aroclor-1254, ug/kg dw	<33	---	---
Aroclor-1260, ug/kg dw	<33	---	---
Aroclor 1268, ug/kg dw	<33	79 %	39-138 %
Surrogate - TCX	59 %	56 %	30-150 %
Surrogate - DCB	70 %	76 %	30-150 %
Dilution Factor	1	1	---
Prep Date	02.14.01	02.14.01	---
Analysis Date	02.15.01	02.15.01	---
Batch ID	0214N	0214N	---

STL Savannah

LOG NO: S1-10678D
Received: 05 FEB 01
Reported: 19 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 130710220

Page 4

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
10678D-8	Method Blank	
10678D-9	Lab Control Standard % Recovery	
10678D-10	LCS Accuracy Control Limit (%R)	

PARAMETER	10678D-8	10678D-9	10678D-10
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These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.

K. Michelle Owens
Michelle Owens, Project Manager

Final Page Of Report



STL Savannah

LOG NO: S1-10790B
Received: 09 FEB 01
Reported: 16 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 102110219

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
10790B-1	SR-16 COMP					
10790B-2	SR-17 COMP	02-03-01/10:00				
10790B-3	SR-18 COMP	02-03-01/14:26				
10790B-4	SR-19 COMP	02-08-01/10:02				
10790B-5	EX-59 COMP N/A	02-08-01/11:12				
		02-03-01/14:20				
PARAMETER		10790B-1	10790B-2	10790B-3	10790B-4	10790B-5
PCB's (8082)						N/A
Aroclor-1016, ug/kg dw		<380	<380	<150	<400	<150
Aroclor-1221, ug/kg dw		<780	<760	<300	<820	<300
Aroclor-1232, ug/kg dw		<380	<380	<150	<400	<150
Aroclor-1242, ug/kg dw		<380	<380	<150	<400	<150
Aroclor-1248, ug/kg dw		1200	2600	650P	1300	610
Aroclor-1254, ug/kg dw		5200	6900	3100	6400	2100
Aroclor-1260, ug/kg dw		3500	4000	2400	4500	1400
Aroclor 1268, ug/kg dw		800	990	540	1100	320
Surrogate - TCX		*F33	*F33	42 %	*F33	49 %
Surrogate - DCB		*F33	*F33	247 %	*F33	168 %
Dilution Factor		10	10	4	10	4
Prep Date		02.13.01	02.13.01	02.13.01	02.13.01	02.13.01
Analysis Date		02.16.01	02.16.01	02.16.01	02.16.01	02.16.01
Batch ID		0213NN	0213NN	0213NN	0213NN	0213NN
Percent Solids		86	88	88	82	88

STL Savannah

LOG NO: S1-10790B
Received: 09 FEB 01
Reported: 16 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 102110219

Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED		
10790B-11	Method Blank			
10790B-12	Lab Control Standard % Recovery			
10790B-13	LCS Accuracy Control Limit (%R)			
PARAMETER		10790B-11	10790B-12	10790B-13
PCB's (8082)				
Aroclor-1016, ug/kg dw		<33	76 %	34-138 %
Aroclor-1221, ug/kg dw		<67	---	---
Aroclor-1232, ug/kg dw		<33	---	---
Aroclor-1242, ug/kg dw		<33	---	---
Aroclor-1248, ug/kg dw		<33	---	---
Aroclor-1254, ug/kg dw		<33	---	---
Aroclor-1260, ug/kg dw		<33	82 %	39-138 %
Aroclor 1268, ug/kg dw		<33	---	---
Surrogate - TCX		70 %	59 %	30-150 %
Surrogate - DCB		65 %	58 %	30-150 %
Dilution Factor		1	1	---
Prep Date		02.13.01	02.13.01	---
Analysis Date		02.15.01	02.15.01	---
Batch ID		0213NN	0213NN	---

STL Savannah

LOG NO: S1-10790B
Received: 09 FEB 01
Reported: 16 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 102110219
Page 4

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
10790B-11	Method Blank	
10790B-12	Lab Control Standard % Recovery	
10790B-13	LCS Accuracy Control Limit (%R)	

PARAMETER	10790B-11	10790B-12	10790B-13
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These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.


Michelle Owens, Project Manager

Final Page Of Report

Serial Number 003959

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Phone: (912) 354-7858 Fax: (912) 352-0165
 Phone: (850) 878-3994 Fax: (850) 878-9504
 Phone: (334) 666-6633 Fax: (334) 666-6696
 Phone: (813) 885-7427 Fax: (813) 885-7049

5102 LaRoche Avenue, Savannah, GA 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Rd., Suite 100, Tampa, FL 33634



PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSES	PAGE	OF
Oxford Lakes						
A. Stewart						
Jerry Hopper						
Solutia						
COMPANY CONTRACTING THIS WORK (if applicable): Genesis Project Inc.						
SAMPLE DATE	TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)
2/13/01	1000	SR-16 Comp		✓		
2/13/01	1426	SR-17 Comp		✓		
2/18/01	1002	SR-15 Comp		✓		
2/18/01	1112	SR-19 Comp		✓		
2/13/01	1400	Ex-59 Comp		✓		
2/13/01	1440	Ex-60 Comp		✓		
2/18/01	0918	Ex-61 Comp		✓		
2/18/01	1045	Ex-62 Comp		✓		
2/18/01	1351	Ex-63 Comp		✓		
2/18/01	1403	Ex-64 Comp		✓		
REMARKS: RUSH						
128ml gles						
40L						
NUMBER OF COOLERS SUBMITTED PER SHIPMENT: _____						
NUMBER OF CONTAINERS SUBMITTED _____						
REMARKS _____						
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	
				2/18/01	1630	
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL-SL LOG NO.	LABORATORY REMARKS:
[Signature]	2/19/01	8:50	YES		51-1079A	



STL Savannah

LOG NO: S1-11005
Received: 21 FEB 01
Reported: 22 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 101710223

Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
11005-1	SR-19 ^A COMP	02-18-01/10:00

PARAMETER 11005-1

PCB's (8082)

Aroclor-1016, ug/kg dw	<760
Aroclor-1221, ug/kg dw	<1500
Aroclor-1232, ug/kg dw	<760
Aroclor-1242, ug/kg dw	<760
Aroclor-1248, ug/kg dw	2100P
Aroclor-1254, ug/kg dw	10000
Aroclor-1260, ug/kg dw	13000
Aroclor 1268, ug/kg dw	3200
Surrogate - TCX	*F33
Surrogate - DCB	*F33
Dilution Factor	20
Prep Date	02.21.01
Analysis Date	02.22.01
Batch ID	0221P

Percent Solids 87

LOG NO: S1-11005
Received: 21 FEB 01
Reported: 22 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 101710223

REPORT OF RESULTS

Page 2

DATE/

LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID TIME SAMPLED

11005-2 Method Blank
11005-3 Lab Control Standard % Recovery
11005-4 LCS Accuracy Control Limit (%R)

PARAMETER	11005-2	11005-3	11005-4
PCB's (8082)			
Aroclor-1016, ug/kg dw	<33	97 %	34-138 %
Aroclor-1221, ug/kg dw	<67	---	---
Aroclor-1232, ug/kg dw	<33	---	---
Aroclor-1242, ug/kg dw	<33	---	---
Aroclor-1248, ug/kg dw	<33	---	---
Aroclor-1254, ug/kg dw	<33	---	---
Aroclor-1260, ug/kg dw	<33	100 %	39-138 %
Aroclor 1268, ug/kg dw	<33	---	---
Surrogate - TCX	82 %	88 %	---
Surrogate - DCB	76 %	82 %	---
Dilution Factor	1	1	---
Prep Date	02.21.01	02.21.01	---
Analysis Date	02.22.01	02.22.01	---
Batch ID	0221P	0221P	---

STL Savannah

LOG NO: S1-11005
Received: 21 FEB 01
Reported: 22 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 101710223

Page 3

REPORT OF RESULTS

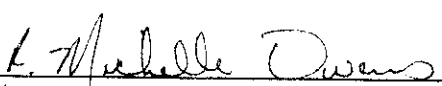
LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
11005-2	Method Blank	
11005-3	Lab Control Standard % Recovery	
11005-4	LCS Accuracy Control Limit (%R)	

PARAMETER	11005-2	11005-3	11005-4
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These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.
SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.


Michelle Owens, Project Manager

Serial Number

001610

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT SERVICES

5102 LaRoche Avenue, Savannah, GA 31404
Phone: (912) 354-7858 Fax: (912) 352-0165
2846 Industrial Plaza Drive, Tallahassee, FL 32301
Phone: (850) 878-3994 Fax: (850) 878-9504
900 Lakeside Drive, Mobile, AL 36693
Phone: (334) 666-6633 Fax: (334) 666-6696
6712 Benjamin Road, Suite 100, Tampa, FL 33634
Phone: (813) 885-7427 Fax: (813) 885-7049

Severn Trent Laboratories, Inc.

Form with fields for PROJECT REFERENCE (Oxford Lakes), PROJECT NO., PROJECT LOCATION (STATE) AL, CONTRACT NO., CLIENT NAME (Sally Hopper), CLIENT PHONE, CLIENT E-MAIL (S. Luha), COMPANY CONTRACTING THIS WORK (Genesis Project, Inc.), SAMPLE IDENTIFICATION (S12-19A COMP), and a table for CONTAINERS SUBMITTED with columns for DATE, TIME, RELINQUISHED BY, RECEIVED BY, and REMARKS.

PUSH

LABORATORY USE ONLY section with fields for CUSTODY SEAL NO., CUSTODY INTACT (YES), ST/SL LOG NO. (511105), and LABORATORY RE-ARKS.





5102 LaRoche Avenue • Savannah, GA 31404 • Tel: 912 354 7858 • Fax: 912 352 0165 • www.stl-inc.com

STL Savannah

LOG NO: S1-11005A
 Received: 21 FEB 01
 Reported: 02 MAR 01

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 09271039

Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
11005A-1	SR-20 COMP	
11005A-2	SR-21 COMP	02-18-01/11:30
11005A-3	SR-21 COMP DUP	02-19-01/11:15
11005A-4	SR-22 COMP	02-19-01/11:15
11005A-5	SR-23 COMP	02-19-01/15:00
		02-19-01/16:40

PARAMETER	11005A-1	11005A-2	11005A-3	11005A-4	11005A-5
PCB's (8082)					
Aroclor-1016, ug/kg dw	<760	<390	<200	<38	<380
Aroclor-1221, ug/kg dw	<1500	<790	<400	<76	<760
Aroclor-1232, ug/kg dw	<760	<390	<200	<38	<380
Aroclor-1242, ug/kg dw	<760	<390	<200	<38	<380
Aroclor-1248, ug/kg dw	1700	850	650	89	630
Aroclor-1254, ug/kg dw	8500	4800	3800	550	5500
Aroclor-1260, ug/kg dw	7000	4300	3200	520	3600
Aroclor 1268, ug/kg dw	1900	790	670	140	760
Surrogate - TCX	*F33	*F33	75 %	63 %	*F33
Surrogate - DCB	*F33	*F33	*F36	105 %	*F33
Dilution Factor	20	10	5	1	10
Prep Date	03.05.01	03.05.01	03.05.01	03.05.01	03.05.01
Analysis Date	03.06.01	03.06.01	03.06.01	03.06.01	03.06.01
Batch ID	0305S	0305S	0305S	0305S	0305S
Percent Solids	87	85	84	88	88

STL Savannah

LOG NO: S1-11005A
Received: 21 FEB 01
Reported: 02 MAR 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 09271039

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
11005A-6	SR-24 COMP	
11005A-7	EX-45 COMP N/A	02-20-01/09:58
11005A-8	EX-65 COMP N/A	02-09-01/09:25
11005A-9	EX-66 COMP N/A	02-09-01/08:27
11005A-10	EX-67 COMP N/A	02-18-01/14:45
		02-19-01/11:30

PARAMETER	11005A-6	11005A-7	11005A-8	11005A-9	11005A-10
PCB's (8082)		N/A	N/A	N/A	N/A
Aroclor-1016, ug/kg dw	<3800	<39	<1600	<370	<390
Aroclor-1221, ug/kg dw	<7600	<79	<3200	<750	<790
Aroclor-1232, ug/kg dw	<3800	<39	<1600	<370	<390
Aroclor-1242, ug/kg dw	<3800	<39	<1600	<370	<390
Aroclor-1248, ug/kg dw	6400	220	1800	510P	<390
Aroclor-1254, ug/kg dw	21000	600P	7800	5000	2800
Aroclor-1260, ug/kg dw	22000	340	8100	3700	2000
Aroclor 1268, ug/kg dw	<3800	200	<1600	810	440
Surrogate - TCX	*F33	90 %	*F33	*F33	*F33
Surrogate - DCB	*F33	70 %	*F33	*F33	*F33
Dilution Factor	100	1	40	10	10
Prep Date	02.22.01	03.05.01	03.05.01	03.05.01	03.05.01
Analysis Date	02.23.01	03.06.01	03.08.01	03.08.01	03.06.01
Batch ID	02220	0305S	0305S	0305S	0305S
Percent Solids	88	85	85	89	85

STL Savannah

LOG NO: SI-11005A
Received: 21 FEB 01
Reported: 02 MAR 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 09271039
Page 5

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED		
11005A-21	Method Blank			
11005A-22	Lab Control Standard % Recovery			
11005A-23	LCS Accuracy Control Limit (%R)			
PARAMETER		11005A-21	11005A-22	11005A-23
PCB's (8082)				
Aroclor-1016, ug/kg dw		<33	70 %	34-138 %
Aroclor-1221, ug/kg dw		<67	---	---
Aroclor-1232, ug/kg dw		<33	---	---
Aroclor-1242, ug/kg dw		<33	---	---
Aroclor-1248, ug/kg dw		<33	---	---
Aroclor-1254, ug/kg dw		<33	---	---
Aroclor-1260, ug/kg dw		<33	---	---
Aroclor 1268, ug/kg dw		<33	88 %	39-138 %
Surrogate - TCX		<33	---	---
Surrogate - DCB		59 %	59 %	30-150 %
Dilution Factor		94 %	94 %	30-150 %
Prep Date		1	1	---
Analysis Date		03.05.01	03.05.01	---
Batch ID		03.06.01	03.06.01	---
		0305S	0305S	---

STL Savannah

LOG NO: S1-11005A
 Received: 21 FEB 01
 Reported: 02 MAR 01

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 09271039

Page 6

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
11005A-21	Method Blank	
11005A-22	Lab Control Standard % Recovery	
11005A-23	LCS Accuracy Control Limit (%R)	

PARAMETER	11005A-21	11005A-22	11005A-23
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These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.
 Methods: EPA SW-846, Update III.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

*F36 = Surrogate recovery was outside established limits due to a coeluting matrix interference in the sample.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.


 Michelle Owens, Project Manager

**SEVERN
TRENT
SERVICES**

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Serial Number **001689**

5102 LaRoche Avenue, Savannah, GA 31404
 2846 Industrial Plaza Drive, Tallahassee, FL 32301
 900 Lakeside Drive, Mobile, AL 36693
 6712 Benjamin Road, Suite 100, Tampa, FL 33634

Phone: (912) 354-7858
 Phone: (850) 878-3994
 Phone: (334) 666-6633
 Phone: (813) 885-7427

Fax: (912) 352-0165
 Fax: (850) 878-9504
 Fax: (334) 666-6696
 Fax: (813) 885-7049

Severn Trent Laboratories, Inc.

PROJECT REFERENCE <i>OxLabs Lakes</i>	PROJECT NO.	PROJECT LOCATION (STATE) <i>AL</i>	MATRIX TYPE	PAGE <i>1</i> OF <i>2</i>
STL (LAB) PROJECT MANAGER <i>A. Stewart</i>	P.O. NUMBER	CONTRACT NO.	REQUIRED ANALYSIS	STANDARD REPORT DELIVERY DATE DUE <i>5/6/01</i>
CLIENT (SITE) <i>Sermy Hoger</i>	CLIENT PHONE	CLIENT FAX		EXPEDITED REPORT DELIVERY (SURCHARGE) DATE DUE
CLIENT NAME <i>Solothu</i>	CLIENT E-MAIL			NUMBER OF COOLERS SUBMITTED PER SHIPMENT:
CLIENT ADDRESS				
COMPANY CONTRACTING THIS WORK (if applicable) <i>Genesis Project, Inc.</i>				
SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	NUMBER CONTAINERS SUBMITTED	REMARKS
<i>2/14/01</i>	<i>1130</i>	<i>SR-20 COMP</i>	<i>1</i>	<i>710</i>
<i>2/14/01</i>	<i>1115</i>	<i>SR-21 COMP</i>	<i>1</i>	<i>710</i>
<i>2/14/01</i>	<i>1115</i>	<i>SR-21 COMP DUP</i>	<i>1</i>	<i>410</i>
<i>2/14/01</i>	<i>1500</i>	<i>SR-22 COMP</i>	<i>1</i>	<i>410</i>
<i>2/14/01</i>	<i>1640</i>	<i>SR-23 COMP</i>	<i>1</i>	<i>410</i>
<i>2/20/01</i>	<i>0558</i>	<i>SR-24 COMP</i>	<i>1</i>	
<i>2/14/01</i>	<i>0925</i>	<i>EX-45 COMP</i>	<i>1</i>	
<i>2/14/01</i>	<i>0827</i>	<i>EX-65 COMP</i>	<i>1</i>	
<i>2/14/01</i>	<i>1445</i>	<i>EX-66 COMP</i>	<i>1</i>	
<i>2/14/01</i>	<i>1130</i>	<i>EX-67 COMP</i>	<i>1</i>	
<i>2/14/01</i>	<i>1345</i>	<i>EX-68 COMP</i>	<i>1</i>	
<i>2/14/01</i>	<i>1425</i>	<i>EX-69 COMP</i>	<i>1</i>	
<i>2/14/01</i>	<i>1632</i>	<i>EX-70 COMP</i>	<i>1</i>	
RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE
RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	DATE	TIME	RECEIVED BY: (SIGNATURE) <i>M. H. H. O. C.</i>	DATE
				TIME
				TIME

RECEIVED FOR LABORATORY USE BY (SIGNATURE) <i>K. Conner</i>	DATE <i>2/21/01</i>	TIME <i>937</i>	CUSTODY INTACT YES NO	LABORATORY USE ONLY CUSTODY SEAL NO.	STL SL LOG NO. <i>SL-1000</i>	LABORATORY REMARKS
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.....

.....

LOG NO: S1-11028
Received: 22 FEB 01
Reported: 27 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 145510227

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
11028-1	SR-25 (COMP)	02-20-01/15:30				
11028-2	SR-26 (COMP)	02-21-01/10:00				
11028-3	SR-28 (COMP)	02-21-01/11:55				
11028-4	SR-29 (COMP)	02-21-01/15:15				
11028-5	EX-73 (COMP) N/A	02-20-01/16:00				
PARAMETER	11028-1	11028-2	11028-3	11028-4	11028-5	
PCB's (8082)					N/A	
Aroclor-1016, ug/kg dw	<39	<81	<400	<190	<450	
Aroclor-1221, ug/kg dw	<79	<160	<810	<380	<920	
Aroclor-1232, ug/kg dw	<39	<81	<400	<190	<450	
Aroclor-1242, ug/kg dw	<39	<81	<400	<190	<450	
Aroclor-1248, ug/kg dw	87	280	650	850	1100	
Aroclor-1254, ug/kg dw	480	1200	3900	2500	3800	
Aroclor-1260, ug/kg dw	370	1200	3500	2200	3700	
Aroclor 1268, ug/kg dw	99	310	680	610	630	
Surrogate - TCX	18 %	65 %	*F33	47 %	*F33	
Surrogate - DCB	75 %	145 %	*F33	*F36	*F33	
Dilution Factor	1	2	10	5	10	
Prep Date	02.22.01	02.22.01	02.22.01	02.22.01	02.22.01	
Analysis Date	02.26.01	02.26.01	02.26.01	02.26.01	02.26.01	
Batch ID	0222R	0222R	0222R	0222R	0222R	
Percent Solids	85	81	83	87	73	

STL Savannah

LOG NO: S1-11028
Received: 22 FEB 01
Reported: 27 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 145510227

Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED		
11028-8	Method Blank			
11028-9	Lab Control Standard % Recovery			
11028-10	LCS Accuracy Control Limit (%R)			
PARAMETER		11028-8	11028-9	11028-10
PCB's (8082)				
Aroclor-1016, ug/kg dw		<33	73 %	34-138 %
Aroclor-1221, ug/kg dw		<67	---	---
Aroclor-1232, ug/kg dw		<33	---	---
Aroclor-1242, ug/kg dw		<33	---	---
Aroclor-1248, ug/kg dw		<33	---	---
Aroclor-1254, ug/kg dw		<33	---	---
Aroclor-1260, ug/kg dw		<33	---	---
Aroclor 1268, ug/kg dw		<33	79 %	39-138 %
Surrogate - TCX		<33	---	---
Surrogate - DCB		76 %	65 %	30-150 %
Dilution Factor		76 %	70 %	30-150 %
Prep Date		1	1	---
Analysis Date		02.22.01	02.22.01	---
Batch ID		02.23.01	02.23.01	---
		0222R	0222R	---

STL Savannah

LOG NO: S1-11028
Received: 22 FEB 01
Reported: 27 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 145510227

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
11028-8	Method Blank	
11028-9	Lab Control Standard % Recovery	
11028-10	LCS Accuracy Control Limit (%R)	

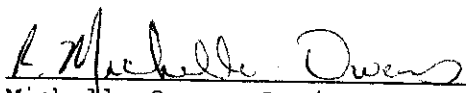
PARAMETER	11028-8	11028-9	11028-10
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These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

*F36 = Surrogate recovery was outside established limits due to a coeluting matrix interference in the sample.


Michelle Owens, Project Manager

Final Page Of Report

Serial Number 001605

SEVERN
TRENT
SERVICES

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Severn Trent Laboratories, Inc.

5102 LaRoche Avenue, Savannah, GA 31404 Phone: (912) 354-7858 Fax: (912) 352-0165
 2846 Industrial Plaza Drive, Tallahassee, FL 32301 Phone: (850) 878-3994 Fax: (850) 878-9504
 900 Lakeside Drive, Mobile, AL 36693 Phone: (334) 666-6633 Fax: (334) 666-6696
 6712 Benjamin Road, Suite 100, Tampa, FL 33634 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSIS	PAGE	OF
Oxford Lakes		AL			1	1
SITL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.				
A. Stewart						
CLIENT (SITE)	CLIENT PHONE	CLIENT FAX				
J. Hopper						
CLIENT NAME	CLIENT E-MAIL					
Solutia						
CLIENT ADDRESS						
COMPANY CONTRACTING THIS WORK (if applicable)						
Genesis Project Inc						
DATE	TIME	SAMPLE IDENTIFICATION		NUMBER CONTAINERS SUBMITTED	REMARKS	
2/20/01	1530	SR-25 (COMP)	X	1	210	
2/21/01	1000	SR-26 (COMP)	X	1	210	
2/21/01	1155	SR-28 (COMP)	X	1		
2/21/01	1515	SR-29 (COMP)	X	1		
2/20/01	1600	EX-73 (COMP)	X	1		
2/21/01	1020	EX-74 (COMP)	X	1		
2/21/01	1440	EX-75 (COMP)	X	1		
RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i> DATE: 2/21/01 TIME: 1900 RECEIVED BY: (SIGNATURE) <i>[Signature]</i> DATE: DATE TIME: TIME						

STANDARD REPORT DELIVERY DATE DUE: 3/7/01

EXPEDITED REPORT DELIVERY (SURCHARGE) DATE DUE:

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 400

RELINQUISHED BY: (SIGNATURE) *[Signature]* DATE: 2/21/01 TIME: 1900

RECEIVED BY: (SIGNATURE) *[Signature]* DATE: DATE TIME: TIME

LABORATORY USE ONLY

STYL-LOG NO. 311028

LABORATORY RE-ARMS

RECEIVED FOR LABORATORY USE BY: *[Signature]* Swafford DATE: 2/20/01 TIME: 9:41

CUSTODY CONTACT: YES NO

CUSTODY SEAL NO. 311028



5102 LaRoche Avenue • Savannah, GA 31404 • Tel: 912 354 7858 • Fax: 912 352 0165 • www.stl-inc.com

STL Savannah

LOG NO: S1-11028B
Received: 22 FEB 01
Reported: 23 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 110110226
Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
11028B-1	SR-27 (COMP)	02-21-01/10:06
PARAMETER		11028B-1
PCB's (8082)		
Aroclor-1016, ug/kg dw		<390
Aroclor-1221, ug/kg dw		<800
Aroclor-1232, ug/kg dw		<390
Aroclor-1242, ug/kg dw		<390
Aroclor-1248, ug/kg dw		660P
Aroclor-1254, ug/kg dw		4700
Aroclor-1260, ug/kg dw		3700
Aroclor 1268, ug/kg dw		1000
Surrogate - TCX		*F33
Surrogate - DCB		*F33
Dilution Factor		10
Prep Date		02.22.01
Analysis Date		02.23.01
Batch ID		0222R
Percent Solids		84

STL Savannah

LOG NO: S1-11028B
 Received: 22 FEB 01
 Reported: 23 FEB 01

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 110110226

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED		
11028B-2	Method Blank			
11028B-3	Lab Control Standard % Recovery			
11028B-4	LCS Accuracy Control Limit (%R)			
PARAMETER		11028B-2	11028B-3	11028B-4
PCB's (8082)				
Aroclor-1016, ug/kg dw		<33	73 %	34-138 %
Aroclor-1221, ug/kg dw		<67	---	---
Aroclor-1232, ug/kg dw		<33	---	---
Aroclor-1242, ug/kg dw		<33	---	---
Aroclor-1248, ug/kg dw		<33	---	---
Aroclor-1254, ug/kg dw		<33	---	---
Aroclor-1260, ug/kg dw		<33	79 %	39-138 %
Aroclor 1268, ug/kg dw		<33	---	---
Surrogate - TCX		76 %	65 %	30-150 %
Surrogate - DCB		76 %	70 %	30-150 %
Dilution Factor		1	1	---
Prep Date		02.22.01	02.22.01	---
Analysis Date		02.23.01	02.23.01	---
Batch ID		0222R	0222R	---

STL Savannah

LOG NO: S1-11028B
Received: 22 FEB 01
Reported: 23 FEB 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 110110226

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
11028B-2	Method Blank	
11028B-3	Lab Control Standard % Recovery	
11028B-4	LCS Accuracy Control Limit (%R)	

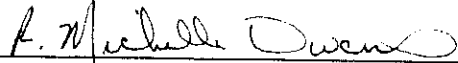
PARAMETER	11028B-2	11028B-3	11028B-4
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These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.


Michelle Owens, Project Manager

LOG NO: S1-11197
 Received: 01 MAR 01
 Reported: 12 MAR 01

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 154710312

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
11197-1	SR-30 COMP	02-27-01/15:07				
11197-2	EX-76 COMP N/A	02-27-01/08:38				
11197-3	EX-77 COMP N/A	02-27-01/08:49				
11197-4	EX-78 COMP N/A	02-27-01/08:54				
11197-5	EX-79 COMP N/A	02-27-01/09:35				

PARAMETER	11197-1	11197-2	11197-3	11197-4	11197-5
PCB'S (8082)		N/A	N/A	N/A	N/A
Aroclor-1016, ug/kg dw	<390	<200	<190	<160	<390
Aroclor-1221, ug/kg dw	<790	<400	<390	<320	<800
Aroclor-1232, ug/kg dw	<390	<200	<190	<160	<390
Aroclor-1242, ug/kg dw	<390	<200	<190	<160	<390
Aroclor-1248, ug/kg dw	1700	310P	480	430	1600
Aroclor-1254, ug/kg dw	6700	2900	3700	2100	6500
Aroclor-1260, ug/kg dw	6200	2100	2800	1900	6800
Aroclor 1268, ug/kg dw	1100	520	570	430	1200
Surrogate - TCX	*F33	36 %	70 %	50 %	*F33
Surrogate - DCB	*F33	*F36	*F36	160 %	*F33
Dilution Factor	10	5	5	4	10
Prep Date	03.06.01	03.02.01	03.06.01	03.06.01	03.06.01
Analysis Date	03.07.01	03.07.01	03.07.01	03.09.01	03.07.01
Batch ID	0306N	0302Q	0306N	0306N	0306N
Percent Solids	85	84	85	84	84

STL Savannah

LOG NO: S1-11197
Received: 01 MAR 01
Reported: 12 MAR 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 154710312

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED		
11197-16	Method Blank			
11197-17	Lab Control Standard % Recovery			
11197-18	LCS Accuracy Control Limit (%R)			
PARAMETER		11197-16	11197-17	11197-18
PCB's (8082)				
Aroclor-1016, ug/kg dw		<33	85 %	34-138 %
Aroclor-1221, ug/kg dw		<67	---	---
Aroclor-1232, ug/kg dw		<33	---	---
Aroclor-1242, ug/kg dw		<33	---	---
Aroclor-1248, ug/kg dw		<33	---	---
Aroclor-1254, ug/kg dw		<33	---	---
Aroclor-1260, ug/kg dw		<33	97 %	39-138 %
Aroclor 1268, ug/kg dw		<33	---	---
Surrogate - TCX		82 %	82 %	30-150 %
Surrogate - DCB		106 %	106 %	30-150 %
Dilution Factor		1	1	---
Prep Date		03.06.01	03.06.01	---
Analysis Date		03.07.01	03.07.01	---
Batch ID		0306N	0306N	---

STL Savannah

LOG NO: S1-11197
Received: 01 MAR 01
Reported: 12 MAR 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 154710312

Page 5

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
11197-16	Method Blank	
11197-17	Lab Control Standard % Recovery	
11197-18	LCS Accuracy Control Limit (%R)	

PARAMETER	11197-16	11197-17	11197-18
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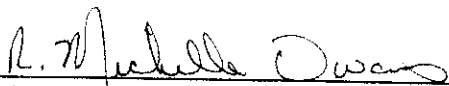
These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

*F36 = Surrogate recovery was outside established limits due to a coeluting matrix interference in the sample.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.


Michelle Owens, Project Manager

Final Page Of Report

Serial Number 001619

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRoche Avenue, Savannah, GA 31404 Phone: (912) 354-7858 Fax: (912) 352-0165
 2846 Industrial Plaza Drive, Tallahassee, FL 32301 Phone: (850) 878-3994 Fax: (850) 878-9504
 900 Lakeside Drive, Mobile, AL 36693 Phone: (334) 666-6633 Fax: (334) 666-6696
 6712 Benjamin Road, Suite 100, Tampa, FL 33634 Phone: (813) 885-7427 Fax: (813) 885-7049

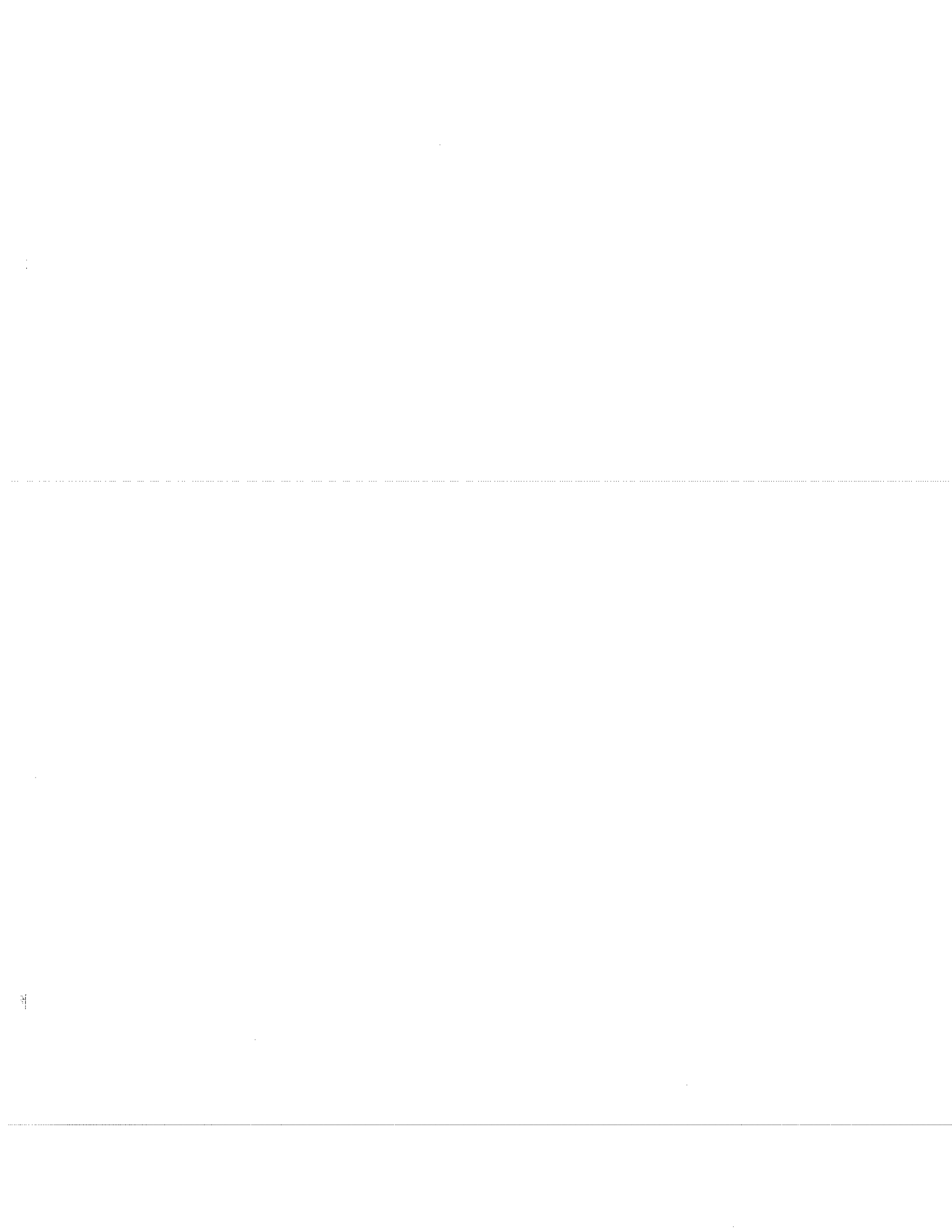
Severn Trent Laboratories, Inc.

**SEVERN
TRENT
SERVICES**

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSIS	PAGE	OF
Oxford Lakes					1	2
STL (LAB) PROJECT MANAGER	R.O. NUMBER	CONTRACT NO.				
A. Stewart						
CLIENT (SITE)	CLIENT PHONE	CLIENT FAX				
Jerry Hopper						
CLIENT NAME	CLIENT E-MAIL					
Solutia						
CLIENT ADDRESS						
COMPANY CONTRACTING THIS WORK (if applicable)						
Genesis Project Inc.						
SAMPLE	DATE	TIME	SAMPLE IDENTIFICATION	NUMBER CONTAINERS SUBMITTED	REMARKS	
2/27/01	1507		SK-30 Comp	1	>10	
	0838		EX-76 Comp	1	>10	
	0849		EX-77 Comp	1	>10	
	0854		EX-78 Comp	1	>10	
	0935		EX-79 Comp	1	>10	
	1110		EX-80 Comp	1	>10	
	1171		EX-81 Comp	1	>10	
	1146		EX-82 Comp	1	>10	
	1151		EX-83 Comp	1	>10	
	1158		EX-84 Comp	1	>10	
	1408		EX-85 Comp	1	>10	
	1413		EX-86 Comp	1	>10	
	1424		EX-87 Comp	1	>10	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	
[Signature]	2/27/01		[Signature]	2/28/01	1400	
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	
[Signature]	3/1/01		[Signature]	3/1/01		

STANDARD REPORT DELIVERY DATE DUE 3/12/01
 EXPEDITED REPORT DELIVERY (SURCHARGE) DATE DUE
 NUMBER OF COOLERS SUBMITTED PER SHIPMENT:
 SCREENED LEVELS
 185 ml glass
 P/B 8082
 40L

LABORATORY USE ONLY
 CUSTODY SEAL NO. 511197
 CUSTODY INTACT YES
 TIME 9:55
 DATE 3/1/01
 RECEIVED FOR LABORATORY USE BY: (SIGNATURE) J Swafford
 RECEIVED BY: (SIGNATURE) [Signature]



STL Savannah

LOG NO: S1-11460
Received: 12 MAR 01
Reported: 19 MAR 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 124710320

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
11460-1	SR-32 COMP	03-06-01/16:25
11460-2	SR-33 COMP	03-07-01/11:50
11460-3	SR-34 COMP	03-07-01/16:00
11460-4	EX-103 COMP <i>n/a</i>	03-06-01/16:35
11460-5	EX-104 COMP	03-07-01/11:56

PARAMETER	11460-1	11460-2	11460-3	11460-4	11460-5
PCB's (8082)				<i>n/a</i>	<i>n/a</i>
Aroclor-1016, ug/kg dw	<160	<77	<200	<38	<990
Aroclor-1221, ug/kg dw	<320	<160	<400	<76	<2000
Aroclor-1232, ug/kg dw	<160	<77	<200	<38	<990
Aroclor-1242, ug/kg dw	<160	<77	<200	<38	<990
Aroclor-1248, ug/kg dw	<160	<77	<200	60	2000
Aroclor-1254, ug/kg dw	1500	680	2400	580	6900
Aroclor-1260, ug/kg dw	1200	530	1600	390	5000
Aroclor 1268, ug/kg dw	220P	120P	380P	93P	1100
Surrogate - TCX	100 %	79 %	90 %	84 %	*F33
Surrogate - DCB	185 %	137 %	275 %	110 %	*F33
Dilution Factor	4	2	5	1	25
Prep Date	03.13.01	03.13.01	03.13.01	03.13.01	03.13.01
Analysis Date	03.14.01	03.14.01	03.14.01	03.14.01	03.14.01
Batch ID	0313N	0313N	0313N	0313N	0313N
Percent Solids	85	86	83	88	83

LOG NO: S1-11460
Received: 12 MAR 01
Reported: 19 MAR 01

Mr. Mike Price
Genesis Project, Inc.
1258 Concord Road
Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
Project: OXFORD LAKES
Sampled By: Client
Code: 124710320

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED				
11460-8	Method Blank					
11460-9	Lab Control Standard % Recovery					
11460-10	LCS Accuracy Control Limit (%R)					
11460-11	LCS-093 Custom					
11460-12	True Value-093 Custom					
PARAMETER		11460-8	11460-9	11460-10	11460-11	11460-12
PCB's (8082)						
Aroclor-1016, ug/kg dw		<33	70 %	34-138 %	---	---
Aroclor-1221, ug/kg dw		<67	---	---	---	---
Aroclor-1232, ug/kg dw		<33	---	---	---	---
Aroclor-1242, ug/kg dw		<33	---	---	---	---
Aroclor-1248, ug/kg dw		<33	---	---	1600	1520
Aroclor-1254, ug/kg dw		<33	---	---	3000	3060
Aroclor-1260, ug/kg dw		<33	79 %	39-138 %	2200	1980
Aroclor 1268, ug/kg dw		<33	---	---	1400	1510
Surrogate - TCX		59 %	59 %	30-150 %	---	---
Surrogate - DCB		76 %	76 %	30-150 %	---	---
Dilution Factor		1	1	---	1.0	---
Prep Date		03.13.01	03.13.01	---	03.13.01	---
Analysis Date		03.14.01	03.14.01	---	03.14.01	---
Batch ID		0313N	0313N	---	0313N	---

LOG NO: S1-11460
 Received: 12 MAR 01
 Reported: 19 MAR 01

Mr. Mike Price
 Genesis Project, Inc.
 1258 Concord Road
 Smyrna, GA 30080

Client PO. No.: 4503213403

Contract No.: S7219
 Project: OXFORD LAKES
 Sampled By: Client
 Code: 124710320

Page 4

REPORT OF RESULTS

DATE/

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	TIME SAMPLED
11460-8	Method Blank	
11460-9	Lab Control Standard % Recovery	
11460-10	LCS Accuracy Control Limit (%R)	
11460-11	LCS-093 Custom	
11460-12	True Value-093 Custom	


PARAMETER	11460-8	11460-9	11460-10	11460-11	11460-12

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

P = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40 %. Thus, viewer discretion should be employed during data review and interpretation of results for this target compound.


 Michelle Owens, Project Manager

Final Page Of Report

Serial Number 005287

SEVERN TRENT SERVICES
ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD
Severn Trent Laboratories, Inc.

5102 LaRoche Avenue, Savannah, GA 31404 Phone: (912) 354-7858 Fax: (912) 352-0165
 2846 Industrial Plaza Drive, Tallahassee, FL 32301 Phone: (850) 878-3994 Fax: (850) 878-9504
 900 Lakeside Drive, Mobile, AL 36693 Phone: (334) 666-6633 Fax: (334) 666-6696
 6712 Benjamin Road, Suite 100, Tampa, FL 33634 Phone: (813) 885-7427 Fax: (813) 885-7049

PROJECT REFERENCE: *Okland Lakes*
 STL (LAB) PROJECT MANAGER: *A. Stewart*
 CLIENT (SITE): *Jerry Hooper*
 CLIENT NAME: *Solomon*
 CLIENT ADDRESS: _____

PROJECT NO. _____ PROJECT LOCATION (STATE): _____ MATRIX TYPE: _____
 P.O. NUMBER _____ CONTRACT NO. _____
 CLIENT PHONE _____ CLIENT FAX _____
 CLIENT E-MAIL _____

COMPANY CONTRACTING THIS WORK (if applicable): *Cowesic Project, Inc.*

SAMPLE DATE	TIME	SAMPLE IDENTIFICATION	MATRIX TYPE	REQUIRED ANALYSIS				STANDARD REPORT DELIVERY DATE DUE	EXPEDITED REPORT DELIVERY (SURCHARGE) DATE DUE	NUMBER OF COOLERS SUBMITTED PER SHIPMENT	REMARKS
				1	2	3	4				
3/4/01	1625	SR-32 COMP	✓								
3/7/01	1150	SR-33 COMP	✓								
3/7/01	1600	SR-34 COMP	✓								
3/6/01	1635	EX-103 COMP	✓								
3/7/01	1156	EX-104 COMP	✓								
3/7/01	1552	EX-105 COMP	✓								
3/7/01	1610	EX-106 COMP	✓								

RELINQUISHED BY: (SIGNATURE) _____ DATE: 3/5/01 TIME: 11:30
 RECEIVED BY: (SIGNATURE) _____ DATE: _____ TIME: _____

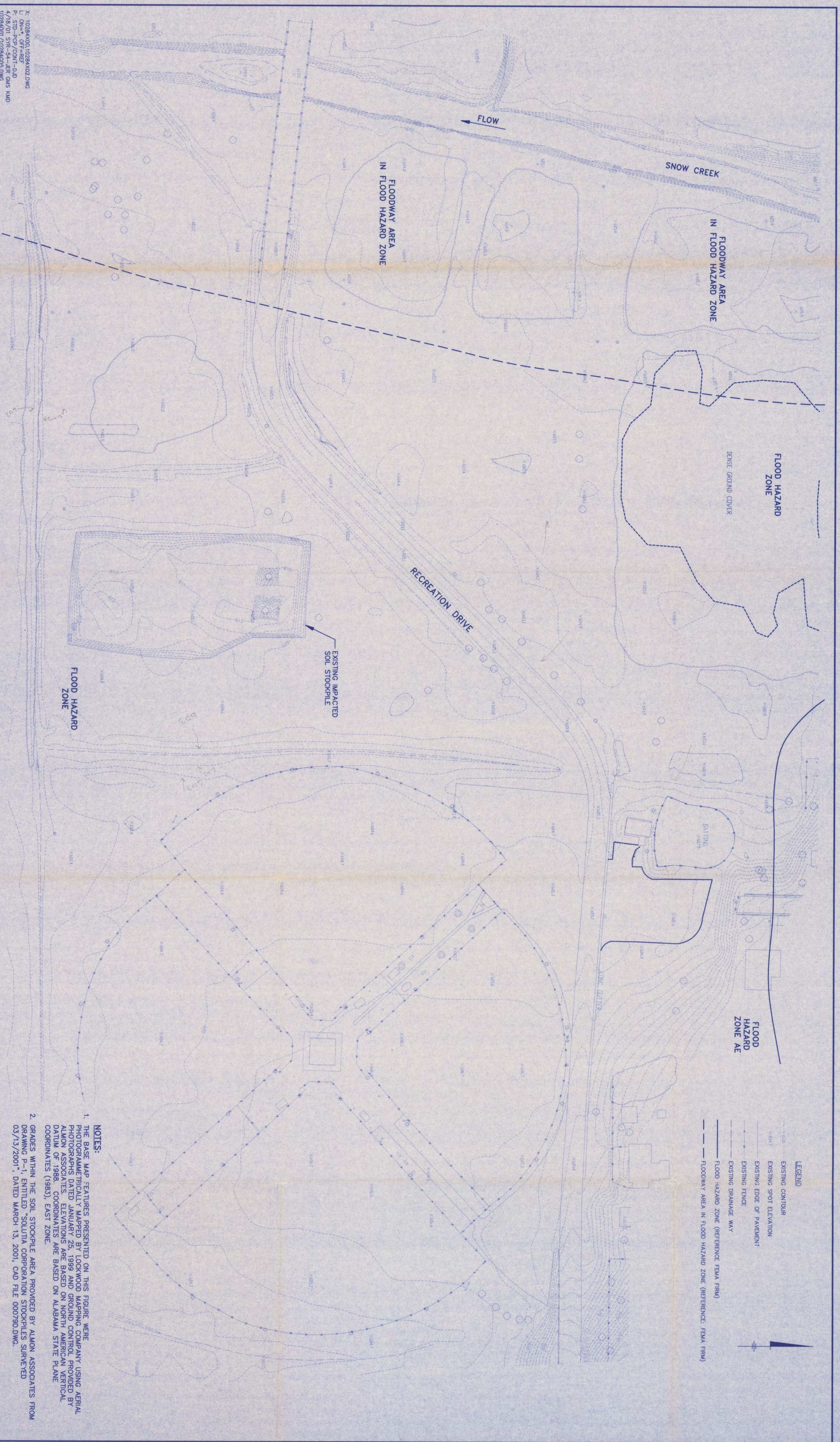
RECEIVED FOR LABORATORY USE BY: (SIGNATURE) _____ DATE: _____ TIME: _____
 CUSTODY SEAL NO. _____ CUSTODY SEAL NO. _____
 CUSTODY INTACT: YES
 LABORATORY USE ONLY

APPENDIX B

Design Drawings

INDEX TO CONTRACT DRAWINGS

G-1	Existing Conditions Site Plan
G-2	Parking Area General Arrangement
G-3	Sections
S-1	Typical Sections and Notes
S-2	Miscellaneous Details



LEGEND

- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING EDGE OF PAVEMENT
- EXISTING FENCE
- EXISTING DRAINAGE WAY
- FLOOD HAZARD ZONE (REFERENCE FEMA FIRM)
- FLOODWAY AREA IN FLOOD HAZARD ZONE (REFERENCE FEMA FIRM)

- NOTES:**
1. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE WERE PHOTOGRAMMETRICALLY MAPPED BY LOCKWOOD MAPPING COMPANY USING AERIAL PHOTOGRAPHY. SPOT ELEVATIONS ARE BASED ON ROUND CONTROL PROVIDED BY ALMON ASSOCIATES. ELEVATIONS ARE BASED ON NAD83 NORTH AMERICAN VERTICAL DATUM OF 1988. COORDINATES ARE BASED ON ALABAMA STATE PLANE COORDINATES (1983), EAST ZONE.
 2. GRADES WITHIN THE SOIL STOCKPILE AREA PROVIDED BY ALMON ASSOCIATES FROM DRAWING P-1, ENTITLED "SOULTA CORPORAATION STOCKPILES SURVEYED 03/13/2001", DATED MARCH 13, 2001, CAD FILE 000790.DWG.

Graphic Scale
 1"=60'
 0 60' 120'

No.	Date	Revisions	Int

Project Mgr. A. Fowler
 Designed by M. Crowliding
 Drawn by G. Stowell
 Checked by J. Holden
 Prof. Eng. Edward Richard Lynch
 PE License 22310



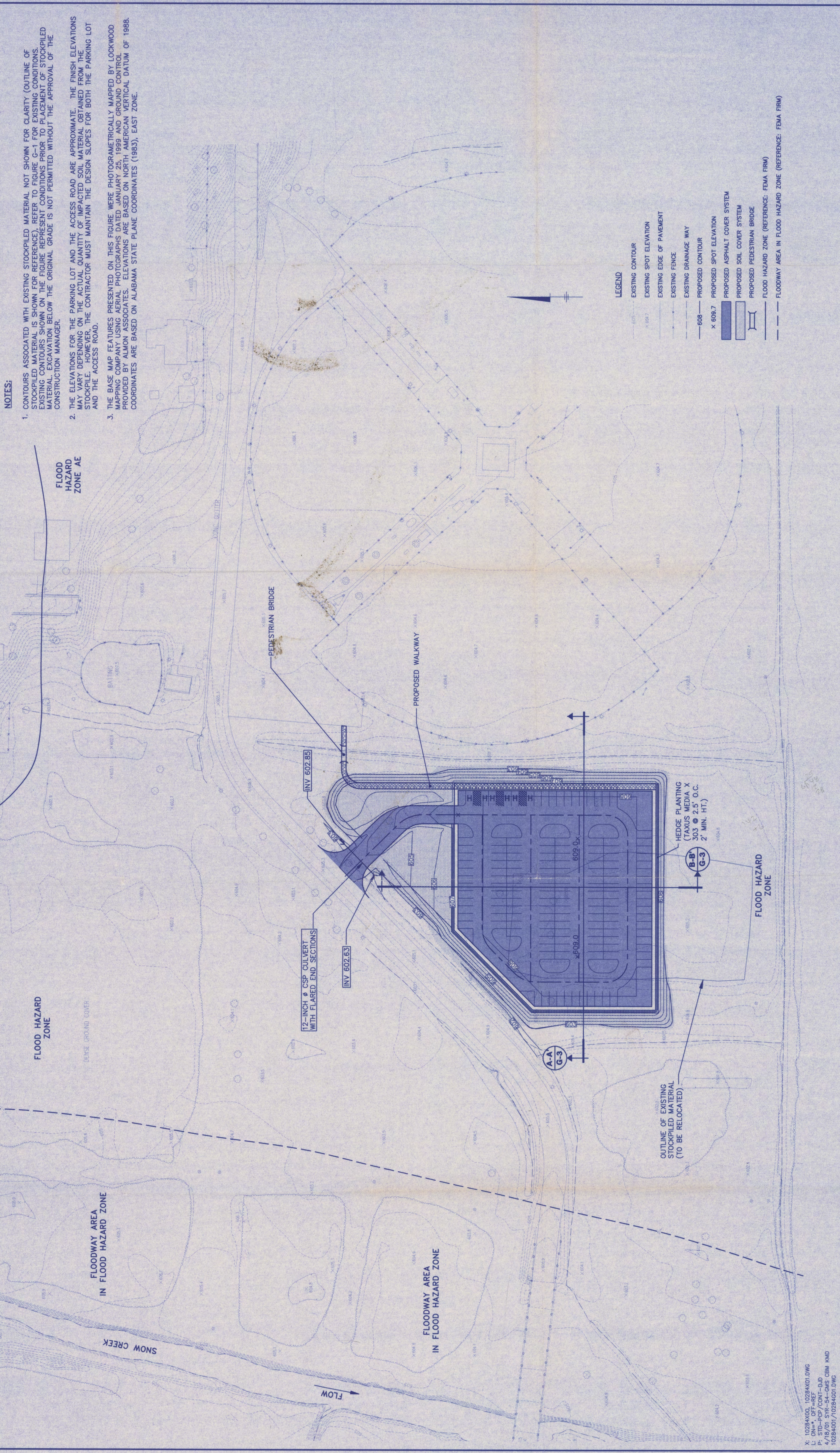
BBL
 BLASLAND, BOUCK & LEE, INC.
 engineers & scientists

SOULTA INC. • ANNISTON, AL.
 OXFORD LAKE SOFTBALL COMPLEX
EXISTING CONDITIONS SITE PLAN

File Number
 102.84.DTF
 Date
 APRIL 2001
 Blasland, Bouck & Lee, Inc.
 Corporate Headquarters
 6723 Tappan Road
 Syracuse, NY 13214
 315-446-9120

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

X: 10284X00, 10284X02.DWG
 L: 01=OFF-REF
 P: 10284X00/CONT-010
 F: 10284X00/CONT-010
 10284001/10284005.DWG



NOTES:

1. CONTOURS ASSOCIATED WITH EXISTING STOCKPILED MATERIAL NOT SHOWN FOR CLARITY (OUTLINE OF STOCKPILED MATERIAL IS SHOWN FOR REFERENCE). REFER TO FIGURE G-1 FOR EXISTING CONDITIONS. EXISTING CONTOURS SHOWN ON THE FIGURE REPRESENT CONDITIONS PRIOR TO PLACEMENT OF STOCKPILED MATERIAL. EXCAVATION BELOW THE ORIGINAL GRADE IS NOT PERMITTED WITHOUT THE APPROVAL OF THE CONSTRUCTION MANAGER.
2. THE ELEVATIONS FOR THE PARKING LOT AND THE ACCESS ROAD ARE APPROXIMATE. THE FINISH ELEVATIONS MAY VARY DEPENDING ON THE ACTUAL QUANTITY OF IMPACTED SOIL MATERIAL OBTAINED FROM THE STOCKPILE. HOWEVER, THE CONTRACTOR MUST MAINTAIN THE DESIGN SLOPES FOR BOTH THE PARKING LOT AND THE ACCESS ROAD.
3. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE WERE PHOTOGRAMMETRICALLY MAPPED BY LOCKWOOD MAPPING COMPANY USING AERIAL PHOTOGRAPHS DATED JANUARY 25, 1999. HORIZONTAL CONTROL PROVIDED BY ALMON ASSOCIATES. ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. COORDINATES ARE BASED ON ALABAMA STATE PLANE COORDINATES (1983), EAST ZONE.

LEGEND

---	EXISTING CONTOUR
-X-604.7	EXISTING SPOT ELEVATION
---	EXISTING EDGE OF PAVEMENT
---	EXISTING FENCE
---	EXISTING DRAINAGE WAY
---	PROPOSED CONTOUR
X 609.7	PROPOSED SPOT ELEVATION
[Hatched Box]	PROPOSED ASPHALT COVER SYSTEM
[Dotted Box]	PROPOSED SOIL COVER SYSTEM
[Line with Dashes]	PROPOSED PEDESTRIAN BRIDGE
---	FLOOD HAZARD ZONE (REFERENCE: FEMA FIRM)
---	FLOODWAY AREA IN FLOOD HAZARD ZONE (REFERENCE: FEMA FIRM)

X: 10284X00_10284X01.DWG
 L: ON* OFF-REF
 P: STD-PCF/CONT-DJD
 4/18/01 SYR-54-GMS CBM KMD
 10284X01/10284X01.DWG

Graphic Scale
 1"=60'
 0 60' 120'

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

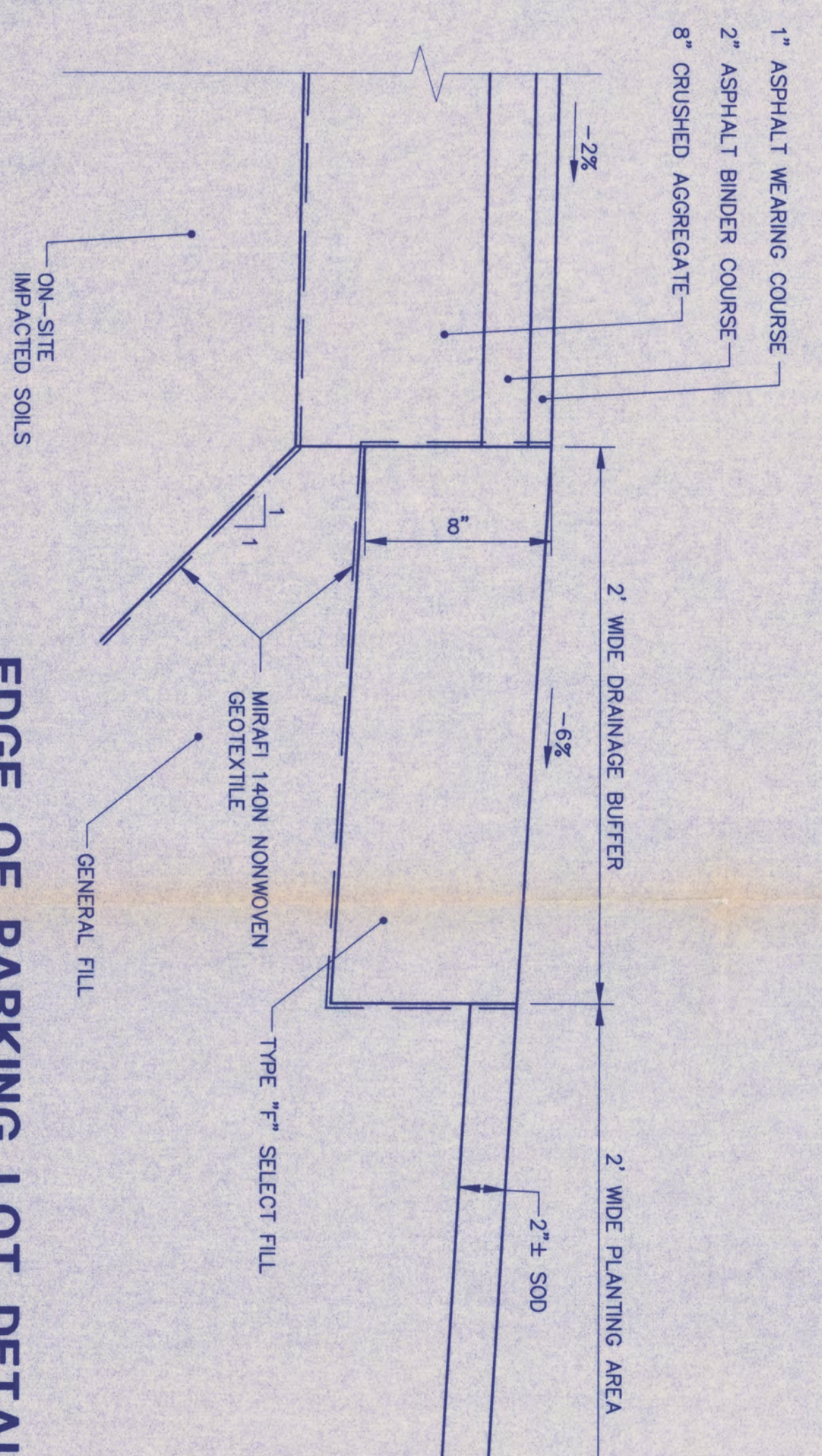
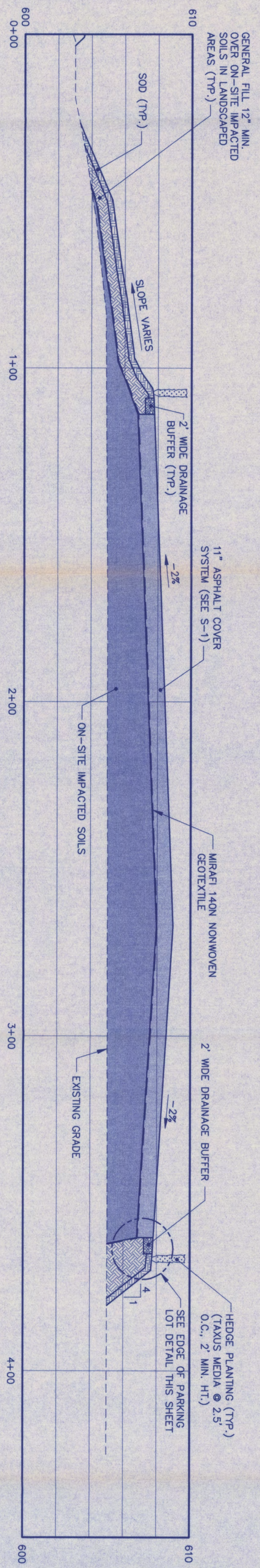
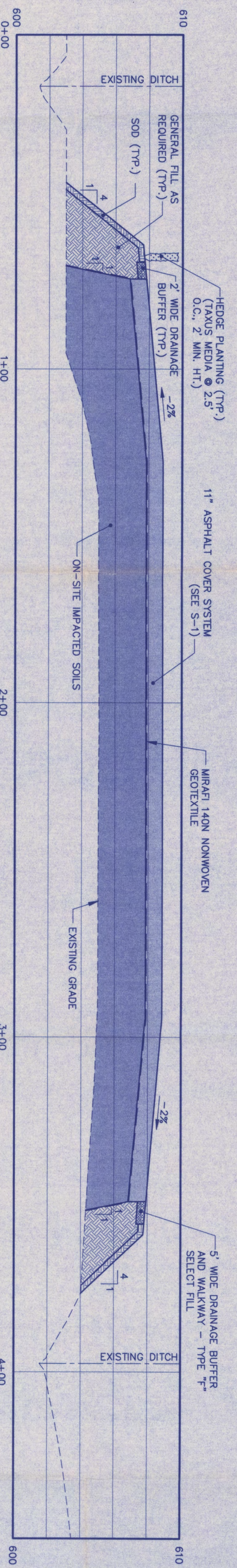
No.	Date	Revisions	Init



BBL
 BLASLAND, BOUCK & LEE, INC.
 engineers & scientists

SOLUTIONS INC. • ANNISTON, AL.
 OXFORD LAKE SOFTBALL COMPLEX
PARKING AREA GENERAL ARRANGEMENT

File Number
 102.84.02F
 Date
 APRIL 2001
 Blasland, Bouck & Lee, Inc.
 6723 State Headquarters
 Syracuse, NY 13214
 315-446-9120



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 P: STD-PCP/CONT-D/D
 4/18/01 STR-54-GMS CSM KMD
 10284X01/10284X02.DWG

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 2209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Graphical Scale
 HORIZ. 20' 0 20' 40'
 VERT. 4' 0 4' 8'

No.	Date	Revisions

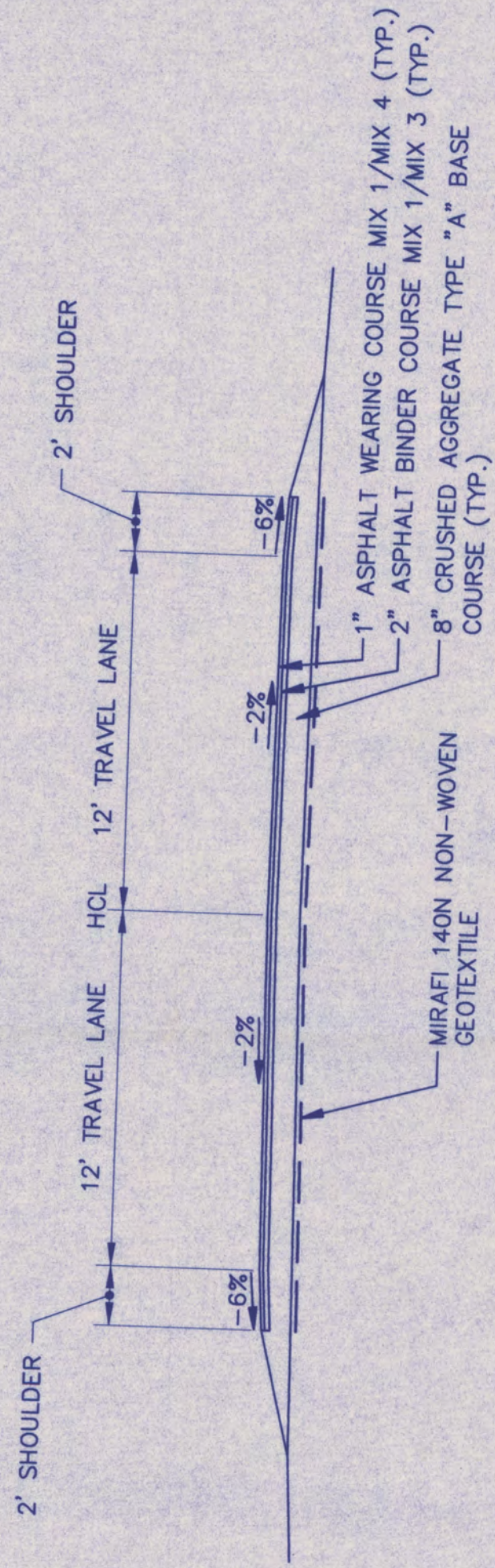
Project Mgr. A. Fowler
 Drawn by M. Goyeiding
 Checked by J. Holden
 Prof. Eng. Edward Richard Lynch
 PE License 22310



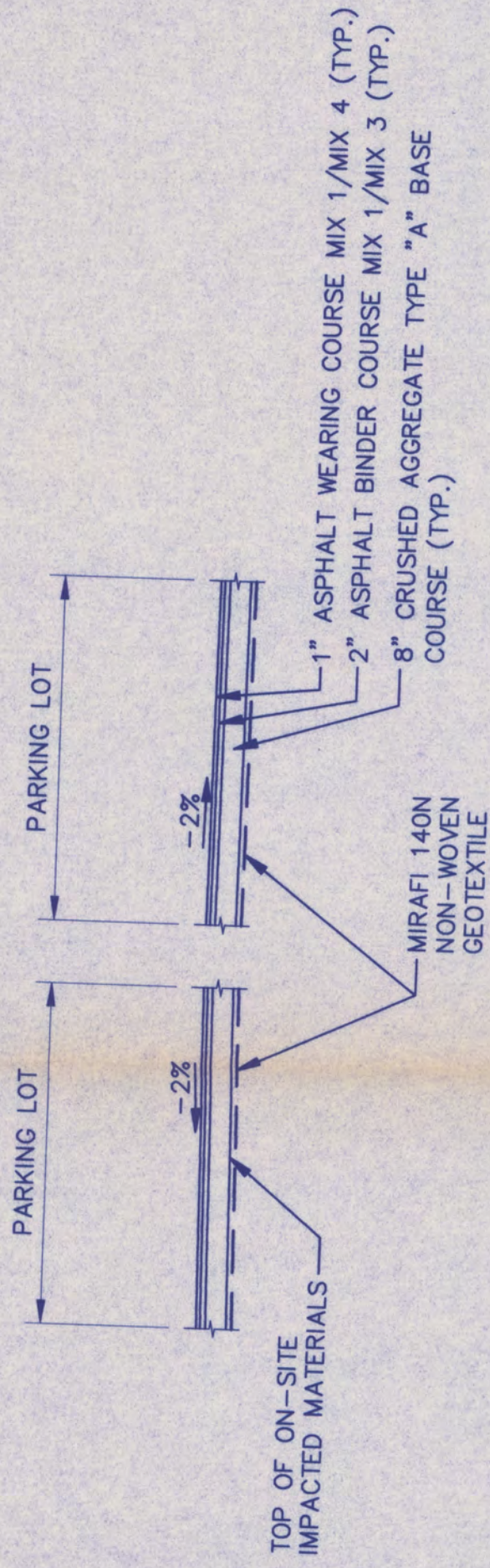
BBL
 BLASLAND, BOUCK & LEE, INC.
 engineers & scientists

SOLUTIA INC. • ANNISTON, AL.
 OXFORD LAKE SOFTBALL COMPLEX
SECTIONS

File Number: 102.84.03F
 Date: April, 2001
 Blasland, Bouck & Lee, Inc.
 Corporate Headquarters
 Syracuse, NY 13214
 315-446-9120



TYPICAL ACCESS ROAD SECTION
3/16" = 1'-0"



TYPICAL PARKING LOT SECTION
3/16" = 1'-0"

NOTES:

1. A NON-WOVEN LINER SHALL BE PLACED ON PREPARED SUBGRADE IN ALL AREAS OF ACCESS ROAD AND PARKING LOT. PLACEMENT SHALL EXTEND THE FULL WIDTH OF THE PARKING FACILITY AND TO THE SIDE SLOPES IN FILL AREAS.
2. PROFILE AND CROSS SLOPE SHALL BE CONTROLLED BY A TAUT REFERENCE STRING LINE AS NECESSARY.

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT, DUE TO THE NATURE OF RECONSTRUCTION PROJECTS, THE EXTENT OF ACCURATELY DETERMINED PRIOR TO THE COMMENCEMENT OF WORK, THESE CONTRACT DOCUMENTS HAVE BEEN PREPARED BASED ON FIELD INSPECTION AND OTHER AVAILABLE INFORMATION. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS TO CONSTRUCTION DETAILS AND WORK QUANTITIES. THE CONTRACTOR SHALL VERIFY EXISTING FIELD CONDITIONS.
2. THE CONTRACTOR IS TO VISIT THE SITE BEFORE SUBMITTING A BID PROPOSAL, TO FAMILIARIZE THEMSELVES WITH THE FIELD CONDITIONS AND TO JUDGE FOR THEMSELVES THE EXTENT AND NATURE OF THE WORK TO BE DONE UNDER THIS CONTRACT. NO EXTRA COMPENSATION WILL BE ALLOWED THEM BECAUSE OF THEIR FAILURE TO INCLUDE IN THEIR BID ALL ITEMS AND MATERIALS WHICH THEY ARE REQUIRED TO FURNISH IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

UTILITIES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES ENCOUNTERED IN THIS WORK. THE CONTRACTOR SHALL REPAIR ALL UTILITIES DAMAGED BY THE CONTRACTOR'S ACTIVITIES TO THE SATISFACTION OF THE OWNER OF THE UTILITY AT NO ADDITIONAL COST TO THIS CONTRACT.
2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES. THE CONTRACTOR SHALL NOTIFY THE UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION (UFO) 1-(800)-962-7962, RAILROAD, AND PRIVATE UTILITY LOCATION COMPANIES (AS NECESSARY) PRIOR TO COMMENCING ACTIVITIES BELOW THE EXISTING GROUND SURFACE (E.G., EXCAVATION, DRIVING POSTS, OR INSTALLING SHORING).

SPECIAL NOTES

DRAINAGE

1. ALL EXISTING CULVERTS AND DITCHES WITHIN THE CONTRACT LIMITS ARE TO BE KEPT CLEAN AND FREE-FLOWING FOR THE DURATION OF THE CONTRACT.
2. THE CONTRACTOR MUST ACQUAINT THEMSELVES WITH DRAINAGE CHARACTERISTICS OF THE AREA SO THAT THEY WILL PROGRESS THEIR WORK EFFICIENTLY WITH AN UNDERSTANDING OF THE POTENTIAL DRAINAGE PROBLEMS.

ROADWAY AND EARTHWORK

1. THE COST OF FURNISHING AND PLACING WATER USED FOR COMPACTION PURPOSES, DUST CONTROL, AND FOR OTHER PURPOSES AS CALLED FOR IN THE CONTRACT DOCUMENTS SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS IN THE CONTRACT.
2. ROADWAYS AND PARKING FACILITIES SHALL BE CONSTRUCTED TO CONFORM TO ALABAMA STATE DEPARTMENT OF TRANSPORTATION POLICY AND STANDARDS.

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES

GENERAL

1. THE CONTRACTOR SHALL MAINTAIN AND PROTECT TWO-WAY TRAFFIC WITHIN THE LIMITS OF THE ROADWAY THROUGHOUT THE LENGTH AND DURATION OF THE CONTRACT IN ACCORDANCE WITH THE REQUIREMENTS OF THE ALABAMA STATE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (AL MUTCD).
2. THE CONTRACTOR SHALL PROVIDE 2 FLAGGERS WHEN, DUE TO WORK ASSOCIATED WITH THIS PROJECT, ANY PORTION OF REGULATION DRIVE IS CLOSED OR UNDER CONSTRUCTION, OR WHEN CONSTRUCTION-RELATED VEHICLES ENTER OR EXIT THE WORK AREA. FLAGGERS SHALL BE EQUIPPED WITH TWO-WAY RADIOS AND BE IN COMMUNICATION WITH EACH OTHER.
3. CONTRACTOR TO PROVIDE AT A MINIMUM 2 SIGNS (ONE IN EACH DIRECTION) TO ALERT THE TRAVELING PUBLIC OF CONSTRUCTION ACTIVITIES AHEAD AND OF FLAGGERS AHEAD.

LANE CLOSURES

1. THE CONTRACTOR SHALL SCHEDULE WORK SO THAT ALL TRAVEL LANES IN EACH DIRECTION ARE OPEN WHEN THE CONTRACTOR'S OPERATIONS ARE CLOSED DOWN OR SUBSTANTIALLY CLOSED DOWN. THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION AND SHALL PROVIDE 2 FLAGGERS TO CONTROL TRAFFIC MOVEMENT AT THE SITE OF PAVING OR OTHER WORK OPERATIONS REQUIRING TEMPORARY CLOSING OF PORTIONS OF THE TRAVELED WAY, UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS. THE MINIMUM WIDTH OF A TRAVELED LANE SHALL BE 12 FEET.
2. THE CONTRACTOR SHALL NOT WORK ON BOTH SIDES OF THE ROADWAY IN THE SAME AREA AT THE SAME TIME.
3. THE CONTRACTOR SHALL COORDINATE WORK WITH ANY CONTRACTORS, PUBLIC MAINTENANCE, OR UTILITIES COMPANY'S OPERATIONS IN THE AREA TO ENSURE PROPER MAINTENANCE OF TRAFFIC.

TRAFFIC CONES, DRUMS, BARRICADES, AND MARKERS

1. ALL TRAFFIC CONES, DRUMS, AND MARKERS ARE TO BE PLACED SO AS TO PROVIDE A MINIMUM 2 FEET CLEARANCE TO THE TRAVELED WAY UNLESS OTHERWISE SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAKE CERTAIN THAT PLACEMENT OF CONES, DRUMS, AND MARKERS OR BARRICADES SHALL NOT INTERFERE WITH THE SIGHT DISTANCE.
2. TYPICAL SPACING SHALL BE 15 FEET.

DROP OFFS

1. NO DROP OFF GREATER THAN 4 INCHES SHALL REMAIN OVERNIGHT. A DROP OFF IS CONSIDERED ELIMINATED IF TAPERED AWAY BY A 1 ON 4 OR FLATTER SLOPE.
2. ALL SIGNS NECESSARY FOR THE MAINTENANCE AND PROTECTION OF TRAFFIC (INCLUDING RELOCATION AND/OR MODIFICATION AND/OR RESTORATION OF EXISTING SIGN PANELS) AS NOTED IN THE CONTRACT DOCUMENTS OR ALABAMA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS SHALL BE INCLUDED IN THE BID.
3. EXISTING SIGNS SHALL BE PROTECTED, COVERED, RELOCATED, OR REMOVED AS NECESSARY. NEW TRAFFIC SIGN PANELS AND THEIR POSTS WILL BE FURNISHED BY OTHERS AND INSTALLED BY THE CONTRACTOR.

X: 1028400.DWG
P: STD-PCO
4/18/01 SVR-SK-CBM_QMS_KMO
10284001/10284003.DWG

Graphic Scale
3/16" = 1'-0"

No.	Date	Revisions	Init

Project Mgr. A. Fowler
Designed by M. Crowe
Drawn by G. Stowell
Checked by J. Holder
Prof. Eng. Edward Richard Leach
PE License 22310

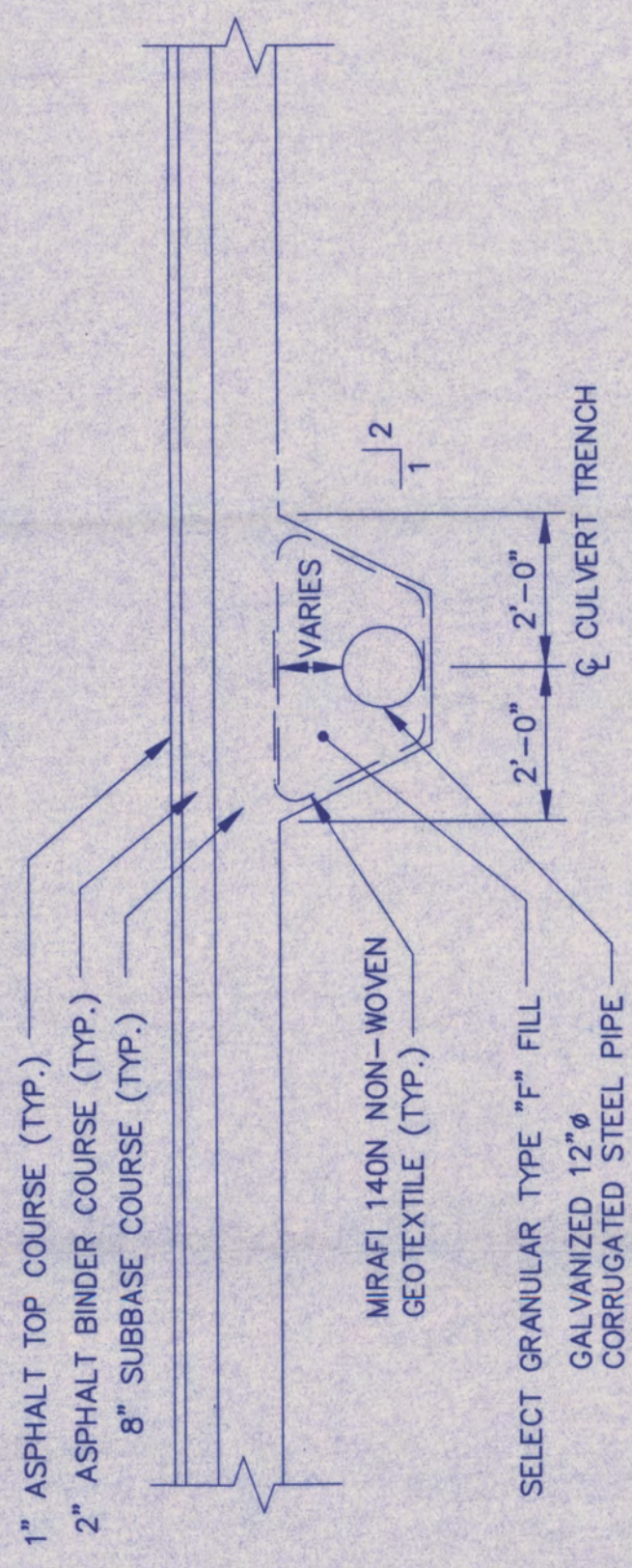


BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

SOLUTIA INC. • ANNISTON, AL.
OXFORD LAKE SOFTBALL COMPLEX

TYPICAL SECTIONS & NOTES

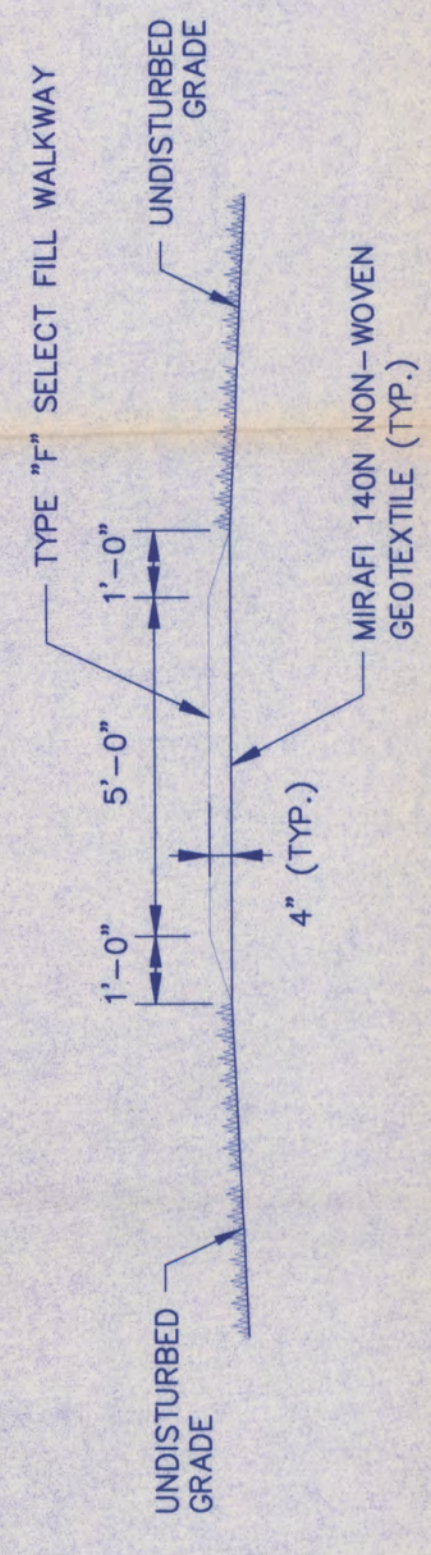
File Number
102.84.04F
Date
APRIL 2001
Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Sylva, NC 28781
315-446-9120



- NOTES:**
- REFER TO THE ALABAMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION 854.05 FOR ROUND CORRUGATED STEEL PIPE AND PIPE ANCHORS.
 - CORRUGATED STEEL PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH AASHTO M-36 TYPE I OR TYPE IA AS SPECIFIED.
 - THE PIPE SHALL CONFORM TO ALABAMA DEPARTMENT OF TRANSPORTATION SPECIFICATION 854.05 FOR TYPE I OR ALABAMA DEPARTMENT OF TRANSPORTATION SPECIFICATION 854.13 FOR TYPE IA.
 - PROTECTION PIPE COUPLING BANDS (DIMPLED BANDS) SHALL NOT BE ACCEPTABLE.
 - THE CORRUGATED DEPTH SHALL BE 1/2-INCH.
 - END SECTIONS SHALL BE CORRUGATED STEEL STANDARD FLANGED END SECTIONS TO MATCH THE PIPE THICKNESS OF THE CONNECTING PIPE.
 - FIELD JOINTS SHALL BE IN ACCORDANCE WITH ALABAMA DEPARTMENT OF TRANSPORTATION SPECIFICATION 854.13.
 - NEOPRENE OR OTHER APPROVED GASKET MATERIAL SHALL BE PROVIDED AT EACH JOINT.

ACCESS ROADWAY CULVERT DETAIL

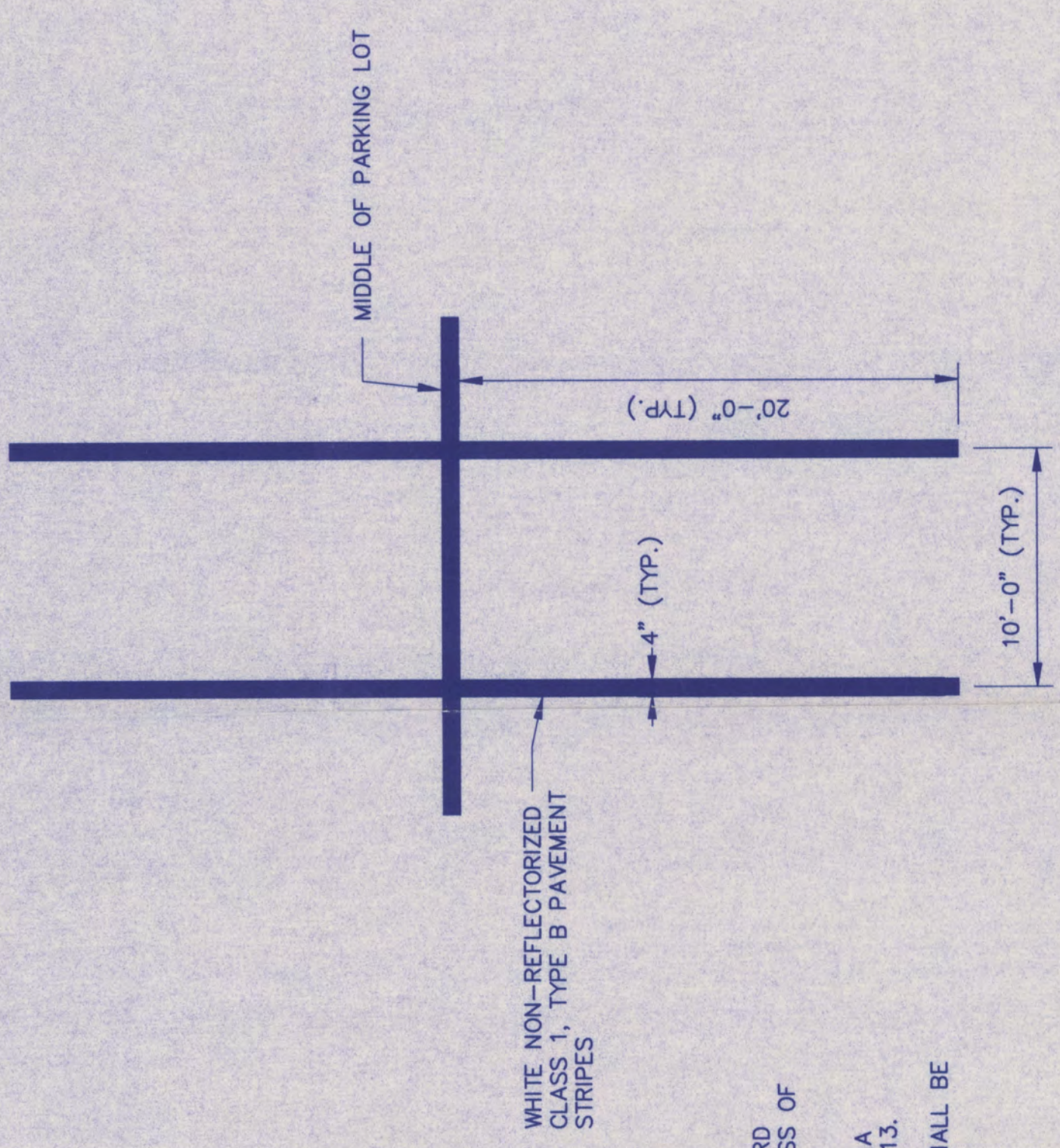
NOT TO SCALE



WALKWAY DETAIL

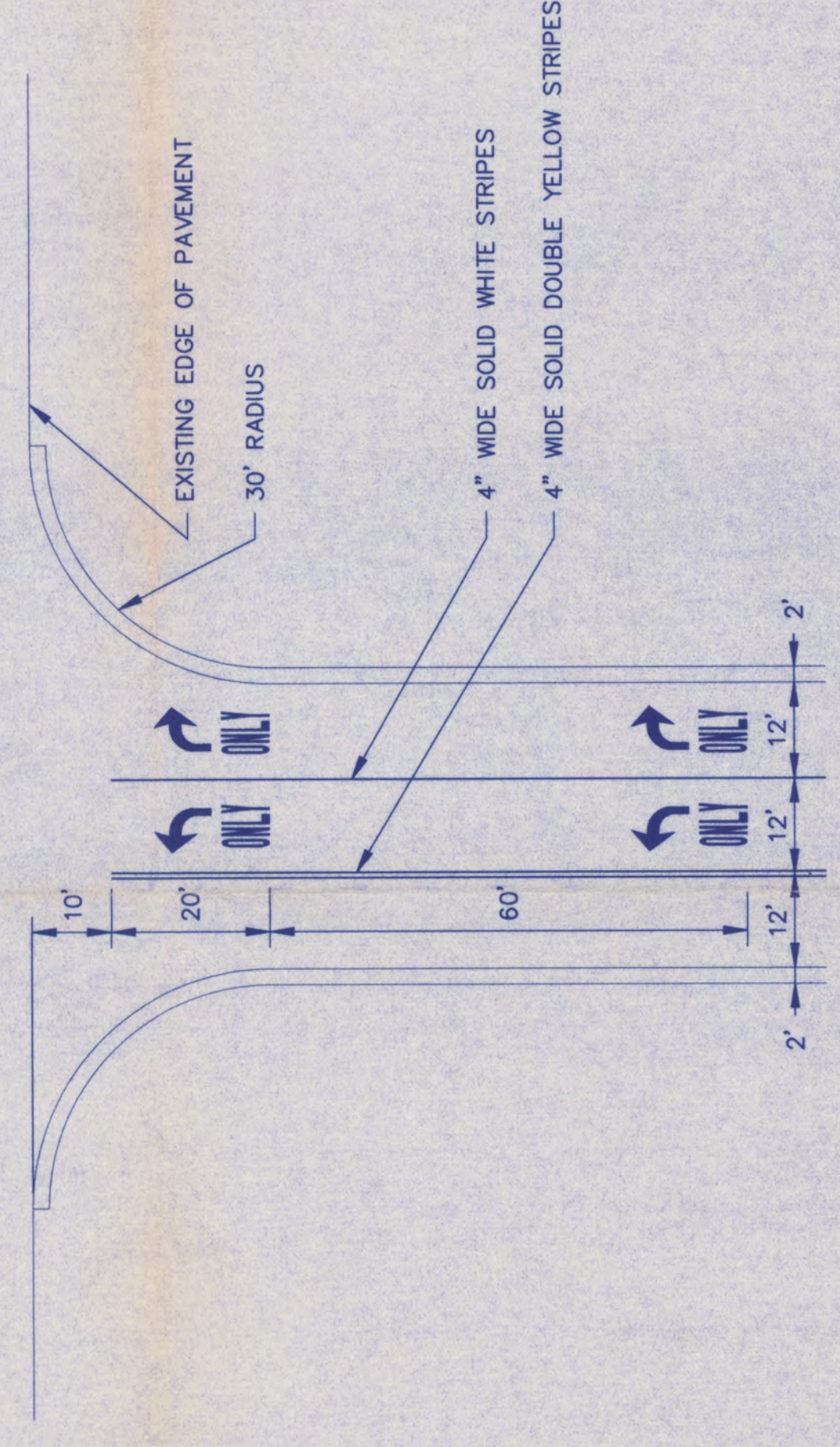
NOT TO SCALE

- PAVEMENT MARKING NOTES:**
- ALL PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
 - AFTER THE CONTRACTOR HAS ESTABLISHED MARKING LINE POINTS FOR THE MARKINGS, BY PAINT OR OTHER APPROVED MEANS AND BEFORE THE NON-REFLECTORIZED PAVEMENT MARKINGS ARE TO BE PLACED, THE ENGINEER IN CHARGE SHALL REVIEW AND APPROVE OR REVISE THESE LOCATIONS TO MEET FIELD CONDITIONS. NECESSARY LOCATION ADJUSTMENTS WILL BE MADE PRIOR TO PLACING ANY NON-REFLECTORIZED PAVEMENT MARKINGS.



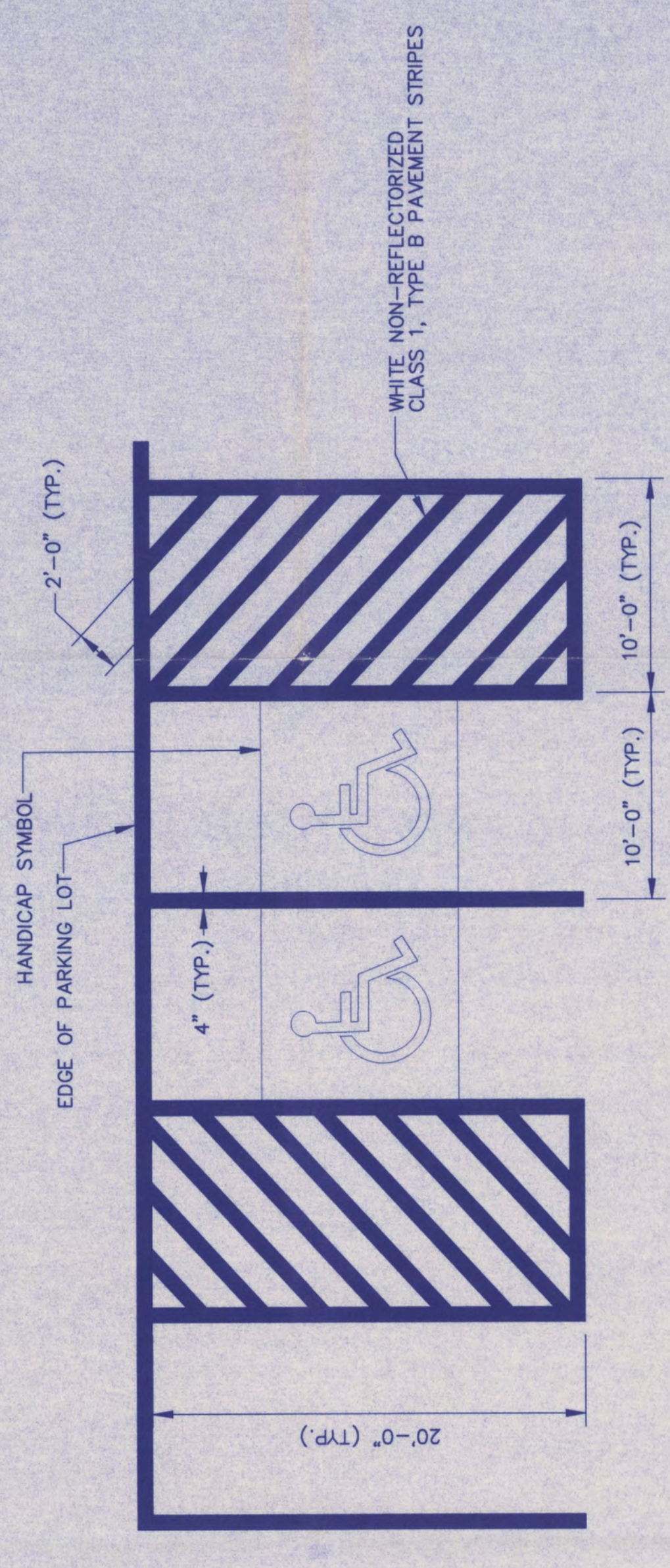
PARKING LOT STRIPING DETAIL

NOT TO SCALE



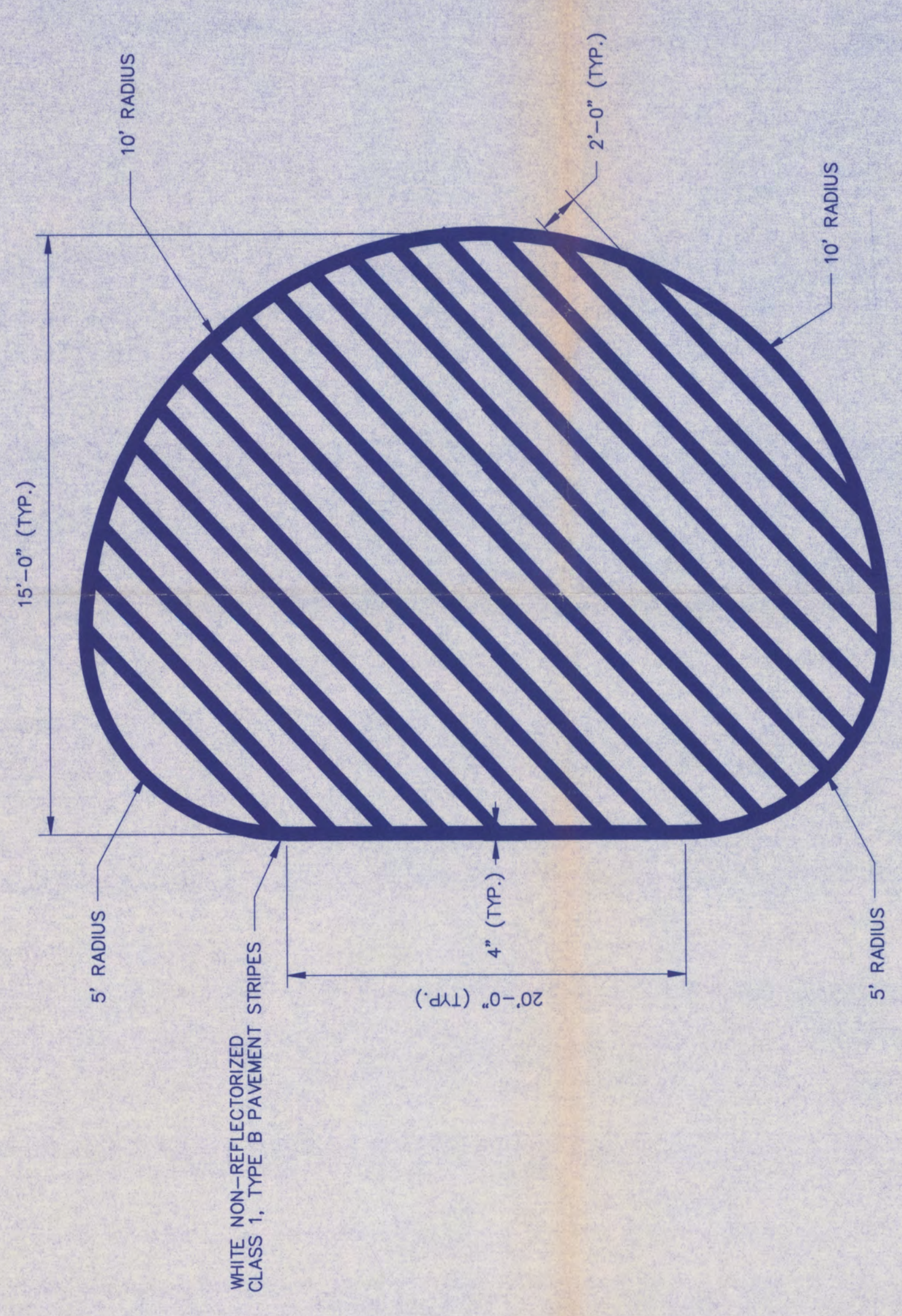
ACCESS ROAD STRIPING DETAIL

NOT TO SCALE



HANDICAP PARKING DETAIL

NOT TO SCALE



PAINTED ISLAND DETAIL

NOT TO SCALE

X: 10284X00.DWG
L: ON=*, OFF=REF
P: STD=PGF/CONT-D.D
4/18/01 SYR=54-GSM GMS KMD
10284001/10284004.DWG

No.	Date	Revisions



BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

SOLUTIA INC. • ANNISTON, AL
OXFORD LAKE SOFTBALL COMPLEX
MISCELLANEOUS DETAILS

File Number
102.84.05F
Date
APRIL 2001
Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

APPENDIX C
Technical Specifications

MATERIALS AND PERFORMANCE INDEX

02201	Earthwork
02205	Base Course and Select Fill
02209	Sod and Seeding
02270	Geotextile
02645	Bituminous Concrete Pavements
02650	Pavement Markings
02950	Plants and Ground Cover
13500	Pedestrian Bridge

MATERIALS AND PERFORMANCE – SECTION 02201

EARTHWORK

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Specified

1. The work shall include excavating, transporting, placing, spreading, drying, and compacting of all impacted material from the existing on-site stockpile to the location shown on the Contract Drawings. All the material from the stockpile shall be re-located such that the material is covered by the asphalt or soil cover system shown on the Contract Drawings. The work shall also include supplying (from an off-site borrow source), transporting, placing, spreading, and compacting the general fill material necessary to be placed for the construction and completion of all work under the Contract.

B. Related Work Specified Elsewhere

1. Base Course and Select Fill

C. Definitions

1. Impacted Soil Material

Existing material in the soil stockpile shall be moved, placed and compacted by heavy equipment or other methods to the approximate elevation and gradient shown on the Contract Drawings. The final elevation of the parking lot may be adjusted (up or down) in the field as approved by the Construction Manager in order to accommodate the actual quantity of impacted material encountered. However, the minimum slope of 2% shall be maintained.

The material from the stockpile consists of PCB-containing soil with some amounts of wood and concrete debris. Analytical testing results (PCB concentrations) of the material are included with the Contract Documents. The material has been stockpiled for over two months and the Contractor should anticipate that the material may be wet of the optimum moisture content as determined by ASTM D698.

2. General Fill

General fill material shall be imported from an off-site borrow source, placed and compacted as shown on the Contract Drawings. The material shall be soil fill consisting of sands, gravels, clay, silt or loam. The material shall not contain ashes, cinders, foundry sands, concrete, asphalt, organic debris, or rocks larger than 6 inches. Additionally, the material shall not contain PCBs in excess of 1 mg/kg.

MATERIALS AND PERFORMANCE – SECTION 02201

EARTHWORK

3. Embankments
 - a. Fills constructed above the original surface of the ground or such other elevation as specified or directed.
4. Excavation Below Subgrade
 - a. Excavation below existing subgrade will not permitted, except to the lines and grades shown on the Contract Documents.

D. Applicable Codes, Standards and Specifications

1. American Society for Testing and Materials (ASTM)

1.02 SUBMITTALS

- A. The name and location of the source of general fill material.
- B. Analytical results (minimum of 3 tests) from PCB tests performed on the material from the proposed borrow source using USEPA Method 8082.
- C. The name and qualifications of the surveyor.

PART 2 - EXECUTION

2.01 EXCAVATION

- A. Minor amounts of excavation (not including excavation from the stockpile of impacted material), will be required to complete the work for the access road, the culvert, or as otherwise shown on the Contract Drawings. Excavation shall be made to the lines and grades shown on the Contract Drawings. The Contractor shall schedule excavation work such that all material excavated will be temporarily stockpiled on-site at a location approved by the Construction Manager and 10 days will be allowed for the Owner to characterize the stockpiled material. The Contractor shall be required to place all or some of the stockpiled material in an area designated by the Construction Manager for impacted soil material. Any excavated material that must be hauled off site will be done at the Owner's expense, except for materials excavated beyond or below the lines and grades shown on the Contract Drawings.
- B. Whenever excavations are carried beyond or below the lines and grades shown on the Contract Drawings, unless approved by the Construction Manager, all such excavated space shall be refilled with general fill or select fill material, as determined by the Construction Manager. All refilling of unauthorized excavations shall be at the Contractor's expense. Any material from unauthorized excavation shall be stockpiled separately; and characterized and disposed of off site in accordance with all local, state and federal regulations at

MATERIALS AND PERFORMANCE – SECTION 02201EARTHWORK

no additional cost to the Owner. The Construction Manager must approve the testing company, method of characterization and disposal site, if applicable.

2.02 REMOVAL OF WATER

A. General

1. The Contractor shall, at all times, provide and maintain proper and satisfactory means and devices for the removal of all water entering and accumulating within the work area, and shall remove all such water as fast as it may collect, in such manner as shall not interfere with the prosecution of the work or the proper placing of fill material, pipes, structures, or other work. Removal of water, which enters the work area, shall be coordinated with the Construction Manager. All fill surfaces shall be placed and rolled to prevent ponding of water and to ensure adequate drainage.
2. Water pumped or drained from the work area, or any sewers, drains or water courses encountered in the work, shall be disposed of in a suitable manner without injury to adjacent property, the work under construction or to pavement, roads, drives and water courses. No water shall be discharged to sanitary sewers. Sanitary sewage shall be disposed of by an approved method in accordance with applicable laws and regulations.
3. Any damage caused by or resulting from dewatering operations shall be the sole responsibility of the Contractor.

B. Work Included

1. The maintenance of ditches.
2. The furnishing and operation of pumps, well points and appliances needed to maintain thorough drainage of the work in a satisfactory manner.

2.03 SUBGRADE PREPARATION

- A. The Contractor shall not disturb the existing subgrade prior to placing impacted soil material or general fill. All topsoil and vegetation shall remain in place. The Contractor shall not place fill material if the existing subgrade has standing water or is excessively wet. Additionally, the Contractor shall be responsible for cutting down all trees located within the footprint area of the proposed parking lot or landscaped area. The trees shall be cut flush to the ground surface and disposed of in accordance with applicable laws and regulations. Root structures shall also be excavated and stockpiled in an area designated by the Construction Manager. These materials will subsequently be characterized and hauled off site at the Owner's expense. The Contractor shall backfill and compact the excavated

MATERIALS AND PERFORMANCE – SECTION 02201

EARTHWORK

root areas with general fill in accordance with the requirements of this section. No trees outside the work area shall be harmed or damaged.

2.04 EMBANKMENT FILL PLACEMENT

A. General

1. Fill placement shall be performed to the approximate elevations shown on the Contract Drawings. The final elevations may vary dependent on the actual quantity of impacted soil material obtained from the stockpile. However, the Contractor must maintain the design slopes for both the parking lot and the access road.
2. Fill placement for general fill shall be done with suitable material which can be satisfactorily compacted during placement.
3. All impacted soil shall be covered each night with plastic prior to Contractor leaving the site. This includes material in the existing stockpile and on the proposed embankment. The Contractor shall continue covering the exposed material each night until the impacted material is fully covered with a minimum 3-inch thickness of either general fill or granular base course material.
4. The Contractor shall place general fill and granular base course materials in a manner such that trucks and/or equipment shall not come in contact with impacted soil material. Any truck or piece of equipment that comes in contact with impacted soil material shall be decontaminated prior to working on or with non-impacted materials or prior to leaving the site.

B. Unsuitable Materials

1. Stones, pieces of rock, pieces of pavement or wood greater than one cubic foot in volume or greater than 1½ feet in any single dimension shall not be placed within 2 feet of the Type "A" base course beneath the parking lot. These materials may be used in the landscaped areas or within the lower portion of the embankment at the discretion of the Construction Manager. Any unsuitable materials that are rejected for use in the landscaped areas shall be separately stockpiled for disposal by the Owner.
2. All stones, pieces of rock, pavement or wood shall be distributed through the fill material and alternated with soil backfill in such a manner that all interstices between them shall be filled with soil.
3. Frozen soil shall not be used for backfilling.

C. Compaction and Density Control (Impacted Soil and General Fill)

MATERIALS AND PERFORMANCE – SECTION 02201

EARTHWORK

1. The compaction shall be as specified below:
 - a. Lift thickness shall be 6 to 8 inches. Thicker or thinner lifts may be utilized, at the discretion of the Construction Manager, if satisfactory results are obtained.
 - b. The compaction specified shall be 95 percent of the maximum density as measured by Standard Procter (ASTM D698).
 - c. The compaction equipment shall be suitable for the material encountered.

2. To verify adequate compaction of the impacted soils and general fill, in-place density testing shall be performed by the Owner, as described below.
 - a. Compaction curves for the full range of materials used shall be developed.
 - b. In-place density shall be determined by the methods of ASTM D1556, ASTM 2937 or ASTM D2922 and shall be expressed as a percentage of maximum dry density.
 1. Testing shall be performed in accordance with current Alabama Department of Transportation requirements.
 2. Tests shall be taken at intervals of 100 feet on each lift, when material properties vary, or as approved by the Construction Manager.

The Contractor shall anticipate and accommodate the testing at no additional cost to the Owner.

3. Where required, to obtain an adequate moisture content to achieve compaction, the Contractor shall add, at his expense, sufficient water during compaction to assure the specified density of the fill material. If the material is too wet to achieve the specified density, it shall be allowed to dry, assisted if necessary, before resuming compaction or filling efforts.

4. The Contractor shall be responsible for all damage or injury done to pipes, structures, property or persons due to improper placing or compacting of fill material.

2.05 OTHER REQUIREMENTS

A. Drainage

MATERIALS AND PERFORMANCE – SECTION 02201

EARTHWORK

1. All materials deposited in roadway ditches or other water courses shall be removed immediately after fill placement is completed and the section, grades and contours of such ditches or water courses restored to their original condition, in order that surface drainage will be obstructed no longer than necessary.
- B. Unfinished Work
1. When, for any reason, the work is to be left unfinished, all roadways, walkways and watercourses shall be left unobstructed with their surfaces in a safe and satisfactory condition.
- C. Hauling Material on Streets
1. When it is necessary to haul material over the streets or pavement, the Contractor shall provide suitable tight vehicles so as to prevent deposits on the street or pavements. In all cases where any materials are dropped from the vehicles, the Contractor shall clean up the same as often as required to keep the crosswalks, streets, and pavements clean and free from dirt, mud, stone and other hauled material. The Contractor shall provide on site, a mechanical street sweeper throughout the duration of the project or whenever trucks are entering and exiting the site.
- D. Dust Control
1. It shall be the sole responsibility of the Contractor to control the dust created by any and all of his operations to such a degree that it will not endanger the safety and welfare of the general public. The Contractor shall follow the guidelines included in the dust control plan. Additionally, the Contractor shall provide on site a water truck until all impacted soil material is covered with either Type "A" base course or general fill.
- E. Surveying
1. The Contractor shall perform an initial survey of the area where impacted soil will be placed on a minimum 50-ft by 50-ft grid. The Contractor shall also survey the top of the embankment fill material on the same grid pattern to verify the quantity of impacted soil placed in the embankment and to demonstrate that the minimum slope for the parking lot and access road is achieved. Additionally, following placement of the Type "A" base course, the Contractor shall survey the same grid locations to determine the quantity of Type "A" base course placed within these areas. The surveyor shall be a Licensed Land Surveyor in the State of Alabama.

- END OF SECTION -

MATERIALS AND PERFORMANCE – SECTION 02205

BASE COURSE AND SELECT FILL

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Specified

1. Granular base course and select fill materials shall be used in either embedment or special backfill as specified on the Contract Drawings.

B. Related Work Specified Elsewhere

1. Earthwork

1.02 SUBMITTALS

A. The name and location of the source of each granular material required.

B. Test reports of the material with sieve analysis and certification that the material meets specifications.

PART 2 - PRODUCTS

2.01 LISTING OF BASE COURSE AND SELECT FILL MATERIALS

A. Type "A" Base Course

1. Crushed Aggregate

Thoroughly washed crushed, durable, sharp angled fragments of gravel free from coatings. Crushed particles shall be a minimum of 85 percent by weight of the particles with at least two fractured faces. The total area of each fractional face shall exceed 25 percent of the maximum cross-sectional area of the particle.

Crushed aggregate shall have the following gradation by weight:

<u>Percent Passing</u>	<u>Sieve</u>
100	1 inch
86-100	3/4 inch
26-55	No. 4
15-41	No. 8
3-18	No. 50
0-10	No. 200

MATERIALS AND PERFORMANCE – SECTION 02205

BASE COURSE AND SELECT FILL

B. Type "F" Select Fill

1. Run-of-Crusher Stone

Run-of-crusher hard durable limestone or approved equal having the following gradation by weight:

<u>Percent Passing</u>	<u>Square Opening (inches)</u>
100%	1 1/2
95 - 100	1
65 - 80	1/2
40 - 60	1/4
0 - 10	#200 Sieve

PART 3 - EXECUTION

3.01 GENERAL

- A. Base courses shall be installed in lifts not to exceed 4 inches in thickness. Compaction shall be to 95% maximum density as measured by Standard Proctor (ASTM D698) and shall be expressed as a percentage of maximum dry density.

To verify adequate compaction the Contractor shall perform in-place density testing. In- place density testing for base courses shall be done by a qualified geotechnical engineering company and the final report shall be stamped by a P.E. licensed to practice engineering in the State of Alabama. Preliminary results shall be provided to the Construction Manager each day tests are performed.

Base courses shall be tested at intervals on a 100 foot grid on each lift in the parking lot and every 50 feet on each lift in the access road.

The tolerance for the base courses is ½-inch from the nominal thickness.

- B. Rolling shall begin at the sides and continue toward the center and shall continue until there is no movement ahead of the roller. Compaction shall be to 95% of the maximum dry density (ASTM D698) throughout the subbase as determined by ASTM D2922.

- END OF SECTION -

MATERIALS AND PERFORMANCE – SECTION 02209

SOD AND SEEDING

PART 1 - GENERAL

1.01 WORK SPECIFIED

- A. The furnishing of solid sod; the preparation of the subgrade and the placing of the sod on the parking lot side slopes and the landscaped area.
- B. Seeding work to be performed in disturbed areas outside the parking lot and landscaped areas. The work shall include seeding, fertilizing and mulching. All areas disturbed by construction activity outside the limits of the parking lot and landscaped area shall be seeded.
- C. The maintenance required until acceptance.

1.02 RELATED WORK SPECIFIED UNDER OTHER SECTIONS

- A. Earthwork

1.03 SUBMITTALS

- A. The Contractor shall submit the location of the source for sod.
- B. Analysis of the seed.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Seed and fertilizer shall conform to the requirements of Alabama Department of Transportation Standard Specifications for Highway Construction Sections 651 and 652.
- B. Sod shall conform to the requirements of Alabama Department of Transportation Standard Specifications for Highway Construction Section 654.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Installation of seed shall conform to the requirements of Alabama Department of Transportation Standard Specifications for Highway Construction Section 652.
- B. Installation of sod shall conform to the requirements of Alabama Department of Transportation Standard Specifications for Highway Construction Section 654.

- END OF SECTION -

MATERIALS AND PERFORMANCE -- SECTION 02270

GEOTEXTILE

PART 1 - GENERAL

1.01 DESCRIPTION

- A. All labor, materials, equipment and services necessary for furnishing and installing the geotextile fabric required for completion of the work.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Mirafi 140N as manufactured by Mirafi, Inc. or an approved equal.

2.02 SUBSTITUTIONS WITH EQUAL MATERIAL

- A. All request for substitutions with an "equal" product shall include the manufacturer's specifications.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Site Preparation

- 1. Site shall be cleared of all sharp objects, tree stumps, and large stones.

B. Fabric Placement

- 1. Laid in the direction of construction traffic.
- 2. All edges shall overlap 3 feet.
- 3. Crushed aggregate, as shown on Contract Drawings, shall be as specified in the section entitled Base Course and Select Fill.

- END OF SECTION -

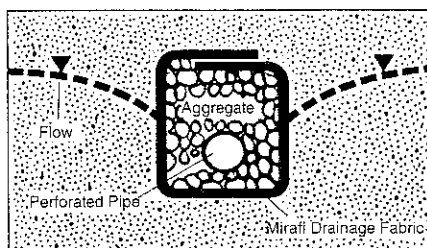
Mirafi Drainage Fabric Properties

Fabric Property	Unit	Test Method	Minimum Average Roll Values	
			140N	140NL
Grab Tensile Strength	lb	ASTM D-4632	120	90
Grab Tensile Elongation	%	ASTM D-4632	55	50
Burst Strength	psi	ASTM D-3786	225	185
Puncture Resistance	lb	ASTM D-4833	65	50
Trapezoid Tear Strength	lb	ASTM D-4533	50	30
Apparent Opening Size	US Standard Sieve	ASTM D-4751	70	70
Permittivity	sec ⁻¹	ASTM D-4491	1.7	1.7
Water Flow Rate	gal/min/ft ²	ASTM D-4491	140	140

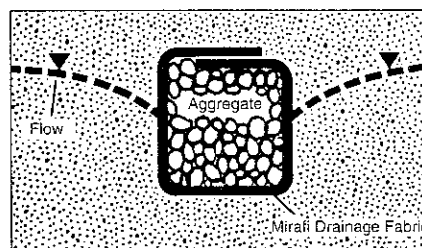
Packaging

Fabric Packaging	140N		140NL	
	Width, ft	12.5	15	12.5
Length, ft	360	360	360	360
Weight, lbs/roll	163	200	125	160
Area, yd ² /roll	500	600	500	600

Type of Fabric Wrapped Drains

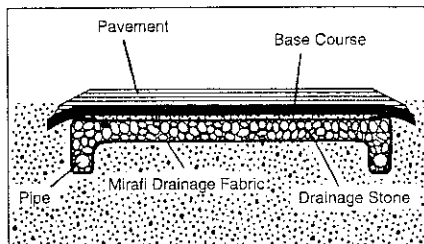


Conventional Drain (with pipe)

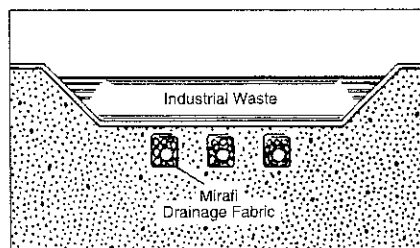


French Drain (without pipe)

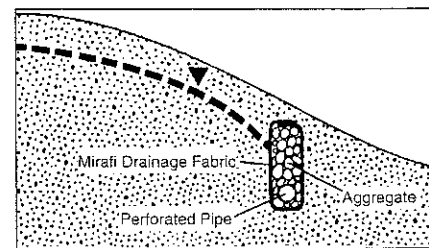
Typical Drain Applications



Blanket Drain & Edge Drain



Pond Underdrain



Interceptor Drain

Filtration Geotextile Design Manual available upon request to practicing designers.

Disclaimer

The information presented herein will not apply to every installation. Applicability of products will vary as a result of site conditions and installation procedures. Final determination of the suitability of any information or material for the use contemplated, of its manner of use, and whether the use infringes any patents, is the sole responsibility of the user.

Mirafi[®] is a registered trademark of Nicolon Corporation.

Mirafi

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Division of Nicolon Corporation



TC Mirafi

TECHNICAL DATA SHEET

Mirafi 140N

Mirafi 140N is a nonwoven geotextile composed of polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position. 140N is inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids.

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value	
			MD	CD
Grab Tensile Strength	ASTM D 4632	kN (lbs)	0.53 (120)	0.53 (120)
Grab Tensile Elongation	ASTM D 4632	%	50	50
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.22 (50)	0.22 (50)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	1654 (240)	
Puncture Strength	ASTM D 4833	kN (lbs)	0.31 (70)	
Apparent Opening Size (AOS)	ASTM D 4751	mm (U.S. Sieve)	0.212 (70)	
Permittivity	ASTM D 4491	sec ⁻¹	1.8	
Permeability	ASTM D 4491	cm/sec	0.26	
Flow Rate	ASTM D 4491	l/min/m ² (gal/min/ft ²)	5500 (135)	
UV Resistance (at 500 hours)	ASTM D 4355	% strength retained	70	

Physical Properties	Test Method	Unit	Typical Value	
Weight	ASTM D 5261	g/m ² (oz/yd ²)	163 (4.8)	
Thickness	ASTM D 5199	mm (mils)	1.4 (55)	
Roll Dimensions (length x width)	--	m (ft)	3.8 x 110 (12.5 x 360)	4.5 x 110 (15 x 360)
Roll Area	--	m ² (yd ²)	418 (500)	502 (600)
Estimated Roll Weight	--	kg (lb)	67 (148)	89 (197)

DISCLAIMER: TC Mirafi warrants our products to be free from defects in material and workmanship when delivered to TC Mirafi's customers and that our products meet our published specifications. Contact your local TC Mirafi Representative for detailed product specification and warranty information.

MATERIALS AND PERFORMANCE – SECTION 02645

BITUMINOUS CONCRETE PAVEMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Specified

1. Construction of bituminous concrete pavement on a prepared base laid to the required grade, thickness and cross-section as shown on the Contract Drawings or as specified in this section.
2. The quality of materials and performance of the work shall be in accordance with the Standard Specifications of the Alabama Department of Transportation, latest edition, unless otherwise specified in this section.

B. Related Work Specified Elsewhere

1. Base Course and Select Fill

C. Submittals

1. Contractor shall submit certification that the bituminous concrete pavement material meets the requirements of the Alabama Department of Transportation Construction Specifications, listed below, for aggregate and mix design.
 - a. Bituminous Concrete Binder Layer – Section 414
 - b. Bituminous Concrete Wearing Surface – Section 416
2. Contractor shall submit the name and location of the supplier of the bituminous concrete pavement.

PART 2 - PRODUCTS

2.01 MATERIALS OF CONSTRUCTION

A. Bituminous Concrete Products

1. Binder course shall be mix 1/mix 3 (Section 414 of ALDOT).
2. The wear course shall be mix 1/mix 4 (Section 416 of ALDOT).

MATERIALS AND PERFORMANCE – SECTION 02645

BITUMINOUS CONCRETE PAVEMENTS

PART 3 - EXECUTION

3.01 INSTALLATION

A. Subgrade

1. The subgrade, prior to placing crushed aggregate base course, shall be shaped to line and grade and compacted with self-propelled rollers in accordance with Section 02201 Earthwork.
2. All depressions which develop under rolling shall be filled with acceptable material and the area re-rolled.
3. Soft areas shall be dried, if necessary, reworked, and re-rolled.
4. Should the subgrade become rutted or displaced prior to the placing of the subbase it shall be reworked to bring to line and grade.

B. Base

1. The base shall consist of 8 inches of Crushed Aggregate, Type A for Parking Lot and Access Road.
2. Provide base over prepared subgrade areas only as indicated by the Contract Drawings.
3. After completion of the base rolling there shall be no hauling over the base other than the delivery of material for the asphalt pavement.

C. Bituminous Material

1. The bituminous binder course shall be 2 inches compacted depth as indicated on the Contract Drawings.
2. The bituminous wear course shall be 1 inch compacted depth as indicated on the Contract Drawings.
3. Prior to placing of any bituminous pavement a sealer shall be applied to the edges of existing pavement, curbing, gutters, manholes and other structures.

D. Testing

1. The finish pavement shall be to the grades and cross-section as shown on the Contract Drawings.
 - a. The surface tolerance shall not exceed 1/4-inch in 10 feet.

MATERIALS AND PERFORMANCE – SECTION 02645

BITUMINOUS CONCRETE PAVEMENTS

- b. There shall be no depressions which will retain standing water.
 2. Variations exceeding ¼-inch or depressions shall be satisfactorily corrected.
 3. The thickness tolerance indicated for each of the various courses of Bituminous Concrete Pavements is the nominal thickness. The pavement shall be constructed so that the final compacted thickness is as near to the nominal thickness as practical and shall not exceed 1/4 inch from the nominal thickness.
 4. Contractor shall be responsible for coring 6 core holes at locations designated by Construction Manager to verify pavement thickness. Upon completion, Contractor shall fill core holes with suitable asphalt concrete patch material.
-

- END OF SECTION -

MATERIALS AND PERFORMANCE – SECTION 02650PAVEMENT MARKINGSPART 1 - GENERAL

1.01 DESCRIPTION

A. Work Specified

1. Application of pavement markings at the location and in accordance with patterns indicated on the Contract Drawings or as ordered by the Construction Manager.
2. The quality of materials and performance of the work shall be in accordance with the Standard Specifications of the Alabama Department of Transportation, latest edition, unless otherwise specified in this section.

B. Related Work Specified Elsewhere

1. Bituminous Concrete Pavements

PART 2 - PRODUCTS

2.01 MATERIALS OF CONSTRUCTION

A. Pavement Markings

1. Dimensions, color, type of material and reflectivity of the stripe will be designated on the Contract Drawings. The type of material will be designated by "Class" and the reflectivity of the material will be designated by "Type" according to the Alabama Department of Transportation.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Pavement Markings

1. The Contractor shall be responsible for cleaning the pavement, to the satisfaction of the Construction Manager, of dust, dirt and other foreign material which may be detrimental to the adhesion of the paint film.
2. Except as noted, painted pavement markings shall be applied with atomizing spray type striping machines. The striping equipment may be either truck mounted or hand operated. All equipment shall be compatible with and suitable for the application of the type of paint being used.

- END OF SECTION -

MATERIALS AND PERFORMANCE – SECTION 02950PLANTS AND GROUND COVERPART 1 - GENERAL

1.01 WORK INCLUDED

- A. Furnish and plant all material called for on the Contract Drawings, excluding sod and grass seed.
- B. Protection of Existing Work
 - 1. Location of underground work such as existing water lines, electrical conduit, sewer and drainage lines, and other utilities shall be located by the Contractor prior to initiating work and the Contractor shall protect the same by means acceptable to the Owner before commencing construction, and maintain such protection until the job is accepted by the Construction Manager.
- C. Delivery, Unloading, Storage
 - 1. All plants shall be delivered to the job in good condition and unloaded with care so that balls and tops are not damaged. Baled and burlapped plants shall not be handled by their tops.
 - 2. The Contractor shall be responsible for the protection of plants from damage through weather conditions, improper storage, vandalism, theft, injury, and requiring the minimum amount of moving to locations where they are to be planted.
 - 3. Whenever and wherever possible, delivery shall be made within a reasonable time of completion of planting pits or beds and if unforeseen conditions prevent immediate planting, Contractor shall heel in plants, watering same if necessary, and protect from drying winds and sun in accordance with good nursery practice.
 - 4. If, in the opinion of the Construction Manager, plants have been damaged through prolonged intervals between delivery and storage, they shall not be used in planting and shall be replaced with new plants conforming to original specifications.
- D. Staking Out Work
 - 1. Spacing of plants shall conform in general to spacing designated on the Contract Drawings and specifications, but variations are permissible when unforeseen site conditions as underground pipes, rock stratus, etc., make uniform spacing impractical, in which case the Contractor shall abide by instructions furnished by the Construction Manager.

MATERIALS AND PERFORMANCE – SECTION 02950

PLANTS AND GROUND COVER

E. Lists and Descriptions of Plant Material

1. The Contractor shall furnish the plant material as specified and described in this section. Quantities shall be determined by referring to the Contract Drawings.
2. Shrubs shall be well shaped, full branched with heights measured to a point in the main perimeter of branches or foliage, rather than to single shoots or leaders. Plants with single stems shall have sufficient, well spaced side branches to give them weight equal to one growth with numerous canes. Canes shall be considered as primary stems starting from the ground or from a point not higher than one-fourth (1/4) the height of the plant.
3. ~~Sizes of the balls shall be at least six inches (6") greater in diameter than the minimum sizes established for individual types of plants as recommended by "Horticultural Standards" latest edition of American Association of Nurserymen, Inc. Depth shall be sufficient to encompass the fibroid and feeding root system necessary for the full recovery of the plant and in no case shall be less than recommended ratios to diameter as recommended by "Horticultural Standards", latest edition of the American Association of Nurserymen, Inc. All balls shall be firm and intact and securely fastened with twine or nails or both.~~
4. When plantings are ready to be set, plant pits shall be prepared. If the pit excavations encounter the on-site impacted soil materials then this material shall be temporarily stockpiled on-site at a location approved by the Construction Manager. The Owner will be responsible for the characterization and disposition of this material. Non-impacted soils that are excavated for the plant pits shall be spread on-site in locations approved by the Construction Manager.

Any material from over or accidental excavation shall be stockpiled separately; and characterized and disposed of off site in accordance with all local, state and federal regulations at no additional cost to the Owner. The Construction Manager must approve the testing company, method of characterization, and disposal site, if applicable.

Plant pits shall not be prepared and left open for prolonged periods prior to planting. Pits shall be protected until used so that the sides do not crumble and so pits do not become saturated with water. All damaged pits shall be restored to original condition and shall be drained of surface water before usage.

5. Depths of pits shall not be more than two inches (2") greater than depth of the ball or roots of bare-root plants to be received. Diameter of pits

MATERIALS AND PERFORMANCE – SECTION 02950PLANTS AND GROUND COVER

shall be such that there is no less than ten inches (10”) of space all around the balls or root spread of bare-root plants.

6. Excavated earth shall be piled sufficiently far back from the edge of the pit to prevent earth sliding back into pit when plants are placed.
7. Mixture used in backfilling pits shall consist of topsoil and peat moss mixed in the ratio of four to one (4 to 1) by volume with 1 lb. of 10-10-10 fertilizer per cubic yard. Mixing shall not be done in the pits.
8. After plant has been set and pit has been backfilled to two-thirds (2/3) of its depth, mixture shall be tamped thoroughly and settled with water. When settling has been accomplished, pit shall be brought to level of adjacent ground with same mixture. Slope finished grade slightly toward center of plant.
9. Handling of plants shall be done in such a manner to minimize damage to balls or tops. Plants shall be handled by the ball and not by the top if bailed in burlap, and if it is required to straighten or turn a plant after backfilling has been done, the pit shall be excavated before this is done.

F. Peat Moss, Fertilizer, Mulch

1. Peat moss shall be of good quality.
2. Fertilizer shall be 10-10-10 and a good quality cotton seed meal.
3. Mulch shall be pulverized pine bark free of debris and weeds.
4. Watering of areas planted shall be done on the same day planting is done, and all planted areas shall be watered as often as necessary as the work progresses, if weather conditions require same. Work shall be done by competent workmen, with minimum disturbance of adjoining areas. Contractor shall supply necessary topsoil to compensate for any settling that takes place due to watering.
5. Pruning for shape shall be done by the Contractor only if so instructed by the Construction Manager. Such pruning shall consist of shaping the plant to a pleasing outline in accordance with good nursery practice.
6. Cut back pruning of all dead wood and injured branches shall be done immediately after planting. Injured or damaged branches shall be cut back to sound live wood in accordance with good nursery practice, and cuts shall be painted with asphalt tree paint.
7. Pruning shall be done before final watering and all debris and trimmings removed prior to application of mulch and final watering.

MATERIALS AND PERFORMANCE – SECTION 02950

PLANTS AND GROUND COVER

G. Cleaning Up

1. Debris, including trimmings, empty containers, surplus materials, and all other trash shall be removed daily as the work progresses.

H. Mulching

1. Mulch shall consist of clean, fresh, pulverized pine bark, free of debris, stones and weeds. Mulch shall be applied to a finish depth of three inches (3") to all beds and in the case of individual plantings, to a symmetrical line established by the size of the plant pit.
2. Application of mulch shall be made after final water as described. Mulch shall be applied in layers until required depth is established. Mulch shall be wet down gently to prevent disturbance by wind if weather conditions require same.
3. Mulch shall be an approved quality and grade.

I. Guarantee

1. Method of determining plants to be replaced under guarantee shall be as follows:

The Construction Manager or his representative with authorized representatives of the Contractor shall together make an inspection of the entire project at the following intervals:

- a. On completion of project and prior to final inspection.
 - b. Twelve (12) months after acceptance of project by the Construction Manager.
2. The Contractor shall guarantee a 95% survival rate for all plantings for twelve (12) months. Plants not surviving this twelve (12) month period shall be removed and replaced in conformance with this specification.

- END OF SECTION -

MATERIALS AND PERFORMANCE – SECTION 13500

PEDESTRIAN BRIDGE

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. All labor, material, and equipment necessary to design, fabricate, and erect the bridge as indicated on the Contract Drawings and as specified herein.

1.02 DESCRIPTION

- A. The specific type bridge required will be a simple wooden bridge with pressure treated wood stringers, wood plank deck, handrail and support blocks.
- B. Dimensions
 - 1. Width - Inside clear width of bridge shall be 5 feet.
 - 2. Span - Center to center of bearing of bridge shall be 8 feet.

1.03 DESIGN BASIS

- A. The pedestrian bridge shall be built to accommodate a live load of 100 psf.
- B. All railings shall have a smooth inside surface with no protrusions or depressions. In accordance with AASHTO, railings for pedestrian use should be a minimum of 42" above the floor deck.
- C. A 4" pressure treated wood toe plate shall be located 2" above the floor deck.

1.04 SUBMITTALS

- A. Shop Drawings
 - 1. Submit detailed shop drawings and erection drawings showing all pertinent information necessary for the fabrication and erection of the bridge.

1.05 GUARANTEES

- A. Upon completion of the bridge system, the Contractor shall furnish the Construction Manager with two copies of a guarantee for the following items.
 - 1. The materials used in the bridge system shall carry a guarantee against defects in composition, design, and workmanship for a period of one year.
 - 2. The erection and installation of the bridge system shall carry a guarantee against defects in workmanship for a period of fifteen years.

MATERIALS AND PERFORMANCE – SECTION 13500

PEDESTRIAN BRIDGE

PART 2 - PRODUCTS

2.01 MATERIALS

- A. All structural members shall have a minimum nominal thickness of material of 2 inches.
 - B. The bridge shall be constructed from pressure treated wood in conformance with ASTM D1760-86a.
 - C. Wood decking shall be No. 1 grade Southern Yellow Pine. Wood decking shall be treated to a minimum of 0.40 pounds of preservative per cubic foot of wood. The wood deck shall be designed for a 100 psf local loading condition. Floor planks shall be attached with at least two plated fasteners where planks cross supporting members.
-
- D. All hardware shall be Hot-Dip Galvanized in accordance with ASTM A123-89a and ASTM D1761-88.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Complete erection of the bridge shall be by the manufacturer or his authorized representative. The authorized representative shall be skilled in the successful erection of bridge systems.

- END OF SECTION -

APPENDIX D

Best Management Practices Plan

**BEST MANAGEMENT PRACTICES PLAN
OXFORD LAKE SOFTBALL COMPLEX
PARKING AREA
ANNISTON, ALABAMA**

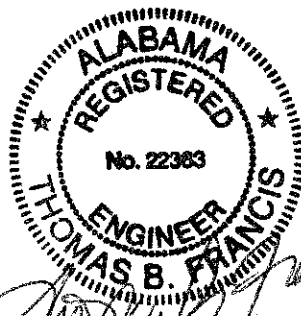
APRIL 2001

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4/23/2001

DISTRIBUTION:

- 1 Copy – Solutia Inc.
- 1 Copy – Maverick Construction Management
- 2 Copies – Golder Associates Inc.

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ATTACHMENT B	Certification Sheet
ATTACHMENT C	Environment Release Report Forms
ATTACHMENT D	Inspection and Maintenance Report Forms
ATTACHMENT E	NPDES Permit Monitoring Report Forms

1.0 INTRODUCTION

1.1 Background

Solutia Inc. (Solutia) previously performed an Interim Corrective Measure removal activity at the Oxford Lake Softball Complex in Anniston, Alabama, consisting of the excavation of 3 to 12 inches of soil impacted with polychlorinated biphenyls (PCBs) from the softball fields and temporarily stockpiling these soils in a grassed area west of the fields. Excavated soils with PCB concentrations of greater than 50 mg/kg were hauled to a permitted disposal facility. As part of a remedial action, the stockpiled soil will be graded to create a parking and landscaped area. Once grading has been completed, the impacted soil will be capped with a nonwoven geotextile and a pavement system or soil cover will be constructed above it. The pavement system will consist of 8 inches of crushed aggregate base course material overlain by 3 inches of hot mix asphalt. The soil cover system will consist of a minimum of 12 inches of clean soil cover. Runoff from the parking lot will be allowed to sheet flow to the existing drainage features.

1.2 NPDES Permit Authority

1.2.1 Plans Required Under NPDES

The National Pollutant Discharge Elimination System (NPDES) is a national program for issuing, modeling, revoking, etc. permits under Sections 307, 318, 402, and 405 of the Clean Water Act of 1990. Under this program, the state of Alabama is authorized to implement a state run program. This program requires that the Owner of a facility submit a Notice of Intent (NOI) when five (5) or more acres of land are disturbed through construction activities. In addition, the Owner is required to develop a "**Best Management Practice Plan**" (BMP Plan) and, if applicable, a "**Spill Prevention, Control, and Countermeasures Plan**" (SPCC Plan). These plans should be fully developed and implemented upon submitting the NOI.

Prior to performing the Interim Corrective Measures for the softball fields, Solutia filed a NOI for coverage under the Alabama Department of Environmental Management (ADEM) NPDES General Permit. The original NOI package (Attachment A) gives a completion date for activities of March 15, 2001. With this document, Solutia proposes revising the completion date to September 1, 2001, in order to complete the construction of the parking lot at the site.

The NPDES General Permit requires Solutia to prepare and implement a BMP Plan describing practices to prevent/minimize the discharge of all sources of pollution in stormwater runoff to State waters. The BMP Plan should detail the structural and non-structural practices that will be implemented and maintained to prevent/minimize the discharge of all sources of pollution (i.e., sediment, trash, garbage, debris, oil & grease, chemicals materials, etc.) to State waters in stormwater run-off. This plan should address applicable BMPs as provided in the Alabama Non-Point Source Management Program Document and the United States Environmental Protection Agency (USEPA) Stormwater Pollution Prevention for Construction Activities document.

The NPDES General Permit also requires Solutia to prepare, implement and maintain a SPCC Plan for all on-site fuel or chemical storage tanks if the volume requirements are met. The SPCC Plan has been prepared and is provided as a separate document. The SPCC Plan contains the overall measures that will be undertaken to prevent and control possible releases of pollutants.

1.3 Purpose

This document presents the BMP Plan. The purpose of this BMP Plan is to detail the site stormwater management and erosion and sedimentation controls that will be implemented to prevent/minimize the discharge of all sources of pollution to State waters in stormwater runoff during the construction activities at the Oxford Lake site.

1.4 Scope Of Work

The principal elements of work associated with this BMP Plan are listed below:

- general preparations of the work area;
- construction of erosion control structures;
- establishment of temporary facilities and roads;
- construction of a vehicle decontamination pad at the site;
- grading of PCB-containing soil;
- construction of the soil cover;
- placement and compaction of the base course material;
- placement and compaction of the hot mix asphalt;
- equipment decontamination and disposal; and
- post-construction cleanup and seeding.

1.5 Approach And Overview

The BMP Plan for the Oxford Lake Parking Lot Project was developed using USEPA and ADEM guidance documents and engineering judgment. The erosion and sedimentation control practices identified in this plan are intended to be supportive of the stormwater management practices. The stormwater management practices provide planning such that runoff from the site will be safely conveyed to stable outlets using a variety of storm drains, diversions, and stable waterways. These stormwater management practices provide for installation of stormwater retention structures to prevent flooding and damage to downstream facilities resulting from runoff from the site. To assure that the site construction activity includes limiting erosion and sedimentation, this BMP Plan has been employed to implement the following five guidance items:

1. Minimize Land Disturbance. To the extent possible and practical, construction-disturbed areas and the duration of exposure to erosion elements will be minimized. Clearing of natural vegetation will be limited to only those areas of the site to be developed at a given time. To the extent possible and practical, natural vegetation will be retained and protected.
2. Forward Planning. Planning for construction activity will consider site topography and soils, and the potential effects on erosion and sedimentation. Areas of steep, erodable slopes and erodable soils will not be disturbed without instituting proper engineering controls to minimize these concerns.
3. Stabilization of Disturbed Areas. Construction-disturbed areas will be stabilized as soon as is practicable. Temporary or permanent vegetation, and mulch, or a combination of these measures, will be employed as quickly as possible and practical after the land is disturbed. Temporary vegetation and mulches may be used on areas where it is not practical to establish permanent vegetation. These temporary measures will be employed immediately after rough grading is completed if a delay is anticipated in developing finished grade.
4. Sediment Capture. Sediment barriers and related structures will be installed to filter or trap sediment on the site. It is recognized, however, that the most effective method of controlling sediment is to control erosion at its source. Sedimentation retention structures will be placed to retain sediment when erosion control methods are not practical, or have failed due to some unforeseen factor.
5. Decrease Peak Storm Velocities. It is expected that stormwater runoff velocity will increase due to the removal of vegetation and the construction of impervious areas. Temporary check dams will be installed along drainage ditches during construction to slow the runoff traveling through the construction site.

1.6 Mechanisms For Plan Revisions

The BMP Plan and all accompanying records, reports, and changes will be retained for the duration of the project plus 3 years. This BMP Plan will be reviewed and amended, at a minimum, when the following occurs:

- applicable ADEM or federal regulations are revised;
- the NPDES General Permit for the construction site is revised;
- the BMP Plan fails in an emergency or does not comply with the NPDES General Permit involving stormwater and construction activities (a copy of the permit is contained in Attachment A);
- there is a change in discharge design, operation, maintenance, or other circumstances, that materially increases the potential for sediment or erosion on the site; or that changes the response necessary, in an emergency; and/or
- as may otherwise be required by ADEM.

1.7 Management Approval

USEPA and the state of Alabama require that the "**Best Management Practice Plan**" be signed by an authorized person. A copy of the certification letter is included in Attachment B.

The BMP Plan will be retained on-site at the project offices and/or on-site trailers and will be available to members of ADEM upon request or in the case of an unplanned stormwater discharge from the site associated with the construction activity. Solutia will allow ADEM or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

- enter upon the premises of the site and have access to the records that must be kept under the conditions of this plan;
- be able to copy at reasonable times, any records that must be kept under the condition of this plan; and/or
- inspect at reasonable times any facilities, equipment, or structures.

2.0 SITE DESCRIPTION

2.1 Site Location And Description

The Oxford Lake Softball Complex is located within the City of Oxford, in northeastern Alabama, just north of Interstate 20. It is bounded on the west by Snow Creek, on the north by vacant woodland and residential areas and on the east by open land. The parking area will be constructed between the softball complex and Snow Creek.

The site was originally flat with a slight slope towards the south where there is a drainage swale that flows westerly toward Snow Creek, which then flows southerly toward Choccolocco Creek.

2.2 Project Stormwater Flow Rates

A hydrology study was not performed for this site. However, because the soils are well drained and permit moderate infiltration and the site is relatively flat, excessive runoff rates are not expected when moderate to large rainfall events occur during construction. All stormwater runoff will enter Snow Creek via a stormwater drainage channel that lies at the southern boundary of the site. Note that prior to flow into the ditch, runoff will pass through a series of erosion and sediment controls.

3.0 BEST MANAGEMENT PRACTICES

The most effective method to prevent pollution of surface water is to implement Best Management Practices (BMPs). BMPs are schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce pollution of waters. BMPs include treatment requirements, operation procedures, and practices to control site runoff.

BMPs typically are divided into two levels: baseline and advanced. Baseline BMPs are general practices that apply to most industrial sites, independent of the types of materials used, processes employed, products manufactured, or site location. Baseline BMPs are relatively simple, inexpensive, and cost-effective practices that emphasize prevention of pollution rather than treatment of pollutants. Advanced BMPs may be required where baseline BMPs do not provide adequate control of stormwater pollution sources. The need for advanced BMPs are not anticipated for this project.

The USEPA has defined seven baseline BMPs to limit and control sediment and erosion. These baseline BMPs will be employed during the construction of the parking lot at the Oxford Lake Site. The seven baseline BMPs are listed below.

- Leave as much vegetation (plants) on-site as possible;
- Minimize the time that soil is exposed;
- Prevent the runoff from flowing across disturbed areas (divert the flow to vegetated areas);
- Stabilize disturbed soils as soon as possible;
- Slow down the runoff flowing across the site;
- Provide drainage ways for the increased runoff (e.g. use existing grassy swales); and
- Remove sediment from stormwater runoff before it leaves the site.

Selecting the best set of sediment and erosion prevention measures for the site depends upon the construction activities and other site-specific conditions (soil type, topography, climate, and season). Erosion can be controlled by stabilizing the site and/or by installation of structural methods of control. The incremental steps used to complete the project will be to install any necessary baseline BMPs prior to starting any construction activities and then apply advanced BMPs if the baseline BMPs do not sufficiently prevent erosion and sedimentation from the construction site. Erosion control measures will be installed based on the surrounding construction activity, so appropriate measures are used in each area of the site.

In addition to using baseline BMPs, good housekeeping measures, maintenance/inspection procedures, employee training, record keeping and internal reporting procedures, and inspection and reporting requirements will be used during this construction project.

3.1 Good Housekeeping

Good housekeeping is important on any construction project to minimize accidents and to ensure high quality work. The Contractor at the site has full responsibility and accountability for meeting good housekeeping requirements.

The "good housekeeping" practices listed below will be followed during the Project.

- All erosion and sediment control measures will be kept in place, will be adequate for the erosion/sediment control of concern, and will be properly constructed and maintained;
- Clearing operations will be confined within the limits shown on the plans;
- The vegetation outside of the clearing area will be protected by not traveling into those areas;
- Controls will be installed such that sediment transported from the site onto public rights-of-way by vehicular traffic will be minimized;
- The sediment barriers and related devices will be those which are effective in retaining sediment on the site;
- The appropriate vegetation will be established as needed on all specified areas, this includes temporary vegetation;
- Work progress will be in accordance with the proposed schedule;
- The contractor will follow the plan and construction sequence;
- As may be necessary, temporary stream channel crossings will be installed and maintained;
- No severe fire hazards will exist that could result in brush or grass fires;
- There will be no excessive sediment leaving the site for any reason;
- All materials stored on-site will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure;
- Information sessions on good housekeeping practices will be incorporated into the employee meetings; and
- Bulletin boards, with updated good housekeeping procedures, tips and reminders will be posted for field personnel.

3.2 Maintenance/Inspection Procedures

The following inspection and maintenance practices will be used to maintain erosion and sediment controls on-site during construction activities.

- All control measures will be inspected a minimum of once a month with monthly inspections a minimum of two weeks apart.
- All control measures will be inspected within 72 hours after any precipitation of 0.75 inches or greater in any 24-hour period since the last inspection.

- Areas that have been finally stabilized will have an inspection of all control measures at least once every month.
- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of report.
- Silt fence will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
- Any constructed sedimentation trap will be inspected for depth of sediment, and built-up sediment will be removed when it reaches one half of the design depth. Sedimentation control structures will be inspected for erosion, piping and risk of displacement after each significant rainstorm (0.75 inch or greater), and will be repaired immediately.
- Diversion and containment dikes will be inspected and any breaches promptly repaired.
- Temporary and permanent seeding and planting will be inspected periodically by the Contractor for bare spots, washouts, and healthy growth. These spots will be repaired as necessary.
- Maintenance inspection reports will be kept using forms found in Attachments C-E.
- The Contractor will select individuals, with the approval of the Construction Manager, who will be responsible for inspections, maintenance and repair activities, and filling out the inspection and maintenance report.
- Personnel selected for inspection and maintenance responsibilities will receive training. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used on-site in good working order. (The Construction Manager or the Project Engineer will train these persons.)

All monitoring forms will be maintained onsite, and copies of these forms will be forwarded to ADEM on a yearly basis.

3.3 Employee Training

An effective training and education effort for all site personnel will be maintained. The Construction Manager or the Project Engineer will hold the training sessions. The program will address the following:

- briefings to all field personnel regarding the scope and importance of erosion and sedimentation control; and
- training for the personnel authorized to perform the inspections and administrative duties of the erosion and sediment control program.

The briefings to all employees will address the following areas:

- sedimentation and erosion prevention - a review of the purposes and goal of the BMF Plan, potential sources of sediment and erosion at the site, BMPs employed at the site, and the role the field personnel fill in sediment and erosion prevention,
- pollution control laws and regulations pertaining to sediment release; and
- the high priority all Contractors and Solutia give to sedimentation and erosion prevention on this project.

3.4 Record Keeping And Internal Reporting Procedures

3.4.1 Record Keeping

Maintaining records for all inspections is an important element of the BMP Plan. Documentation of all inspections, whether routine or detailed, will be viewed as a good preventive maintenance technique. Analysis of inspection records allows for early detection of any potential problems.

Keeping a log of all maintenance activities, such as the cleaning of catch basins or repairing erosion on a berm or dike, will enable the effectiveness of the BMP program, equipment, and operation to be evaluated. BMP Plan-related record keeping will be handled in conjunction with the SPCC Plan-related record keeping.

The following will be used to accurately document and report inspection results:

- field notebooks;
- daily reports;
- timed and dated photographs;
- video tapes; and
- drawing/sketches and maps.

All inspection forms will be maintained at the site in a separate three-ring binder in the Construction Manager's office. This book will be available for review by appropriate personnel upon request.

3.4.2 Reporting

Solutia will be provided copies of the weekly inspection of the stormwater controls. These reports will be provided within one calendar week following each inspection. All other required forms and reports will be forwarded with the weekly reports.

Original records of inspections, and maintenance activities will be retained by the Construction Manager throughout the project. At the completion of the project, original records will be transferred to Solutia for its keeping, with copies retained by the Contractor. Solutia should maintain the records for at least one year after coverage under the Facility NPDES Construction permit expires.

3.5 Discharge Monitoring, Inspection, And Reporting Requirements

The Alabama NPDES General Permit for construction requires certain monitoring, inspection and record keeping. These requirements can be found in the NPDES General Permit under Part I (Attachment A). The Inspection Certification Form (Attachment B), as required, will be signed within 14 days of starting and disturbing activities authorized under the General Permit. Inspection and Maintenance Report Forms to be filled out during the inspection are included in Attachment D, and include forms for rainfall events, structural control inspections, and other erosion control inspections. Other forms to be filled out include Release Report Forms (Attachment C) and other Monitoring Report Forms (i.e., Noncompliance Activities) (Attachment E). These forms will be completed and retained in the Construction Manager's Office.

These worksheets and report forms will be filed and submitted to ADEM as specified in the NPDES General Permit, Part I, Sections C and D (Attachment A). These forms shall be completed by the Owner or his designee and submitted to ADEM.

4.0 SITE STORMWATER MANAGEMENT CONTROLS

Site stormwater controls used during the removal of soil from the softball fields will be adopted at the Project site. All controls used will be designed and properly installed such that minimal sediment enters the drainage ditch or Snow Creek.

4.1 General Considerations

The majority of the working area will be covered by asphalt pavement as a result of construction. Therefore, the peak runoff will increase. However, due to the small size of the proposed development increases will be minimal and, therefore, no surface water control system has been designed. All flow will occur as sheet flow to the previously existing drainage features.

4.2 Cleaning Of Stormwater Control Devices

All control devices must be cleaned of debris as needed to reliably convey the design stormwater flow. This work must be completed in concert with other work discussed as a part of this task.

4.3 Sedimentation Prevention

Silt fence and haybales will be installed around the perimeter of the existing stockpile area and parking lot area to prevent sediment from leaving the site. In addition, all storm sewer inlets located onsite will be protected using Alabama Department of Transportation (ADOT) Class 1 rip rap. The riprap will act as a sediment filter and prevent debris and sediment from entering the pipelines. This will maintain the pipes at their full capacity. All removed sediments will either be incorporated under the proposed cover system or be directly loaded into roll-offs for management by Solutia.

The primary entry point for sediment is the drainage ditch leading to Snow Creek. Controls will be centered on protecting this water body from receiving sediment via stormwater runoff from the construction site.

4.4 Conversion To Permanent Control

The final task will be the conversion of stormwater management to permanent controls. These tasks will be completed under the Project Engineer, Project Superintendent, and the Construction Manager

judgments, such as, removing any rip rap left in place and providing permanent cover on areas that will no longer be disturbed.

5.0 SITE EROSION AND SEDIMENTATION CONTROLS

5.1 Overview

There are two erosion and sedimentation controls that will be implemented during the Oxford Lake Project. The first are the general controls that are implemented as needed when localized control is necessary. The second are the construction-specific controls that are implemented at locations of major site work. The general controls consist of both stabilization and structural practices and are defined in Section 5.2 in greater detail. The construction-specific controls applicable to the Project are summarized in Section 5.3.

5.2 Description Of General Erosion And Sedimentation Controls

The USEPA defines two types of sediment and erosion control practices: stabilization practices and structural practices. Stabilization practices are those practices that preserve existing vegetation or revegetating disturbed soil as soon as possible after construction. Structural practices are used in sediment and erosion control to divert stormwater flow away from exposed areas, convey runoff, prevent sediments from moving off-site, and can also reduce the erosive forces of runoff waters. These controls are used as either permanent or temporary controls.

5.2.1 Stabilization Practices

Preserving existing vegetation or revegetating disturbed soil as soon as possible after construction is the most effective way to control erosion. A vegetation cover reduces erosion potential by shielding the soil surface from direct erosive impact of raindrops, by improving the water storage porosity of the soil, by slowing the rate of water run-off and by physically holding the soil in place with plant roots. Vegetative cover can be grass, trees, shrubs, bark, mulch, or straw. Grasses are the most common type of cover used for re-vegetation because they grow quickly.

Vegetative and other site stabilization practices can be either temporary (provide a cover for exposed or disturbed areas for short periods of time) or permanent controls. Stabilization measures will be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.

Vegetative-related erosion control practices which will be utilized during the Project are listed below.

- **Preservation of natural vegetation (grasses, brushes, vines and existing trees)** - A practical effort to preserve already stabilized areas and to provide natural buffer zones will be made.
- **Mulching (Ds1)** - Materials such as hay or straw will be placed as needed on the soil surface as a temporary soil stabilization measure during seeding activities. Straw mulch will be placed on all areas after seeding. On steep slopes, mulch matting may be used with netting or anchoring to hold the seed and soil in place, except in areas that receive soil.
- **Temporary seeding (Ds2)** - Growth of a short-term vegetative cover (plants) will be used on disturbed site areas that may be in danger of erosion. The temporary seeding will be applied no later than 14 days from the last construction activity in that area, ideally as soon as practical after the last land disturbing activity in an area. Hydro-seeding is the preferred practice for temporary seeding. All temporary seeding will be completed in accordance with ADOT seeding recommendations.
- **Permanent seeding and planting (Ds3)** - Disturbed portions of the site where construction activities permanently cease will be stabilized with permanent, long-lived vegetative cover no later than 14 days after the last construction activity. Low-maintenance local plant species will be used. All other erosion control practices such as dikes, basins and surface runoff control measures will be installed before planting. All permanent seeding will be completed in accordance with ADOT seeding and/or sodding.
- **Dust Control on Disturbed Areas (Du)** - Dust control on disturbed portions of the site where construction activities are ongoing will be in accordance with the separate Dust Control Plan (DCP) developed for this project.

The indicated code for describing each practice is in conformance with USEPA and ADEM guidelines.

5.2.2 Structural Practices

Structural controls can be used in sediment and erosion control in a variety of ways, for example:

- to divert stormwater flows away from exposed areas;
- to convey runoff;
- to prevent sediments from moving off-site; and
- to reduce the erosive forces of runoff waters.

As implemented to support construction, the controls will be temporary measures. The structural controls which may be utilized during the Project include:

- **Channel Stabilization** - Existing Open channels will be used to convey/divert water at the site. These channels may be stabilized if necessary to be non-erosive and provide adequate capacity for transferring water. As much vegetation as possible will be left inside the channel right-of-way considering the requirements of construction, operation, and maintenance.

- **Construction Entrance/Exit** - Stone stabilized pads should be established at any point where traffic will be leaving a construction site to a public right-of-way, street, alley, sidewalk or parking area. The purpose will be to reduce or eliminate the transport of mud from the construction area onto public rights-of-way by motor vehicles or by runoff.
- **Diversion** - Diversions will be utilized as necessary to reduce slope lengths, intercept storm runoff, and divert it to a stable outlet at a non-erosive velocity. Diversions will be developed as a ridge of compacted soil, constructed above, across or below a slope.
- **Storm Drain Inlet or Outlet Protection** - Rip rapped channel sections should be placed below storm drain outlets to reduce the velocity of flow before entering receiving channels below storm drain outlets.
- **Inceptor Dikes and Swales** - Ridges of compacted soil and excavated depressions, can be established to keep upslope runoff from crossing unprotected areas with a high risk of erosion.
- **Sedimentation Barrier - Filter Fence** - Also called a silt fence, this temporary sedimentation control measure consists of posts with filter fabric stretched across the posts. The lower edge of the fence is trenched in place and covered by backfill. The filter fence should be used for drainage areas of 1 acre or less with runoff velocities of 0.5 feet per second or less and will be placed perpendicular to the direction of flow. Silt fencing should be used on all side-slope and down-slope boundaries of the construction area. Silt fences should not be used in streams or swales. Silt fencing requires frequent inspection, especially after each rainfall. The sediment collected behind the fence will be removed and properly disposed when it is one-third to one-half the free standing height of the fence.
- **Sedimentation Barrier - Straw Bale** - Straw bales placed end to end (with no gaps in between) and staked into place can be used to prevent sediment from leaving the site by trapping the sediment in the barrier while allowing surface water to pass through. Installed perpendicular to the flow lines, straw bales can also be used to decrease the velocity of sheet flow or channel flows of low-to-moderate levels. The bales will be inspected and repaired immediately after each rainfall, or daily if there is prolonged rainfall. Damaged straw bales will be immediately replaced. Trapped sediments will be removed and properly disposed on a regular basis, or after each storm.

Figure 2 contains information and details for implementing some of the methods described above. The indicated code for describing each practice is in conformance with USEPA and ADEM guidelines. Any deviations from the proposed measures must be approved by the Construction Manager.

5.3 Construction-Specific Controls

The construction-specific controls include the following:

Task 1: Off-Site Vehicle Tracking

A stabilized construction entrance will be provided to help reduce vehicle tracking of sediments off-site. All construction equipment entering work zones will stay within the designated zones until properly cleaned. Haul vehicles bringing in fill dirt will only be contacting soil areas

already cleaned. At the conclusion of all work, construction equipment will again be thoroughly cleaned before leaving the site.

Task 2: Grading and Restoration of Disturbed Areas

The soil stockpile will be graded and compacted in thin lifts. Immediately after the area has been completed to final grade, placement of the geotextile cap and overlying pavement or soil cover system will commence. Sloped areas beyond the limits of the asphalt pavement will be stabilized with grass sodding. Therefore, the soil will be exposed for only a short time.

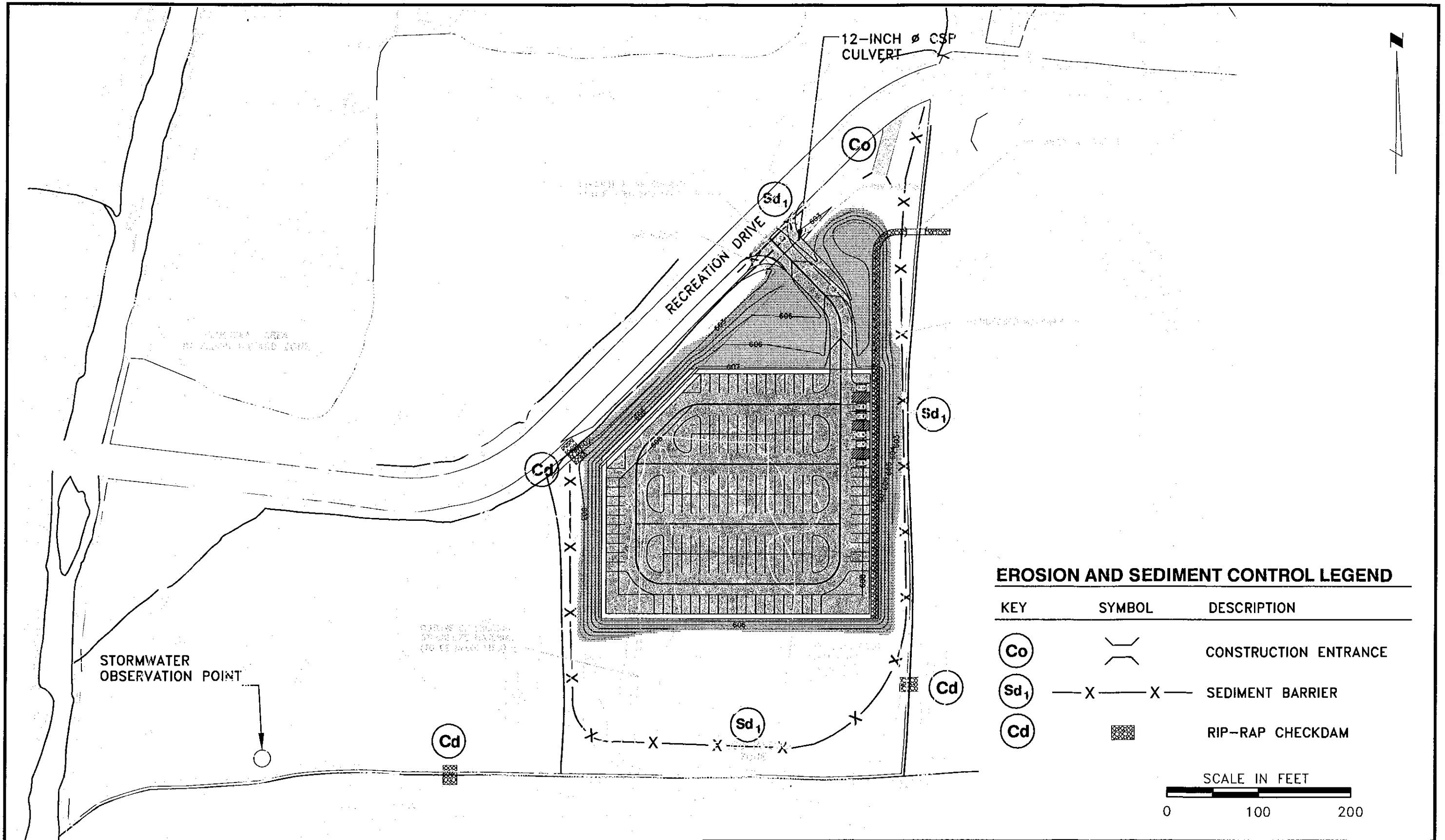
Additional erosion and sedimentation controls to be implemented during the Project include the following:

1. Cover. The temporary on-site stockpile of excavated soil will be covered daily with an impervious synthetic cover. During grading of the parking lot, silt fences will be placed around the stockpile. This material will ultimately be placed under the final pavement system.

2. Monitoring Point. A stormwater monitoring point will be established at the western end of the drainage ditch that runs westerly toward Snow Creek to ensure that stormwater runoff is not contaminated with sediment.

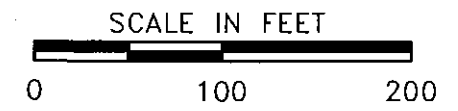
6.0 REFERENCES

- Alabama Nonpoint Source Management Program Document*, as amended, Alabama Department of Environmental Management, Water Division - Mining & Nonpoint Source Section, in accordance with Section 319 of the Federal Clean Water Act, as amended.
- Stormwater Discharge Monitoring and Sampling Requirements NPDES General Permit ALG610000 - Construction and Other Land Disturbance Activity*, Alabama Department of Environmental Management, Guidance Documentation, February 1, 1993.
- Application Guidance for NPDES Permit for Stormwater Discharges from Construction, Excavation, Land Clearing, Other Land Disturbance Activities, and Associated Areas Not Authorized by an Existing NPDES Permit General Permit Number ALG610000*, Alabama Department of Environmental Management, Mining & Nonpoint Source Section, MNPS Form 200-A, 8/1/92.
- Dust Control Plan, Detention, Cap and Cover (NORTH SIDE COVER EXTENSION) Project*, Anniston, Alabama, prepared by ICF Kaiser Engineers, Inc. for Solutia Company, April 1977.
- Spill Prevention, Control and Countermeasures Plan, Detention, Cap and Cover (NORTH SIDE COVER EXTENSION) Project* Anniston, Alabama, prepared by ICF Kaiser Engineers, Inc. for Solutia Company, April 1977.
- Stormwater Management for Construction Activities - Developing Pollution Prevention Plans and Best Management Practices*, United States Environmental Protection Agency, Office of Water, 1993.
- EPA Stormwater Pollution Prevention for Construction Activities*, United States Environmental Protection Agency, Office of Wastewater Enforcement and Compliance, as amended.
- Work Plan for the Anniston Eastside Stormwater Controls Project*, prepared by Westinghouse Remediation Services, Inc. (Atlanta, Georgia), Revision 2, 20 November 1996.
- Stormwater Management Plan for the Eastside Stormwater Controls Project*, prepared by Westinghouse Remediation Services, Inc. (Atlanta, Georgia), and Dames and Moore, Inc. (Atlanta, Georgia), Revision 2, 20 November 1996.
- Erosion and Sedimentation Control Plan for the Eastside Stormwater Controls Project*, prepared by Westinghouse Remediation Services, Inc. (Atlanta, Georgia), and Dames and Moore, Inc. (Atlanta, Georgia), Revision 2, 20 November 1996.
- Stormwater Pollution Prevention Plan for the Eastside Stormwater Controls Project*, prepared by Westinghouse Remediation Services, Inc. (Atlanta, Georgia), and Dames and Moore, Inc. (Atlanta, Georgia), Revision 2, 20 November 1996.
- Dust Control Plan for the Eastside Stormwater Controls Project*, prepared by Westinghouse Remediation Services, Inc. (Atlanta, Georgia), Revision 2, 20 November 1996.



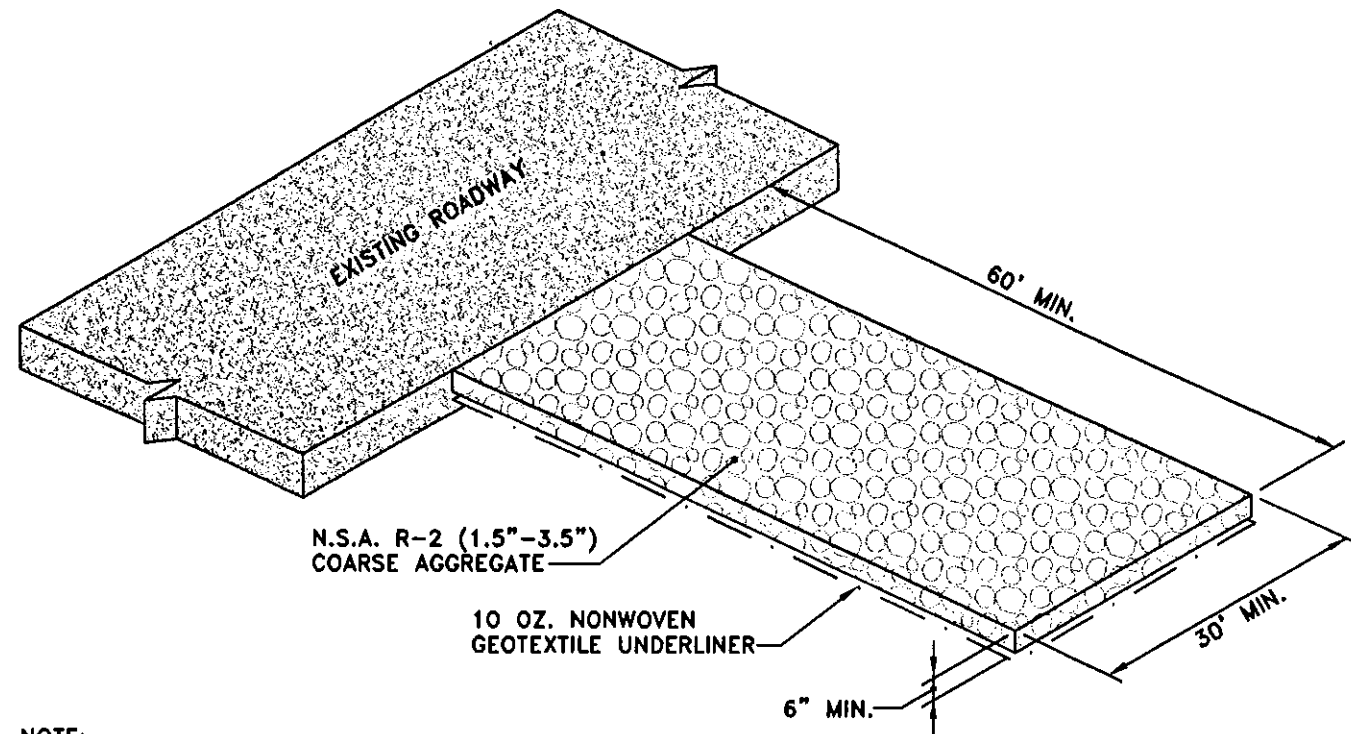
EROSION AND SEDIMENT CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
Co		CONSTRUCTION ENTRANCE
Sd ₁		SEDIMENT BARRIER
Cd		RIP-RAP CHECKDAM



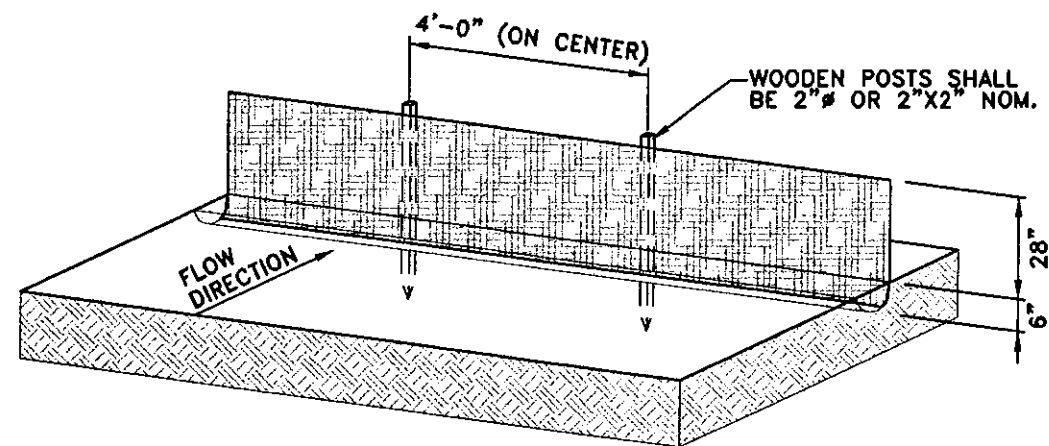
REFERENCE: BASEMAP FROM BBL PARKING AND GENERAL ARRANGEMENT PLAN AND EXISTING CONDITIONS PLAN

<p>Golder Associates Atlanta, Georgia</p>	TITLE			
	EROSION AND SEDIMENT CONTROL PLAN			
CLIENT/PROJECT	DRAWN	DATE	JOB NO.	
SOLUTIA/OXFORD LAKES/AL	GM	4/01	943-3680	
	CHECKED	SCALE	DWG. NO.	REV. NO.
		AS SHOWN	1	
	REVIEWED	FILE NO.	SUBTITLE	FIGURE NO.
		943-3680		1



NOTE:
 THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1.5-3.5 INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

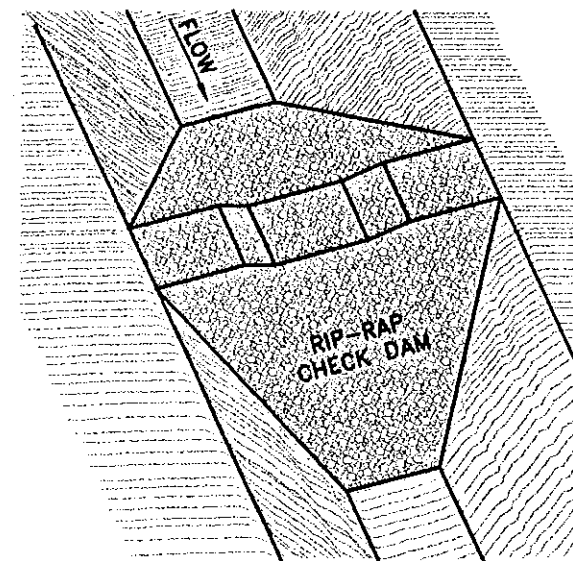
CONSTRUCTION ENTRANCE (Co)



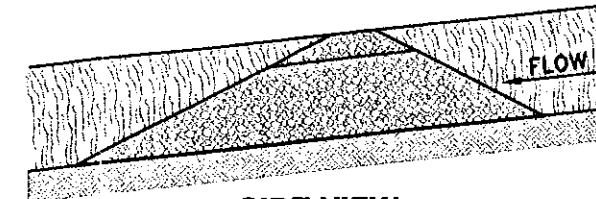
NOTES:

1. SILT CONTROL SHALL BE IN EFFECT PRIOR TO ANY GRADING OR CONSTRUCTION.
2. USE TYPE 'C' WIRE-REINFORCED SILT FENCE.
3. SPLICED JOINTS SHALL OVERLAP 18", WITH MATCHING POST.
4. DRIVE 4' (48") MIN. POSTS 12"-18" INTO SOIL.
5. DIG DITCH 12" WIDE, 6" DEEP. LAY FABRIC 6"-8" DEEP, THEN BACKFILL.

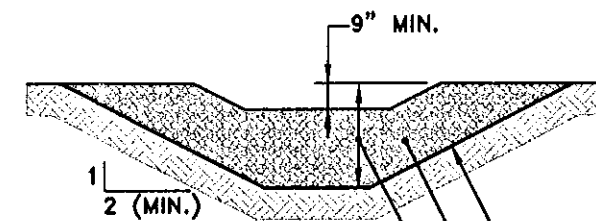
SILT FENCE (Sd₁)



ISOMETRIC VIEW




SIDE VIEW



UPSTREAM VIEW

10 OZ. GEOTEXTILE FILTER FABRIC UNDER RIP-RAP CHECK DAM

CHECK DAM (Cd)

 Golder Associates Atlanta, Georgia	TITLE TYPICAL EROSION AND SEDIMENTATION CONTROL STRUCTURES				
	CLIENT/PROJECT SOLUTIA/OXFORD LAKES/AL	DRAWN RJS	DATE 1/01	JOB NO. 943-3680	
	CHECKED <i>[Signature]</i>	SCALE N.T.S.	DWG. NO. 2	REV. NO.	
	REVIEWED	FILE NO. 943-3680	SUBTITLE	FIGURE NO. 2	

ATTACHMENT A

Construction General Permit (GP) Notice of Intent (NOI) Package, Parts I-III

**APPLICATION GUIDANCE FOR NPDES PERMIT FOR STORMWATER DISCHARGES FROM
CONSTRUCTION, EXCAVATION, LAND CLEARING, OTHER LAND DISTURBANCE ACTIVITIES,
AND ASSOCIATED AREAS NOT AUTHORIZED BY AN EXISTING NPDES PERMIT
GENERAL PERMIT NUMBER ALG610000**

REQUIRED FORMS AND OTHER INFORMATION

1. Appropriate fee (check or money-order)
2. EPA Form I
3. ADEM MNPS Form 200 (in lieu of EPA forms 2C, 2D, & 2F)
4. Proof of advertising (15 day public notice) in a local newspaper
5. 1" - 2,000' scale or Department approved equivalent site location map (7.5 minute series U.S.G.S topographic map, 8 1/2 x 11 inch sheets or a map folded to a size of 8 1/2 x 11 inches)
6. Individual or One-page Best Management Practices (BMP) Plan.

GENERAL INSTRUCTION

Complete and correct applications must be submitted at least 30 days prior to proposed date of coverage under the general permit. Incomplete or incorrect applications will be returned and cannot be processed until a corrected application is re-submitted.

Responses must be typewritten or printed legibly with black or blue ink (applications completed with pencil will not be accepted). Complete all blanks. Answer "N/A" or "Not Applicable" or "None", where necessary. Also, use attachments when needed.

Please submit three copies of the completed application with original, responsible corporate official signatures.

APPLICATION INSTRUCTION FOR ADEM MNPS FORM 200

1. Response must be the same as the label on EPA Form 1.
2. Please provide facility name which is unique or different from applicant name. Response must match EPA Form I, Item III. Make sure legal description is correct.
3. Self-explanatory.
4. **DO NOT FORGET** to place an asterisk (*) before the name of each officer at the level of vice president or above having the authority and responsibility to prevent and abate violations. You must list the legal business address or the home, street address of each officer. A P.O. box address is not acceptable.
5. Self-explanatory.
6. Self-explanatory.
7. List all Notices of Violation, Administrative Orders, or Settlement Agreements that have occurred within the last 36 months for All NPDES, SID, or UIC permit numbers issued to the applicant.

8. Response should reflect all activities conducted onsite.
9. List the exact name of the receiving stream(s) as found on the USGS or TVA topographic map. You may use "UT" to designate unnamed tributary of a named creek. List the Lat & Long in degrees, minutes, & seconds of the point where pollutants enter the receiving waters. List the distance from the disturbed area or associated treatment facilities to the receiving stream. The drainage area must be less than one square mile or 640 acres; instream treatment of pollutants is not authorized.
10. If the response to (a) or (b) is "yes", be sure to address completely in the BMP plan & narrative description. If the project will result in a discharge to coastal waters or is within the Alabama Coastal Area **AND** is considered a Major Project (the answer to (a) and (a), 1. is "yes"), the applicant must apply for and obtain Coastal Zone Management Certification from the ADEM Mobile Branch, 2204 perimeter Road, Mobile, AL 36616, (205)/479-2336.

For the purposes of this permit application, a Major Project includes:

- A. Construction and operation of energy facilities
 - B. Construction and operation of industrial plants
 - C. Construction of new roads over 1/2 mile in length
 - D. Dredging operations over 250,000 cubic yards
 - E. Filling operations over 250, 1 000 cubic yards
 - F. Dredge spoil disposal over 250,000 cubic yards
 - G. Structural methods of erosion control
 - H. Water wells which pump over 50 gallons per minute
 - I. Facilities for the disposal of waste materials Including but not limited to municipal and industrial effluent and solid waste
 - J. Commercial and residential projects over 25 acres
11. Self-explanatory.
 12. A spill prevention control and countermeasures plan must be implemented for all facilities having fuel or chemical storage tanks.
 13. Signatory must be a responsible corporate official at the level of vice-president or above and must be listed (and marked with an asterisk) in item 4 on page 1. The applications submitted to the Department must contain **original** signatures.

APPLICATION INSTRUCTION FOR EPA FORM 1

- III. Please provide facility name which is unique or different from applicant name. Response must match ADEM MNPS Form 200, Item 2. Make sure legal description is correct.
- VII. Please refer to attached list of appropriate Standard Industrial Codes (SIC) Codes.
- VIII. The operator is the permittee and information in this block must agree with information on the ADEM MNPS Form 200. The applications submitted to the Department must contain **original** signatures.
- X. List only those permits which are applicable to this facility.
- XIII. Signatory must be a responsible corporate official at the level of vice-president or above and must be the signatory of the ADEM MNPS Form 200. The applications submitted to the Department must contain **original** signatures.

INSTRUCTIONS FOR PREPARING BMP PLAN FOR FACILITY OPERATIONS

Plans for watercourse filling, crossing, or alteration/diversion must be prepared and approved individually. Please be advised that these activities are subject to permitting under section 404 of the Clean Water Act as administered by the Corps Of Engineers.

**** The applicant must submit the attached one-page BMP plan or an individual plan as described below.**

INDIVIDUAL BMP PLAN

Listed below are several BMP guidance documents which should help you in the preparation of your individual plan. Copies can be obtained from the ADEM at the copying rate of \$0.40 cents per page.

1. Alabama Nonpoint Source Management Program Document, as amended, Prepared by ADEM, Water Division - Mining & Nonpoint Source Section, in accordance with section 319 of the Federal Clean Water Act, as amended.
2. EPA Stormwater Pollution Prevention For Construction Activities, Office Of Wastewater Enforcement and Compliance, U.S. Environmental Protection Agency, Washington, D.C. 20460, as amended.
3. Best Management Practices Plan - Magnolia Pipeline, Basin Pipeline Corporation, 2101 Sixth Avenue North, Suite 900, Birmingham, AL 35203, as amended.
4. Best Management Practices For Nonpoint Source-Runoff Control, Mobile & Baldwin Counties, Alabama, South Alabama Regional Planning Commission, January 1989, as amended.
5. Best Management Practices For Controlling Sediment And Erosion From Construction Activities, Birmingham Regional Planning Commission, August 1980, as amended.
6. Best Management Practices For Agricultural Nonpoint Source Control, Volume III - Sediment, North Carolina Agricultural Extension Service, Biological And Agricultural Engineering Department, North Carolina State University, August 1982, as amended.

An individual plan, at a minimum, must address the following as appropriate:

Specifications for haul road or access road designs.

Location, design, and maintenance requirements for treatment facilities and structures (i.e. silt fencing, staked hay bale rows, sediment ponds & traps, rock check dams, ditches, berms, etc.) and proposed Best Management Practices (BMPs) that will be implemented prior to or concurrent with disturbance activities to prevent/minimize discharges to State waters resulting from non-point sources of pollutants in stormwater run-off or from spills.

Plans for grading and stabilization of the disturbed area to include use of mesh or netting, mulch, seed-mixtures, planting schedules, etc.

Measures to ensure permanent revegetation or cover of all disturbed areas.

Location of vehicle & equipment maintenance, cleaning, and storage areas and specific BMPs to be implemented.

Location and operation of all portable facilities, i.e. office trailers, toilet facilities, employee break areas, etc.

Location of material storage areas, i.e. topsoil piles, paints & solvents, pesticides/herbicides & fertilizers, soil conditioners, lubricating oils & anti-freeze, etc. and specific BMPs to be implemented.

Methods to keep mud and dirt off of paved county or state roads.

Location of buried utility lines.

Information on potential groundwater impacts, i.e. pilings, deep excavation, disturbance near known recharge zones, groundwater levels, tunneling, etc.

BMPs to be implemented during water acquisition activities to protect State waters.

Address regular cleanup and proper disposal of floating or submerged trash and garbage originating at the site or resulting from the permittee's activities.

Address the collection, storage, treatment and disposal of sewage and other putrescible wastes.

Maintain onsite or have readily available sufficient oil & grease absorbing material and flotation booms to contain and clean-up fuel or chemical spills and leaks.

All construction and worker debris (e.g. trash, garbage, etc.) must be immediately removed and disposed of in an approved manner. Also, soil contaminated by paint or chemical spills, oil spills, etc. must be immediately cleaned up or be removed and disposed of in an approved manner.

Appropriate measures to be taken to prevent the deposition of airborne pollutants such as spray paint, herbicides, excessive road dust, etc. from entering any waterbody.

Run-off from dust suppression operations. Please be advised that the use of used motor oil and other petroleum based or toxic liquids for dust suppression operations is prohibited.

All materials used as fill or for construction purposes must be non-toxic, non-acid forming and free of solid waste or other debris.

No rubbish, trash, garbage, or other such materials shall be discharged into waters of the State of Alabama. Litter and refuse shall be disposed in a manner consistent with State and local regulations.

PROOF OF PUBLIC NOTICE

The Notice of Intent must be accompanied by proof of public notice by the applicant. The public notice must be published in a local newspaper of general circulation for one day immediately prior to the date of the letter of intent. If no local paper is available it must be published in the newspaper that is most generally circulated in the area. The public will have 15 days from the date of publication to comment.

The public notice must take the general form specified below.

(COMPANY NAME AND MAILING ADDRESS) located at (PHYSICAL LOCATION) intends to petition the Alabama Department of Environmental Management for (AUTHORIZATION and/or REAUTHORIZATION) to discharge stormwater under General Permit ALG610000. This General Permit has been issued by the Department to cover the discharge of stormwater from construction, excavation, land clearing, (_____). This discharge will be to (NAME OF WATERWAY(s)).

Copies of the General Permit and the Notice of Intent filed by (COMPANY NAME) may be inspected at the Alabama Department of Environmental Management, 1751 Congressman Dickinson Drive, Montgomery, Alabama 36130

Persons wishing to comment may do so within 15 days following the publication of This notice by writing to the attention of the Chief of Permits & Services Division, Alabama Department of Environmental Management, 1751 Congressman Dickinson Drive, Montgomery, Alabama 36130

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)
FIELD OPERATIONS DIVISION NPDES GENERAL PERMIT NOTICE OF INTENT (NOI)**

ALG610000 - CONSTRUCTION, EXCAVATION, CLEARING, DISTURBANCE, RECLAMATION, AND ASSOCIATED AREAS AND ALG490000 - NONMETALLIC, NONCOAL MINING, QUARRYING, EXCAVATION, BORROWING, STORAGE, PROCESSING, RECOVERY AND ASSOCIATED AREAS LESS THAN FIVE ACRES

PLEASE READ THE ACCOMPANYING INSTRUCTIONS CAREFULLY BEFORE COMPLETING THIS FORM. COMPLETE ALL QUESTIONS. RESPOND WITH "N/A" AS APPROPRIATE. INCOMPLETE OR INCORRECT ANSWERS, OR MISSING SIGNATURES WILL DELAY AUTHORIZATION. IF SPACE IS INSUFFICIENT, CONTINUE ON AN ATTACHED SHEET(S) AS NECESSARY.

PLEASE TYPE OR PRINT IN INK.

I. APPLICANT INFORMATION Initial Authorization: ALG610000 ALG490000 Reauthorization: ALR _____

Company Name Solutia, Incorporated		Facility/Project Name Oxford Lake Softball Complex	
Responsible Official and Title Dennis Cavner, Vice President		Facility Contact and Title Craig Branchfield, Manager, Remedial Projects	
Mailing Address of Applicant 575 Maryville Centre Drive		Facility Street Address or Location Description Oxford Lakes Softball Complex Recreation Drive	
City St. Louis	State MO	Zip 63141	
		City Oxford	State AL Zip
Business Phone Number (314) 674-1000		Facility Phone Number (256) 231-8404	Fax Number (256) 231-8451
Responsible Official Street/Physical Address & Phone Number Same as above			Email Address crbran1@solutia.com
Registered Agent Name, Address, & Phone Number N/A			

II. LEGAL STRUCTURE OF APPLICANT

Corporation Association Individual Single Proprietorship Partnership LLC

Government Agency _____ Other _____ Other _____

(Y) (N) If not an Individual or Single Proprietorship, applicant is properly registered and in good standing with the Alabama Secretary of State's office. If "No", please explain:

Parent Corporation and Subsidiary Corporations of Applicant, if any: _____

Construction Contractor(s), If Known: Williams Environmental, Atlanta, GA

III. VIOLATION HISTORY

Identify every Warning Letter, Notice of Violation (NOV), Administrative Order, Directive, or litigation filed by ADEM or EPA during the three year (36 months) period preceding the date on which this form is signed issued to the applicant, parent corporation, subsidiary, or LLC Member. Indicate the date of issuance, briefly describe alleged violations, list actions (if any) to abate alleged violations, and indicate date of final resolution:

No Violations in past 36 months

IV. PROPOSED SCHEDULE

Anticipated Activity schedule: Commencement date: January 15, 2001 Completion date: 15 March, 2001

Area of the Permitted site: Total area in acres: 25 Disturbed area in acres: 7

IX. FUEL - CHEMICAL HANDLING, STORAGE & SPCC PLAN

Will fuels, chemicals, or liquid waste be used or stored onsite?		<input type="checkbox"/> Yes <input type="checkbox"/> No		If "yes", identify and indicate amount below:	
Capacity	Contents	Capacity	Contents	Capacity	Contents
100 gallons	Diesel	_____ gallons	_____	_____ gallons	_____
_____ gallons	_____	_____ gallons	_____	_____ gallons	_____

X. MAP SUBMITTAL

Attach to this application a 7.5 minute series U.S.G.S. topographic map(s) or equivalent map(s) no larger than, or folded to a size of 8.5 by 11 inches (several pages may be necessary) of the area extending to at least one mile beyond property boundaries. The topographic or equivalent map(s) must include a caption indicating the name of the topographic map, name of the applicant, facility name, county, and township, range, & section(s) where the facility is located. Unless approved in advance by the Department, the topographic or equivalent map(s), at a minimum, must show:

- | | |
|--|---|
| (a) an outline of legal boundary of entire property | (b) an outline of the facility |
| (c) all existing and proposed disturbed areas | (d) location of discharge areas |
| (e) perennial, intermittent, and ephemeral streams | (f) lakes, springs, water wells, wetlands |
| (g) all known facility dirt/improved access/haul roads | (h) all surrounding unimproved/improved roads |
| (i) high tension power lines and railroad tracks | (j) buildings and structures |
| (k) contour lines, township-range-section lines | (l) drainage patterns, swales, washes |
| (m) proposed and existing discharge points | |

XI. QUALIFIED CREDENTIALLED PROFESSIONAL CERTIFICATION

A Comprehensive Best Management Practices (BMP) Plan must be prepared, signed, and certified by a qualified credentialed professional as follows:

"I certify under penalty of law that a comprehensive BMP Plan for the prevention and minimization of all sources of pollution in stormwater and authorized related process wastewater runoff has been prepared under my supervision for this facility utilizing effective BMPs from documents #1, #2, and other acceptable documents as indicated below. If the plan is properly implemented and maintained by the permittee, discharges of pollutants can reasonably be expected to be effectively minimized to the maximum extent practicable according to permit requirements. The applicant has been advised that appropriate pollution abatement/prevention facilities and structural & nonstructural BMPs or Department approved equivalent BMPs as described in the proposed plan must be fully implemented and regularly maintained as needed at the facility in accordance with good sediment and erosion practices and ADEM requirements.

The BMP plan addresses implementation and maintenance of applicable effective BMPs utilizing good sediment, erosion, and other pollution control practices as provided in:

- (1) The Storm Water Management For Construction Activities - Developing Pollution Prevention Plans And Best Management Practices document, as amended, as adopted by the EPA
- (2) The Alabama Nonpoint Source Management Program Document, as amended, as adopted by the Department and approved by EPA.
- (3) Other listed appropriate BMP manuals, plans, or documents reviewed and specifically accepted by the Department.

Address: Golder Associates Inc.
3730 Chamblee Tucker, Rd. Atlanta, GA 30341
Name and Title (type or print) Thomas B. Francis, PE

Registration/Certification : ALPE#22363

Phone Number : (770) 496-1893

Signature

Thomas B. Francis

Date Signed

2/3/2001

XII. OTHER RESPONSIBLE OFFICIALS

Please list the name, phone number, and address of any other responsible official(s) of the applicant with legal or decision making responsibility or authority for the facility: None

XIII. RESPONSIBLE OFFICIAL SIGNATURE

This NOI must be signed by a Responsible Official of the applicant who is the owner, the sole proprietor of a sole proprietorship, a general member or partner, a ranking elected official or other duly authorized representative for a unit of government; or an executive officer of at least the level of vice-president for a corporation, having overall responsibility for the operation of the facility.

"I certify under penalty of law that this document, the BMP Plan, and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the qualified credentialed professional and other person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment for knowing violations.

A comprehensive BMP Plan to prevent and minimize discharges of pollution to the maximum extent practicable has been prepared at my direction by a qualified credentialed professional for this facility utilizing effective BMPs from documents #1, #2, and other documents as indicated in XI, above. I understand that regular inspections must be performed by, or under the direct supervision of, a qualified credentialed professional and all appropriate pollution abatement/prevention facilities and structural & nonstructural BMPs or Department approved equivalent BMPs identified by the qualified credentialed professional must be fully implemented prior to and concurrent with commencement of regulated activities and regularly maintained as needed at the facility in accordance with good sediment, erosion, and other pollution control practices and ADEM requirements. I understand that failure to fully implement and regularly maintain BMPs for the protection of water quality may subject the permittee to appropriate enforcement action.

I understand that, while coverage under the Construction General Permit ALG610000 allows for short-lived, limited removal or relocation offsite of fill material, ALG610000 does not provide coverage for mining activities described in ADEM Admin. Code R. 335-6-9. I also understand that coverage under the Noncoal Mining General Permit ALG490000 does not authorize mining activity that exceeds 5 un-reclaimed acres. Planned/proposed mining sites greater than 5 acres must apply for and obtain coverage under an Individual Permit prior to commencement of any land disturbance.

I certify that this form has not been altered, and if copied or reproduced, is consistent in format and identical in content to the ADEM approved form.

I further certify that the discharges described in this application have been tested or evaluated for the presence of non-stormwater discharges and any non-construction process wastewaters have been fully identified."

Name and Official Title (type or print) Dennis Cavner, Vice President

Signature _____ Date Signed _____

Contact the Department prior to submittal with any questions or to request acceptable alternate content/format. Be advised that you are not authorized to commence regulated activity until this NOI can be processed and authorization to proceed is received in writing from the Department.

Unless required in writing by the Department, EPA forms 1, 2C, 2D, & 2F need not be completed for authorization under these NPDES General Permits provided proposed activities described in this NOI for this facility qualify for coverage under these permits and there are no process wastewaters which require coverage under an Individual NPDES permit.

Complete this form, attach additional information as necessary, enclose appropriate processing fee, and send to:

Field Operations Division - MNPS
Alabama Department of Environmental Management
Phone: (334) 394-4311
Fax: (334) 394-4326

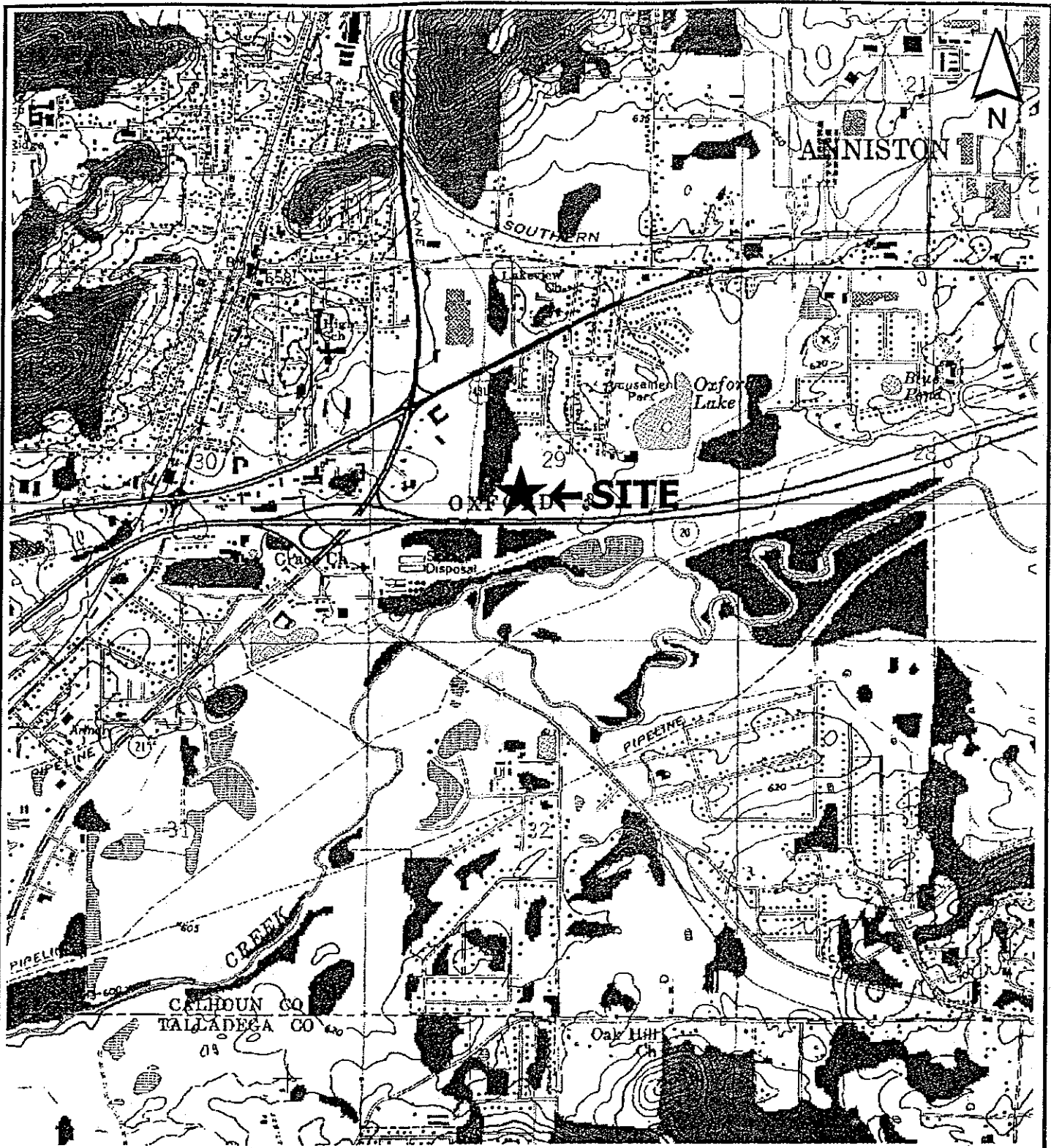
PO Box 301463
Montgomery, AL 36130-1463
Email: mnps@adem.state.al.us

1400 Coliseum Boulevard
Montgomery, AL 36110-2059

ATTACHMENT I

Existing Environmental Permits, OtherAir Permits

<u>Permit Number</u>	<u>Description of Source</u>	<u>Date Issued</u>
301-0007-X011	Santotar Storage Tank	11/20/89
301-0007-X012	Therminol 66J and Returned Therminol 66 Storage Tanks	04/08/91
301-0007-X013	Horizontal Benzene Storage Tanks	03/31/92
301-0007-X014	Therminol Ends Storage Tank	07/07/92
301-0007-X015	Paranitrochlorobenzene Storage Tank	11/23/93
301-0007-Z016	Paranitrophenol Storage Tank	11/23/93
301-0007-Z002	Polyphenyl Manufacturing Process	01/24/86
301-0007-Z005	Paranitrochlorobenzene Unloading Dock	11/30/77
301-0007-Z006	Paranitrophenol Manufacturing Process and Related Equipment	08/17/78
301-0007-Z010	75 MMBTU/hour Process Steam Boiler with By- Product Fuel Firing Capability	04/26/94



SOURCE: USGS 7.5 MINUTE QUADRANGLE OXFORD, AL



Golder Associates

Atlanta, Georgia

SITE LOCATION MAP

CLIENT/PROJECT

SOLUTIA/OXFORD LAKES/AL

CREATED

MCG

DATE

3-Jan-2001

JOB NO.

943-3680-050

CHECKED

SCALE

AS SHOWN

PRINT FILE

Site.eps

REV. FILE

REVIEWED

FILE

Q:\GIS\0068.spr

LAYOUT

lytSite

FIGURE NO.

1

ATTACHMENT B

Certification Sheet

**OXFORD LAKES PROJECT
SOLUTIA INC., ANNISTON, ALABAMA
BEST MANAGEMENT PRACTICES PLAN**

APRIL 2001

REVISION: 0

MANAGEMENT APPROVALS

"I certify under penalty of law that this document and all attachments were prepared under my direction of supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

SOLUTIA INC.

Name (Type or Print)	Title
Signature	Date

CONTRACTOR APPROVALS

"I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the stormwater discharge associated with industrial activity from the construction site identified as part of this certification."

CONTRACTOR: _____

Name (Type or Print)	Title
Signature	Date

ATTACHMENT C

Environment Release Report Forms

**OXFORD LAKES PROJECT
SOLUTIA INC., ANNISTON, ALABAMA
ENVIRONMENTAL RELEASE REPORT FORM**

(Sheet 1 of ____)

1. Inspection Team: _____ 2. Date: _____
 _____ 3. Time: _____

4. Date of Last Inspection: _____ 5. Days Since Last Inspection: _____

6. Days Since Last Rain Event: _____ 7. Quantity of Last Rain: _____

8. Quantity of rain since Last Inspection: _____

9. Summary Inspection Checklist:

Item	Comments
1. Maintain containment of select soil	
2. Maintain soil and erosion control measures	
3. Maintain stormwater conveyances	
4. Promptly clean up any minor fuel spills	
5. All vehicles cleaned as necessary before leaving the site or exclusion zones	
6. Promptly remove litter or debris	
7. Spill response equipment in place	

10. General Notes:

**OXFORD LAKES PROJECT
SOLUTIA INC., ANNISTON, ALABAMA
ENVIRONMENTAL RELEASE REPORT FORM**

(Sheet 2 of ____)

11. Description and Volume of Observed Flows Into Stormwater Drainage System: _____

12. Comments: _____

13. Items for Corrective Action: _____

14. Date of Revision of Spill Prevention, Control, and Countermeasures Plan (SPCC):

15. Date of Implementation of Corrective Actions: _____

(use additional sheets as necessary)

**OXFORD LAKES PROJECT
SOLUTIA INC., ANNISTON, ALABAMA
CHEMICAL RELEASE REPORT FORM**

(Sheet 1 of ____)

1. Date of Release: _____ 2. Approximate Time of Release: _____

3. Approximate Duration of Release: _____ 4. Quantities Released: _____

5a. Chemicals or Constituents Released: _____

5b. Release to (check media as appropriate): Air _____ Storm Drainage System _____
Other Surface Water _____ Soil _____

6. Description of Incident (Location, Source, Cause)

7. Response Action Taken: _____

8. Corrective Measures Taken: _____

9. Anticipated Consequences of Incident (environmental, need for further corrective action, etc):

10. Verbal Report Filed: Time _____ Date: _____ By: _____

To: _____ of _____ (Agency or Organization)

ATTACHMENT D

INSPECTION AND MAINTENANCE REPORT FORMS

- Rainfall Event Summary Sheet
 - Erosion and Sedimentation Controls Inspection Sheet
-
-

**RAINFALL EVENT SUMMARY SHEET
 OXFORD LAKES PROJECT
 SOLUTIA INC., ANNISTON, ALABAMA**

**Inspection and Maintenance Report Form
 Weekly Rainfall Event Summary**

Inspector: _____
 Date: _____

Inspector's Qualifications:

Days Since Last Rainfall: _____ Amount of Last Rainfall _____ Inches

Stabilization Measures

Area	Date Since Last Disturbed	Date of Next Disturbance	Stabilized? (Yes or No)	Stabilized With	Condition

Stabilization Required:

To Be Performed By: _____

On or Before: _____

**EROSION AND SEDIMENTATION CONTROLS
INSPECTION SHEET
OXFORD LAKES PROJECT
SOLUTIA INC., ANNISTON, ALABAMA**

Inspection and Maintenance Report Form

Date: _____ Control Device: _____

From	To	Is Control Device functioning properly?	Is There Evidence of Washout or Over-Topping?

ATTACHMENT E

NPDES Permit Monitoring Report Forms

- **Inspection Report and BMP Certification**
 - **Non-compliance Notification Report**
-
-

INSPECTION REPORT & BMP CERTIFICATION

COMPANY NAME _____

PERMIT AREA NAME _____

NPDES NUMBER: ALR _____ COUNTY: _____

LATITUDE: _____ LONGITUDE: _____
(In degrees, minutes, seconds)

TOWNSHIP, RANGE, SECTION: _____
(To nearest 1/4 section)

NEAREST NAMED RECEIVING STREAM: _____

SAMPLING DATA AND INFORMATION:

INSPECTION RESULTS (Deficiencies/corrective actions, including compliance schedule):

Based upon the inspection of (Date & Time) _____ which I or personnel under my direct supervision (list: _____) conducted, I certify that all structural and non-structural BMPs have been implemented and maintained, except for those deficiencies noted above, in accordance with the plan filed with the Department, good engineering practices, and with provisions and requirements of the above referenced NPDES permit and ADEM regulations.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Name of Responsible Official

Signature

Date

NONCOMPLIANCE NOTIFICATION REPORT

PERMITTEE NAME: _____

PERMIT NUMBER: ALR: _____

PERMIT AREA NAME _____

1. DESCRIPTION OF DISCHARGE:

NONCOMPLIANCE PARAMETER(S):

CAUSE OF NONCOMPLIANCE: (Attach additional pages if necessary)

2. PERIOD OF NONCOMPLIANCE: (Include exact date(s) and time(s) or, if not corrected, the anticipated time the noncompliance is expected to continue):

3. DESCRIPTION OF STEPS TAKEN AND/OR BEING TAKEN TO REDUCE OR ELIMINATE THE NONCOMPLYING DISCHARGE AND TO PREVENT ITS RECURRENCE (attach additional pages if necessary):

NAME AND TITLE OF RESPONSIBLE OFFICIAL (type or print)

SIGNATURE OF RESPONSIBLE OFFICIAL

DATE SIGNED

APPENDIX E

Spill Prevention, Control and Countermeasures Plan

**SPILL PREVENTION, CONTROL AND
COUNTERMEASURES PLAN**

**OXFORD LAKE SOFTBALL COMPLEX
PARKING AREA**

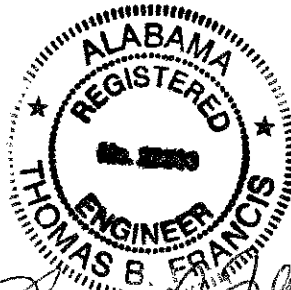
APRIL 2001

Submitted to:

Solutia Inc.
702 Clydesdale Avenue
Anniston, Alabama 36201-5390

Prepared by:

Golder Associates Inc.
3730 Chamblee Tucker Road
Atlanta, Georgia 30341



Thomas B. Francis
4/23/2001

DISTRIBUTION:

- 1 Copy – Solutia Inc.
- 1 Copy – Maverick Construction Management
- 2 Copies – Golder Associates Inc.

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FIGURES

FIGURE 1 Erosion and Sediment Control Plan

ATTACHMENTS

- ATTACHMENT A Construction General Permit (GP) Notice of Intent (NOI) Package, Parts I-III
- ATTACHMENT B Certification Sheet
- ATTACHMENT C Environment Release Report Form
- ATTACHMENT D Inspection and Maintenance Report Forms

1.0 INTRODUCTION

1.1 Background

Solutia Inc. (Solutia) previously performed an Interim Corrective Measure removal activity at the Oxford Lake Softball Complex in Anniston, Alabama, consisting of the excavation of 3 to 12 inches of soil impacted with polychlorinated biphenyls (PCBs) from the softball fields and temporarily stockpiling these soils in a grassed area west of the fields. Excavated soils with PCB concentrations of greater than 50 mg/kg were hauled to a permitted disposal facility. As part of a remedial action, the stockpiled soil will be graded to create a parking and landscaped area. Once grading has been completed, the impacted soil will be capped with a nonwoven geotextile and a pavement system or soil cover will be constructed above it. The pavement system will consist of 8 inches of crushed aggregate base course material overlain by 3 inches of hot mix asphalt. The soil cover system will consist of a minimum of 12 inches of clean soil cover. Runoff from the parking lot will be allowed to sheet flow to the existing drainage features.

Note that the hot mix asphalt will be delivered to the site and no paving operations will be conducted during heavy rainfall events.

1.2 NPDES Permit Authority

1.2.1 Plans Required Under NPDES

The National Pollutant Discharge Elimination System (NPDES) is a national program for issuing, modeling, revoking, etc. permits under Sections 307, 318, 402, and 405 of the Clean Water Act of 1990. Under this program, the state of Alabama is authorized to implement a state run program. This program requires that the Owner of a facility submit a Notice of Intent (NOI) when five (5) or more acres of land are disturbed through construction activities. In addition, the Owner is required to develop a "**Best Management Practice Plan**" (BMP Plan) and, if applicable, a "**Spill Prevention, Control, and Countermeasures Plan**" (SPCC Plan). These plans should be fully developed and implemented upon submitting the NOI.

Prior to performing the Interim Corrective Measures for the softball fields, Solutia filed a NOI for coverage under the Alabama Department of Environmental Management (ADEM) NPDES General Permit. The original NOI package (Attachment A) gives a completion date for activities of March 15,

2001. With this document, Solutia proposes revising the completion date to September 1, 2001, in order to complete the construction of the parking lot at the site.

The NPDES General Permit requires Solutia to prepare, implement and maintain a SPCC Plan for all on-site fuel or chemical storage tanks if the volume requirements are met. The SPCC Plan should contain the overall measures that will be undertaken to prevent and control possible releases of pollutants.

The NPDES General Permit also requires Solutia to prepare and implement a BMP Plan describing practices to prevent/minimize the discharge of all sources of pollution in stormwater runoff to State waters. The BMP Plan has been prepared and is provided as a separate document.

1.3 Purpose

This document presents the SPCC Plan. The purpose of this SPCC Plan is to detail measures that will be undertaken to prevent and control possible releases of pollutants as a result of construction-related activities associated with the construction of the Oxford Lake Softball Complex Parking Area.

1.4 Scope of Work

The principal elements of work associated with this SPCC Plan are listed below:

- general preparations of the work area;
- construction of erosion control structures;
- establishment of temporary facilities and roads;
- construction of a vehicle decontamination pad at the site;
- grading of PCB-containing soil;
- construction of the soil cover;
- placement and compaction of the base course material;
- placement and compaction of the hot mix asphalt;
- equipment decontamination and disposal; and
- post-construction cleanup and seeding.

1.5 Approach and Overview

This SPCC Plan for the project was developed using USEPA and ADEM guidance documents and Engineering judgment.

Pollution prevention-related planning presented in this SPCC Plan includes the following:

- identification of potential sources of construction-related pollution;

- measures and controls focused at limiting releases during construction, including emergency response;
- spill prevention; and
- the NPDES permit and other relevant plans.

1.6 Mechanisms for Plan Revisions

The SPCC Plan and all accompanying records, reports, and changes will be retained for the duration of the project plus 3 years. This SPCC Plan will be reviewed and amended, at a minimum, when the following occurs:

- applicable ADEM or federal regulations are revised;
- the General NPDES Permit for the construction site is revised;
- the SPCC Plan fails in an emergency, or does not comply with the NPDES General Permit;
- there is a change in discharge design, operation, maintenance, or other circumstances, that materially increases the potential for fires, explosions, or releases of toxic or hazardous constituents; or that changes the response necessary in an emergency;
- as may otherwise be required by ADEM; and/or
- there is a reportable release of a hazardous substance to a stormwater drain.

1.7 Management Approval

The USEPA and the state of Alabama require that the "Spill Prevention, Control, and Countermeasures Plan" be signed by an authorized person. A copy of the certification letter is in Attachment B.

The SPCC Plan will be retained on-site at the project offices and/or on-site trailers and will be available to members of ADEM upon request or in the case of an unplanned stormwater discharge from the site associated with the construction activity. Solutia will allow ADEM or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

- enter upon the premises of the project site to have access to the records that must be kept under the conditions of this plan;
- be able to copy at reasonable times, any records that must be kept under the condition of this plan; and/or
- inspect at reasonable times any facilities, equipment, or structures.

2.0 SITE DESCRIPTION

2.1 Site Location and Description

The Oxford Lake Softball Complex is located within the City of Oxford, in northeastern Alabama, just north of Interstate 20. It is bounded on the west by Snow Creek, on the north by vacant woodland and residential areas and on the east by open land. The parking area will be constructed between the softball complex and Snow Creek.

The site was originally flat with a slight slope towards the south where there is a drainage swale that flows westerly toward Snow Creek, which then flows southerly toward Choccolocco Creek.

2.2 Potential Sources of Pollution

2.2.1 Potential Pollutants in Soils

Areas of routine natural drainage have been sampled by Solutia and have been shown to include PCB-impacted soils.

2.2.2 Construction Activities

Construction activities will include earth moving activities such as excavation, and fill placement, and compaction.

2.2.3 Drainage

Figure 1 shows the site layout. Surface water drainage both within and surrounding the site property limits drain southerly toward a drainage ditch which then flows westerly into Snow Creek.

2.2.4 Spills

Spills may occur from the usage of diesel fuel, gasoline, and the collection of rinse water that is used in the washing of equipment. Additionally, leaks of hydraulic oil might occur from the heavy equipment.

3.0 MEASURES AND CONTROLS

3.1 Spill Control Practices and Countermeasures

The Alabama NPDES General Permit for construction requires Solutia to prepare, implement, and maintain a SPCC Plan. The plan must be consistent with the requirements of 40 CFR 112 for tanks which meet or exceed the applicable size thresholds. In most situations, this would require construction of a containment system if the cumulative storage capacity of fuel or chemicals at the facility were greater than 1,320 gallons or if any single container has capacity greater than 660 gallons.

3.1.1 General

This section describes spill prevention and response procedures for the Oxford Lake project that could contribute to the prevention of pollutants to the stormwater drainage system if properly maintained. Spills may occur from the usage of diesel fuel and the collection of rinse water that is used in the cleaning of equipment. Additionally, leaks of hydraulic oil might occur from the heavy equipment. The general practices listed below will be followed for spill prevention and cleanup.

- Provisions will be made to prevent spills or leaks of fuels and/or oil products from refueling operations or equipment maintenance.
- Manufacturer's recommended methods for spill cleanup will be followed and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- All spills will be cleaned up immediately after discovered.
- Spills of any toxic or hazardous material will be reported to the appropriate State or local government agency, as required.
- All materials and equipment necessary for spill cleanup will be kept in a designated material storage area or structure on-site.
- All equipment will refuel at a central location to be designated upon mobilization and during refueling operations will not be left unattended. Absorbent pads will be kept on-site for emergency if an overfill occurs.

3.1.2 Spill Response

Spill response equipment, personal protective equipment (PPE), and first aid equipment will be stored at the project trailer as specified in the Health & Safety Plan (HASp).

If a release occurs, the event will be documented utilizing the Environmental Release Report Form presented in Attachment C. Proper emergency response equipment must be used for its appropriate use:

Item	Use
Personal Protective Equipment: Tyvek coveralls Gloves Goggles PVC boots	Protect on-site response personnel from injury or potential exposure during incident response.
Spill Control Equipment: - bucket, broom - shovel - floor dry - absorbent pads - sand bags	Control and contain spilled liquid
Full-face respirators	Prevent inhalation hazards
First Aid Station	Provide basic first aid treatment of injured personnel
Emergency Eye Wash	Rinse foreign matter from eyes
Emergency Shower	Rinse foreign matter from skin
Fire alarm/communications system	Notify appropriate spill response personnel
Fire extinguishers	Fire control

In case of emergency, contact:

Emergency	Organization or Agency	Telephone No.
Injury	Emergency Medical Services	911
	Memorial Hospital	-----
Fire/Explosion	Anniston Fire Department	911
	Solutia Fire Department	-----
	Anniston Police Department	911
Hazardous Waste Spill or Release	ADEM-Birmingham Office	
	USEPA National Response Center	800-424-8802
	CHEMTREC	800-424-9300
Utilities	Alabama Power	-----
Other	Poison Control Agency	800-922-1117

3.2 Good Housekeeping

3.2.1 General

Good housekeeping is important on any construction project to minimize accidents and to ensure high quality work. The Contractor at the site has full responsibility and accountability for meeting good housekeeping requirements.

The "good housekeeping" practices listed below will be followed during the project.

- All erosion and sediment control measures will be kept in place, will be adequate for the erosion/sediment control of concern, will be properly constructed and maintained.
- Cleaning operations will be confined within the limits shown on the plans.
- The vegetation outside of the cleaning area will be protected by not traveling into those areas.
- Controls will be instituted such that sediment transported from the site onto public right-of-way by vehicular traffic will be minimized.
- The sediment barriers and related devices will be those which are effective in retaining sediment on the site.
- The appropriate vegetation will be established as needed on all specified areas, this includes temporary vegetation.
- Work progress will be in accordance with the proposed schedule.
- The contractor will follow the plan and construction sequence.
- As may be necessary, temporary stream channel crossings will be installed and maintained.
- No severe fire hazards will exist that could result in brush or grass fires.
- There will be no excessive sediment leaving the site for any reason.
- All materials stored on-site will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Information sessions on good housekeeping practices will be incorporated into the employee meetings.
- Bulletin boards with updated good housekeeping procedures, tips and reminders will be posted for field personnel.

3.2.2 Hazardous Products

Below are listed the practices that will be used to reduce the risks associated with hazardous or regulated materials that are used on-site.

- Products will be kept in original containers unless they are not re-sealable.
- Original labels and material safety data sheets will be retained.
- If surplus product must be disposed of, manufacturers' or local and State recommended methods for proper disposal will be followed.

3.2.3 Product Specific Practices

The following specific practices for petroleum products will be followed on-site.

- All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage.
- The mobile refueling tank will be regularly inspected and, when not refueling, kept in an area protected from damage by operating equipment.
- Petroleum products will be stored in tightly sealed containers, which are clearly labeled.
- Used oil or oil filters, batteries, and hydraulic fluid will be properly disposed.
- All necessary precautions to prevent leaks or spills from maintenance and refueling operations from coming in contact with the ground and/or stormwater will be employed.

The specific practices listed below will be followed on-site when handling fertilizer products.

- Fertilizers used in temporary or permanent seeding operations will be applied only in the minimum amounts recommended by the manufacturer and worked into the soil to limit exposure to stormwater.
- Storage of fertilizers will be in a covered shed.
- The contents of any partially used bags of fertilizer will be transferred to sealable plastic bins to avoid spills.

3.2.4 Employee Training

An effective training and education effort will be maintained for all site personnel. The training sessions will be held by the Construction Manager or the Project Engineer. The program will address the following:

The information and training listed below will be given to all site personnel.

- Training for the personnel authorized to perform the functions of inspections and administrative duties of the erosion and sediment control program.
- An initial training program for new employees or personnel such as inspectors, who will have an added duty of inspection for pollution prevention, is mandatory; an annual refresher course or training program will be planned.
- The existence, purposes and goal of the SPCC Plan will be reviewed with all personnel, identifying potential sources of stormwater pollution at the site, BMPs employed at the site, and the role each employee fills in stormwater pollution prevention.
- Pollution control laws and regulations will be overviewed.
- Good housekeeping material management practices will be overviewed.

3.3 Stormwater Management

The stormwater management controls are detailed in the BMP Plan.

3.4 Erosion and Sedimentation Controls

The erosion and sedimentation controls are detailed in the BMP Plan.

3.5 Other Controls

3.5.1 Sanitary Waste

All sanitary waste will be collected from the portable units and trailer holding tanks by a licensed sanitary waste management contractor, as required by local regulation.

3.5.2 Hazardous Waste

All hazardous waste and materials will be transported and disposed of by the Contractor in accordance with Federal, State, and local regulations. The Contractor will be responsible for seeing that these practices are followed.

3.5.3 Waste Materials

All non-combustible waste materials will be collected and stored in dumpsters that will meet all County and State solid waste management regulations.

All combustible trash and construction debris from the site will be managed in accordance with ADEM regulations. The dumpster will be emptied as often as is necessary, and the trash will be hauled to an approved landfill. No construction materials will be buried on-site. All personnel will be instructed regarding the correct procedure for waste disposal.

3.6 On-Site Vehicle And Personnel Tracking

3.6.1 General

It is anticipated that personnel and equipment will at various times be required to manage on-site PCB-impacted soils. Additionally, personnel and equipment will be required to operate within the Select Stockpile area.

3.6.2 Operations

The defined areas of excavation and placement of PCB-impacted soil will be identified by flagging and taping, to identify the area as the "exclusion zone." Equipment to be employed in managing PCB-impacted materials in this area will, to the extent practical, stay out of the exclusion zone to limit the potential for inadvertent transfer of these materials out of the area and the need to clean the equipment.

The fill material will consist of impacted soil that contains PCB concentrations below 50 ppm. To limit the potential for spread of affected materials, work will proceed as rapidly as possible while maintaining high levels of safety and quality.

3.6.3 Personnel Decontamination

To the extent practical, personnel will be kept from entering the exclusion zone. Nonetheless, an area for PPE removal and personnel decontamination will be staged adjacent to the exclusion zone of each area of PCB-impacted soils, to include:

- boot wash tubs;
- disposal containers for PPE (i.e., Tyvek, gloves, etc.);
- hand wash buckets;
- first aid kit to provide immediate first aid supplies; and
- fire extinguishers readily available to handle emergencies.

3.7 Off-Site Vehicle Tracking

A stabilized construction entrance will be provided to help reduce vehicle tracking of sediments off-site. All construction equipment entering work zones will stay within the designated zones until completion of the project. This equipment will be properly cleaned before leaving the site. Other construction vehicles not used in the work zones will not enter those zones. A road sweeper will be available to handle any tracking onto Recreation Drive.

4.0 MAINTENANCE AND INSPECTION PRACTICES AND PROCEDURES

4.1 Erosion and Sedimentation Controls

4.1.1 Maintenance/Inspection Procedures

The maintenance and inspection practices detailed in the BMP Plan will be used to maintain erosion and sedimentation controls during construction activities. Refer to Section 3.2 of the BMP Plan for descriptions of these activities.

4.2 Record Keeping and Internal Reporting

Maintaining records for all inspections is an important element of any SPCC Plan. Documenting all inspections, whether routine or detailed, is a good preventive maintenance technique, because analysis of inspection records allows for early detection of any potential problems. Record keeping also helps to devise improvements in the SPCC program after inspection records have been analyzed. Record keeping and reporting for maintenance activities will also be a part of the plan as another preventive maintenance measure. A log will be kept of all maintenance activities, evaluation of the effectiveness of the SPCC program, equipment, and operation. SPCC Plan-related record keeping will be handled in conjunction with the BMP Plan-related record keeping.

A variety of techniques to accurately document and report inspection results which will include the following:

- field notebooks;
- timed and dated photographs;
- video tapes; and
- drawing and maps.

Records of spills, leaks, or other discharges, inspections, and maintenance activities will be retained for at least one year after coverage under the permit expires.

All inspection forms will be maintained at the site in a separate three-ring binder in the Construction Manager's office. This book will be available for review by appropriate personnel by request.

4.3 Discharge Monitoring, Inspection, and Reporting Requirements

The Alabama NPDES General Permit for construction requires certain monitoring, inspection, and record keeping. These requirements can be found in the NPDES General under Part I (see Attachment

A). Inspection and Maintenance Report Forms to be filled out during the inspection are included in Attachment D. Worksheet D1 is a form to be used after rainfall events, and Worksheet D2 is for all other controls. These forms will be completed and retained in the Construction Manager's Office. Additional Forms to be completed are the Environmental Release Report Forms and the Chemical Release Report Form. These forms can be found in Attachment C.

Other Report Forms to be filled out are the Inspection Report and BMP Certification, the Noncompliance Notification Report, and the Discharge Monitoring Report. These worksheets and report forms will be submitted to ADEM as specified in the NPDES General Permit, Part I, Section C and D (see Attachment A). These forms are required to be completed by the owner or his designee.

Note: The Worksheets and Report Forms in this document are "master" copies. Please make a photocopy to use as a "working" copy and return the master copy to the SPCC Plan for future use.

5.0 COMPREHENSIVE SITE COMPLIANCE EVALUATION

5.1 Inspection

All areas of the site that could contribute to stormwater pollution by petroleum based products will be inspected at least weekly by the Construction Manager and at least one other member from the Project Team.

All areas contributing to a stormwater discharge associated with construction will be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loading will be evaluated to determine whether they are adequate and properly implemented, or if additional control measures are needed. The inspectors will also observe structural stormwater management measures (detailed in the BMP Plan), sediment and erosion control measures (detailed in the BMP Plan), and other pollution prevention measures identified in this plan to ensure that they are operating correctly. Equipment needed to implement the plan, such as spill response equipment, will be visually inspected.

The inspector will verify that all areas identified as potential sources of pollution are inspected regularly and that the inspections are documented in his daily field log.

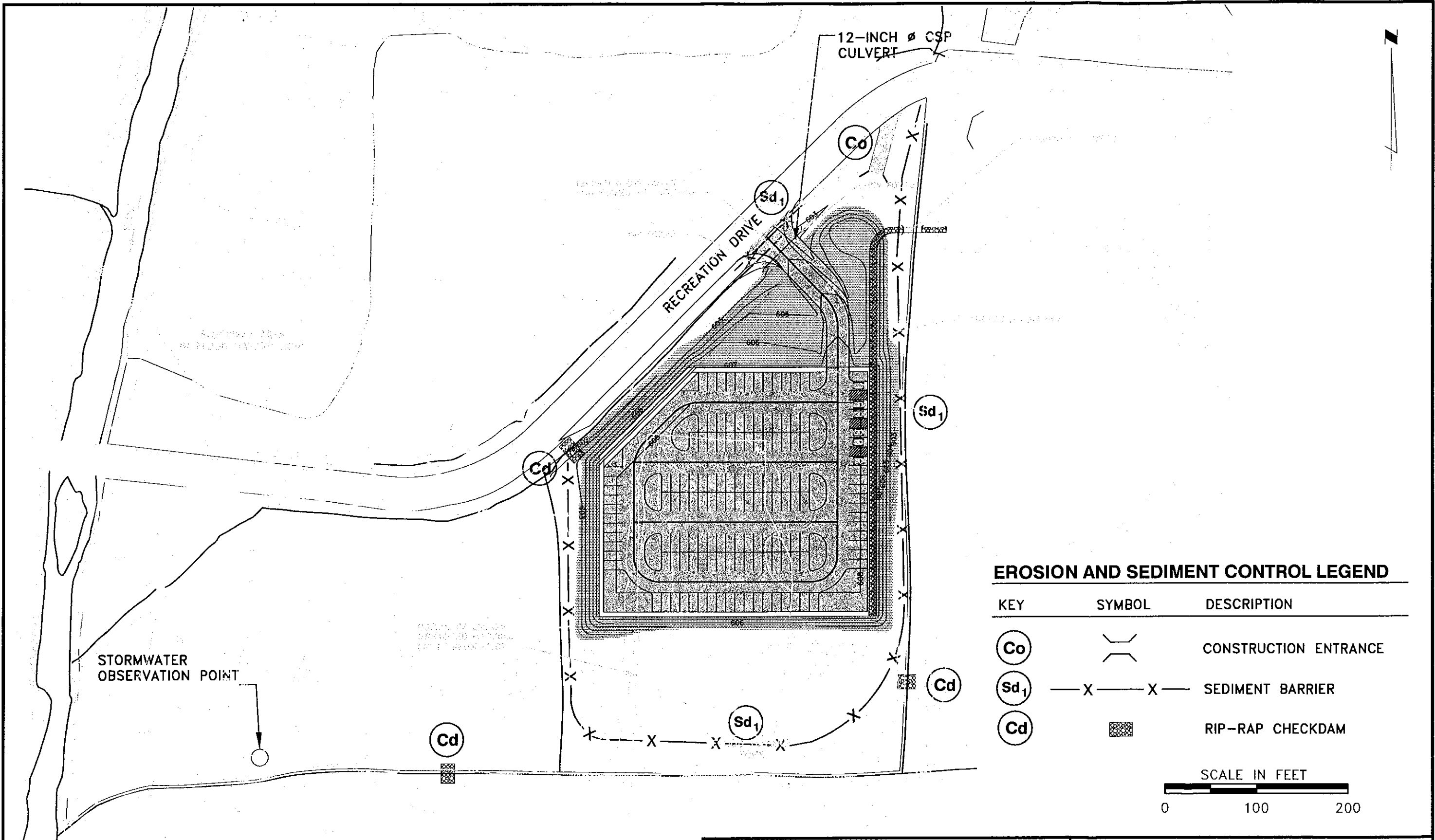
5.2 Documentation And Corrective Action

As discussed above, any problems associated with SPCC compliance will be noted on completed daily field logs. Problems will then be discussed, resolved, and corrective action will be implemented, as required, by the Construction Manager. Any actions taken as a result of the inspection will be documented. Section 3 of this plan, Measures and Controls, will be revised within two weeks of the inspection if necessary and will contain the proposed dates of implementation of any improvements to be made. The improvement must occur within four weeks after the inspection.

Copies of any forms/documents which detail SPCC inspection results will be retained until one year after the expiration of the Solutia facility's General NPDES permit for the discharge of stormwater associated with industrial activities.

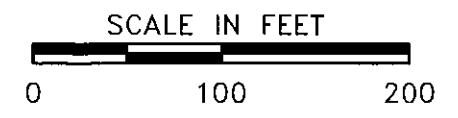
6.0 REFERENCES

- Alabama Nonpoint Source Management Program Document*, as amended, Alabama Department of Environmental Management, Water Division - Mining & Nonpoint Source Section, in accordance with Section 319 of the Federal Clean Water Act, as amended.
- Stormwater Discharge Monitoring and Sampling Requirements NPDES General Permit ALG610000 - Construction and Other Land Disturbance Activity*, Alabama Department of Environmental Management, Guidance Documentation, February 1, 1993.
- Application Guidance for NPDES Permit for Stormwater Discharges from Construction, Excavation, Land Clearing, Other Land Disturbance Activities, and Associated Areas Not Authorized by an Existing NPDES Permit General Permit Number ALG610000*, Alabama Department of Environmental Management, Mining & Nonpoint Source Section, MNPS Form 200-A, 8/1/92.
- Best Management Practices Plan, Detention, Cap and Cover (NSCE) Project*, Anniston, Alabama, prepared by ICF Kaiser Engineers, Inc. for Solutia Company, April 1997.
- ~~*Dust Control Plan, Detention, Cap and Cover (NSCE) Project*, Anniston, Alabama, prepared by ICF Kaiser Engineers, Inc. for Solutia Company, April 1997.~~
- Stormwater Management for Construction Activities - Developing Pollution Prevention Plans and Best Management Practices*, United States Environmental Protection Agency, Office of Water, 1993.
- EPA Stormwater Pollution Prevention for Construction Activities*, United States Environmental Protection Agency, Office of Wastewater Enforcement and Compliance, as amended.
- Work Plan for the Anniston Eastside Stormwater Controls Project*, prepared by Westinghouse Remediation Services, Inc. (Atlanta, Georgia), Revision 2, 20 November 1996.
- Stormwater Management Plan for the Eastside Stormwater Controls Project*, prepared by Westinghouse Remediation Services, Inc. (Atlanta, Georgia), and Dames and Moore, Inc. (Atlanta, Georgia), Revision 2, 20 November 1996.
- Erosion and Sedimentation Control Plan for the Eastside Stormwater Controls Project*, prepared by Westinghouse Remediation Services, Inc. (Atlanta, Georgia), and Dames and Moore, Inc. (Atlanta, Georgia), Revision 2, 20 November 1996.
- Stormwater Pollution Prevention Plan for the Eastside Stormwater Controls Project*, prepared by Westinghouse Remediation Services, Inc. (Atlanta, Georgia), and Dames and Moore, Inc. (Atlanta, Georgia), Revision 2, 20 November 1996.
- Dust Control Plan for the Eastside Stormwater Controls Project*, prepared by Westinghouse Remediation Services, Inc. (Atlanta, Georgia), Revision 2, 20 November 1996.



EROSION AND SEDIMENT CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
Co		CONSTRUCTION ENTRANCE
Sd ₁		SEDIMENT BARRIER
Cd		RIP-RAP CHECKDAM



REFERENCE: BASEMAP FROM BBL PARKING AND GENERAL ARRANGEMENT PLAN AND EXISTING CONDITIONS PLAN

<p>Golder Associates Atlanta, Georgia</p>	TITLE			
	EROSION AND SEDIMENT CONTROL PLAN			
CLIENT/PROJECT	DRAWN	DATE	JOB NO.	
SOLUTIA/OXFORD LAKES/AL	GM	4/01	943-3680	
	CHECKED	SCALE	DWG. NO.	REV. NO.
		AS SHOWN	1	
	REVIEWED	FILE NO.	SUBTITLE	FIGURE NO.
		943-3680		1

ATTACHMENT A

Construction General Permit (GP) Notice of Intent (NOI) Package, Parts I-III

**APPLICATION GUIDANCE FOR NPDES PERMIT FOR STORMWATER DISCHARGES FROM
CONSTRUCTION, EXCAVATION, LAND CLEARING, OTHER LAND DISTURBANCE ACTIVITIES,
AND ASSOCIATED AREAS NOT AUTHORIZED BY AN EXISTING NPDES PERMIT
GENERAL PERMIT NUMBER ALG610000**

REQUIRED FORMS AND OTHER INFORMATION

1. Appropriate fee (check or money-order)
2. EPA Form I
3. ADEM MNPS Form 200 (in lieu of EPA forms 2C, 2D, & 2F)
4. Proof of advertising (15 day public notice) in a local newspaper
5. 1" - 2,000' scale or Department approved equivalent site location map (7.5 minute series U.S.G.S topographic map, 8 1/2 x 11 inch sheets or a map folded to a size of 8 1/2 x 11 inches)
6. Individual or One-page Best Management Practices (BMP) Plan.

GENERAL INSTRUCTION

Complete and correct applications must be submitted at least 30 days prior to proposed date of coverage under the general permit. Incomplete or incorrect applications will be returned and cannot be processed until a corrected application is re-submitted.

Responses must be typewritten or printed legibly with black or blue ink (applications completed with pencil will not be accepted). Complete all blanks. Answer "N/A" or "Not Applicable" or "None", where necessary. Also, use attachments when needed.

Please submit three copies of the completed application with original, responsible corporate official signatures.

APPLICATION INSTRUCTION FOR ADEM MNPS FORM 200

1. Response must be the same as the label on EPA Form 1.
 2. Please provide facility name which is unique or different from applicant name. Response must match EPA Form I, Item III. Make sure legal description is correct.
 3. Self-explanatory.
 4. **DO NOT FORGET** to place an asterisk (*) before the name of each officer at the level of vice president or above having the authority and responsibility to prevent and abate violations. You must list the legal business address or the home, street address of each officer. A P.O. box address is not acceptable.
 5. Self-explanatory.
 6. Self-explanatory.
 7. List all Notices of Violation, Administrative Orders, or Settlement Agreements that have occurred within the last 36 months for All NPDES, SID, or UIC permit numbers issued to the applicant.
-

8. Response should reflect all activities conducted onsite.
9. List the exact name of the receiving stream(s) as found on the USGS or TVA topographic map. You may use "UT" to designate unnamed tributary of a named creek. List the Lat & Long in degrees, minutes, & seconds of the point where pollutants enter the receiving waters. List the distance from the disturbed area or associated treatment facilities to the receiving stream. The drainage area must be less than one square mile or 640 acres; instream treatment of pollutants is not authorized.
10. If the response to (a) or (b) is "yes", be sure to address completely in the BMP plan & narrative description. If the project will result in a discharge to coastal waters or is within the Alabama Coastal Area **AND** is considered a Major Project (the answer to (a) and (a), 1. is "yes"), the applicant must apply for and obtain Coastal Zone Management Certification from the ADEM Mobile Branch, 2204 perimeter Road, Mobile, AL 36616, (205)479-2336.

For the purposes of this permit application, a Major Project includes:

- A. Construction and operation of energy facilities
 - B. Construction and operation of industrial plants
 - C. Construction of new roads over 1/2 mile in length
 - D. Dredging operations over 250,000 cubic yards
 - E. Filling operations over 250, 1 000 cubic yards
 - F. Dredge spoil disposal over 250,000 cubic yards
 - G. Structural methods of erosion control
 - H. Water wells which pump over 50 gallons per minute
 - I. Facilities for the disposal of waste materials including but not limited to municipal and industrial effluent and solid waste
 - J. Commercial and residential projects over 25 acres
11. Self-explanatory.
 12. A spill prevention control and countermeasures plan must be implemented for all facilities having fuel or chemical storage tanks.
 13. Signatory must be a responsible corporate official at the level of vice-president or above and must be listed (and marked with an asterisk) in item 4 on page 1. The applications submitted to the Department must contain **original** signatures.

APPLICATION INSTRUCTION FOR EPA FORM 1

- III. Please provide facility name which is unique or different from applicant name. Response must match ADEM MNPS Form 200, Item 2. Make sure legal description is correct.
- VII. Please refer to attached list of appropriate Standard Industrial Codes (SIC) Codes.
- VIII. The operator is the permittee and information in this block must agree with information on the ADEM MNPS Form 200. The applications submitted to the Department must contain **original** signatures.
- X. List only those permits which are applicable to this facility.
- XIII. Signatory must be a responsible corporate official at the level of vice-president or above and must be the signatory of the ADEM MNPS Form 200. The applications submitted to the Department must contain **original** signatures.

INSTRUCTIONS FOR PREPARING BMP PLAN FOR FACILITY OPERATIONS

Plans for watercourse filling, crossing, or alteration/diversion must be prepared and approved individually. Please be advised that these activities are subject to permitting under section 404 of the Clean Water Act as administered by the Corps Of Engineers.

**** The applicant must submit the attached one-page BMP plan or an individual plan as described below.**

INDIVIDUAL BMP PLAN

Listed below are several BMP guidance documents which should help you in the preparation of your individual plan. Copies can be obtained from the ADEM at the copying rate of \$0.40 cents per page.

1. Alabama Nonpoint Source Management Program Document, as amended, Prepared by ADEM, Water Division - Mining & Nonpoint Source Section, in accordance with section 319 of the Federal Clean Water Act, as amended.
2. EPA Stormwater Pollution Prevention For Construction Activities, Office Of Wastewater Enforcement and Compliance, U.S. Environmental Protection Agency, Washington, D.C. 20460, as amended.
3. Best Management Practices Plan - Magnolia Pipeline, Basin Pipeline Corporation, 2101 Sixth Avenue North, Suite 900, Birmingham, AL 35203, as amended.
4. Best Management Practices For Nonpoint Source-Runoff Control, Mobile & Baldwin Counties, Alabama, South Alabama Regional Planning Commission, January 1989, as amended.
5. Best Management Practices For Controlling Sediment And Erosion From Construction Activities, Birmingham Regional Planning Commission, August 1980, as amended.
6. Best Management Practices For Agricultural Nonpoint Source Control, Volume III - Sediment, North Carolina Agricultural Extension Service, Biological And Agricultural Engineering Department, North Carolina State University, August 1982, as amended.

An individual plan, at a minimum, must address the following as appropriate:

Specifications for haul road or access road designs.

Location, design, and maintenance requirements for treatment facilities and structures (i.e. silt fencing, staked hay bale rows, sediment ponds & traps, rock check dams, ditches, berms, etc.) and proposed Best Management Practices (BMPs) that will be implemented prior to or concurrent with disturbance activities to prevent/minimize discharges to State waters resulting from non-point sources of pollutants in stormwater run-off or from spills.

Plans for grading and stabilization of the disturbed area to include use of mesh or netting, mulch, seed-mixtures, planting schedules, etc.

Measures to ensure permanent revegetation or cover of all disturbed areas.

Location of vehicle & equipment maintenance, cleaning, and storage areas and specific BMPs to be implemented.

Location and operation of all portable facilities, i.e. office trailers, toilet facilities, employee break areas, etc.

Location of material storage areas, i.e. topsoil piles, paints & solvents, pesticides/herbicides & fertilizers, soil conditioners, lubricating oils & anti-freeze, etc. and specific BMPs to be implemented.

Methods to keep mud and dirt off of paved county or state roads.

Location of buried utility lines.

Information on potential groundwater impacts, i.e. pilings, deep excavation, disturbance near known recharge zones, groundwater levels, tunneling, etc.

BMPs to be implemented during water acquisition activities to protect State waters.

Address regular cleanup and proper disposal of floating or submerged trash and garbage originating at the site or resulting from the permittee's activities.

Address the collection, storage, treatment and disposal of sewage and other putrescible wastes.

Maintain onsite or have readily available sufficient oil & grease absorbing material and flotation booms to contain and clean-up fuel or chemical spills and leaks.

All construction and worker debris (e.g. trash, garbage, etc.) must be immediately removed and disposed of in an approved manner. Also, soil contaminated by paint or chemical spills, oil spills, etc. must be immediately cleaned up or be removed and disposed of in an approved manner.

Appropriate measures to be taken to prevent the deposition of airborne pollutants such as spray paint, herbicides, excessive road dust, etc. from entering any waterbody.

Run-off from dust suppression operations. Please be advised that the use of used motor oil and other petroleum based or toxic liquids for dust suppression operations is prohibited.

All materials used as fill or for construction purposes must be non-toxic, non-acid forming and free of solid waste or other debris.

No rubbish, trash, garbage, or other such materials shall be discharged into waters of the State of Alabama. Litter and refuse shall be disposed in a manner consistent with State and local regulations.

PROOF OF PUBLIC NOTICE

The Notice of Intent must be accompanied by proof of public notice by the applicant. The public notice must be published in a local newspaper of general circulation for one day immediately prior to the date of the letter of intent. If no local paper is available it must be published in the newspaper that is most generally circulated in the area. The public will have 15 days from the date of publication to comment.

The public notice must take the general form specified below.

(COMPANY NAME AND MAILING ADDRESS) located at (PHYSICAL LOCATION) intends to petition the Alabama Department of Environmental Management for (AUTHORIZATION and/or REAUTHORIZATION) to discharge stormwater under General Permit ALG610000. This General Permit has been issued by the Department to cover the discharge of stormwater from construction, excavation, land clearing, (_____). This discharge will be to (NAME OF WATERWAY(s)).

Copies of the General Permit and the Notice of Intent filed by (COMPANY NAME) may be inspected at the Alabama Department of Environmental Management, 1751 Congressman Dickinson Drive, Montgomery, Alabama 36130

Persons wishing to comment may do so within 15 days following the publication of This notice by writing to the attention of the Chief of Permits & Services Division, Alabama Department of Environmental Management, 1751 Congressman Dickinson Drive, Montgomery, Alabama 36130

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)
FIELD OPERATIONS DIVISION NPDES GENERAL PERMIT NOTICE OF INTENT (NOI)**

ALG610000 - CONSTRUCTION, EXCAVATION, CLEARING, DISTURBANCE, RECLAMATION, AND ASSOCIATED AREAS AND ALG490000 - NONMETALLIC, NONCOAL MINING, QUARRYING, EXCAVATION, BORROWING, STORAGE, PROCESSING, RECOVERY AND ASSOCIATED AREAS LESS THAN FIVE ACRES

PLEASE READ THE ACCOMPANYING INSTRUCTIONS CAREFULLY BEFORE COMPLETING THIS FORM. COMPLETE ALL QUESTIONS. RESPOND WITH "N/A" AS APPROPRIATE. INCOMPLETE OR INCORRECT ANSWERS, OR MISSING SIGNATURES WILL DELAY AUTHORIZATION. IF SPACE IS INSUFFICIENT, CONTINUE ON AN ATTACHED SHEET(S) AS NECESSARY.
PLEASE TYPE OR PRINT IN INK.

I. APPLICANT INFORMATION Initial Authorization: ALG610000 ALG490000 Reauthorization: ALR

Company Name Solutia, Incorporated		Facility/Project Name Oxford Lake Softball Complex	
Responsible Official and Title Dennis Cavern, Vice President		Facility Contact and Title Craig Branchfield, Manager, Remedial Projects	
Mailing Address of Applicant 575 Maryville Centre Drive		Facility Street Address or Location Description Oxford Lakes Softball Complex Recreation Drive	
City St. Louis	State MO	Zip 63141	City Oxford State AL Zip
Business Phone Number (314) 674-1000		Facility Phone Number (256) 231-8404	Fax Number (256) 231-8451
Responsible Official Street/Physical Address & Phone Number Same as above			Email Address crbran1@solutia.com
Registered Agent Name, Address, & Phone Number N/A			

II. LEGAL STRUCTURE OF APPLICANT

Corporation Association Individual Single Proprietorship Partnership LLC

Government Agency Other Other

(Y) (N) If not an Individual or Single Proprietorship, applicant is properly registered and in good standing with the Alabama Secretary of State's office. If "No", please explain:

Parent Corporation and Subsidiary Corporations of Applicant, if any:

Construction Contractor(s), If Known: Williams Environmental, Atlanta, GA

III. VIOLATION HISTORY

Identify every Warning Letter, Notice of Violation (NOV), Administrative Order, Directive, or litigation filed by ADEM or EPA during the three year (36 months) period preceding the date on which this form is signed issued to the applicant, parent corporation, subsidiary, or LLC Member. Indicate the date of issuance, briefly describe alleged violations, list actions (if any) to abate alleged violations, and indicate date of final resolution:

No Violations in past 36 months

V. PROPOSED SCHEDULE

Anticipated Activity schedule: Commencement date: January 15, 2001 Completion date: 15 March, 2001

Area of the Permitted site: Total area in acres: 25 Disturbed area in acres: 7

IX. FUEL - CHEMICAL HANDLING, STORAGE & SPCC PLAN

Will fuels, chemicals, or liquid waste be used or stored onsite?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	If "yes", identify and indicate amount below:	
Capacity	Contents	Capacity	Contents	Capacity	Contents
100 gallons	Diesel	_____ gallons	_____	_____ gallons	_____
_____ gallons	_____	_____ gallons	_____	_____ gallons	_____

X. MAP SUBMITTAL

Attach to this application a 7.5 minute series U.S.G.S. topographic map(s) or equivalent map(s) no larger than, or folded to a size of 8.5 by 11 inches (several pages may be necessary) of the area extending to at least one mile beyond property boundaries. The topographic or equivalent map(s) must include a caption indicating the name of the topographic map, name of the applicant, facility name, county, and township, range, & section(s) where the facility is located. Unless approved in advance by the Department, the topographic or equivalent map(s), at a minimum, must show:

(a) an outline of legal boundary of entire property	(b) an outline of the facility
(c) all existing and proposed disturbed areas	(d) location of discharge areas
(e) perennial, intermittent, and ephemeral streams	(f) lakes, springs, water wells, wetlands
(g) all known facility dirt/improved access/haul roads	(h) all surrounding unimproved/improved roads
(i) high tension power lines and railroad tracks	(j) buildings and structures
(k) contour lines, township-range-section lines	(l) drainage patterns, swales, washes
(m) proposed and existing discharge points	

XI. QUALIFIED CREDENTIALLED PROFESSIONAL CERTIFICATION

A Comprehensive Best Management Practices (BMP) Plan must be prepared, signed, and certified by a qualified credentialed professional as follows:

"I certify under penalty of law that a comprehensive BMP Plan for the prevention and minimization of all sources of pollution in stormwater and authorized related process wastewater runoff has been prepared under my supervision for this facility utilizing effective BMPs from documents #1, #2, and other acceptable documents as indicated below. If the plan is properly implemented and maintained by the permittee, discharges of pollutants can reasonably be expected to be effectively minimized to the maximum extent practicable according to permit requirements. The applicant has been advised that appropriate pollution abatement/prevention facilities and structural & nonstructural BMPs or Department approved equivalent BMPs as described in the proposed plan must be fully implemented and regularly maintained as needed at the facility in accordance with good sediment and erosion practices and ADEM requirements.

The BMP plan addresses implementation and maintenance of applicable effective BMPs utilizing good sediment, erosion, and other pollution control practices as provided in:

- (1) The Storm Water Management For Construction Activities - Developing Pollution Prevention Plans And Best Management Practices document, as amended, as adopted by the EPA
- (2) The Alabama Nonpoint Source Management Program Document, as amended, as adopted by the Department and approved by EPA.
- (3) Other listed appropriate BMP manuals, plans, or documents reviewed and specifically accepted by the Department.

Address: Golder Associates Inc.
3730 Chamblee Tucker, Rd. Atlanta, GA 30341

Registration/Certification : ALPE#22363

Name and Title (type or print) Thomas B. Francis, PE

Phone Number : (770) 496-1893

Signature Thomas B Francis

Date Signed 2/3/2001

XII. OTHER RESPONSIBLE OFFICIALS

Please list the name, phone number, and address of any other responsible official(s) of the applicant with legal or decision making responsibility or authority for the facility: None

XIII. RESPONSIBLE OFFICIAL SIGNATURE

This NOI must be signed by a Responsible Official of the applicant who is the owner, the sole proprietor of a sole proprietorship, a general member or partner, a ranking elected official or other duly authorized representative for a unit of government; or an executive officer of at least the level of vice-president for a corporation, having overall responsibility for the operation of the facility.

"I certify under penalty of law that this document, the BMP Plan, and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the qualified credentialed professional and other person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment for knowing violations.

A comprehensive BMP Plan to prevent and minimize discharges of pollution to the maximum extent practicable has been prepared at my direction by a qualified credentialed professional for this facility utilizing effective BMPs from documents #1, #2, and other documents as indicated in XI, above. I understand that regular inspections must be performed by, or under the direct supervision of, a qualified credentialed professional and all appropriate pollution abatement/prevention facilities and structural & nonstructural BMPs or Department approved equivalent BMPs identified by the qualified credentialed professional must be fully implemented prior to and concurrent with commencement of regulated activities and regularly maintained as needed at the facility in accordance with good sediment, erosion, and other pollution control practices and ADEM requirements. I understand that failure to fully implement and regularly maintain BMPs for the protection of water quality may subject the permittee to appropriate enforcement action.

I understand that, while coverage under the Construction General Permit ALG610000 allows for short-lived, limited removal or relocation offsite of fill material, ALG610000 does not provide coverage for mining activities described in ADEM Admin. Code R. 335-6-9. I also understand that coverage under the Noncoal Mining General Permit ALG490000 does not authorize mining activity that exceeds 5 un-reclaimed acres. Planned/proposed mining sites greater than 5 acres must apply for and obtain coverage under an Individual Permit prior to commencement of any land disturbance.

I certify that this form has not been altered, and if copied or reproduced, is consistent in format and identical in content to the ADEM approved form.

I further certify that the discharges described in this application have been tested or evaluated for the presence of non-stormwater discharges and any non-construction process wastewaters have been fully identified."

Name and Official Title (type or print) Dennis Cavner, Vice President

Signature _____ Date Signed _____

Contact the Department prior to submittal with any questions or to request acceptable alternate content/format. Be advised that you are not authorized to commence regulated activity until this NOI can be processed and authorization to proceed is received in writing from the Department.

Unless required in writing by the Department, EPA forms 1, 2C, 2D, & 2F need not be completed for authorization under these NPDES General Permits provided proposed activities described in this NOI for this facility qualify for coverage under these permits and there are no process wastewaters which require coverage under an Individual NPDES permit.

Complete this form, attach additional information as necessary, enclose appropriate processing fee, and send to:

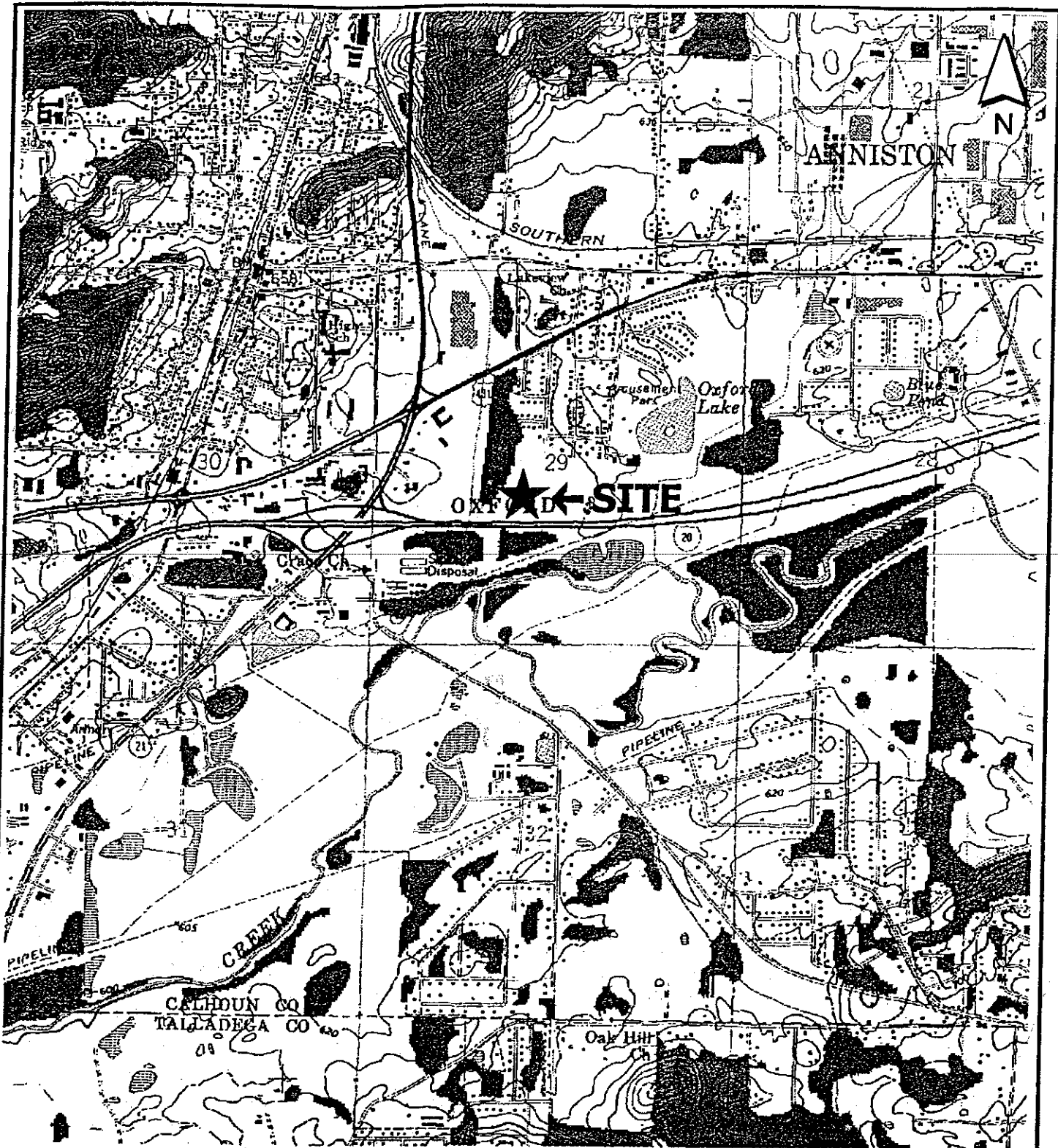
Field Operations Division - MNPS PO Box 301463 1400 Coliseum Boulevard
Alabama Department of Environmental Management Montgomery, AL 36130-1463 Montgomery, AL 36110-2059
Phone: (334) 394-4311
Fax: (334) 394-4326 Email: mnps@adem.state.al.us

Microsoft WORD 97, HP 5SiMx Print Driver Internet Web Page: www.adem.state.al.us

ATTACHMENT I

Existing Environmental Permits, OtherAir Permits

<u>Permit Number</u>	<u>Description of Source</u>	<u>Date Issued</u>
301-0007-X011	Santotar Storage Tank	11/20/89
301-0007-X012	Therminol 66J and Returned Therminol 66 Storage Tanks	04/08/91
301-0007-X013	Horizontal Benzene Storage Tanks	03/31/92
301-0007-X014	Therminol Ends Storage Tank	07/07/92
301-0007-X015	Paranitrochlorobenzene Storage Tank	11/23/93
301-0007-Z016	Paranitrophenol Storage Tank	11/23/93
301-0007-Z002	Polyphenyl Manufacturing Process	01/24/86
301-0007-Z005	Paranitrochlorobenzene Unloading Dock	11/30/77
301-0007-Z006	Paranitrophenol Manufacturing Process and Related Equipment	08/17/78
301-0007-Z010	75 MMBTU/hour Process Steam Boiler with By- Product Fuel Firing Capability	04/26/94



SOURCE: USGS 7.5 MINUTE QUADRANGLE OXFORD, AL



Golder Associates

Atlanta, Georgia

TITLE

SITE LOCATION MAP

CLIENT/PROJECT

SOLUTIA/OXFORD LAKES/AL

CREATED

MCG

DATE

3-Jan-2001

JOB NO.

943-3680-050

CHECKED

SCALE

AS SHOWN

PRINT FILE

Site.eps

REV. FILE

REVIEWED

FILE

Q:GIS\0068.spr

LAYOUT

lytSite

FIGURE NO.

1

ATTACHMENT B

Certification Sheet

**OXFORD LAKE PROJECT
SOLUTIA INC., ANNISTON, ALABAMA
SPILL PREVENTION, CONTROL AND COUNTERMEASURES PLAN**

APRIL 2001

REVISION: 0

MANAGEMENT APPROVALS

"I certify under penalty of law that this document and all attachments were prepared under my direction of supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

SOLUTIA INC.

Name (Type or Print)	Title
Signature	Date

CONTRACTOR APPROVALS

"I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the stormwater discharge associated with industrial activity from the construction site identified as part of this certification."

CONTRACTOR: _____

Name (Type or Print)	Title
Signature	Date

ATTACHMENT C

Environment Release Report Forms

**OXFORD LAKE PROJECT
SOLUTIA INC., ANNISTON, ALABAMA
ENVIRONMENTAL RELEASE REPORT FORM**

(Sheet 1 of ____)

1. Inspection Team: _____ 2. Date: _____
 _____ 3. Time: _____

4. Date of Last Inspection: _____ 5. Days Since Last Inspection: _____

6. Days Since Last Rain Event: _____ 7. Quantity of Last Rain: _____

8. Quantity of rain since Last Inspection: _____

9. Summary Inspection Checklist:

Item	Comments
1. Maintain containment of select soil	
2. Maintain soil and erosion control measures	
3. Maintain stormwater conveyances	
4. Promptly clean up any minor fuel spills	
5. All vehicles cleaned as necessary before leaving the site or exclusion zones	
6. Promptly remove litter or debris	
7. Spill response equipment in place	

10. General Notes:

**OXFORD LAKE PROJECT
SOLUTIA INC., ANNISTON, ALABAMA
ENVIRONMENTAL RELEASE REPORT FORM**

(Sheet 2 of ____)

11. Description and Volume of Observed Flows Into Stormwater Drainage System: _____

12. Comments: _____

13. Items for Corrective Action: _____

14. Date of Revision of Spill Prevention, Control, and Countermeasures Plan (SPCC):

15. Date of Implementation of Corrective Actions: _____

(use additional sheets as necessary)

**OXFORD LAKE PROJECT
SOLUTIA INC., ANNISTON, ALABAMA
CHEMICAL RELEASE REPORT FORM**

(Sheet 1 of ____)

1. Date of Release: _____ 2. Approximate Time of Release: _____

3. Approximate Duration of Release: _____ 4. Quantities Released: _____

5a. Chemicals or Constituents Released: _____

5b. Release to (check media as appropriate): Air _____ Storm Drainage System _____
Other Surface Water _____ Soil _____

6. Description of Incident (Location, Source, Cause)

7. Response Action Taken: _____

8. Corrective Measures Taken: _____

9. Anticipated Consequences of Incident (environmental, need for further corrective action, etc):

10. Verbal Report Filed: Time _____ Date: _____ By: _____
To: _____ of _____ (Agency or Organization)

ATTACHMENT D

INSPECTION AND MAINTENANCE REPORT FORMS

- Rainfall Event Summary Sheet
 - Erosion and Sedimentation Controls Inspection Sheet
-
-

**RAINFALL EVENT SUMMARY SHEET
 OXFORD LAKE PROJECT
 SOLUTIA INC., ANNISTON, ALABAMA**

**Inspection and Maintenance Report Form
 Weekly Rainfall Event Summary**

Inspector: _____
 Date: _____

Inspector's Qualifications:

Days Since Last Rainfall: _____ Amount of Last Rainfall _____ Inches

Stabilization Measures

Area	Date Since Last Disturbed	Date of Next Disturbance	Stabilized? (Yes or No)	Stabilized With	Condition

Stabilization Required:

To Be Performed By: _____

On or Before: _____

**EROSION AND SEDIMENTATION CONTROLS
INSPECTION SHEET
OXFORD LAKE PROJECT
SOLUTIA INC., ANNISTON, ALABAMA**

Inspection and Maintenance Report Form

Date: _____ Control Device: _____

From	To	Is Control Device functioning properly?	Is There Evidence of Washout or Over-Topping?

APPENDIX F

Dust Control Plan

**DUST CONTROL PLAN
OXFORD LAKE SOFTBALL COMPLEX
PARKING AREA
ANNISTON, ALABAMA**

APRIL 2001

Submitted to:

Solutia Inc.
702 Clydesdale Avenue
Anniston, Alabama 36201-5390

Prepared by:

Golder Associates Inc.
3730 Chamblee Tucker Road
Atlanta, Georgia 30341

DISTRIBUTION:

1 Copy – Solutia Inc.
1 Copy – Maverick Construction Management
2 Copies – Golder Associates Inc.

April 2001

943-3680

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In Order
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FIGURES

FIGURE 1 Air Monitoring Log

1.0 INTRODUCTION

1.1 Background

Solutia Inc. (Solutia) previously performed an Interim Corrective Measure removal activity at the Oxford Lake Softball Complex in Anniston, Alabama, consisting of the excavation of 3 to 12 inches of soil impacted with polychlorinated biphenyls (PCBs) from the softball fields and temporarily stockpiling these soils in a grassed area west of the fields. Excavated soils with PCB concentrations of greater than 50 mg/kg were hauled to a permitted disposal facility. As part of a remedial action, the stockpiled soil will be graded to create a parking and landscaped area. Once grading has been completed, the impacted soil will be capped with a nonwoven geotextile and a pavement system or soil cover will be constructed above it. The pavement system will consist of 8 inches of crushed aggregate base course material overlain by 3 inches of hot mix asphalt. The soil cover system will consist of a minimum of 12 inches of clean soil cover. Runoff from the parking lot will be allowed to sheet flow to the existing drainage features.

1.2 Purpose

The purpose of this Dust Control Plan (DCP) is to describe in detail the strategies for controlling the release of dust from the construction activities.

1.3 Scope of Work

The principal elements of work associated with this DCP pertain to the construction of the Oxford Lake Softball Complex Parking Area. The following provides a summary of the major components associated with the project:

- general preparations of the work area;
- establishment of temporary facilities and roads;
- construction of a vehicle decontamination pad at the site;
- construction of erosion control structures;
- grading of PCB-containing soil;
- construction of the soil cover;
- placement and compaction of the base course material;
- placement and compaction of the hot mix asphalt;
- equipment decontamination and disposal; and
- post-construction cleanup and seeding.

1.4 Site Location and Description

The Oxford Lake Softball Complex is located within the City of Oxford, in northeastern Alabama, just north of Interstate 20. It is bounded on the west by Snow Creek, on the north by vacant woodland and residential areas and on the east by open land. The parking area will be constructed between the softball complex and Snow Creek.

The site was originally flat with a slight slope towards the south where there is a drainage swale that flows westerly toward Snow Creek, which then flows southerly toward Choccolocco Creek.

2.0 ENGINEERING CONTROLS FOR DUST

2.1 Responsibilities

The Construction Manager is responsible for the implementation of the Dust Control Plan. He is authorized to direct site activities as needed to carry out this responsibility. He may authorize other senior site staff to support administration of this function. Dust control, however, is the responsibility of the Contractor.

The Construction Manager (or his designee) as required by site conditions, will collect information from on-site monitoring equipment, the Site Health and Safety Officer (SHSO), and other sources to judge the adequacy of ongoing dust control efforts, and take corrective action as needed. The Construction Manager will be empowered to immediately take actions in all cases where on-going site activity must be modified or delayed to conduct work in a manner as to limit or control dust. The Construction Manager will notify the Contractor if dust control is not satisfactory.

2.2 Description of the Engineering Controls

The following sections describe in detail the engineering controls and work practices to be used to control dust throughout the project.

2.2.1 Watering

Water will be applied to site and work area surfaces where other engineering controls (such as the use of temporary liners) are not employed and when airborne dust is present.

The water will be applied by water trucks using a gravity distribution bar and/or a pressure spray system.

2.2.2 Control of Transportation Dust

Speed limits for site vehicles will be established at **10** miles per hour and enforced in order to limit the generation of dust from their travel. Disciplinary actions will be taken against all individuals for violation of site speed limits. All operators will be instructed to report visible dust immediately.

The Contractor will ensure that haul and access roads and pathways are maintained in order to properly control dust. Material transport vehicles will be loaded in a manner to avoid spillage during transport. If

the loads appear to be dusty, the load will be wetted prior to transportation. Any spillage of materials during transport will immediately be cleaned up.

2.2.3 Materials Handling

Planning and scheduling of work activities will be utilized to minimize the number of times the materials are handled or disturbed. Excavation, stockpile, and placement work areas will be planned to limit the amount of work area exposed to the minimum necessary to support construction activities.

Soils exposed during excavation activities will be kept sufficiently moist to prevent the generation of dust. Temporary stockpiles of materials may be necessary to conduct the work. These piles will also be kept sufficiently moist to prevent the generation of dust.

2.2.4 Odor

Organic emissions are not expected at the site. However, the site will be monitored and the appropriate action taken if they are detected as provided for in the **Site Specific Health and Safety Plan (HASP)**. If odors are detected at the site, they will be controlled by limiting the amount of material exposed, by continuous water misting, or other controls that may be necessary. Odors generated by material in transport vehicles will be controlled by covering and sealing the material in the vehicle with plastic sheeting.

3.0 SITE STANDARDS FOR DUST

3.1 Surveillance Objectives

This section specifies the surveillance activities that will take place during the project. Air surveillance objectives include:

- characterizing breathing zone concentrations of respirable dust (Responsibility of the Contractor based on Health and Safety Plan);
- determining the appropriateness of respiratory protective equipment (Responsibility of the Contractor based on Health and Safety Plan); and
- monitoring the performance of dust control activities.

3.2 General Monitoring Guidelines

Real time air monitoring using mini-rams or equivalent will be conducted as a part of regular operations. ~~Guidelines for sequence and frequency of monitoring activities are as follows (Specific requirements shall be provided in the Contractor's Health and Safety Plan):~~

- when work begins at a different area of the site;
- if new areas of affected materials are discovered or if constituents other than those previously identified are handled;
- when a new operational procedure is introduced;
- before and during confined space entry;
- upon request, real time air monitoring will be conducted in the presence of the construction manager or his representative;
- when special or unusual conditions warrant this action as determined by the SHSO; and
- the frequency of monitoring increases as dust concentrations approach an action limit.

3.3 Monitoring Parameters and Location of Monitoring Events

Respirable Dust (Mini-ram brand or equivalent) monitoring is to be used during construction for fence line and work zone perimeter monitoring. Breathing zone monitoring will be conducted as specified in the Contractor's Health and Safety Plan. Work zone perimeters defined, as a distance not more than 50 feet from earth moving activities, will be monitored in accordance with the Contractor's Health and Safety Plan in areas where PCB concentrations are present. The SHSO will use work zone perimeter data to inform the crew and supervision of dust control effectiveness.

Fence line monitoring will be conducted at upwind and downwind locations of the project site. Monitoring locations will be documented on a site map. Wind direction will also be determined. The action levels for respirable dust at the fence line are specified below.

3.4 Implementation

The SHSO is responsible for:

- daily calibration of all instruments in accordance with manufacturer's instructions,
- documentation of calibration, instrument readings and site conditions/activities during monitoring;
- directing activities with regard to air monitoring results; and
- communicating results to employees, supervision and client representative.

3.5 Action Levels

Field team personnel shall observe the action levels specified below. If questions arise regarding the applicability or alternation of these levels, the SHSO must be consulted. Actions are implemented when an instrument sustains a reading above the action level for at least two minutes.

INSTRUMENTS AND ACTION LEVELS

Instrument	Action Level	Specific Action
Respirable Dust Monitor*	Background to 0.5 mg/m ³ at Fence Line	Maintain dust control procedures
	0.5 mg/m ³ at Fence Line	Notify Supervision
	>0.5 mg/m ³ at Fence Line	Stop Work

Other action levels shall be as specified in the Contractor's Health and Safety Plan.

3.6 Reporting Results Of Air Surveillance Activities

Air monitoring data will be recorded onto Air Monitoring Logs. Air Monitoring Logs will be kept on-site by the SHSO. Excursions above the action limits discussed under Section 3.5 will be reported to the Solutia representative immediately. A copy of the Air Monitoring Log is provided (Figure 1).

**FIGURE 1
AIR MONITORING LOG**

PROJECT SITE DETECTION, Oxford Lake Softball Complex		H/S OFFICER _____		DATE: _____
PROJECT NUMBER	LEVEL OF PROTECTION			
DESCRIPTION OF SITE: (weather, temp. soil conditions)				
INSTRUMENT	INSTRUMENT RESPONSE	LOCATION	TIME	COMMENTS
CALIBRATION DATA: (type and concentration of cal. Gas, instrument adjustments if any)				
ADDITIONAL NOTES:				
SIGNATURE: _____ DATE: _____				
Health & Safety Officer				

APPENDIX G

Health and Safety Plan

SITE SPECIFIC HEALTH AND SAFETY PLAN

**SOFTBALL FIELDS
RECREATION DRIVE
OXFORD, ALABAMA**

SUBMITTED TO:

**MAVERICK CONSTRUCTION MANAGEMENT
POST OFFICE BOX 60700
KING OF PRUSSIA, PENNSYLVANIA 19406**

**Tel: (610) 783-6202
Fax: (610) 783-6231**

PREPARED BY:

**WILLIAMS ENVIRONMENTAL SERVICES, INC.
2075 WEST PARK PLACE
STONE MOUNTAIN, GEORGIA 30087**

**Tel: (770) 879-4107
Fax: (770) 879-4831**

Date: 23 February 2001

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E	RESPIRATORY PROTECTION PROGRAM
F	HEAT STRESS
G	SOLUTIA SITE HEALTH AND SAFETY PLAN

**Site Safety and Health Plan
Softball Fields
Recreation Drive, Oxford, Alabama**

**SECTION 1
APPROVALS**

SECTION 1 APPROVALS

By their signatures, the undersigned certify that this Site Specific Health and Safety Plan is approved and will be utilized for the Solutia Facility in Oxford, Alabama.

President

Date

Health and Safety Manager

Date

Project Manager

Date

Health and Safety Officer

Date

Disclaimer: Williams Environmental Services, Inc. (Williams) has developed this Safety Plan based on experience from a number of PCB projects. This plan should be viewed as the minimum requirements to be used on this project and should be incorporated into the successful contractor's own on-site safety program. The plan should be modified when site conditions warrant it. This plan does not relieve contractor from its responsibility while working at a Solutia site to comply with all local, state and federal regulations including OSHA, DOT, and EPA.

**Site Safety and Health Plan
Softball Fields
Recreation Drive, Oxford, Alabama**

**SECTION 2
GENERAL**

SECTION 2 GENERAL

2.1 INTRODUCTION

The remedial activities at hazardous waste sites present numerous and potentially deadly hazards. These hazards, if not adequately prepared for and properly addressed, may have a serious impact on the health and well-being of employees assigned to work on such sites. A project that involves the excavation and remediation of contaminated soils may be initiated only after full consideration has been given to the various chemical and physical hazards associated with the site.

This Site Safety and Health Plan (SSHP) has been prepared to identify the health and safety procedures, methods, and requirements for the remedial and stabilization activities to be performed at the Softball Fields on Recreation Drive located in Oxford, Alabama. The SSHP applies to all activities to be performed by the Contractor, employees and subcontractors during implementation of remedial activities at the Site. Contractors selected to perform support activities during remedial activities will be required to meet the standards of this plan and abide by the protocols established herein. Any vendors or consultants shall be considered as Site visitors and must abide by the regulations in Section 7.2.2.

The SSHP will be modified and updated as necessary to incorporate the specific safety risk analyses and mitigative measures identified by each subcontractor relative to unique activities that are not already addressed. The SSHP addresses those health and safety issues related to the potential for specific chemical and physical hazards present during the remediation. An *Emergency Response/Contingency Plan (Section 12)* has also been included in the SSHP; this section outlines the procedures to be followed in the event of an emergency or unusual situation.

During development of this SSHP, consideration was given to Solutia's Site Health and Safety Plan (1998- Appendix G), and current health and safety standards as defined by the Occupational Safety and Health Administration (OSHA), and the National Institute for Occupational Safety and Health (NIOSH). Standards for known contaminants and procedures designed to account for potential exposure to unknown substances were also reviewed. Specifically, this SSHP has been prepared in accordance with the document entitled "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities" jointly authored by NIOSH, OSHA, the United States Coast Guard (USCG), and the United States Environmental Protection Agency (USEPA). Contractor will strictly adhere to the SSHP during all phases of this project.

This document will be periodically reviewed to ensure it is current and technically correct. Any changes in the Site conditions and/or scope of work of on-site activities will involve a review and modification of the SSHP. Changes will be completed in the form of an addendum.

All personnel who expect to participate in on-site activities must satisfy the training and medical requirements set forth in *Section 6, Personnel Training and Medical Requirements*.

2.2 SITE DESCRIPTION AND HISTORY

Oxford Lake Softball Complex (Complex) is a city-owned community recreational area located in Oxford, Alabama. The Complex includes approximately 25 acres and is situated east of Snow Creek, near its confluence with Choccolocco Creek. There are two use activity areas at the Complex: (1) an athletic field area in the eastern portion (approximately 9 acres), and (2) an open area located in the western portion nearest to Snow Creek (approximately 16 acres). The athletic area consists of four fenced softball fields that are also used for football and soccer by both adult and youth athletic leagues.

Portions of the Complex are located within the 100-year floodplain of Snow Creek. Solutia is currently investigating this portion of the floodplain pursuant to the requirements of a RCRA Post Closure Permit issued to Solutia, dated January 7, 1997, by the Alabama Department of Environmental Management (ADEM) (Permit No. ALD 004 019 048).

Information obtained during Solutia Inc.'s (Solutia) Phase I Off-Site Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) indicated that there was a potential for polychlorinated biphenyls (PCBs) to have been deposited in the Snow Creek floodplain at the Complex. Therefore, Solutia conducted a preliminary investigation of the area to determine if PCBs were present. Since the preliminary investigation indicated that low levels of PCBs were present, a more thorough investigation was carried out to characterize the distribution of PCB-containing soils.

A RFI Results and Interim Measures (IMs) Plan for the softball fields at the Complex was submitted on January 4, 2001, and has been implemented over the last few months. As part of the IMs for the softball fields, PCB-impacted surficial soil was removed from the fields and stockpiled in the open area adjacent to the fields.

2.3 SCOPE OF WORK

Solutia has now submitted a Remedial Action Work Plan that addresses this stockpiled soil. The remedial activities for the soil stockpile will consist of relocating and compacting the soil from the stockpile to form an embankment, and constructing a multi-layer cover system to permanently contain the material. The embankment will be located west of the softball fields and south of Recreation Drive. As part of the cover system, a parking lot for the City of Oxford and a landscaped area have been incorporated into the design. The existing stockpile will be excavated to the full depth and the material will be placed and compacted in approximately 8-inch thick lifts. A geotextile was placed beneath the existing stockpile and will be used as a marker to ensure that excavation does not extend into the underlying soils.

The stockpiled material will be placed to an average height of about 3 feet within the proposed parking lot area. The multi-layer cover systems proposed to contain the soil are described below. At the end of construction, the soil will be effectively isolated beneath the cover systems.

Asphalt Cover System

The majority of the regraded stockpile will be covered with an asphaltic cover system to address potential erosion of PCB-impacted soil. This cover system will include a geotextile fabric, 8 inches of crushed aggregate base course, and 3 inches of hot mix asphalt. The effectiveness and reliability of this type of cover system in isolating the affected soil and in preventing erosion are supported by long-term performance experience with similar systems elsewhere.

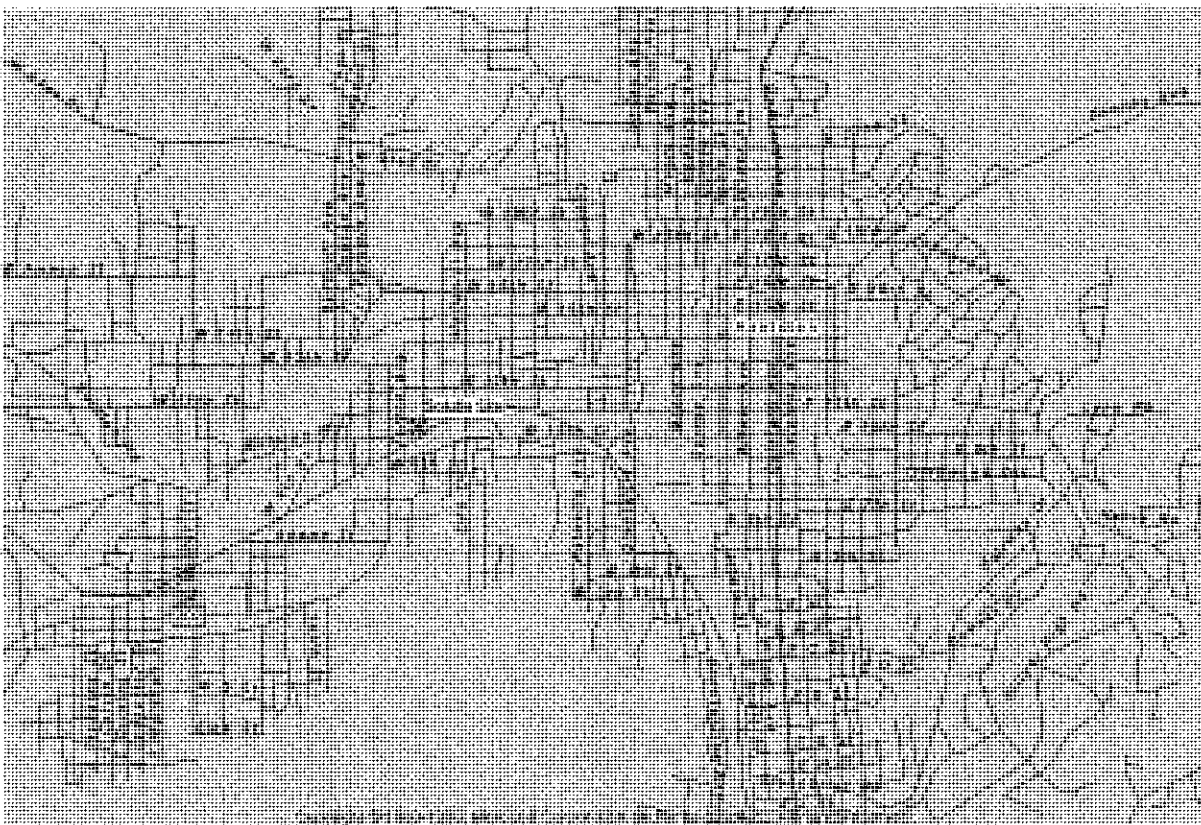
Soil Cover System

A soil cover system is proposed for the landscaped area to address potential erosion of PCB-impacted soil. The landscaped area will be located on the sideslopes of the parking lot and the area adjacent to the entrance road providing access from Recreation Drive. This cover system will include a geotextile fabric anchored into the underlying soil that will be covered by a minimum of 12 inches of soil with grass vegetation. The grass vegetation for this area will be established by sodding. The effectiveness and reliability of this type of cover system in isolating the affected soil and in preventing erosion are also supported by long-term performance experience.

Activities conducted as part of the Site remediation are divided into discrete tasks. Descriptions of these activities can be found in Section 5. The tasks covered are as follows:

TASK NO.	DESCRIPTION
1	Mobilization to the Site
2	Excavation of Contaminated Soil
3	Backfill Activities
4	Sod Placement
5	Demobilization

FIGURE 2.1
SITE MAP



2.4 EMERGENCY TELEPHONE NUMBERS

AGENCY	TELEPHONE NUMBERS
Ambulance	911
Police	911
Fire Department	911
Northeast Regional Medical Center - Hospital	800-424-9300
Construction Manager	TBD
Solutia Site Contact	TBD
Site Safety Officer	TBD
Poison Control Center	(800) 282-5846
National Response Center (Operated by USEPA and U.S.C.G.)	(800) 424-8802
CHEMTREC	(800) 424-9300
Project Principal	TBD
Health and Safety Manager	TBD
Project Manager	TBD
Health and Safety Officer	TBD
Maverick, Tim Joness	610-659-9527

**Site Safety and Health Plan
Softball Fields
Recreation Drive, Oxford, Alabama**

**SECTION 3
SITE ORGANIZATION
AND RESPONSIBILITIES**

SECTION 3

SITE ORGANIZATION AND RESPONSIBILITIES

3.1 OVERVIEW

All personnel will be responsible for continuous adherence to the procedures set forth by the SSHP during the performance of on-site remedial activities. In no case may work be performed which conflicts with the intent of or the inherent safety and environmental cautions expressed in these procedures. Contractor or subcontractor personnel violating safety and health procedures will be dismissed from the Site.

3.2 PROJECT SAFETY AND HEALTH REPRESENTATIVE

Contractor will provide a Project Safety and Health Representative (PSHR) to administer the health and safety program outlined in this SSHP. Minimum qualifications for the PSHR include formal training in Industrial Hygiene and Occupational Health, completion of a 40-hour HAZWOPER training course as mandated by OSHA in 29 CFR 1910.120, and familiarity with the requirements specifically set forth for this type of work in that regulation.

The PSHR will be responsible for:

- Ensuring that medical examination and training requirements for all Contractor and subcontractor personnel on-site are current and comply with 29 CFR 1910.120 and .134.
- Pre-job briefing of all Contractor personnel, subcontractors, and vendors with regard to this SSHP and other safety requirements including but not limited to (a) potential hazards; (b) personal hygiene principles; (c) personal protective equipment; (d) respiratory equipment usage; (e) emergency procedures for dealing with fire and medical emergency situations;
- Implementation of special safety considerations and the emergency response contingency plan;
- Ensuring that all Contractor and subcontractor personnel are properly equipped and protected;
- Alerting appropriate emergency services before starting work and providing a copy of the Emergency Response/Contingency Plan to the respective emergency services; and
- Complying with OSHA health and safety regulations

The PSHR is given the authority to take the appropriate steps that are required to ensure adherence of operations to the adopted SSHP. The PSHR will not be assigned to the Site on a full-time basis. The PSHR for this site is Mark A. Fleri, CSP, CIH, PE.

3.3 SITE HEALTH AND SAFETY REPRESENTATIVE

Contractor will conduct all operations under the site's health and safety representative (SHSR). The safety representative will be responsible for maintaining all requirements of the Solutia Health and Safety Plan.

3.4 PROJECT MANAGER

The Project Manager is ultimately responsible for field implementation of the safety and health program. This includes communicating specific health and safety requirements to site workers and consulting with the SHSR regarding planned activities, unforeseen conditions, and resolution of any questions with identified safety procedures or levels of protection to be used.

3.5 SITE SUPERINTENDENT

The Site Superintendent is responsible for ensuring that all employees working on his crew are complying with the requirements set forth in this SSHP. Each supervisor is also responsible for communicating to the SHSR his opinion of the effectiveness of the SSHP on-site and any unforeseen hazards that may be discovered during operation. Each Site Superintendent will ensure that employees and subcontractors are conducting themselves in compliance with the health and safety requirements of the plan. The supervisor is responsible for immediately investigating injury circumstances and completing the **Supervisor's Employee Injury Report** (*Appendix A*) for any work-related injury, illness, or incident.

3.6 TECHNICIANS (WORKERS)

~~Technicians who will be working on-site are responsible for understanding and complying with SSHP requirements and for notifying either the SHSR or their supervisor of any concerns they might have for their health and safety on the job. Technicians and all other support personnel are responsible for conducting themselves in a safe manner, mindful of the inherent hazards associated with working around contaminated materials, heavy equipment, and extreme environmental conditions. Disregard of the SSHP or standard operating procedures will be grounds for immediate dismissal.~~

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**SECTION 4
CHEMICAL CONTAMINANTS/
PHYSICAL HAZARDS**

SECTION 4 CHEMICAL CONTAMINANTS/PHYSICAL HAZARDS

4.1 OVERVIEW

The purpose of this section is to identify the physical, chemical, and biological hazards associated with implementation of the remedial activities at the Site. A detailed description of project activities to be performed is included in *Section 5, Hazard Assessment*. Subsections of this section will discuss each task or operation for the project in terms of the general hazards associated with it. Section 5 will also identify the protective measures to be implemented during the performance of each specific activity. If additional activities beyond those identified are conducted on-site by Contractor or its subcontractors, a supplemental health and safety task analysis will be performed specifically for those activities. The purpose of this information is to maintain an accident and injury free work site. This section will also outline the specific chemical contaminants of concern, as well as anticipated physical hazards that may be encountered at the Site.

4.2 CHEMICAL HAZARDS

Potential chemical exposure hazards exist from compounds known to be present because of previous operations and subsequent data generated from the remedial investigation activities. Table 4.1, *Hazardous Materials Associated with the Solutia Site*, lists the major contaminants of concern found at the Site. The major routes of chemical exposure will be from inhalation, ingestion or dermal contact with contaminated material. These routes of chemical exposure will be significantly reduced through the use of proper personal protective equipment and good personal hygiene. Historical monitoring and sampling data indicates that the potential for exposure from contaminated soils occurs mainly during the excavation and transfer of soils from the excavation area.

In Table 4.1, PCBs are listed with the associated exposure data, warning properties, and exposure symptoms. Reference material for this information and all chemicals brought on site by Contractor will be included in the SSHP. Each chemical will be listed and accounted for and the appropriate Material Safety Data Sheets (MSDS) will be filed in Appendix D of this plan upon the chemical's arrival. Reference material for this information includes:

- *Pocket Guide to Chemical Hazards*, NIOSH, 1997.

**TABLE 4.1
HAZARDOUS CHEMICALS ASSOCIATED
WITH REMEDIAL ACTIVITIES AT THE SOLUTIA SITE**

COMPOUND	EXPOSURE LIMIT CONCENTRATION			WARNING	
	TWA	IDLH	UNITS	PROPERTIES	EXPOSURE SYMPTOMS
PCBs	0.5	5	mg/m ³	Colorless to pale yellow, viscous liquid with a mild hydrocarbon odor	Eye irritant, Chloracne, reproductive effects, and liver damage <i>NIOSH Potential Occupational Carcinogen</i>
Nuisance Dust	5.0	N/A	mg/m ³	Varies	Eye and respiratory irritant

4.3 PHYSICAL HAZARDS

The topics below identify the type of physical hazards which may be present on the Site during remedial activities:

- **Slips, Trips, Falls**—These type hazards result from unlevelled surfaces, slippery surfaces, and hard to see objects located across walking paths (i.e., rope, cords), and are responsible for over 60 percent of work-related injuries. A fall hazard may originate as a result of the void created by excavations and uneven surfaces on the Site.
- **Heavy Equipment**—Heavy equipment is necessary for both excavation and transport of materials. Associated hazards include poor operator visibility and inability to be fully aware of surroundings at all times (i.e., people, mobile and stationary objects). Severe slopes may be present which present potential rollover and fall hazards to operators and Site personnel.
- **Excavations**—Excavation of the Site has the potential to create hazards to Site personnel. For example, equipment may fall into open excavations. Workers may also fall into excavated areas. Excavations may cave in if not properly sloped or shored. Also, excavations may fill with water following extensive rainfall.
- **Oxygen-Deficient Atmosphere**—Oxygen-deficient atmospheres may occur in some areas on-site, including excavation areas. OSHA defines oxygen deficient atmospheres as environments with less than 19.5% oxygen content, by volume. For Site operations where oxygen deficiency is suspected or may exist, measurements will be performed to quantify oxygen levels prior to any entry. If oxygen deficiency is determined, appropriate ventilation must be performed prior to entry. Also the requirement for confined space entry (*see Appendix B, Confined Space Entry Procedures*) must be followed (testing, approvals, permit, etc.).
- **Housekeeping and Sanitation**--In order to permit safe and efficient work conditions, all work areas shall be kept clean and free of debris. All hand tools will be kept in storage until they will be needed for use. Trash containers will be leak proof, clean and maintained in a sanitary condition. Potable water will be used for first aid, drinking, and personal hygiene purposes. Disposable drinking cups will be provided along with the water coolers. Community drinking cups will not be permitted.
- **Toxic Atmospheres** —Toxic atmospheres may exist around the excavation areas, material staging areas, and material load-out areas. By nature of the work to be performed, varying concentrations of toxic airborne contaminants may be generated. In the disturbance of affected soils and dusts, the human sense of smell is not sufficient to provide adequate warning of unsafe levels of airborne substances. Where affected materials may exist, frequent monitoring will be performed by a combination of personal monitoring with analysis of samples and by real time direct-reading instruments.
- **Falling Objects**—Operations of trucks and excavating equipment on-site can create falling objects. Hard hats, safety glasses, and steeled-toed footwear will be required for personnel in all operations and areas on-site, with the exception of the front gate security area and the office and support trailers.
- **Heat Stress**—Heavy construction work in the summer months can create heat stress conditions for employees. The use of respiratory protective equipment and protective

(non-breathable) clothing, boots, and gloves can greatly increase the potential for heat stress.

- **Electrical**— Electrical hazards may exist during maintenance, operation and mobilization activities. Employees will be trained in and shall use Lockout/Tagout procedures (Appendix C).
- **Traffic Safety**—During hauling operations, there will be a significant level of truck traffic coming to and from the excavation and backfill areas. Pedestrian traffic on the Site may be at risk as traffic moves along the haul roads from which trucks enter and leave the excavation areas.
- **Unleveled Surfaces**—Unleveled surfaces result from excavation activities and the natural terrain in some areas. These areas will be flagged or roped off to eliminate traffic.
- **Flammable Atmosphere**—Flammable atmospheres may exist in buried lines and unidentified tanks. The SHSR will be notified if any potentially hazardous conditions are suspected.
- **Noise**—High noise levels (in excess of 85 dBA for extended periods) can result in temporary and permanent loss of hearing. Areas where noise levels exceed 85 dBA will be posted and hearing protection will be provided and worn.
- **Compressed Gases**—Stored energy in cylinders, when released, can result in projectiles. Fire and explosion will result from the ignition of flammable gases. Toxic or oxygen-deficient atmospheres will result from the release of gases in confined spaces.
- **Fire**—Fuel sources may exist in the form of flammable liquids, combustible materials and flammable gases. Accumulation of debris can contribute fuel to fires. Improper storage and use of flammable materials may result in a fire.

4.4 BIOLOGICAL HAZARDS

Potential biological hazards include plants, ticks, snakes, and various stinging insects. Some of the most common biological hazards can be prevented or the effects reduced by over the counter medications. These medications, as recommended by local pharmacists, will be kept in supply in the office first aid kit. Workers who know they are sensitized to any biological hazard should not perform any task that would increase their risk for anaphylactic shock.

4.4.1 Poisonous Plants

Common poisonous plants on site may include plants from the poison ivy group, including poison oak and sumac. The most distinctive features of poison ivy and oak are that their leaves are composed of three leaflets. Both of these plants have greenish-white flowers and berries that grow in clusters. These plants can produce a severe rash characterized by redness, blisters, swelling, and intense burning and itching. The victim may also develop a headache, high fever and feel very ill. The rash will usually begin to appear within a few hours but may be delayed for 24 to 48 hours.

If contact occurs with a poisonous plant, remove all contaminated clothing and wash the exposed areas thoroughly with soap and water, followed by rubbing alcohol. Apply calamine lotion if rash is mild. Seek medical advice if a severe reaction occurs or if there is a known history of previous sensitivity. If a poisonous plant is found in the work area, the SHSR should be notified so that it can be removed. All personnel working in an area with poison ivy should wear a Tyvek suit, at a minimum, to avoid skin contact.

4.4.2 Ticks

Ticks are wingless, bloodsucking insects. Certain types of ticks can carry diseases such as Rocky Mountain Spotted Fever and Lyme's Disease. When working in high grasses or brush, project personnel should wear Tyvek coveralls and boot covers with the joints taped. An insect repellent containing DEET is also recommended. It has been proven that the longer an infected tick remains on the body, the greater the chance that it will transmit disease. Because of this, workers should check themselves for ticks on a regular basis. Most ticks are about the size of the eraser on a pencil but the Lyme's disease tick is about the size of a period on this page.

If an attached tick is found, remove it by grasping the tick with a pair of tweezers as close to the skin as possible. Be careful not to leave any part of the tick attached. The skin area of the victim should be marked or circled to indicate where the bite occurred. The tick should be placed in a container or zip-lock bag and marked as to the date, time and body area as from which it was removed. Universal precautions (Section 4.5) should be used during this procedure. The area should be washed with soap and water and then covered with an antibiotic ointment to prevent infection.

Lyme's disease may cause a bulls-eye rash and/or flu-like symptoms. If left untreated, serious nerve and heart damage may develop. The rash may develop from three days to a month after the tick bite. Early treatment of Lyme's disease symptoms with antibiotics can prevent the more serious medical problems of the later stages of the disease. If you suspect that you have been bitten by a tick or you have symptoms of Lyme's disease, notify the SHSR or your physician.

4.4.3 Snakes

If snakebite occurs, a tourniquet should be applied between the bite and the heart. The wound should be immobilized and held below the level of the heart. The victim (and snake if possible) must be immediately taken to the nearest hospital.

4.4.4 Insect Stings

Stings from insects are often painful, cause swelling and can be fatal if a severe allergic reaction such as anaphylactic shock occurs. If a sting occurs, the stinger should be scraped out of the skin, opposite of the sting direction. The area should be washed with soap and water followed by an ice pack.

If the victim has a history of allergic reaction, he should be taken to the nearest medical facility. If the victim has medication to reverse the effects of the sting, it should be taken quickly.

If the victim experiences a severe reaction, a constricting band should be placed between the sting and the heart. The bitten area should be kept below the heart if possible. A physician should be contacted immediately for further instructions.

4.5 BLOODBORNE PATHOGENS

The majority of the occupational tasks at Contractor will not involve a significant risk of exposure to blood, blood components, or body fluids. The highest risk of acquiring any bloodborne pathogen for employees on-site will be following an injury. When administering first aid care, there are potential hazards associated with bloodborne pathogens that cause diseases such as Human Immunodeficiency Virus (HIV), Hepatitis B (HBV), Hepatitis A (HAV), Hepatitis C (HCV), or the Herpes Simplex Virus (HSV). An employee who has not received the appropriate certification should never execute first aid and/or CPR.

In order to minimize any potential pathogen exposure, all employees should use the handwashing facilities on a regular basis. The decon area will provide an adequate supply of water, soap and single use towels for handwashing. Additionally, the following universal precautions should be followed to prevent further potential risk:

- Direct skin or mucous membrane contact with blood should be avoided.
- Open skin cuts or sores should be covered to prevent contamination from infectious agents.
- Body parts should be washed immediately after contact with blood or body fluids that might contain blood, even when gloves or other barriers have been used.
- Gloves and disposable materials used to clean spilled blood shall be properly disposed in an approved hazardous waste container.
- First aid responders shall wear latex or thin mil Nitrile gloves when performing any procedure risking contact with blood or body substances.
- Safety glasses will be worn to protect the eyes from splashing or aerosolization of body fluids.
- A CPR mask will be worn when performing CPR to avoid mouth-to-mouth contact.
- Work gloves will be worn to minimize the risk of injury to the hands and fingers when working on all equipment with sharp or rough edges.
- Never pick up broken glass or possible contaminated material with your unprotected hands.

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**SECTION 5
HAZARD ASSESSMENT**

SECTION 5 HAZARD ASSESSMENT

5.1 TASK-BY-TASK RISK ANALYSIS

Activities conducted as part of the Solutia Site are divided into discrete tasks. The tasks covered in this HASP are as follows:

TASK NO.	DESCRIPTION
1.	Mobilization to the Site
2.	Excavation of Contaminated Soil
3.	Backfill Activities
4.	Sod Placement
5.	Demobilization

5.2 TASK 1 – MOBILIZATION TO THE SITE

5.2.1 Description of Activity

Contractor will mobilize a team of personnel to prepare the site for work activities. Activities will include delineation of work areas, installation of the operations area, implementation of erosion and sedimentation control measures, installation of utilities and temporary facilities, and site surveying.

5.2.2 Hazard Assessment

Chemical hazards associated with this task will be minimal. The primary hazard will be associated with the use of equipment and construction practices during setup. Improperly installed utilities may also lead to electrical hazards throughout the project.

5.2.3 Health and Safety Mitigative Measures

Workers setting up the site will be required to wear Level D protection as described in *Section 8, Personal Protective Equipment and Equipment Reassessment Program*. Safe operating practices construction safety will be stressed at the daily tailgate safety meeting. All electrical utilities will be installed in compliance the National Electrical Code. Should temperature extremes become a problem, Contractor will implement heat stress monitoring.

5.3 TASK 2 – EXCAVATION OF CONTAMINATED SOIL

5.3.1 Description of Activity

The preliminary limits of excavation will be confirmed, surveyed, and marked as defined in the Contract Drawings. Contractor estimates that excavation will occur five (5) days per week, ten (10) hours per day. Clean overburden will be stockpiled at the excavation site, as approved by the supervising contractor.

Excavation will be performed with a tracked excavator. Sampling by the Supervising Contractor will determine if further excavation beyond the initial limits is required. Sloping will be used to control the excavation face in accordance with OSHA 29 CFR Part 1926.650, Subpart P.

5.3.2 Hazard Assessment

Chemical hazards associated with this task involve the potential contact with soils and water containing the contaminants of concern on the Site. Skin absorption, inhalation and ingestion are identified as potential routes of exposure for the contaminants. There are several safety hazards that are also inherent in this operation. Heavy equipment will be used extensively.

5.3.3 Health and Safety Mitigative Measures

Workers will initially be required to wear Level D protection. The workers' breathing zones and the work areas will be monitored by the SHSR. If the action levels are exceeded, PPE will be up-graded to Level C. Tyvek®, Poly-coated Tyvek® or equivalent outerwear and chemical resistant (Nitrile) gloves will be worn when contacting potentially hazardous material, water or equipment. Workers will frequently check the integrity of their PPE by looking for any tears, rips or holes while they work. If any such flaws are noted, the damaged PPE will be removed and replaced. The workers will receive instruction regarding decontamination and personal hygiene. Safe work practices for the operation of heavy equipment and excavation safety will be emphasized at the daily tailgate safety meeting. The excavation work areas will be checked frequently by the SHSR to ensure compliance with 29 CFR 1926.650 excavation requirements.

5.4 TASK 3 – BACKFILL ACTIVITIES

5.4.1 Description of Activity

Soils that have been approved for backfill will be stockpiled at the intended open excavation and protected by plastic sheeting. Backfilling will be accomplished in loose lifts that will be compacted in accordance with the specifications, or as directed by oversight.

5.4.2 Hazard Assessment

Non-PCB contaminated soil will be used to fill low areas. Minimal chemical hazards are anticipated for this phase of the project. The primary hazards are physical and safety hazards associated with the operation of heavy equipment, such as slips, trips, falls, noise, moving parts and vehicle safety. Backfill activities will be performed in Level D protection.

5.4.3 Health and Safety Mitigative Measures

Workers will initially be required to wear Level D protection. The workers' breathing zones and the work areas will be monitored by the SHSR. If the action levels are exceeded, PPE will be up-graded to Level C. Tyvek®, Poly-coated Tyvek® or equivalent outerwear and chemical resistant (Nitrile) gloves will be worn when contacting potentially hazardous material, water or equipment. Workers will frequently check the integrity of their PPE by looking for any tears, rips or holes while they work. If any such flaws are noted, the damaged PPE will be removed and replaced. The workers will receive instruction regarding decontamination and personal hygiene. Safe work practices for the operation of heavy equipment, uneven surfaces, and hearing conservation will be emphasized in the tailgate safety meetings.

5.5 TASK 4 – SOD PLACEMENT

5.5.1 Description of Activity

Once backfilling operations have been completed, sod will be placed over the soils bringing the site back to it's original state in accordance with the specifications.

5.5.2 Hazard Assessment

Chemical hazards associated with this task will be minimal. The primary hazard will be associated with the use of equipment and construction practices during sod placement.

5.5.3 Health and Safety Mitigative Measures

Workers will be required to wear Level D protection as described in *Section 8, Personal Protective Equipment and Equipment Reassessment Program*. Safe equipment and construction operating practices will be stressed at the daily tailgate safety meeting.

5.6 TASK 5 – DEMOBILIZATION

5.6.1 Description of Activity

Prior to equipment leaving the work zone, decontamination verification will be required. After completion of decontamination activities, the support equipment installed by Contractor will be dismantled and removed from the site.

5.6.2 Hazard Assessment

Hazards associated with decontamination activities involve the potential contact with soils and water containing chemicals of concern. Skin absorption, inhalation, and ingestion have been identified as potential routes of exposure.

5.6.3 Health and Safety Mitigative Measures

Workers will be required to wear Modified D protection (with Polycoated Tyvek and a full-face shield) during high pressure spray decontamination activities. Workers involved in other operations will be in Modified Level D unless otherwise directed by the SHSR. All work occurring at heights above six feet will require the use of a full body harness and lifeline. Workers' breathing zones will be monitored throughout the decontamination procedures.

Workers will receive instruction in prescribed work practices, such as minimizing direct contact of protective clothing with water and wet soil, and using work practices which avoid splashing water or generation of aerosol sprays. Care will also be taken to minimize the amount of water or other liquid used in the decontamination process. Instruction will also be provided regarding decontamination and personal hygiene (*see Section 11, Decontamination Protocols*).

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**SECTION 6
PERSONNEL TRAINING AND
MEDICAL REQUIREMENTS**

SECTION 6

PERSONNEL TRAINING AND MEDICAL REQUIREMENTS

6.1 TRAINING REQUIREMENTS

All Contractor' personnel and visitors at the Site will have training relative to their job responsibilities. Such training will be provided prior to their being allowed to engage in Site activities that could expose personnel to health and safety hazards. The SHSR or designated alternate has the responsibility to ensure this training is provided—reflective of Site conditions—and is updated as needed.

6.1.1 Site Orientation

The following is a list of training topics required during Site orientation:

1. Acute and chronic health effects of the chemicals identified or suspected at the Site;
2. Physical agents, biological, and safety hazards identified at the Site;
3. Personal hygiene and personnel decontamination requirements and procedures;
4. The selection, use, and limitations of available safety equipment, and procedures required for personnel protection.
5. Proper selection, use, maintenance, and fitting of respirators;
6. Work zones established at the Site;
7. Prohibitions in contaminated areas;
8. Explanation of the “buddy” system;
9. Emergency preparedness procedures (emergency egress routes, emergency signals, evacuation procedures, phone numbers, personnel rescue methods, etc.);
10. First aid- and CPR-trained Site Safety and Health Representative on-site;
11. Solutia's Site safety requirements and both Solutia and Contractor SSHP review;
12. Use of fire extinguishers;
13. Decontamination procedures for equipment;
14. Review of standard operating procedures;
15. Review of Hazard Communication and Worker's Rights ;
16. Air monitoring program purpose and procedures;
17. Contractor' Safety Inspection Audit Program; and
18. Emergency Evacuation Drill

All personnel who will work on the Site will be required to read the SSHP. Prior to work on the Site, each individual must read and sign a **Document Review and Certification Form** (*Appendix A*) indicating they have read and understand the requirements set forth in the Plan.

6.1.2 Pre-assigned Training

Contractor' personnel and visitors entering the Exclusion and/or Contamination Reduction Zones will have training in accordance with the provisions of 29 CFR 1910.120. These requirements are outlined below:

1. General workers, such as laborers and equipment operators, engaged in activities that expose or potentially expose them to hazardous substances and health hazards are required to complete and maintain documentation of:
 - Forty hours of instruction;
 - Three days of on-the-job training under the direct supervision of a trained experienced supervisor;
 - Eight hours of annual refresher training.
 - Confined Space training (if required)
 - Bloodborne Pathogen training (if required)
 - Lockout/Tagout training
2. Workers on-site for a specific and limited task (for example, groundwater monitoring), and who are unlikely to experience exposure in excess of the applicable limits are required to complete:
 - Twenty-four hours of instruction;
 - One-day of on-the-job training under the direct supervision of a trained, experienced supervisor; and
 - Eight hours of annual refresher training.
3. Workers regularly on-site who work in areas which have been monitored and fully characterized, indicating that no PPE is required and that emergencies are unlikely to develop (i.e., the Site Support Zone) must have the same training requirements as listed in number two above.
4. On-site management and supervisors directly responsible for personnel engaged in on-site activities must complete:
 - The same or equivalent training as required for personnel they supervise;
 - Eight additional hours of specialized manager/supervisor training that complies with 29 CFR 1910.120 (e);
 - Eight hours of annual refresher training; and
 - Bloodborne Pathogens training (if required)
5. On-site support staff, such as secretaries, guards and clerks, are not required to have any specialized training but they must receive a site orientation.

The SHSR is responsible for ensuring that personnel assigned to the Site are trained in accordance with the above requirements. The SHSR will ensure that all training certificates are current. A copy of the documents listed above will be on file in the SHSR office.

6.1.3 First Aid/CPR Training

The SHSR, and additional designees, will possess current certification in first aid and CPR. At least one person so certified will be present during each work shift while Contractor

and/or visitors or subcontractor personnel are on-site. A copy of the First Aid/CPR certification will be kept on file in the SHSR office.

6.1.4 Daily Health and Safety Meetings

The SHSR or designated members of management will conduct a daily tailgate safety meeting. The meeting will review existing protocols and serve as a mechanism to update personnel on new Site conditions and requirements. The meeting will serve as a means to communicate the latest accident and corrective measures to prevent the opportunity of reoccurrence. The meetings will also provide an opportunity for Site personnel to express any health and safety concerns. Topics for discussion may include, but are not limited to:

- Discussion of current work activities.
- Review of available analytical or relevant process data which relates to worker exposure;
- Review of the type and frequency of environmental and personal monitoring (if any) to be performed;
- Task-specific levels of protection and anticipated potential for upgrading;
- Review of emergency procedures;
- Review of existing and/or new health and safety issues.

The **Tailgate Safety Meeting Log** (*Appendix A*) will be signed by each attendee.

6.1.5 Subcontractor Training Requirements

Prior to arrival on-site, each subcontractor will be responsible for certifying that their employees meet the training requirements contained in this section by providing a copy of their certificates. Each subcontractor employee will be required to provide a document certifying the dates of their training attendance and latest annual refresher. Subcontractor personnel will also be required to attend the daily tailgate safety meeting.

6.1.6 Documentation

Appendix A contains a **Document Review Certification Form**. This form will be used to document personnel review of the SSHP and acknowledgment of the training and certification requirements specified in this section. All on-site Contractor personnel, visitors, and subcontractors are required to sign this form. The form, together with the training certificates, will be retained on-site in a notebook in the SHSR office.

Daily tailgate safety meetings will also be documented on the appropriate form included in *Appendix A*. The form will include topics of discussion for the day and be signed by all those in attendance at the meeting. Contractor' Project Manager will maintain completed forms on-site.

6.2 GENERAL MEDICAL PROGRAM

6.2.1 General

Contractor will use the services of an Occupational Physician. Board Certified in Occupational Medicine, the Physician has had extensive experience in Occupational and Environmental Medicine and Toxicology as both a consultant and a manager for corporate medical departments. The Physician is responsible for the creation of job specific examination protocols, review and disposition of medical evaluations performed by our national network of medical facilities, and all MRO activities. The Contractor's

HEALTHCARE facility will be used to oversee the medical examinations and surveillance specified herein. All employees involved with the project will be issued a medical clearance prior to commencing work. The examination will meet requirements of USEPA, OSHA 29 CFR 1910.120, 1910.134, and ANSI Z88.2. The medical protocol will include the following:

1. Medical and Work History;
2. General Physical Examination (including evaluation of all major organ systems);
3. Audiogram;
4. Electrocardiogram;
5. Biological Blood Profile (SMAC-20-25);
6. Complete Blood Count (CBC) with differential;
7. Chest X-ray (as clinically indicated);
8. Pulmonary Function Testing (FVC and FEV1.O);
9. Urinalysis with Microscopic Examination, Heavy Metals;
10. Ability to wear a respirator;
11. Visual acuity; and
12. Site specific bioassays (as required).

Additional clinical tests may be included at the discretion of the Occupational Physician.

Periodic (annual) surveillance examinations will be performed, as described above, for all on-site employees included in the medical surveillance program. In addition, nonscheduled medical examinations will be conducted under the following circumstances:

1. After acute exposure to any toxic or hazardous material;
2. At the discretion of the Contractor, SHSR, and Occupational Physician, when an employee reports the potential exposure to dangerous levels of toxic or hazardous materials;
3. At the discretion of the Contractor, SHSR, and Occupational Physician, and upon receipt of a request for a medical examination from an employee with demonstrated symptoms of exposure to hazardous substances;
4. In accordance with the corporate drug policy, after any accidents, severe injuries, and/or property damage caused by an error in judgment; and
5. After lost workday accidents/illness as directed by procedure 1020 of the Contractor H&S manual.

Contractor will maintain medical surveillance records for its employees and require lower-tier subcontractors to do likewise. These records will be available to the Contractor or regulatory agencies upon request by appropriate officials following all rules prescribed under 29 CFR 1910.120. A medical clearance form will be kept on site for each employee. The employee's complete occupational medical history should be on file at Contractor's Healthcare Medical Management Facility. These records will be maintained for the duration of employment plus 30 years.

6.2.2 Respirator Certification

Prior to authorizing the use of any air purifying or supplied-air respirator, OSHA, under 29 CFR 1910.134 and 29 CFR 1925.58, requires that a determination be made regarding the prospective wearer's physical ability to safely use such equipment. Consequently, individuals scheduled to work in areas that require the use of respiratory protection must provide the SHSR with current documentation, signed by a qualified physician, regarding the individual's physical ability to wear a respirator. The medical clearance form will indicate the employee's ability to wear respiratory protection on the Site. The inability to provide current or complete documentation will be sufficient grounds to preclude any individual from areas or tasks requiring such protection. In addition to the medical clearance, an annual fit test will be issued to each employee. The fit test document will be kept on file in the SHSR office.

6.2.3 Exposure/Injury Medical Emergency

As a follow-up to an injury or illness, or as a result of possible excessive exposure to either a chemical or physical hazard, all employees are entitled and required to seek appropriate medical attention. The SHSR or designated alternate must be apprised of the need for seeking such medical attention and assist in determining the immediacy of the situation.

During and immediately following the emergency situation, the SHSR or designated alternate has the following responsibilities:

- Ensure that the examining medical facility is fully apprised of the Site condition and/or hazard which caused the medical emergency;
- Conduct an investigation of the Site condition which caused the medical situation prior to reassigning the task;
- Complete an **Emergency Incident/Exposure Report** (*Appendix A*);
- Ensure that the injured or ill worker receives written medical clearance prior to return to the Site;
- Ensure copies of the **Medical Clearance and Accident Investigation Form** (*Appendix A*) are maintained on-site in the SHSR office for the duration of the project;
- Provide a copy of the Medical Clearance and Accident Investigation Form for the employee's medical records; and
- Ensure that a copy of the report(s) is presented to the field oversight manager.

Injury/illness and/or possible excessive exposure to either a chemical or physical hazard requiring emergency medical treatment and hospitalization must be reported within 24 hours to the Project Manager, Contractor' Project Principal, and the Client. Fatalities must be reported immediately.

6.2.4 Exit Medical Examination

An exit medical examination will be provided for employees within 14 working days upon the termination of the employee from Contractor. This physical will include all items listed for the baseline medical exam. In addition, exit bioassays may be needed for employees who are exposed to certain contaminants, such as lead, at or above the published permissible exposure levels for 30 or more days per year (12 consecutive months).

Workers who will continue employment with Contractor will remain in the medical monitoring program, but will have a site specific exit exam if air sampling indicates the need for biological monitoring. For terminated employees, a complete examination report will be mailed to the employee, with a copy kept on file at Contractor's Healthcare Facility. An abbreviated exit examination report will be kept on file in the Contractor's home office.

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**SECTION 7
SITE CONTROL**

SECTION 7 SITE CONTROL

7.1 SITE CONTROL

Site control will minimize the potential contamination of workers and observers, protect the public from potential on-site hazards, and prevent vandalism of equipment and materials. Site control measures also enhance response in emergency situations. The Site field operations will be divided into three work zones. These zones are described below:

1. **Exclusion Zone (EZ)**—The area where the highest potential for exposure exists for workers. Personal protective equipment is required in this area. The EZ must be clearly demarcated by barricades or barrier tape that will be placed a minimum of 3 feet from the edge of an active operation. Some situations may necessitate a distance less than the recommended minimum. These instances should be reviewed by the SHSR.

Visitors are not permitted into controlled zones (EZ and CRZ) without the approval of management. Additionally, visitors must have satisfactorily completed the required OSHA training, be properly fitted with respiratory protection, and have medical clearance, as required.

2. **Contamination Reduction Zone (CRZ)**—The area immediately adjacent to and surrounding the EZ. This area is used as a transition zone between the EZ and support zone. This area is used to minimize the potential for contact with contaminated soils by decontamination and other work practices. The CRZ will include facilities for personnel or equipment decontamination. Personal protective equipment worn in the EZ may not be worn outside the CRZ except during emergencies.
3. **Support Zone (SZ)**—All areas outside the CRZ and EZ. The exposure potential in these zones is minimal. SZs provide a changing area for personnel entering the CRZ and EZ, a lunch area, office space, and clean equipment and material storage. Protective clothing worn in an EZ may not be worn in a Support Zone except in an emergency.

The final locations of these zones will be determined and modified as necessary in the field. In addition, it may be necessary to make modifications as weather and Site conditions change. Movement of personnel between the three zones will be limited through specific access control points to prevent cross-contamination from contaminated to clean areas.

7.2 SITE ACCESS CONTROL

7.2.1 General

It is the responsibility of the site supervisors to control access to the Site and to ensure proper security. Any evidence of unauthorized entry should be noted in the **Daily Health and Safety Field Log** (*Appendix A*), and the SHSR shall be immediately notified. Effective site security will prevent the following:

- Exposure of unauthorized, unprotected people to Site hazards;
- Increased hazards from vandals or persons seeking to abandon other wastes on the Site;

- Interference with safe working procedures.

Site visitors, as well as on-site workers, will be required to sign a **Daily Site Sign-In/Sign-Out Log** (*Appendix A*).

7.2.2 Visitor Training

Prior to entry to the Site, all visitors must receive a Site-specific orientation briefing. The topics covered in this orientation will include those outlined in *Section 6.1.1*. Additional information will also be incorporated from the latest tailgate safety meeting.

Visitors who intend to enter the EZ must also provide evidence that they have successfully completed the forty hours of general training and possess a physicians declaration reporting that the individual is medically fit to work as required in 29 CFR 1910.120.

7.3 BUDDY SYSTEM

Activities in contaminated or otherwise hazardous areas will be conducted with a "buddy" who is responsible for performing the following activities:

- Provide his or her partner with assistance;
- Observe his/her partner for signs of chemical or heat exposure;
- Periodically check the integrity of his/her partner's protective clothing; and
- Notify the shift supervisor or others if emergency help is needed.

The access area for personnel entering the Exclusion Zone is a convenient location for enforcing the buddy system because all personnel who enter the contaminated areas must pass through this entrance point.

7.4 SITE COMMUNICATIONS

Two sets of communication systems will be established prior to initiating Site activities: (1) internal communications among personnel on-site; and (2) external communication between on-site and off-site personnel. Internal communication alerts team members to emergencies; passes along safety information; time remaining until next rest period; changes in the work to be accomplished; and maintains Site control. An external communication system between on-site and off-site personnel is necessary to report to management, and maintain contact with essential off-site emergency response personnel.

On-site internal communications will be conducted through verbal communications and hand-held two-way radios. Nonverbal communications will be used when background noise or PPE impede verbal communications and will utilize standard hand and air-horn signals, as illustrated below:

On-site Communication Procedures—

- Channel one has been designated as the radio frequency for personnel in the Exclusion Zone. All other on-site communications will use channel two.
- Personnel in the Exclusion Zone should remain in constant radio communication or within sight of the Site Superintendent. Any failure of radio communication requires an evaluation of whether personnel should leave the Exclusion Zone.
- The following standard hand signals will be used in case of radio failure:
 - Hand gripping throat.....Out of air, can't breathe.
 - Grip partner's wrist or both hands.....Leave area immediately.

around waist.

- Hands on top of headNeed assistance.
- Thumbs upOK, I am all right, I understand.
- Thumbs downNo, negative.
- **Intermittent five-second blast** is the emergency signal for a fire emergency and to indicate all personnel should leave the Exclusion Zone.
- **Continuous thirty second blast** indicates a medical emergency and to indicate all personnel should leave the Exclusion Zone.

External communications during Site activities will be accomplished by use of telephone at the Site office (External Emergency Services Numbers are found in Section 2).

7.5 DUST CONTROL

One of the best ways to reduce exposure to potentially contaminated soils is by reducing the generation of dust. Contractor will adhere to Solutia's Dust Control Plan (1998). Equipment operators will be responsible for using their equipment in a method that will create the least amount of unnecessary soil disturbance. This will include speed reduction during travel and correct loading/unloading of contaminated soil during work operations. If dust generation becomes a problem because of wind, low rainfall, etc., the employees on-site will be responsible for implementing fugitive dust control measures.

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**SECTION 8
PERSONAL PROTECTIVE EQUIPMENT
AND EQUIPMENT REASSESSMENT PROGRAM**

SECTION 8 PERSONAL PROTECTIVE EQUIPMENT AND EQUIPMENT REASSESSMENT PROGRAM

8.1 OVERVIEW

Please refer to Section 8 in the Solutia Health and Safety Plan.

8.2 RESPIRATORY PROTECTION

All personnel who may come in contact with airborne contaminants must be provided respiratory protection sufficient to safeguard them from exposure to unacceptable levels. It is desirable to prevent airborne contaminants from being generated through engineering controls and proper work practices. Where these methods are insufficient to control exposures below the established limits, then respiratory protection shall be used to supplement these methods.

This section will serve as the written Respiratory Protection Program for the Site. Guidance contained in the Contractor Environmental H&S manual will be followed. The following elements are required to be fully in place and operational. These elements apply to all Contractor personnel and subcontractors who may require PPE:

- Written standard operating procedures governing the selection and use of respirators are established by this procedure.
- Respirators will be full-face air-purifying respirators with combination organic vapor and particulate cartridges.
- Contractor employees and subcontractors will be instructed and trained in the proper use of respirators and their limitations by the SHSR.
- Respirators will be assigned to individual workers for their exclusive use, with the exception of SCBAs.
- Respirators will be cleaned and disinfected at the conclusion of the shift. The SHSR will be responsible for enforcing these procedures.
- Respirators shall be stored in a convenient, clean, and sanitary location.
- Respirators used routinely will be inspected during cleaning. Worn or deteriorated parts will be replaced. Respirators for emergency use, such as self-contained breathing devices, shall be thoroughly inspected at least once a month and after each use.
- Appropriate surveillance of work area conditions and degrees of employee exposure or stress will be maintained by the SHSR.
- The SHSR will regularly inspect and evaluate the effectiveness of the program.
- A physician's "written opinion" will be obtained by the SHSR to document the ability of each employee to wear a respirator.
- NIOSH approved or accepted respirators only will be used.

Fit testing of respirators will be conducted for employees meeting the training and medical criteria. The *Respirator Qualitative and/or the Quantitative Fit Test* records (Appendix A) will be used to document fit tests.

8.3 PROTECTIVE CLOTHING

Protective clothing is used to minimize direct contact of the worker's skin with contaminated soils and sludges and to minimize contact with chemicals which will readily permeate "standard" work clothing. Clothing, gloves, and boots are not chemical proof and only provide increased resistance to skin contact with hazardous substances. Protective clothing deteriorates and degrades over time. Factors such as environmental stresses, type and concentration of contaminant present, duration of contact, and properties of the clothing are some of the factors affecting chemical protective clothing's ability to provide protection.

Three sets of PPE will be readily available for Government employees for entry into the EZ and CRZ.

8.4 ESTABLISHED LEVELS OF PROTECTION

No entry into the EZ will be allowed without the proper level of protective equipment worn by the worker. Failure to wear the properly prescribed level of PPE for the specific task will be grounds for immediate dismissal.

Certain levels of protection are established for various functions on-site while in the EZ. These levels of protection shall be increased or decreased based on realtime monitoring data and historical exposure assessment data. The SHSR will provide monitoring to determine the proper levels of protection.

8.5 LEVELS OF PROTECTION

Minimum initial levels of protection for anticipated tasks to be considered are specified under the sections listed below:

Mobilization and Site Set-Up	Level D
Excavation of Contaminated Material	Level D/Level C
Personal, Equipment, Debris Decontamination	Modified Level D/Level C
Backfill, Demobilization	Level D/Modified Level D/Level C

Contractor will provide its personnel with appropriate personal safety equipment and protective clothing. Contractor will ensure that all safety equipment and protective clothing is properly used, kept clean, and well maintained.

8.6 PPE REASSESSMENT PROGRAM

The level of protection provided by selected PPE shall be upgraded or downgraded based upon monitoring results or a change in Site conditions. Typical indicators for reassessment would include:

- Commencement of a new work phase, such as the start of work that begins on a different portion of the Site.

- Change in job tasks during a work phase.
- Appearance of new contaminants other than those previously identified.
- Changes in ambient levels of contaminants.
- Change in work scope that affects the degree of contact with contaminants.

Upgrading or downgrading the level of protection based on changes in ambient levels of contaminants in the worker breathing zone will be determined by the SHSR. Action Levels have been established in the Solutia Health and Safety Plan for the project and are listed in Table 8.1. The action level designated for particulates accounted for the maximum levels of the contaminants of concern concentrated in the soil at the site. Action levels are real time and the particulate action level should be used to upgrade respiratory protection from Level D to Level C. Therefore, the particulate action level will be used as the action level for the contaminants of concern.

TABLE 8.1
ACTION LEVELS FOR PPE UPGRADE
FROM LEVEL D TO LEVEL C

CONTAMINANT	ACTION LEVEL
Particulate	0.5 mg/m ³

The action levels are based on the concentrations of soil contaminants and the permissible exposure limits (PELs) set by OSHA (See Table 4.1).

If during the perimeter or work area monitoring the action level is exceeded, all workers in the work area will be required to don or upgrade respiratory protection. When the action level is exceeded, the SHSR or designee will implement continuous monitoring between the active work area and the perimeter to provide input for determining the source strength and potential downwind impacts.

Prior to entry into any confined space or excavation, the atmosphere will be checked using an oxygen/combustible gas meter. If an oxygen-deficient atmosphere is noted (less than 19.5% oxygen), the space will be ventilated and rechecked until the deficiency is corrected. Once the oxygen deficiency no longer exists, the atmosphere will be checked for the presence of combustible gases. Any reading above ten percent of the LEL will require corrective measures (i.e., PPE, continuous ventilation, etc.) prior to entry into the area.

If at any time during air monitoring activities it is determined that an action level is reached, a higher grade of personal protection (C or B) will be used. *Table 8.2, Levels of Protection: Typical PPE Ensembles*, lists typical ensembles for Level B, C, and D protection and the reasons for use of each.

8.7 RECORDKEEPING

A **Daily Air Monitoring Report** (*Appendix A*) documenting all direct reading measurements will be maintained by the SHSR. This daily report form will document the task, time, meter reading, and level of protection being worn by workers involved in the activity. Actions taken in response to releases and/or recordings above pre-established action levels will also be recorded in the Daily Air Monitoring Report.

**TABLE 8.2
LEVELS OF PROTECTION: TYPICAL PPE ENSEMBLES**

LEVEL OF PROTECTION	RECOMMENDED	PROTECTION PROVIDED	SHOULD BE USED WHEN	LIMITING CRITERIA
B	<p>Pressure-demand, full facepiece SCBA or pressure-demand supplied-air respirator with escape SCBA.</p> <p>Chemical-resistant clothing (overalls and long-sleeved jacket; hooded, one- or two-piece chemical-resistant one-piece suit).</p> <p>Inner and outer chemical-resistant gloves.</p> <p>Chemical-resistant safety boots/shoes.</p> <p>Hard-hat.</p> <p>Two-way radio communications.</p> <p>Disposable boot covers.</p> <p>Face shield.</p>	<p>The same level of respiratory protection but less skin protection than Level A.</p>	<p>The type and atmosphere concentration of substances have been identified and require a high level of respiratory protection, but less skin protection. This involves atmospheres:</p> <ul style="list-style-type: none"> • with IDLH concentrations of specific substances that do not represent a severe skin hazard; <p>OR</p>	<p>Outer coverall suit material must be compatible with the substances involved.</p>
			<ul style="list-style-type: none"> • that do not meet the criteria for use of air-purifying respirators. <p>Atmosphere contains less than 19.5% oxygen.</p> <p>Presence of incompletely identified vapors or gases indicated by direct-reading organic vapor detection instrument, but vapors and gases are not suspected of containing high levels of chemical harmful to skin or capable of being absorbed through skin contact.</p>	

**TABLE 8.2
LEVELS OF PROTECTION: TYPICAL PPE ENSEMBLES**

LEVEL OF PROTECTION	RECOMMENDED	PROTECTION PROVIDED	SHOULD BE USED WHEN	LIMITING CRITERIA
C	<p>Full-facepiece or half face air-purifying, cartridge-equipped respirator.</p> <p>Chemical-resistant clothing (overalls and long-sleeved jacket; hooded, one- or two-piece chemical splash suit; disposable chemical-resistant one-piece suit).</p> <p>Chemical-resistant safety boots/shoes.</p> <p>Hard-hat.</p> <p>Hearing protection.</p> <p>Optional: Coveralls.</p> <p>Disposable boot covers.</p> <p>Face shield.</p> <p>Escape mask.</p>	<p>The same level of skin protection as Level B, but a lower level of respiratory protection.</p>	<p>The atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect any exposed skin.</p> <p>The types of air contaminants have been identified, concentrations measured, and a canister is available that can remove the contaminant.</p> <p>All criteria for the use of air-purifying respirators are met.</p>	<p>Atmospheric concentration of chemicals must not exceed IDLH levels.</p> <p>The atmosphere must contain at least 19.5% oxygen.</p>

**TABLE 8.2
LEVELS OF PROTECTION: TYPICAL PPE ENSEMBLES**

LEVEL OF PROTECTION	RECOMMENDED	PROTECTION PROVIDED	SHOULD BE USED WHEN	LIMITING CRITERIA
Modified D	<p>Chemical-resistant clothing (overalls and long-sleeved jacket; hooded, one- or two-piece chemical splash suit; disposable chemical-resistant one-piece suit).</p> <p>Chemical-resistant safety boots/shoes</p> <p>Hardhat</p> <p>Hearing protection</p>	<p>The same level of skin protection as level C without respiratory protection</p>	<p>The atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect any exposed skin.</p>	<p>May not be worn when atmospheric concentration of chemicals exceeds PEL.</p> <p>The atmosphere must contain at least 19.5% oxygen.</p>
D	<p>Optional—</p> <ul style="list-style-type: none"> • Gloves • Escape mask • Face shield <p>Coveralls</p> <p>Safety boots/shoes</p> <p>Safety glasses or chemical splash goggles</p> <p>Hardhat</p> <p>Hearing protection</p> <p>Optional—</p> <ul style="list-style-type: none"> • Gloves • Escape mask • Face shield 	<p>No respiratory protection.</p> <p>Minimal skin protection.</p>	<p>The atmosphere contains no known hazard, or hazard is controlled to levels below the PEL.</p> <p>Work functions preclude splashes, immersion, or the potential for unexpected inhalation of or contact with hazardous levels of any chemicals.</p>	<p>This level should not be worn during contact with the COC.</p> <p>The atmosphere must contain at least 19.5% oxygen.</p>

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**SECTION 9
ENVIRONMENTAL AND PERSONAL
ON-SITE AIR MONITORING PLAN**

SECTION 9 ENVIRONMENTAL AND PERSONAL ON-SITE AIR MONITORING PLAN

9.1 OVERVIEW

This section describes the goals of Solutia's air-monitoring program for the project. Please refer to Section 7 of the Solutia Health and Safety Plan for details. The air monitoring plan establishes the data used to determine the action levels (Table 8.1A) for initiation of dust and vapor suppression, and for changes in personal protective equipment (PPE). Therefore, the purposes of air monitoring include:

- Assessment of worker exposure;
- Detection of any off-site migration of contaminants;
- Ensuring proper selection of protective equipment to minimize exposure; and
- Delineation of areas where protection is required.

While work is in progress, the SHSR will conduct real-time monitoring in and around each active work location. The significant contaminants of concern for occupational exposure are PCBs contained in fugitive dust emissions. To assure worker safety, real-time monitoring will be conducted during excavation and as required by special work conditions for all of the COCs. As mentioned in Section 8, PPE will be upgraded or downgraded based upon real-time monitoring results.

9.2 PERSONNEL SAMPLING

The primary purpose of personnel sampling is to assess the potential for exposure to individual employees and to ensure the proper level of PPE has been selected for the task to which an employee is assigned. Solutia's SHSR will perform personnel sampling as indicated in Section 7.3 in the Solutia Health and Safety Plan.

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**SECTION 10
SAFE WORK PRACTICES**

SECTION 10 SAFE WORK PRACTICES

10.1 GENERAL

To maintain a strong safety awareness and enforce safe procedures at the Site, a list of standing orders has been developed stating the practices that must always be followed and those that must never occur in the EZ and CRZ on-site. The list of standing orders is as follows:

- No smoking, eating, or gum chewing will be permitted in the EZ or in the CRZ;
- Field work will only be conducted during daylight hours unless adequate artificial lighting is provided;
- All personnel are required to attend a daily safety meeting, read the SSHP, and sign all appropriate forms prior to initiating work;
- Personnel will be advised of the precautions to be taken against heat stress;
- Walkways will be kept clear of equipment, sampling materials, and other obstructions; and
- Water and soap will be available to personnel who wish to wash after removing PPE.

To ensure that everyone who enters the Site is aware of these orders and familiar with their content, the list will be made available in the following ways:

- Available for review in the SHSR office;
- Posted conspicuously at the Site entrance and at the entrance to the CRZ and/or the EZ; and
- Reviewed by the SHSR or designated alternate with the field crew at the beginning of each work day, thereby informing personnel of any new standing orders resulting from a change in Site conditions or work activities.

Additionally, appropriate warning signs, devices, and fences will be erected and posted.

In addition to the standing orders, the site's Hazard Communication Program will include MSDSs, listing the names and properties of chemicals present on the Site. All chemicals that are used on-site will be properly stored and labeled. Employees will be briefed on this information at the beginning of the project or whenever they first join the work team. Tailgate safety meetings will be held for all employees prior to initiating work for the day.

10.2 HEAVY EQUIPMENT OPERATION

Working with tools and heavy equipment (e.g., excavation equipment) is a major hazard at the Site. Injuries can result from equipment hitting or running over personnel, impacts from flying objects, burns from hot objects, and damage to PPE. The following general precautions will be followed to help prevent injuries from such hazards:

- Before any heavy equipment, machinery or mechanized equipment is placed in use, it will be in safe operating condition. Records of the inspections (performed

each shift and weekly) will be maintained at the Site and will be available on request to the designated authority.

- The site superintendent will designate a competent person to be responsible for the daily inspection of all machinery/equipment and during use to make sure it is in safe operating condition. Checks will be made at the beginning of each shift. The equipment to be used will be tested to determine that the brakes and operating systems are in proper working condition.
- Preventative maintenance procedures recommended by the manufacturer will be followed.
- Any machinery or equipment found to be unsafe will be sidelined and its use prohibited until safe conditions have been restored.
- Machinery and mechanized equipment will be operated only by designated, experienced and qualified personnel. Equipment deficiencies observed at any time that affect their safe operation will be corrected before continuing operation.
- Getting off or on any equipment while in motion is prohibited.
- Machinery or equipment will be shut down and positive means taken to prevent its operation while repairs or manual lubrications are being done. (**Exemption:** *Equipment designed to be serviced while running*).
- Bulldozer and scraper blades, front-end loader buckets, dump bodies, and similar equipment will be either fully lowered or blocked when being repaired or when not in use. All controls will be in a neutral position, with the engines stopped and brakes set, unless work being performed on the machine requires otherwise.
- All points requiring lubrication during operation will have fittings located and guarded as to be accessible to employees without potential for injury.
- When necessary, all mobile equipment and the area in which it is operated will be adequately illuminated while work is in progress.
- Mechanized equipment will be shut down prior to and during fueling operations. Closed systems, with automatic shutoff that will prevent spillage if connections are broken, may be used to fuel diesel-powered equipment left running.
- All towing devices used on any combinations of equipment will be structurally adequate for the weight drawn and securely mounted.
- Persons will not be permitted to get between a towed object and towing piece of equipment until the towing equipment has been stopped and secured by setting the brakes, placing in neutral, and chocking.
- All equipment with windshields will be equipped with powered wipers. Vehicles that operate under conditions that cause fogging or frosting of windshields will be equipped with operable defogging or defrosting devices.
- The controls of loaders, excavators, or similar equipment with folding booms or lift arms will not be operated from a ground position unless so designed.

- All self-propelled construction equipment will be equipped with a reverse signal alarm. Alarm will be audible and sufficiently distinct to be heard above prevailing conditions. Alarm will operate automatically upon commencement of backward motion. Alarm may be continuous or intermittent (not to exceed three-second intervals) and will operate during the entire backward movement.
- All bulldozers, tractors, or similar equipment used in clearing operations will be provided with substantial guards, shields, canopies, and grills to protect the operator from falling and flying objects as appropriate to the nature of the clearing operations.
- Trucks will not trail debris or track mud outside the CRZ. Visible loose dirt will be removed. Pressure washing will be used where required to remove dirt.

10.3 ELECTRICAL SAFETY

Working with electrical systems to install necessary services to buildings and equipment presents safety hazards. Lack of basic electrical safety and sound wiring practices can result in fatalities due to electric shock.

- Three-wire (grounded) systems with ground fault circuit interrupters (GFCI) will be used on all temporary 110-volt electrical systems (extension cords, etc.).
- Wiring of all new facilities will be in accordance with the latest edition of the NEC.
- Wiring will be performed by a qualified electrician.
- No work will be performed on energized electrical systems capable of delivering current greater than 0.005 amps.
- Any wiring required will be protected from the elements while in use.
- High-voltage overhead lines will be identified to all equipment operators and safe clear distances will be maintained at all times.

10.4 HEAT STRESS

To minimize the likelihood of employee heat stress, all workers must observe the following at temperatures above 70°F:

- Avoid prolonged periods of high heat stress;
- Take regular breaks;
- Consume increased amounts of fresh water (or Gatorade) to replenish body fluids;
- Observe coworkers (buddy system) for signs of fatigue; and
- Report any symptoms to the Superintendent.

Site Supervisors must regularly monitor the condition of the work force for signs of heat stress. Work in high ambient temperatures, coupled with protective clothing, can quickly result in worker heat stress. Heat stress monitoring and modified work-rest schedules will be instituted in accordance with ACGIH guidelines. Specific monitoring of heat stress is delineated in Appendix F.

Alcohol consumption dehydrates the body and will increase the likelihood of incurring heat stress. Workers should curb their alcohol consumption and arrive at the Site each morning physically fit for work. Any worker deemed unfit for work because of alcohol consumption or for any reason will be restricted from Site activities. If a physician has placed a worker on restrictive duty, he will be restricted from activities that may cause injury/accidents to the employee or to coworkers. Contractor' Site management will be responsible for ensuring that unfit workers are restricted from site activities as required.

10.5 CONFINED SPACE ENTRY

Workplaces that are not intended for human occupancy are defined as confined spaces. Limited openings hinder proper ventilation, escape, and rescue; therefore, creating a potentially life threatening situation for a worker.

Confined space entry is not anticipated for Site operations. However, confined space entry will not be undertaken without prior approval from the Site Superintendent and the SHSR. Any confined space entry will be governed by the proposed OSHA regulation, 29 CFR 1910.146, and will be conducted in accordance with the **Confined Space Entry Procedures** detailed in *Appendix B*.

10.6 SLIPS, TRIPS, FALLS

Slips, trips, and falls can easily occur at construction sites. Pedestrian traffic will be excluded from excavation areas. (Exceptions will be reviewed on a case-by-case basis, with SHSR authorization.) Walkways to and from equipment storage in the CRZ will be established and maintained as level and free of obstructions as possible. Walking surfaces will be constructed where required and maintained free of obstacles.

Work activity on elevated surfaces must be conducted in accordance with fall protection criteria 29 CFR 1910.23. Proper guardrails or a fall arrest system must be in place for work on surfaces six (6) feet or higher.

10.7 FIRE HAZARDS

Smoking will not be allowed inside the EZ or CRZ. Cigarettes, lighters, chewing tobacco (or any other personal effects) will not be allowed in the Exclusion Zone.

Debris (paper, brush, scrap, wood, etc.) shall be removed from work areas on a daily basis or as needed to preclude accumulation of sources of fuel. Flammable and combustible liquids will be maintained in the smallest quantities possible. No flammable/combustible liquids will be stored inside the office trailer, decon trailers, or Contractor' temporary buildings. Fuel cans will have a designated storage area.

Portable fire extinguishers shall be provided for each of Contractor' trailers and/or office buildings and for each mobile vehicle and piece of heavy equipment. Each employee will have received instruction on the proper operation of a portable fire extinguisher.

Cutting and welding will require an inspection of the area and review of the operation by the SHSR prior to cutting or welding activities being performed. A request to perform cutting or welding activities will be submitted and will require the inspection and testing of the work area. The supervisor will prepare the cutting and welding permit request form and sign it. The permit will be issued by the SHSR only for the specific operation for a specified period of time. A **Cutting, Welding, and Burning Permit** form is included in *Appendix A*.

10.8 VISITORS

Visitors will be permitted in the immediate area of active operations only with approval from Site management. Approval for entry into the EZ and CRZ will require physical examination and compliance with training requirements (29 CFR 1910.120). All Site visitors must be briefed on appropriate sections of the HASP; a **Visitor's Log** (*Appendix A*) will be kept on-site. Visitor vehicles will be restricted to the SZ. Subcontractor and vendor equipment will not be permitted in the EZ without prior authorization and will be subject to Site decontamination procedures.

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**SECTION 11
DECONTAMINATION PROTOCOLS**

SECTION 11

DECONTAMINATION PROTOCOLS

11.1 GENERAL

Decontamination is the process of removing or neutralizing contaminants that have accumulated on personnel, personal protective equipment, and equipment. Decontamination activities are critical to health and safety at hazardous waste sites. Decontamination protects workers from hazardous substances that may contaminate and eventually permeate the protective clothing, respiratory equipment, tools, vehicles, and other equipment used on-site; it protects all Site personnel by minimizing the transfer of harmful materials into clean areas, and it protects the community by preventing uncontrolled transportation of contaminants from the Site.

11.2 PREVENTION OF CONTAMINATION

The first step in decontamination is to establish decontamination procedures that minimize contact with waste and thus the potential for spreading contaminants. Contractor will:

PERSONNEL—

- Stress work practices that minimize contact with hazardous substances (e.g., do **not** walk through areas of obvious contamination, do **not** directly touch potentially hazardous substances).
- Use remote sampling, handling, and container-opening techniques.
- Protect monitoring and sampling instruments by bagging. Make openings in the bags for sample ports and sensors that must contact Site materials.
- Wear disposable outer garments and use disposable equipment where appropriate.
- Proper disposal of PPE.

HEAVY EQUIPMENT—

- Limit the surface area of contact, i.e., on backhoes, limit contact to the arm and bucket.
- If contaminated tools are to be placed on non-contaminated equipment for transport to the decon pad, plastic will be used on top of the non-contaminated equipment to keep it clean.
- Material from excavations will be placed in soil piles away from personnel and equipment traffic.

In addition, the following procedures will be used to maximize worker protection. The proper procedures for dressing prior to entering the EZ will minimize the potential for contaminants to bypass the protective clothing and escape decontamination. In general, all fasteners should be used (i.e., zippers fully closed, all buttons used, all snaps closed, etc.). Gloves and boots should be tucked under the sleeves and legs of outer clothing, and hoods (if not attached) should be worn outside the collar. Another pair of tough outer gloves will be worn over the sleeves. All junctures will be taped to prevent contaminants from running inside the gloves, boots, and jackets (or suits, if one-piece construction).

Prior to each use, the PPE will be inspected to ensure that it contains no cuts or punctures that could expose workers to contaminants. Similarly, any injuries to the skin surface, such as cuts and scratches, may enhance the potential for chemicals or infectious agents that directly contact the worker's skin to penetrate into the body. Particular care will be taken to protect these areas. Workers with large areas of damaged skin will not be allowed to work on-site until skin heals.

11.3 TYPES OF CONTAMINATION

Contaminants can be located either on the surface of personal protective equipment or permeated into the PPE material. Surface contaminants may be easy to detect and remove; however, contaminants that have permeated a material are difficult or impossible to detect and subsequently remove. If contaminants that have permeated a material are not removed by decontamination, they may continue to permeate to the inner surface of the material where they can cause an unexpected exposure.

Five major factors that may affect the extent of permeation are listed below:

- **Contact Time.** The longer a contaminant is in contact with an object, the greater the probability and extent of permeation. For this reason, minimizing contact time is one of the most important objectives of a decontamination program.

Employees can reduce dermal contact time by using the correct PPE to avoid direct contact with hazardous materials. Employees can reduce their overall contact time by washing their exposed body parts, with soap and water, on a regular basis.

- **Concentration.** Molecules flow from areas of high concentration to areas of low concentration. As concentrations of wastes increase, the potential for permeation of personal protective clothing increases. Because of this, workers will be instructed to change their outer layer of work clothing if it becomes heavily soiled.
- **Temperature.** An increase in temperature generally increases the permeation rate of contaminants. For example, VOCs have the ability to produce vapors, which can become an inhalation hazard. As the ambient temperature increases, the concentration of hazardous vapors may become sufficient enough to implement or increase the level of respiratory protection. The decision to increase respiratory protection will be based upon the results of the real-time air monitoring performed in the workers' breathing zones.
- **Size of Contaminant Molecules and Pore Space.** Permeation increases as the contaminant molecule becomes smaller and as the pore space of the material to be permeated increases. Tyvek™ coveralls should keep the majority of contaminated soils from contacting the employees' skin. However, workers will be required to tape all PPE junction points to further decrease the opportunity of contact with contaminated soils. Coveralls and other PPE should be checked regularly to ensure there are no tears, rips and holes that might allow the invasion of contaminated soils to the skin surface.
- **Physical State of Wastes.** As a rule, gases, vapors, and low-viscosity liquids tend to permeate more readily than high-viscosity liquids or solids. The contaminated material on the Site is not readily capable of producing hazardous

vapors that may create an inhalation hazard. However, the handling of soils will be minimized to reduce dust generation. Also, stockpiles of contaminated material will be covered to reduce dust in the work area.

11.4 PERSONNEL AND PERSONAL EQUIPMENT DECONTAMINATION FACILITIES

Contractor will provide and maintain a designated decon station in the CRZ of each EZ. They will be equipped with soap, water, and any other solutions, which may be required for effective decontamination of personnel. See Section 9 of the Solutia Health and Safety Plan.

A temporary storage area for disposable protective clothing will be set aside in the EZ adjacent to the CRZ.

11.5 PERSONAL HYGIENE AND DECONTAMINATION PROCEDURES

11.5.1 Decontamination Procedures

For those tasks that require protective clothing and respiratory protection, a decontamination area will be provided for Contractor' employees who work in the area designated as the EZ. Employees will be required to don the PPE before entering and doff the PPE when leaving.

All personnel and equipment leaving the EZ will be thoroughly decontaminated. The procedure for personnel decon is task- and Site-dependent; however, the general elements of decon will include:

- Gross boot wash and rinse;
- Suit removal;
- Outer/ Inner glove removal;
- Respirator removal and wash;

Workers should check for gross contamination on boots and clothing before leaving the EZ. Protective clothing should be removed in an inside-out fashion and disposed properly in waste receptacles provided. Employees will be required to wash their face, hands, and any exposed areas with soap and water. Boots will be cleaned using a series of tubs containing soap and water and a brush to remove contamination.

These decontamination procedures must be followed each time the employee leaves the contaminated area, with the exception of emergency escape situations, such as a fire. If employees come into contact with contaminated materials, portable eyewash bottles and portable showers will be located on-site for employees to wash affected skin or to flush the eyes (at least 15 minutes). If irritation, redness or swelling arises in the contact area, a physician will be contacted immediately.

Respirators will be removed and properly cleaned and disinfected by either the employee or a designated technician. A specific decontamination station for cleaning respirators will be located in the decon trailer. The respirator, without the cartridges, should be wiped clean with a benzalkonium chloride antiseptic towelette, followed by the use of a wash and rinse solution and then dried with a paper towel. The respirator will be kept in a two gallon zip-lock bag for storage. New cartridges should be inserted in accordance with OSHA Respiratory Protection Standard 29 CFR 1910.134. The SHSR shall monitor effectiveness of the decontamination procedures and, if found ineffective, shall take appropriate steps to correct any deficiencies.

11.5.2 Equipment Decontamination

A decontamination area for tools and equipment is to be established in an area near the personal decontamination area. Water used for decontamination will be collected and properly treated prior to re-use or disposal. All tools and equipment will be decontaminated before leaving the CRZ.

11.5.3 Vehicle Decontamination

Trucks, excavation equipment, cranes, and loaders will become contaminated during the normal course of operation. Any contamination picked up in tire treads, undercarriages, splash guards and/or other areas of vehicles or equipment will be removed at the decon station prior to the unit leaving the Site. Soils collected at the decon station will be considered "affected" and removed from the decon facility and returned to either the storage area or excavation. Water collected at the decon facility will be considered "affected" and will be pumped to the water treatment facility. Means to remove dry (loose) material will be provided, as well as a means to remove adhered material.

At the conclusion of the work associated with affected materials, trucks, loaders, etc., will be thoroughly decontaminated and inspected by the SHSR prior to release from the Site. Each piece of properly decontaminated equipment will receive a decontamination certificate authorized by the SHSR (Decontamination Certificate is found in Appendix A).

**Site Safety and Health Plan
Softball Fields
Recreation Drive, Oxford, Alabama**

**SECTION 12
EMERGENCY PROCEDURES**

SECTION 12

EMERGENCY RESPONSE/CONTINGENCY PLAN

12.1 POTENTIAL EMERGENCIES

The activities, layout, and hazards of the Site have been evaluated to determine the potential emergencies to be anticipated. As a result, four categories of emergencies have been established. This list may be revised if on-site conditions or operations warrant. In the event of a revision or addition to the list, the Emergency Response / Contingency Plan will be appropriately updated. The categories of anticipated emergencies are listed below.

- Injury, Illness
- Fire
- Spill/Environmental Release
- Natural Hazards

Due to the nature of this Site, personnel accidents requiring first aid, exposure to soils and groundwater with chemical constituents, potential fires near mechanical equipment, and water-related incidents (e.g., on-site flooding) are the most anticipated situations that may arise.

Contractor employees will be required to review, practice and follow Sections 12 and 13 of the Solutia Health and Safety Plan

12.2 HOSPITAL ROUTE

The SHSR will provide a map, including written directions, to all on-site personnel showing the route from the jobsite to the selected medical facility.

From the Softball Field turn left onto Recreation Drive, go to the light and turn right onto US 431 (approximately 4 miles), turn right onto East 10th Street, the hospital will be on the right.

**Site Safety and Health Plan
SOLUTIA ANNISTON FACILITY**

**APPENDIX A
HEALTH AND SAFETY PLAN FORMS**

Project Name:
Project Contact:

Project No.
Facility Location:

EMPLOYEE SIGN-IN/SIGN-OUT LOG

DATE	Name	Time In	Time Out	Signature*

* By my signature, I verify that I have not been injured during the workday or during any work related activity

Project Name:
Project Contact:

Project No.
Facility Location:
Date: _____

DAILY WEATHER DATA SHEET

MORNING

Time: _____

Temperature _____ °F

Wind Direction _____ at _____ MPH

Humidity _____ %

Heat Index (WBGT) _____ °F

Wind Chill _____ °F

Comments: _____

AFTERNOON

Time: _____

Temperature _____ °F

Wind Direction _____ at _____ MPH

Humidity _____ %

Heat Index (WBGT) _____ °F

Wind Chill _____ °F

Comments: _____

EVENING

Time: _____

Temperature _____ °F

Wind Direction _____ at _____ MPH

Humidity _____ %

Heat Index (WBGT) _____ °F

Wind Chill _____ °F

Comments: _____

Signed: _____

Project Name: _____	Project No. _____
Project Contact: _____	Date: _____
Project Location: _____	

EMPLOYEE INJURY REPORT

This is an official document to be initiated by the employee's supervisor. Please answer all questions completely. This report must be forwarded to the employee's Health and Safety Office within 24 hours of the injury.

Injured's Name _____	Sex _____	S.S. No. _____	Birthdate _____
Home Address _____	City _____	State _____	Zip _____ Phone _____
Job Title _____	Employee No. _____	Hire Date _____	Hourly Wage _____

SUPERVISOR

Date of Incident _____	Time _____	Time Reported _____	To Whom? _____
Client Name _____	Client Address _____	Time Shift Began _____	
Has Employee Returned to work? No ___ Yes ___ When _____ Did Employee Miss a Regularly Scheduled Shift? No ___ Yes ___			
Doctor/Hospital Name _____	Address _____		
Witness Names _____	Statements Attached? No ___ Yes ___		
Nature of Injury _____	Exact Body Part _____		
Medical Attention: None _____	First Aid on Site _____	Doctor's Office _____	Hospital ER _____ Hospitalize _____
Job Assignment at Time of Incident _____			
Describe Incident _____			
What Unsafe Physical Condition or Unsafe Act Caused the Incident? _____			
What Corrective action Has Been Taken to Prevent Recurrence? _____			
Date Corrected _____			
Supervisor/Foreman _____	_____	_____	_____
<i>(Print)</i>	<i>(Signature)</i>		<i>(Date)</i>

MANAGER

Comments on Incident and Corrective Action _____		

Manager's Name _____	_____	_____
<i>(Print)</i>	<i>(Signature)</i>	<i>(Date)</i>

HEALTH AND SAFETY

Concur With Action Taken? No _____ Yes _____			Remarks _____
OSHA Classification: ___ Incident Only ___ First Aid ___ No Lost Workdays ___ Restricted Activity ___ Fatality			
Days Away From Work _____		Days Restricted Work _____	Total Days Charged _____
___ State Jurisdiction ___ Federal L&H		Date ER Submitted _____	Which Claims Office? _____
Coding: A. Injury type or Illness _____ B. Injured Body Parts _____ C. Activity at Time of Incident _____			
D. Injury Cause Code ___ E. Agent Code ___ F. Safety Rule Violated Code ___ G. Accident Prevention Code _____			
Name _____	_____	_____	_____
<i>(Print)</i>	<i>(Signature)</i>		<i>(Date)</i>

Document Review and Certification

I have reviewed the Site Specific Health and Safety Plan for the Solutia Site. To the best of my ability, I will conduct myself and operations under my responsibility, in a safe manner and in compliance with this Plan. I will report any injury, illness, or recognizable symptoms, if developed, immediately to my supervisor.

I understand that failure to comply with the requirements established in this Plan may be grounds for immediate termination of employment.

Printed Name	Signature	Date

Project Name:
Project Contact:

Project No.
Facility Location:
Date: _____

TAILGATE SAFETY MEETING LOG

DAILY WORK PLAN ACTIVITIES

SAFETY TOPICS

Required Protective Clothing/Equipment _____

Chemical Hazards _____

Other discussion Items/Requirements _____

Emergency Procedures _____

Hospital and Address: _____ Telephone: _____

Paramedic Telephone: 911

Meeting Conducted by:

Name Printed

Signature

Supervisor _____

Manager _____

TAILGATE SAFETY MEETING LOG

Page ___ of ___

NAME PRINTED

ATTENDED

SIGNATURE

NAME PRINTED		SIGNATURE

PERSONAL PROTECTIVE EQUIPMENT CERTIFICATION

Employee Name: _____

Social Security Number: _____

Job Number: _____

Project Name and Address: _____

Contractor will provide all Site personnel with the appropriate personal safety and protective clothing. The equipment will be chosen only by a Health and Safety Officer (HSO). The specific type of PPE used (i.e. coveralls, respirators, cartridges, etc.) can be found in the Site Health and Safety Plan. The level of protection may be downgraded or upgraded based upon changes in Site conditions:

In accordance with the Occupational Safety and Health Administration (OSHA) and 29 CFR 1910.132, Subpart I, the employee named above has been certified to wear the following Level(s) of personal protective equipment. The typical PPE Levels are as follows:

_____ **Level D** – Work clothing, work gloves, hard-hat, safety glasses and hearing protection as required.

_____ **Modified Level D** – Same equipment as Level D with the addition of disposable or cotton coveralls and chemically resistant gloves worn over work clothing.

_____ **Level C** – Same equipment as Modified Level D, with the addition of a full-face or half-face air-purifying respirator with a NIOSH approved filter.

_____ **Level B** – Same equipment as Modified Level D, with the addition of a full-face supplied air respirator.

Site HSO: _____

Date: _____

Site Supervisor: _____

Date: _____

I have read the above statement and I understand that I must be able to wear PPE correctly to be protected against the chemical hazards of this Site.

Employee Signature: _____

Date: _____

EXAMPLE

FIT TESTER 3000

QUANTITATIVE RESPIRATOR FIT TEST

SUBJECT IDENTIFICATION

Subject _____

ID# _____

Operator _____

TEST DATE: 11/04/98 01:57:58pm

TEST PARAMETERS

Modeled Work Rate : 200 Kcal/Hr (moderate)
Mask Type : Full Face
Cartridge Type : Combination (high)
Challenge Pressure : 1.26 (in. H2O)
Modeled Breathing Rate : 67.30 (liters/min)

Step	Type	Description	Leak Rate	Duration	FF
1	Test	Face Forward	28.10 (cc/m)	8.0 Secs	2395
2	Test	Face Left	120.80 (cc/m)	8.0 Secs	557
3	Test	Face Right	29.60 (cc/m)	8.0 Secs	2274
4	Test	Head Up	73.80 (cc/m)	8.0 Secs	912
5	Test	Head Down	18.50 (cc/m)	8.0 Secs	3638
6	Test	Face Forward	55.30 (cc/m)	8.0 Secs	1217

Average % Leak = 0.081

Equivalent Fit Factor = 1238 (Pass) (Minimum FF = 500)

NOTES:

SIGNATURES: Operator _____ Subject _____

Project Name: _____

Project No. _____

Project Contact: _____

Date: _____

Facility Location: _____

INCIDENT REPORT

Nature of Incident: (Fire, medical emergency/team response, flood, etc.). Give brief description.

Time of Occurrence: _____

Date of Incident: _____

Location of Incident:

Describe Procedures Followed in Responding to Incident: (List all people involved in response and describe each person's actions. Use additional sheets if necessary. Complete Medical Incident Report for each person injured or any incident of illness during the response to the emergency.)

Brief Summary of Corrective Action to be Taken to Prevent Recurrence:

List Officials and Agencies Notified at Time of Incident:

Signed: _____
(Safety Officer)

(Date)

(Site Manager)

(Date)

Project Name:
Project Contact:
Facility Location:

Project No.
Date: _____

HEALTH & SAFETY VIOLATION REPORT

DATE OF VIOLATION:

NATURE OF VIOLATION (use additional paper if necessary):

ACTION TAKEN:

WARNING GIVEN (Detail): Yes / No

SENT HOME: Yes / No

DISCHARGED: Yes / No

WITNESS:

(Print & Signature) (Date)

VIOLATOR:

(Print & Signature) (Date)

REPORT BY:

(Print & Signature) (Date)

To: All Employees
From: Contractor's Health and Safety
Re: Medical Examinations

You have been scheduled to take your medical examination through Contractor's Healthcare Facility which is based in _____. The management team of Contractor's Healthcare Facility is responsible for keeping all of your medical records updated and in compliance with the Occupational Safety and Health Administration (OSHA) regulations. To make this process easier, please follow these instructions:

- Remember to fill out your *Physical Exam and Medical History* booklet before you go to the clinic.
- Do not eat or drink anything (except water) for 6 hours before your exam.
- Do not expose yourself to any excessive noise (loud music, work areas, etc.) for 12 hours before the exam. If you are on the job prior to your appointment time, you must use hearing protection.
- Take your picture identification with you to the clinic.
- If you are taking medications, take the medication bottles with you to the clinic.
- Make sure to take your *Authorization Form* with you to the clinic.

If you have any questions about your medical records or your physical, talk to your Site Health and Safety Officer.

Medical Monitoring Program
Exam Refusal

Project Name: _____	Project No. _____
Project Contact: _____	Date: _____
Facility Location: _____	

EMPLOYEE'S NAME: _____
EMPLOYEE'S I.D. NUMBER: _____

DESCRIPTION OF EMPLOYEE'S ACTIVITY

Primary Job Task:

Job Site History Since Latest Physical (Location and Dates):

I understand that I have been offered an exit physical at no cost to me.
At this time, I choose to decline this examination.

Name (Print)

Signature

Date

Witness

Date

EQUIPMENT DECONTAMINATION VERIFICATION

Project Name:	Project No.:
Facility Location:	Date:

Equipment Description:

Serial # _____

Color _____

Attachments _____

Other Info. _____

Decontamination Method:

Comments:

Person Verifying Decontamination:

Print: _____

Title: _____

Date: _____

Project Name:
Project Contact:

Project No.
Facility Location: _____
Date: _____

AEROSOL SAMPLING DATA

CALIBRATION DATA

Pump Number _____
Pre-Calibration Flowrate
(Liters/Minute)

Calibration Data _____
Post-Calibration Flowrate
(Liters/Minute)

X = _____

X = _____

AVERAGE FLOWRATE = _____ (L/M)

Date: _____

Date: _____

Initials: _____

Initials: _____

SAMPLING DATA

Technician: _____ Date: _____ Sampling Media _____

Substance(s) Sampled: _____

Pump Location or User Name: _____

Temperature: _____ °F Wind: _____ at _____ mph Relative Humidity _____ %

FILTER I.D.	TIME ON	TIME OFF	TIME, MIN.	VOLUME AIR (L)
-------------	---------	----------	------------	----------------

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Project Name: _____
Project Contact: _____
Facility Location: _____

Project No. _____
Date: _____

CUTTING, WELDING, AND BURNING PERMIT

DATE PERMIT ISSUED: _____
SHIFT: _____
LOCATION OF WORK: Building: _____
Elevation: _____
Specific Location: _____
REQUESTED BY: _____
POSITION/TITLE: _____

Permit must be posted before any work may begin. Necessary precautions have been taken to prevent fire and to protect any material or equipment which may be endangered. Work areas and all adjacent areas where sparks might spread have been inspected and no fire conditions exist.

VERIFIED BY: _____
(Print)

(Signature)
POSITION/TITLE _____

Critical Lift Permit

Section 1- Approvals and Documentation:

A. Identification:

Job Number: _____ Location: _____

Lift Identification Names: _____

Date of Lift: _____ Time: _____

Lift Description: _____

B. Approvals (Signatures Required):

Site Manager: _____ Date: _____
(If over 50 Tons)

Project Manager: _____ Date: _____
(If over 50 Tons)

Project Foreman: _____ Date: _____

Operator: _____ Date: _____

Engineering: _____ Date: _____
(If engineering designs are used)

C. Attachments:

1. Operator certifications.
2. Capacity Certificates and Inspection Reports for all lifting equipment.
3. Inspection Reports for all Rigging Equipment.
4. Rigging Diagram.
5. Free Body Diagram.
6. Insurance Certificates.

Section II - Pre-Lift Planning

A. Pre-Lift Checklist

		(Initials)	
		(Yes)	(NO)
1.	Has an inventory of equipment been generated?	_____	_____
2.	Have weather conditions been considered?	_____	_____
3.	Have the general safety precautions been reviewed?	_____	_____
4.	Have the electrical safety procedures been reviewed?	_____	_____
5.	Have the safe rigging practices been implemented?	_____	_____
6.	Have the safety precautions for lifting in tight quarters and confined spaces been reviewed?	_____	_____
7.	Has a method of attachment and handling been determined?	_____	_____
8.	Are all lifting lugs engineered to specifications?	_____	_____
9.	Has the matting been inspected and approved?	_____	_____
10.	Has the stability of the ground been assured?	_____	_____
11.	Is a tag line going to be used?	_____	_____
12.	Have disconnecting/connecting means been developed?	_____	_____
13.	Has the orientation of equipment been confirmed?	_____	_____
14.	Is survey equipment required?	_____	_____
15.	Is a pre-lift meeting planned?	_____	_____
16.	Is the total weight below 95% of capacity?	_____	_____
17.	Are all required approvals signed?	_____	_____

Section III - Load and Capacity:

A. Weight of Equipment - Live Load

	New ()	Used ()	
1. Equipment Condition	_____	_____	
2. Weight of Equipment Empty	_____	_____	lbs.
3. Weight of Attachments	_____	_____	lbs.
a. Platforms and Ladders	_____	_____	lbs.
b. Piping and Accessories	_____	_____	lbs.
c. Liquid Inside	_____	_____	lbs.
d. Dirt and Debris	_____	_____	lbs.
e. Internal Trays of Liners	_____	_____	lbs.
4. Total Weight of Equipment	_____	_____	lbs.

B. Total Load

Erection Crane

1. Percent of Equipment Weight	_____		%
2. Amount of Equipment Weight	_____		lbs.
3. Weight of Headache Ball	_____		lbs.
4. Weight of Block	_____		lbs.
5. Weight of Lift Bar	_____		lbs.
6. Weight of Slings and Shackles	_____		lbs.
7. Weight of Jib - Erected	_____		lbs.
Stored	_____		lbs.
8. Weight of Jib Headache Ball	_____		lbs.
9. Weight of Cable (Full Load)	_____		lbs.
10. Auxiliary Boom Head	_____		lbs.
11. (Others) _____	_____		lbs.
TOTAL WEIGHT	_____		lbs.

Tailing Crane

1. Percent of Equipment Weight	_____		%
2. Amount of Equipment Weight	_____		lbs.
3. Weight of headache Ball	_____		lbs.
4. Weight of Block	_____		lbs.
5. Weight of Lift Bar	_____		lbs.
6. Weight of Slings and Shackles	_____		lbs.
7. Weight of Jib - Erected	_____		lbs.
Stored	_____		lbs.
8. Weight of Jib Headache Ball	_____		lbs.
9. Weight of Cable (Full Load)	_____		lbs.
10. Auxiliary Boom Head	_____		lbs.
11. (Other) _____	_____		lbs.
TOTAL WEIGHT	_____		lbs.

C. Capacities of the Crane

Erection Crane Configuration

- 1. Type of Crane _____
- 2. Rated Capacity _____ tons
- 3. Lifting Arrangement
 - a. Max. Radius During Lift _____ ft.
 - b. Length of Boom _____ ft.
 - c. Angle of Boom At Pick _____ degrees
 - d. Angle of Boom at Set _____ degrees
 - e. Rated Capacity under Most Severe Conditions
 - 1. Over Rear _____ lbs.
 - 2. Over Front _____ lbs.
 - 3. Over Side _____ lbs.
 - f. Rated Capacity for lift _____ lbs.

- 4. Jib
 - a. Is the jib to be used? Yes () No ()
 - b. Length of jib _____ ft.
 - c. Jib Angle _____ degrees
 - d. Rated jib capacity _____ lbs.

- 5. Cable
 - a. Number of Parts _____
 - b. Size of Cable _____ inch
 - c. Maximum capacity _____ lbs.

D. Percent of Cranes' Capacity

$$\frac{\text{Total Weight}}{\text{Rated Capacity}} \times 100 = \text{_____} \%$$

E. Sizing of Slings

- 1. Sling Selection
 - a. Type of Arrangement _____
 - b. Number of Slings on Hook _____
 - c. Sling Size _____ inch
 - d. Sling Length _____ ft.
 - e. Rated Capacity _____ lbs.

Tailing Crane Configuration

1. Type of Crane _____
2. Rated Capacity _____ tons
3. Lifting Arrangement
 - a. Max. Radius During Lift _____ ft
 - b. Length of Boom _____ ft
 - c. Angle of Boom at Pick _____ degrees
 - d. Angle of Boom at Set _____ degrees
 - e. Rated Capacity Under Most Severe Conditions
 1. Over Rear _____ lbs.
 2. Over Front _____ lbs.
 3. Over Side _____ lbs.
 - f. Rated Capacity for Lift _____ lbs.

4. Jib
 - a. Is the Jib to be used Yes () No ()
 - b. Length of Jib _____ ft
 - c. Jib Angle _____ degrees
 - d. Rated Jib Capacity _____ lbs.
5. Cable
 - a. Number of Parts _____
 - b. Size of Cable _____ inch
 - c. Maximum Capacity _____ lbs.
6. Percent of Cranes Capacity
$$\frac{\text{Total Weight}}{\text{Rated Capacity}} \times 100 = \text{_____} \%$$
7. Sizing of Slings
 1. Sling Selection
 - a. Type of Arrangement _____
 - b. Number of Slings on Hook _____
 - c. Sling Size _____ inch
 - d. Sling Length _____ ft
 - e. Rated Capacity _____ lbs.

**Site Safety and Health Plan
SOLUTIA ANNISTON FACILITY**

**APPENDIX B
CONFINED SPACE ENTRY
PROCEDURES**

Confined Space Entry Program

1.0 INTRODUCTION

The Confined Space Entry Program includes the identification process for the confined spaces found on a Contractor job site. Entry requirements, including proper employee training and atmospheric testing, are also included in the program. A permit system has been written for the purpose of permit-required confined spaces, as well as specific duties of employees involved in confined space entry. Regulations concerning contract labor and emergency rescue have also been included in the program.

The Confined Space Entry Program was written in order to provide CONTRACTOR' employees and management with the understanding, knowledge, and skills necessary for the safe performance of the duties associated with confined spaces. Proper execution of this program will also ensure compliance with the Code of Federal Regulations (CFR) Title 29, Part 1910.146, which is entitled *Permit Required Confined Spaces for General Industry*.

2.0 DEFINITIONS

- **Acceptable entry conditions** are the conditions that must exist in a permit space to allow entry and ensure that employees involved with a permit-required confined space can safely enter into and work within the space.
- **Attendant** is an individual stationed outside one or more permit spaces who monitors the authorized entrants. The attendant also performs all attendants' duties assigned in the employers permit space program.
- **Authorized entrant** describes an employee who is authorized by the employer to enter a permit space.
- **Confined Space** is an area that: 1) is large enough and so configured that an employee can bodily enter and perform assigned work; 2) has limited or restricted means for entry or exit (i.e. tanks, silos, vaults, furnaces, and sewers are spaces with means of limited entry) ; and 3) is not designed for continuous employee occupancy.
- **Emergency** is any occurrence (including failure of hazard control or monitoring equipment) or event, internal or external, to the permit space that could endanger entrants.

- **Engulfment** means the surrounding and effective capture of a person by a substance that can be aspirated to cause death by filling or plugging the respiratory system, or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.
- **Entry** is the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.
- **Entry permit** is the written or printed document that is provided by the employer to allow and control entry into a permit space and that contains the proper information specific to the space.
- **Entry Supervisor** is the person (such as the employer, foreman, or health and safety officer) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorized entry operations, and for terminating entry as required.
- **Hazardous atmosphere** is an atmosphere that may expose employees to the risk of death, impairment of ability to self-rescue, injury, or acute illness.
- **Hot work permit** is the employer's written authorization to perform operations (i.e. welding, riveting, burning, and heating) capable of providing an ignition source.
- **Non-permit confined space** is a confined space that should not contain or (with respect to atmospheric hazards) have the potential to contain any hazard capable of causing death or serious physical harm.
- **Permit-required confined space (PRCS)** is a confined space that includes one or more of the following: 1) contains or has a potential to contain a hazardous material; 2) contains a material that has the potential for engulfing an entrant; 3) has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or 4) contains any other recognized serious safety or health hazard.
- **Permit system** is the employer's written procedure for preparing and issuing permits for entry and for returning the permit space to service following termination of entry.
- **Rescue service** includes the personnel designated to rescue employees from permit spaces.

- **Retrieval system** includes the equipment (including a retrieval line, chest or full-body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from permit spaces.

3.0 IDENTIFICATION OF CONFINED SPACES

In order to prepare a Confined Space Program for CONTRACTOR, it is necessary to identify the confined spaces and the specific hazards associated with each confined space.

Each confined space can be identified as a PRCS or non-permit confined space by the same decision making process. If the space is determined to be a confined space by definition of 29 CFR 1910.146, further analysis can be done to determine if these spaces are PRCSs. If any of the four PRCS qualifications defined by 29 CFR 1910.146 are present, the spaces are PRCSs. Material Safety Data Sheets (MSDS) may also be reviewed to provide an understanding of any chemical hazards associated with the confined spaces.

4.0 ENTRY REQUIREMENTS FOR PRCS

All entries into permit-required confined spaces shall be carried out in strict accordance with the following requirements:

- 4.1** Any conditions making it unsafe to remove the cover of the permit space shall be eliminated before the cover is removed.
- 4.2** When entrance covers are removed (such as hatches in ventilation systems, heaters or manholes), the opening shall be promptly guarded by a railing, temporary cover, or other temporary barrier that will protect each employee working in the space from foreign objects entering the space.
- 4.3** CONTRACTOR shall inform employees about the confined spaces located on the premises by posting danger signs or other equally effective means, of the existence, location, and the danger posed by the permit spaces. A sign reading "DANGER--PERMIT REQUIRED CONFINED SPACE, DO NOT ENTER" must be used on all permit required confined spaces to satisfy the federal requirement for a sign.
- 4.4** Before an employee enters the space, the internal atmosphere shall be tested with a calibrated direct-reading instrument for the following conditions, in the following order:
 - Oxygen content
 - Flammable gases and/or vapors
 - Potentially toxic air contaminants

- 4.5** A hazardous atmosphere shall not be present within the space whenever any employee is inside the space.
- 4.6** Continuous forced-air ventilation shall be used according to the following guidelines:
- An employee may not enter the space until the forced-air ventilation has eliminated any hazardous atmosphere.
 - The forced-air ventilation system shall be so directed as to ventilate the immediate areas where an employee is or will be present within the space and will continue until all employees have left the space.
 - The air supply for the forced-air ventilation shall be from a clean source and must not increase the hazards in the space.
 - The air supply must be of sufficient volume to replace the air within the confined space twenty (20) times per hour.
- 4.7** The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced-air ventilation is preventing the accumulation of a hazardous atmosphere.
- 4.8** If a hazardous atmosphere is detected during entry:
- Each employee shall leave the confined space immediately;
 - The space shall be evaluated to determine how the hazardous atmosphere developed; and
 - Measures, such as using appropriate PPE, shall be implemented to protect employees from a hazardous atmosphere before any subsequent entry takes place.
- 4.9** Prior to entry by any employee, the entry supervisor will verify that the space is safe for entry and that the measures outlined in Section 4, Parts 4.1 through 4.5, have been taken. This verification will be in the form of a written permit and pre-entry checklist that contains, as a minimum, the date, the location of the space, and the signature of the person providing the permit. The permit shall be executed before entry and shall be made available to each employee entering the space.

5.0 TESTING

Testing and monitoring will be used to evaluate conditions in the PRCS every time entry operations will be conducted. Testing will be accomplished with properly calibrated instruments in accordance with the following guidelines:

- 5.1** Conditions will be tested in the PRCS to determine if acceptable entry conditions exist before entry is authorized to begin;
- 5.2** The PRCS will be monitored, as necessary, to determine if acceptable entry conditions are being maintained throughout the entry operation;
- 5.3** When testing for atmospheric hazards is conducted, oxygen will always be tested first, followed by tests for combustible gases and vapors, and then for toxic gases and vapors; and
- 5.4** Entry into a confined space for any type of hot work (welding etc.) shall be prohibited when air monitoring indicates that the concentration of flammable gases in the atmosphere is greater than 10% of the lower flammability limit (LFL).

6.0 PERMIT SYSTEM

- 6.1** Before entry is allowed, CONTRACTOR shall document the completion of entry requirements (Section 4.0).
- 6.2** Before entry begins, the Entry Supervisor identified on the permit shall sign the entry permit to authorize entry.
- 6.3** The completed permit will be made available at the time of entry to all authorized entrants by posting it at the entry portal.
- 6.4** The duration of the permit will not exceed the time required to complete the assigned job or task.
- 6.5** The Entry Supervisor shall terminate entry and cancel the entry permit when:
 - The entry operations covered by the permit have been completed.
 - A condition not allowed under the entry permit arises in or near the permit space.
- 6.6** CONTRACTOR shall retain each canceled entry permit for at least one year to facilitate the review of the permit required confined space program. Any problems encountered during an entry operation shall be

noted on the applicable permit so that appropriate revisions to the confined space program can be made.

7.0 ENTRY PERMIT

A permit shall be established for all PRCS entries and shall include the following, at minimum:

- 7.1 The date of entry, the location of the entry, the names or identification of entrants, and the type of work which will be conducted in the confined space;
- 7.2 The hazards to be controlled or eliminated prior to proceeding with the entry;
- 7.3 Safety equipment required to perform the job;
- 7.4 Safety precautions required to perform the job;
- 7.5 The type of atmospheric testing required and the results of those tests;
- 7.6 The type of equipment which will be necessary for rescue and how rescue personnel will be summoned in the event of an emergency;
- 7.7 The duration of the permit. (The duration of the permit should not exceed the time needed to complete the assigned work);
- 7.8 The authorized entrants within the permit space; and
- 7.9 The personnel, by name, currently serving as attendants.

An Entry Checklist (Form 1) and an Entry Permit (Form 2) have been attached at end of this program.

8.0 TRAINING

- 8.1 All CONTRACTOR employees authorized to enter and work in PRCSs shall be trained before assignment to such duties, when there is a change in assigned duties, and whenever a change in PRCS operations results in exposure to a new hazard. Additional training will be required if there is reason to believe that there is a deviation from PRCS procedures or if inadequacies in the employee's knowledge of these procedures are noted. The training will include at a minimum:

- Hazard Recognition
- Communication
- Protective Equipment
- Lock-out/Tag-out Procedures
- Respiratory Protection (if applicable)
- Self-Rescue
- Permit System

8.2 In addition to the above, the attendant must be trained in the following:

- Tracking the number of entrants
- Effects of hazard exposure
- Emergency procedures as they pertain to the attendant
- Monitoring multiple spaces
- Rescue procedures

8.2 A written certification indicating that the above training has been accomplished will be provided for each employee who will participate in an entry operation. The certification will contain each employee's name, the signatures or initials of the trainers, and the dates of the training.

9.0 DUTIES OF ENTRANT

9.1 Know the hazards that may be encountered during entry, including information on the mode of entry, signs or symptoms, and consequences of exposure;

9.2 Know proper use of equipment provided for entry operation;

9.3 Communicate with the attendant as necessary;

9.4 Alert the attendant whenever:

- The entrant recognizes any warning sign or symptoms of exposure to a dangerous situation; or
- The entrant detects a prohibited condition.

9.5 Exit from the PRCS as quickly as possible whenever:

- An order to evacuate is given by the attendant or the entry supervisor;
- The entrant recognizes any warning sign or symptoms of exposure to a dangerous situation;
- The entrant detects a restricted condition; or
- An evacuation alarm is activated.

10.0 DUTIES OF ATTENDANT

- 10.1** An attendant shall be stationed outside the confined work space at all times during confined space entry, work, and exit. The attendant's sole function is to attend to the confined space entrants and he/she shall not be assigned other duties or responsibilities.
- 10.2** The attendant shall be knowledgeable of and be able to recognize potential permit confined space hazards and be trained to perform his/her duties.
- 10.3** The attendant shall maintain continuous count of all entrants in the confined space.
- 10.4** The attendant shall monitor activities within and outside the confined space to determine the entrants' safety.
-
- 10.5** The attendant shall maintain effective and continuous communication with entrants during confined space entry, work, and exit. Communication equipment such as hand held radios will be provided by CONTRACTOR at no charge to the employee.
- 10.6** The attendants shall order entrants to evacuate the confined space if the attendant:
- Observes a condition which is not allowed in the entry permit;
 - Detects behavioral effects of hazard exposure, a situation outside the confined space which could endanger the entrants, or an uncontrolled hazard within the confined space; must leave the work station; or
 - If monitoring entry in more than one confined space, must focus attention on the rescue of entrants of one of those spaces.
- 10.7** The attendants shall notify rescue and other emergency services immediately upon determining that entrants need to escape from confined space.
- 10.8** If unauthorized person(s) approach a confined space while permit actions are in progress, the attendant shall inform the unauthorized person(s) to stay away from the confined space work area; if unauthorized person(s) enter a confined space the attendant shall instruct the unauthorized person(s) to immediately exit the confined space and shall inform the authorized entrants of the unauthorized entry.
- 10.9** The attendant shall not enter the confined space to attempt rescue of the entrants but shall use any rescue equipment provided and perform any

other assigned rescue and emergency duties which do not require entry into the confined space.

11.0 ENTRY SUPERVISOR DUTIES

- 11.1** Knows hazards that may be faced during entry, including information on the mode, signs, or symptoms and consequences of exposure.
- 11.2** Verifies by checking that appropriate entries have been made on the permit, that all tests specified by the permit have been conducted, and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.
- 11.3** Terminates the entry and cancels the permit as required when:
- The entry operations covered in the permit have been completed.
 - A condition that is not allowed under the entry permit arises in or near the permit space.
- 11.4** Verifies that rescue services are available and that the means for summoning them are operable.
- 11.5** Removes unauthorized individuals who enter or who attempt to enter the permit space during entry operations.
- 11.6** Determines that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.

12.0 CONTRACT ENTRY INTO PRCS

- 12.1** When CONTRACTOR arranges to have employees of another employer (contractor) perform work that involves permit space entry, CONTRACTOR shall:
- Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit confined space program meeting the requirements of this section;
 - Apprise the contractor of the elements, including the hazards identified and the host employer's experience with the space, that make the space in question a permit space;
 - Apprise the contractor of any precautions or procedures that CONTRACTOR has implemented for the protection of employees in or near permit spaces where contractor personnel will be working;

- Coordinate entry operations with the contractor, when both CONTRACTOR personnel and contractor personnel will be working in or near permit spaces;
- Debrief the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in permit spaces during entry operations.

12.2 Any contractor who is retained to perform permit confined space entry operations shall:

- Posses certification indicating that necessary training outlined in Section 8, parts 1 through 3 has been accomplished;
- Obtain any available information regarding permit space hazards and entry operations from the host employer.
- Coordinate entry operations with CONTRACTOR, when both CONTRACTOR personnel and contractor personnel will be working in or near permit spaces;
- Inform CONTRACTOR of the permit space program that the contractor will follow and of any hazards confronted or created in permit spaces, either through a debriefing or during the entry operation.

13.0 RESCUE AND EMERGENCY SERVICES

13.1 The following requirements apply to employers who have employees enter permit spaces to perform rescue services.

- CONTRACTOR shall ensure that each member of the rescue service is provided with, and is trained to properly use, the personal protective equipment and rescue equipment necessary for making rescues from permit spaces.
- Each member of the rescue service shall be trained to perform the assigned rescue duties. Each member of the rescue service shall also receive the training required of authorized entrants as outlined in Section 9.
- Each member of the rescue service shall practice making permit space rescues at least once every 12 months, by means of simulated rescue operations in which they remove dummies, mannequins, or actual persons from the actual permit spaces or from representative permit spaces. Representative permit spaces shall, with respect to opening size, configuration, and accessibility, simulate the types of permit spaces from which rescue is to be performed.
- Each member of the rescue service shall be trained in basic first-aid and in cardiopulmonary resuscitation (CPR). At least one member of

the rescue service holding current certification in first aid and in CPR shall be available.

13.2 When CONTRACTOR arranges to have persons other than the CONTRACTOR' employees perform permit space rescue, the host employer shall:

- Inform the rescue service of the hazards they may confront when called on to perform rescue on a CONTRACTOR site; and
- Provide the rescue service with access to all permit spaces from which rescue may be necessary so that the rescue service can develop appropriate rescue plans and practice rescue operations.

13.3 To facilitate non-entry rescue, retrieval systems or methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of injury or would not contribute to the rescue of the entrant. Retrieval systems shall meet the following requirements:

- Each authorized entrant shall use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level, or above the entrant's head. Wristlets may be used instead of the chest or full body harness if CONTRACTOR can demonstrate that the use of a chest or full body harness is unfeasible or creates a greater hazard and that the use of wristlets is the safest and most effective alternative.
- The other end of the retrieval line shall be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device shall be available to retrieve personnel from vertical type permit spaces more than 5 feet (1.52 m) deep.
- If an injured entrant is exposed to a substance for which a Material Safety Data Sheet (MSDS) or other similar written information is required to be kept at the work site, that MSDS or written information shall be made available to the medical facility treating the exposed entrant.

References

Code of Federal Regulations (CFR) 1910.146, *Permit Required Confined Spaces for General Industry*;

American National Standard Z117.1-1995; *Safety Requirements for Confined Spaces*

NIOSH *Criteria for Recommended Standard; Working in Confined Spaces*

Confined Space Entry Permit

----- Confined Space ----- Hazardous Area -----

Permit Valid for Eight (8) Hours Only. All Copies of Permit Will Remain at Jobsite Until Job is Completed.

Site Location and Description _____
 Purpose of Entry _____

Supervisor(s) in Charge of Crew _____ Phone Number _____ Type of Crew _____

*** Bold Denotes Minimum Requirements to be Completed and Reviewed Prior to Entry***

Requirements Completed	Date	Time	Requirements Completed	Date	Time
Lock-out/De-energize/ Try-out			Full- Body Harness with "D" Ring		
Line(s) Broken- Capped- Blanked			Emergency Escape Retrieval Equipment		
Purge-Flush and Vent			Lifelines		
Ventilation			Fire Extinguishers		
Secure Area (Post and Flag)			Lighting (Explosive Proof)		
Breathing Apparatus			Protective Clothing		
Resuscitator- Inhalator			Respirator(s) (Air Purifying)		
Standby Safety Personnel			Burning and Welding Permit		
Radio					

Note: Items That Do Not Apply- Enter N/A in the Blank

Continuous Monitoring Test to be taken Every Two Hours:

Permissible Entry Level:

Percent O₂ 19.5% to 23.5%

Lower Flammable Limit (LEL) Under 10%

Carbon Monoxide 35 ppm

Contaminants:

TWA: _____ STEL: _____

TWA: _____ STEL: _____

TWA: _____ STEL: _____

TWA= Time Weighted Average: Employee Can Work in the area 8 hours (or longer with appropriate respiratory protection)

STEL= Short-Term Exposure Limit: Employee Can Work in the area for up to 15 minutes.

Remarks:

Gas Tester Name and Check No. _____ Instruments Used: _____ Model and /or Type _____ Serial and/or Unit No. _____

Safety Standby Persons _____

Supervisor Authorizing Entry _____

All Above Conditions Satisfied Yes No

Department _____ Phone No. _____

Ambulance _____

Safety _____

Original to _____

Fire _____

Gas Company _____

Copy to _____

**Site Safety and Health Plan
SOLUTIA ANNISTON FACILITY**

**APPENDIX C
LOCK OUT/TAGOUT**

CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

1.0 PURPOSE

The purpose of this procedure is to provide written instructions and guidelines for preventing the hazard of accidental start-up or energizing of equipment, lighting, piping, etc. while it is being worked upon, moved or adjusted so as to prevent accidental exposure to hazardous energy.

2.0 RESPONSIBILITY

It is the responsibility of the qualified person to implement the requirements of this procedure.

3.0 REQUIREMENTS

Employees shall not be allowed to work in proximity to hazardous energy sources in which during the course of work the employee could contact the energy source unless the source is de-energized or effectively guarded.

Servicing and/or maintenance of or around machines, equipment, lighting or piping that could cause injury if accidentally started, energized, pressurized, etc. shall not be allowed until lockout/tagout has been completed to ensure employee safety.

4.0 REFERENCES

29 CFR 1910.147
29 CFR 1926.416 & 1926.417

5.0 DEFINITIONS

Affected Employee: An employee whose job requires him to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout.

Authorized Employee: A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment.
Capable of being Locked Out: An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it.

Energized: Connected to an energy source or containing residual or stored energy.

Energy Isolating Device: A mechanical device (switch, valve, etc.) that physically prevents the transmission or release of energy.

WILLIAMS ENVIRONMENTAL SERVICES, INC.

CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT) SAFETY PROCEDURE #1205

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Energy Source: Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, kinetic or other energy.

Lockout: The placement of a lockout device on an energy isolating device in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout Device: A device that utilizes a positive means, such as a lock (either key or combination type) to hold an energy isolating device in a safe position and prevent the energizing of a machine or equipment.

Qualified Person: A person designated by the employer as capable, by education and/or training, of anticipating, recognizing and evaluating employee exposure to a hazardous energy or other unsafe condition working on/or around equipment and/or machinery.

Tagout: The act of placing a tagout device on an energy isolating device, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout Device: A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

6.0 PROCEDURE

- 6.1 The following steps shall be used to ensure that the machine, equipment, lighting or piping is stopped or de-energized, isolated from all potentially hazardous energy sources and locked out before employees perform any servicing or maintenance where the unexpected energization or start-up of the machine or equipment or release of stored energy could cause injury.

- 6.2 All employees are required to comply with the restrictions and limitations imposed upon them during the use of lockout. The authorized employees are required to perform the lockout in accordance with this procedure. All employees, upon observing a machine or piece of equipment which is locked out to perform servicing of maintenance shall not attempt to start, energize or use that machine or equipment.
- 6.3 Sequence of Lockout
 - 6.3.1 Notify all affected employees that servicing or maintenance is required on a machine, equipment, lighting or piping and that the machine or equipment must be shut down and locked out to perform the servicing or maintenance.
 - 6.3.2 The authorized person shall refer to the machine, equipment, lighting or piping data sheets to identify the type and magnitude of energy that the machine or equipment utilizes, shall understand the hazards of the energy, and shall know the methods to control the energy.
 - 6.3.3 If the machine, equipment, lighting or piping is operating, shut it down by the normal stopping procedure. (depress stop button, open switch, close valve, etc.)
 - 6.3.4 Deactivate the energy isolating device(s) so that the machine or equipment is isolated from the energy source.
 - 6.3.5 Lockout the energy isolating device with assigned individual lock(s).
 - 6.3.6 Stored up residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam or water pressure, etc.) must be dissipated or restrained by methods, such as grounding, blocking, bleeding down, etc.
 - 6.3.7 Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate. Note: Return operating control(s) to neutral or "off" position after verifying the isolation of the equipment.
 - 6.3.8 The machine or equipment is now locked out.
- 6.4 Restoring Equipment to Service

- 6.4.1 Check the machine or equipment and the immediate area around the machine or equipment to ensure that non-essential items have been removed and the machine or equipment components are operationally intact.
- 6.4.2 Check the work area to ensure that all employees have been safely positioned or removed from the area.
- 6.4.3 Verify that the control(s) are in neutral.
- 6.4.4 Remove the lockout devices and re-energize the machine or equipment.
- 6.4.5 Notify affected employees that the servicing or maintenance is completed and the machine or equipment is ready for use.

6.5 If an energy isolating device is not capable of being locked out, the employer's energy control program shall utilize a tagout system.

6.5.1 Tagout devices, including their means of attachment, shall be substantial enough to prevent inadvertent or accidental removal. Tagout device attachment means shall be of non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all environment-tolerant nylon cable tie.

6.5.2 Tagout devices shall warn against hazardous conditions if the machine or equipment is energized and shall include a legend, such as the following:

Do Not Start	Do Not Open	Do Not Close
Do Not Energize	Do Not Operate	

The tag should also identify CONTRACTOR Environmental as the contractor implementing the lockout/tagout and the date implemented.

6.5.3 When a tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defected.

7.0 TRAINING

- 7.1 Each authorized employee shall be trained in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the work place, and the methods and means necessary for energy isolation and control.
- 7.2 Each affected employee shall be instructed in the purpose and use of the energy control procedure.

- 7.3 All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to re-start or re-energize machines or equipment which are locked out or tagged out.
- 7.4 When tagout systems are used, employees will also be trained in the following limitations of tags:
 - 7.4.1 Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.
 - 7.4.2 Tags must be legible and understandable by all authorized employees, affected employees and all other employees whose work operations are or may be in the area, in order to be effective.
 - 7.4.3 Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the work place.
 - 7.4.4 Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.
 - 7.4.5 Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.
- 7.5 Employee retraining shall be provided whenever job conditions change, machinery changes or equipment processes change that present a new hazard. Also, whenever there is a change in energy control procedures or when a periodic inspection reveals inadequate knowledge of employees.
- 7.6 Certification of Training
 - 7.6.1 The certification shall contain each employee's name, social security number and date of training.

8.0 DOCUMENTATION

All documentation generated as a result of training shall be maintained in secure storage throughout the life of the contract and transmitted to the CONTRACTOR Environmental office for storage when the job is completed.

**Site Safety and Health Plan
SOLUTIA ANNISTON FACILITY**

**APPENDIX D
MATERIAL SAFETY DATA SHEETS**

SOLUTIONIA, INC.
Anniston, Alabama
Material Safety Data Sheets

Table of Contents

1. Diesel Fuel
2. Ethylene Glycol
3. Gasoline
4. Grease (multipurpose)
5. Liqui-nox
6. Motor Oil
7. PCB
8. Toilet Deodorizer

MSDS Sheets will be provided upon chemical's arrival on site.

**Site Safety and Health Plan
SOLUTIA ANNISTON FACILITY**

**APPENDIX E
RESPIRATORY PROTECTION
PROGRAM**

RESPIRATORY PROTECTION

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- 10.0 RESPIRATORS FOR EMERGENCY USE
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- 12.0 RECORDKEEPING
- 13.0 EXHIBITS

1.0 PURPOSE

The purpose of this procedure is to establish guidelines and requirements for use and care of respiratory protective equipment.

2.0 DEFINITIONS

Air-Purifying Respirator – a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

Atmosphere-Supplying Respirator – a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

Canister or Cartridge – a container with a filter, sorbent, or catalyst, or combination of these items, which removes specific contaminants from the air passed through the container.

Demand Respirator – an atmosphere-supplying respirator that admits breathing air to the facepiece only when a negative pressure is created inside the facepiece by inhalation.

Emergency Situation – any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that may or does result in an uncontrolled significant release of airborne contaminant.

Employee Exposure – exposure to a concentration of an airborne contaminant that would occur if the employee were not using respiratory protection.

End-of-Service-Life Indicator – a system that warns the respirator user of the approach of the end of adequate respiratory protection, for example, that the sorbent is approaching saturation or is no longer effective.

Filter or Air Purifying Element – a component used in respirators to remove solid or liquid aerosols from the inspired air.

Filtering Facepiece (dusk mask) – a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium.

Fit Factor – a quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

Fit Test – the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

Helmet – a rigid respiratory inlet covering that also provides head protection against impact and penetration.

High Efficiency Particulate Air (HEPA) Filter – a filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter.

Hood – a respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

Immediately Dangerous to Life or Health (IDLH) – an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair and individual's ability to escape from a dangerous atmosphere.

Loose-Fitting Facepiece – a respiratory inlet covering that is designed to form a partial seal with the face.

Negative Pressure Respirator (tight-fitting) – a respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

Physician or Other licensed Health Care Professional (PLHCP) – an individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services required by paragraph (e) of the standard.

Positive Pressure Respirator – a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

Powered Air-Purifying Respirator – an air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

Pressure Demand Respirator – a positive pressure atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

Qualitative Fit Test (QLFT) – a pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to the test agent.

Quantitative Fit Test (QNFT) – an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

Respiratory Inlet Covering – that portion of a respirator that forms the protective barrier between the user's respiratory tract and an air-purifying device or breathing air source, or both. It may be a facepiece, hood, helmet, suit, or a mouthpiece respirator with nose clamp.

Service Life – the period of time that a respirator, filter or sorbent, or other respiratory equipment provides adequate protection to the wearer.

Tight-Fitting Facepiece – a respirator inlet covering that forms a complete seal with the face.

User Seal Check – an action conducted by the respirator user to determine if the respirator is properly seated to the face.

3.0 PERMISSIBLE PRACTICE

In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, vapors, or sprays, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as

far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to this procedure.

4.0 REQUIREMENTS

This written respiratory protection program has been established in accordance with the requirements of OSHA 29 CFR 1926.103 and 1910.134.

- a. The project manager, site superintendent, and/or safety engineer shall identify and evaluate the respiratory hazard(s) in the workplace. This evaluation shall include a reasonable estimate of employee exposures to respiratory hazard(s) and identification of the contaminant's chemical state and physical form. Where the project manager, superintendent, and/or safety engineer cannot identify or reasonably estimate employee exposure, the atmosphere shall be considered to be Immediately Dangerous to Life and Health (IDLH).

Respirators for IDLH Atmospheres:

- i. A full facepiece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes, or
 - ii. A combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.
 - iii. Respirators provided only for escape from IDLH atmospheres shall be NIOSH certified for escape from the atmosphere in which they will be used.
- b. Respirators shall be selected on basis of hazards to which the employees are exposed.
 - c. The employee shall be instructed and trained in the proper use of respirators, inspection, care, maintenance, and limitations of the respirator(s) to be used.
 - d. Respirators shall be required until engineering or work practice controls are established and effectively lower exposure to acceptable levels in emergency situations.
 - e. Employees shall not use a respirator if the physician or licensed health care professional (PLHCP) determines it to be unsafe for the person.
 - f. Respirators shall be provided at no cost to all employees required to wear respirators.
 - g. For protection against gases and vapors, canisters/cartridges shall be changed in accordance with the change-out-schedule established at the jobsite or utilize end-of-service-life-indicator's (ESLI's) to determine when canisters/cartridges shall be changed. For protection against particulates, filters certified by NIOSH under 30 CFR part 11 as high efficiency particulate air (HEPA) filters, or filters

certified by NIOSH under 42 CFR part 84. For contaminants consisting primarily of particles with mass median aerodynamic diameters (MMAD) of at least 2 micrometers, any filter certified for particulates by NIOSH shall be used. Particulate filters shall be changed out when the employee notices a resistance in breathing. Employees may exit the work area to wash their faces and respirators whenever necessary to alleviate skin irritation.

- h. Employees shall use respiratory protection in accordance with instructions and training received.

5.0 RESPONSIBILITY

It is the responsibility of the project manager or his designee at each jobsite to insure that each person entering regulated areas is properly trained and that each person wears the required respiratory protection equipment while inside these regulated areas.

6.0 MEDICAL EVALUATION

A medical evaluation shall be provided for each employee required to wear a respirator, before the employee is fit tested or required to use the respirator in the workplace.

A Physician or other Licensed Health Care Professional (PLHCP) shall be identified to perform medical evaluations using the medical questionnaire or an initial medical examination that obtains the same information as the medical questionnaire.

Follow-up medical examinations shall be provided for the following employees:

- a. Any employee who gives a positive response to any question among 1 through 8 in section 2 Part A of the medical questionnaire.
- b. Any employee whose initial medical examination demonstrates the need for a follow-up medical examination.

6.1 ADMINISTRATION OF THE MEDICAL QUESTIONNAIRE

The medical questionnaire and examinations shall be administered confidentially during the employee's normal working hours.

The questionnaire shall be administered in a manner that ensures that the employee understands its contents.

The employee shall be provided with the opportunity to discuss the questionnaire and examination results with the PLHCP.

6.2 MEDICAL DETERMINATION

A written recommendation shall be obtained from the PLHCP regarding the employee's ability to use the respirator(s). The recommendation shall provide only the following information:

- a. Any limitations on respirator use related to the medical condition of the employee; or

- b. Relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator;
- c. The need, if any, for follow-up medical evaluations; and
- d. A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.

6.3 ADDITIONAL MEDICAL EVALUATIONS

At a minimum additional medical evaluations shall be provide if:

- a. An employee reports medical signs or symptoms that are related to the ability to use a respirator;
- b. A PLHCP, supervisor, or program administrator determines that an employee needs to be re-evaluated;
- c. Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicate a need for employee re-evaluation; or
- d. A change occurs in workplace conditions that may result in a substantial increase in the physiological burden placed on the employee.

7.0 SELECTION AND USE OF RESPIRATORY PROTECTIVE EQUIPMENT

The selection of respiratory protection equipment for use in any operation will consider the following factors:

The nature of the hazard(s) associated with the operation or process;

The nature of the work operation or process;

The physical and chemical properties of the contaminant(s);

The adverse health effects of the contaminant(s);

Warning properties of the contaminant(s);

The relevant Permissible Exposure Limit(s);

The measured concentration(s) of the contaminant(s);

Worker activities in the area of the operation and the potential stress of these work conditions on employees wearing the respirators;

The period of time respiratory protection will be worn by employees during the work shift;

The physical characteristics, functional capabilities, and limitations of the respirator; and

Respirator fit test results.

Respirators shall be selected from those approved by the National Institute for Occupational Safety and Health (NIOSH) for use in atmospheres containing the hazard from which the employee must be protected. A NIOSH approved respirator contains the following: An assigned identification number placed on each unit; a label identifying the type of hazard the respirator is designed to protect against; additional information on the label which indicates limitations and identifies the component parts approved for use with the basic unit.

RESPIRATOR SYSTEMS

Respirator systems are described as follows:

Half-face: Half-mask air-purifying respirator with appropriate filters.

Full-face: Full facepiece, air purifying respirator with appropriate filters.

PAPR: Powered air-purifying respirator, with appropriate filters, that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

Atmosphere-Supplying Respirator: A respirator, that supplies the respirator user with breathing air from a source independent of the ambient atmosphere.

CE, Abrasive Blast Hood: An atmosphere-supplying respirator with head and shoulder protection from rebound of abrasive materials.

Pressure Demand Respirator: An atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

Supplied Air-SCBA: Full facepiece respirator, operated in pressure demand mode, with grade D air supplied by remote compressor or blower, with auxiliary positive pressure self-contained breathing apparatus (bottle system).

7.1 AIR QUALITY

For air-supplied hoods, and respirators, the compressor is to be situated so as to avoid entry of contaminated air into the supply system, and suitable in-line purifying absorbent beds and filters installed to further assure breathing air quality. Sorbent beds and filters shall be maintained and replaced or refurbished periodically following the manufacturer's instructions and have a tag containing the most recent change date and the signature of the person authorized to perform the change.

For compressors that are not oil-lubricated, carbon monoxide shall be monitored to ensure levels do not exceed 10 parts per million (ppm).

Oil-lubricated compressors, shall have a high temperature alarm or carbon monoxide alarm, or both. If only high temperature alarms are used, the air supply shall be monitored at intervals sufficient to prevent carbon monoxide in the breathing air from exceeding 10 parts per million (ppm).

In addition the further requirements of OSHA 29 CFR 1910.134.(i) shall be met.

8.0 EMPLOYEE TRAINING PROGRAM

- A. All employees who may be required to wear a respirator shall be trained in the proper use of respiratory protective equipment. Respirators should be assigned to individual workers for their exclusive use whenever feasible. A record will be kept of all employees who received the initial and annual training. Additionally, any employee who has already been trained and does not have sufficient understanding and skill to use the respirator must be retrained in those areas in which his/her knowledge or skill is deficient. Each employee shall sign the required form after receiving the training. The training is to consist of the following:
1. Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator;
 2. What the limitations and capabilities of the respirator are;
 3. How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions;
 4. How to inspect, put on and remove, use, and check the seals of the respirator;
 5. What the procedures are for maintenance and storage of the respirator;
 6. How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators;
 7. The general requirements of 29 CFR 1910.134;
 8. Facial hair, that interferes with proper sealing of the respirator, shall not be permitted. Provisions shall be made for respirator frames for glasses when glass stems interfere with proper seal.
 9. The type of filters and their uses and limitations shall be discussed, including the location of the information on the filter, and color coding of filters.
- B. User Seal Check Each employee that uses a tight-fitting respirator shall perform a user seal check to ensure that an adequate seal is achieved each time the respirator is donned.
1. Positive Pressure Check: Close off the exhalation valve and exhale gently into the facepiece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal.
 2. Negative Pressure Check Close off the inlet opening of the canister or cartridges by covering with the palm of the hand(s). Inhale gently so that the facepiece collapses slightly and no inward leakage of air should be detected. If air leakage is detected, adjust the position of the facepiece

on the face and/or adjust the tension in the straps. Retest the seal. Repeat this procedure until the facepiece is properly sealed.

8.1 RESPIRATORY TRAINING

A training session with required employee attendance shall be conducted by the supervisor or other qualified personnel to ensure that employees understand the limitations, use, and maintenance of respiratory equipment, and other important aspects of the respiratory protection program. Upon completion of the fit testing and training, each employee should read and sign an appropriate statement.

Each employee determined medically fit to wear a respirator will be fit tested upon receiving the equipment and at annual intervals thereafter. The superintendent or other qualified person on site shall ensure that respirators fit the wearer properly and exhibit the least possible leakage.

Problems in fitting a respirator may result if facial hair prevents a good seal from forming between skin and sealing surface. *Corrective lenses that have temple bars or straps may prevent proper sealing. An adapter kit to accommodate eye glasses may be purchased from the manufacturer and should be used when a full face respirator is worn.

- And therefore cannot be allowed for workers who must wear tight fitting respirators (all but hoods).

8.2 RESPIRATOR TRAINING FOR QUALITATIVE TESTING

Qualitative Fit Test may only be used to fit test negative pressure air purifying respirators that must achieve a fit factor of 100 or less.

The test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension, and how to determine an acceptable fit. The test subject should be allowed to choose the most comfortable respirator.

The mask is donned and worn at least five minutes to assess comfort, allowing the test subject adequate time to determine the comfort of the respirator:

Positioning of mask on nose (for half-face masks)

Room for eye protection (if required)

Room to talk

Positioning mask on face and cheeks

The following criteria should be used to help determine the adequacy of the respirator fit:

- Chin properly placed;
- Adequate strap tension, not overly tightened;
- Fit across nose bridge;
- Distance from nose to chin
- Tendency of respirator to slip
- Self-observation in mirror

The test subject shall conduct a user seal check, using the negative and positive pressure seal checks described in Appendix B-1 of the standard.

8.3 QUALITATIVE FIT TEST

The respirator to be tested, shall be equipped with high efficiency particulate air (HEPA) or P100 series filter(s).

Only stannic chloride smoke tubes shall be used for this protocol.

No form of test enclosure or hood for the test subject shall be used.

The fit test shall be performed in an area with adequate ventilation to prevent exposure of the person conducting the fit test or the build-up of irritant smoke in the general atmosphere.

After selecting, donning, and properly adjusting a respirator, the test subject should wear it to the Fit Testing area.

SENSITIVITY SCREENING CHECK

The employee to be tested must demonstrate his or her ability to detect a weak concentration of the irritant smoke.

The test operator shall advise the test subject that the smoke can be irritating to the eyes, lungs, and nasal passages and instruct the subject to keep his/her eyes closed while the test is being performed.

The test subject shall be allowed to smell a weak concentration of the irritant smoke before the respirator is donned to become familiar with its irritating properties and to determine if he/she can detect the irritating properties of the smoke. The test operator shall carefully direct a small amount of the irritant smoke in the test subject's direction to determine if he/she can detect the irritant smoke.

IRRITANT FUME PROTOCOL

FIT TEST

1. The test subject shall properly don the respirator selected as above, without assistance, and wear it for at least 5 minutes before starting the fit test.
2. The test conductor shall review this protocol with the test subject before testing.
3. The test subject shall perform the positive pressure and negative pressure user seal checks. Failure of either check shall be cause to adjust the respirator straps to achieve proper fit. If a proper fit cannot be achieved the subject shall select an alternate respirator.
4. Break both ends of a ventilation smoke tube containing stannic chloride, such as the SENSIDYNE part #501, or equivalent. Attach one end of the smoke tube to an aspirator bulb and attach a short length of tubing to the other end of the smoke tube.

5. Advise the test subject that the smoke can be irritating to the eyes and instruct the subject to keep his/her eyes closed while the test is performed.
6. The test conductor shall direct the stream of irritant smoke from the tube towards the face seal area of the test subject. The person conducting the test shall begin with the tube at least 12 inches from the facepiece and gradually move to within six inches, moving around the whole perimeter of the mask.
7. The test subject shall be instructed to do the following exercises while the respirator is being challenged by the smoke. Each exercise shall be performed for one minute.
 - i. Breathe normally.
 - ii. Breathe deeply. Be certain breaths are deep and regular.
 - iii. Turn head all the way from one side to the other. Be certain movement is complete. Inhale on each side. Do not bump the respirator against the shoulders.
 - iv. Nod head up-and-down. Be certain motions are complete and made every second. Inhale when head is in the full up position (looking toward the ceiling). Do not bump the respirator against the chest.
 - v. Talking. Talk aloud and slowly for at least a minute. This can be accomplished by reciting a memorized poem or song, or by counting backwards from 100.
 - vi. Bending over. The test subject shall bend at the waist as if he/she were to touch his/her toes.
 - vii. Breathe normally.
8. The test subject shall indicate to the test conductor if the irritant smoke is detected. If smoke is detected, the test conductor shall stop the test. The respirator shall not be adjusted once the test exercises begin.
9. Each test subject passing the smoke test (i.e., without detecting the smoke) shall be given a sensitivity check of smoke from the same tube to determine if the test subject reacts to the smoke. Failure to evoke a response shall void the fit test.
10. Steps 7, 8, 9, 10 of this fit test protocol shall be performed in a location with exhaust ventilation sufficient to prevent general contamination of the testing area by the test agents.
11. Respirators successfully tested by the protocol may be used in contaminated atmospheres.
12. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as, stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface.
13. If hair growth or apparel interfere with a satisfactory fit, then they shall be altered or removed so as to eliminate interference and allow a satisfactory fit.

14. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respirator diseases or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.
15. Qualitative fit testing shall be repeated at least annually.
16. In addition, because the sealing of the respirator may be affected, qualitative fit testing shall be repeated immediately when the test subject has a:
 - i. Weight change of 10% or more.
 - ii. Significant facial scarring in the area of the facepiece seal.
 - iii. Significant dental changes: i.e., multiple extractions without prosthesis, or acquiring dentures.
 - iv. Reconstructive or cosmetic surgery, or
 - v. Any other condition that may interfere with facepiece sealing.

8.4 QUANTITATIVE FIT TEST

The site administrator shall ensure that persons administering Quantitative Fit Test are able to calibrate equipment and perform test properly, recognize invalid tests, calculate fit factors properly and ensure that test equipment is in proper working order.

Acceptable Quantitative Fit Test Protocols:

Generated Aerosol, (Fit Booth)
Condensation Nuclei Counter (CNC)
Controlled Negative Pressure (CNP)

Quantitative Fit Test shall be used for all respirators requiring a fit factor of 500 or greater.

The protocols for the above quantitative fit test methods are found in Appendix A of the standard.

9.0 CARE AND STORAGE OF RESPIRATORY EQUIPMENT

The care and storage of respiratory equipment should be adjusted to the type of plant, working conditions and hazards involved.

9.1 RESPIRATOR CLEANING

Respirators shall be cleaned after each day's use, or more often, if necessary. Those used by more than one worker shall be thoroughly cleaned and disinfected after each use. This procedure is described as follows:

1. Respirators should be washed with detergent in warm water (110° F maximum) using a brush (not wire). If possible, detergents containing a bactericide should be used. Organic solvents shall not be used, as they deteriorate the rubber face
-

piece. When the cleaner does not contain a disinfecting agent, respirator components should be immersed for two (2) minutes in one of the following:

- a. Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 110° F; or
 - b. Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodide/100 cc of 45% alcohol) to one liter of water at 110° F; or
 - c. Other commercially available cleansers of equivalent disinfectant quality, when used as directed, if their use is recommended or approved by the respirator manufacturer.
2. Rinse respirators in warm (110° F maximum) clean water to remove all traces of detergent, cleaner, sanitizer, and disinfectant.
 3. Components should be hand-dried with a clean lint free cloth or be allowed to air dry on a clean surface.
 4. Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.
 5. In areas where showers are being utilized the respirators should be given a thorough washing, at that time, also.

When not in use, respiratory equipment should be sealed in plastic bags and stored with the face piece and exhalation valve in a non-distorted position. A metal cabinet with shelves is well suited for this purpose.

6. Test the respirator to ensure all components work properly.
7. Document cleaning of respirators on the Respirator Cleaning, Maintenance and Inspection Log.

9.2 RESPIRATOR MAINTENANCE

Repair or replacement of component parts should be done by qualified individuals. Substitution of parts from a different brand or type of respirator will invalidate the approval of the respirator. Do not mix or substitute respirator parts.

Inspection for defects in respirator equipment should be done after each use and during cleaning. The primary defects to look for in the inspection of component parts of the respirator and corrective actions where appropriate are itemized below:

1. Air purifying respirators (quarter mask, half mask, and full face piece).
 - a. Rubber face piece - check for:
 - excessive dirt (clean all dirt from face piece)
 - cracks, tears, or holes (install new face piece)

- distortion (allow face piece to "sit" free from any constraints and see if distortion disappears; if not, obtain new face piece), and
- cracked, scratched, or loose fitting lenses (contact respirator manufacturer to see if replacement is possible; otherwise obtain new face piece).

b. Headstraps - check for:

- breaks or tears (replace headstraps)
- loss of elasticity (replace headstraps)
- broken or malfunctioning buckles or attachments (obtain new buckles), and
- allows the face piece to slip (replace headstrap)

c. Inhalation valve, exhalation valve - check for:

- detergent residue, dust particles, or dirt on valve or valve seat (clean residue with soap and water)
- cracks, tears, or distortion in the valve material or valve seat (contact manufacturer for instructions), and
- missing or defective valve cover (obtain valve cover from manufacturer).
- proper seating (lays flat and seals)

d. Filter element (s) - check for:

- proper filter for the hazard
- approval designation (NIOSH stamped on filter)
- missing or worn gaskets (contact manufacturer for replacement)
- worn threads - both filter threads and face piece threads (replace filter or face piece, whichever is applicable)
- cracks or dents in filter housing (replace filter), and missing or loose hose clamps (obtain new clamps)

2. Atmosphere Supplying Respirators

- a. Check face piece, headstraps, valves, and breathing tubes, as for air purifying respirators.

- b. Hood, helmet, blouse, or full suit, if applicable - check for:
 - Headgear suspension (adjust properly for you)
 - cracks or breaks in face shield (replace face shield), and
 - protective screen to see that it is intact and fits correctly over the face shield, abrasive blasting hoods, and blouses (obtain new screen).
 -

- c. Air Supply System - check for:
 - breathing air quality
 - breaks or kinks in air supply hoses and end fitting attachments (replace hose and/or fitting)
 - tightness of connections
 - proper setting of regulators and valves (consult manufacturer's recommendations), and
 - correct operation of air purifying elements and carbon monoxide or high temperature alarms.

- d. Document Respirator Maintenance on the Respiratory Cleaning, Maintenance and Inspection Log.

10.0 RESPIRATORS FOR EMERGENCY USE

In many instances the work being performed will be on jobsites where hazardous chemicals and/or materials are being utilized by the client. When working around such hazardous substances the employees should familiarize themselves with the materials in question. The employee should become familiar with the respirators in the immediate area, that the client supplies, in the event of a hazardous chemical leak.

11.0 RESPIRATOR PROGRAM AUDITS

The respirator program shall be evaluated periodically with program adjustments, as appropriate, made to reflect the evaluation results. Compliance to the aforementioned points of the program should be reviewed; respirator selection, purchase of approved equipment, medical evaluations of employees, fit testing, issuance of equipment and associated maintenance, storage, repair and inspection, and appropriate surveillance of work area conditions.

Audits should be performed, by the site administrator, with results reported to appropriate management.

12.0 RECORDKEEPING

1. Medical Evaluations

Medical evaluations are required to be retained in accordance with 29 CFR 1910.1020. Medical evaluation records shall include the following as a minimum:

Results of the medical questionnaire; and

A copy of the PLHCP's written opinion and recommendations, including the results of relevant medical examinations and tests (where applicable).

2. Fit Test

Fit test records shall contain the name or identification number of the employee being tested, type of fit test performed (QLFT or QNFT), specific make, model, style, and size of the respirator tested, and the date of the fit test.

Qualitative Fit Test – shall contain the Pass/Fail results.

Quantitative Fit Test – the strip chart and fit factor achieved or other recording of the results.

Fit test results shall be retained until the next fit test has been administered.

13.0 EXHIBITS

- a. Respirator fit test report
- b. Respirator Cleaning, Maintenance and Inspection Log.
- c. Medical Questionnaire (Mandatory). TO BE INCLUDED
- d. Worksite-Specific Procedure
(Utilized to write and implement worksite-specific procedures for respiratory protection). TO BE INCLUDED

EXHIBIT A

PRINT NAME: _____

RESPIRATOR PROTECTION TRAINING PROGRAM

BEFORE SIGNING, BE SURE YOU UNDERSTAND EACH OF THE FOLLOWING ITEMS:

1. EXPLANATION OF THE EFFECTS OF MISUSE OF RESPIRATORY PROTECTIVE EQUIPMENT.
2. DISCUSSION OF WHY ENGINEERING CONTROLS CANNOT BE USED INSTEAD OF RESPIRATORY EQUIPMENT.
3. WHY THE PARTICULAR RESPIRATOR WAS SELECTED.
4. LIMITATION OF THE SELECTED RESPIRATOR.
5. PUTTING ON THE RESPIRATOR.
6. WEARING THE RESPIRATOR.
7. MAINTENANCE OF THE RESPIRATOR.
8. RECOGNIZING AND HANDLING EMERGENCY SITUATION.
9. INSPECTING THE RESPIRATOR.
10. USE OF AIR PURIFYING RESPIRATOR.
11. USE OF SUPPLIED AIR RESPIRATORY EQUIPMENT.
12. PURPOSE OF MEDICAL EVALUATION.
13. PROPER FIT TESTING TECHNIQUES.

I UNDERSTAND THE USE, CARE, INSPECTION, AND HAVE HAD THE OPPORTUNITY TO WEAR AND TO FIT TEST THE FOLLOWING TYPES OF RESPIRATORS: (LIST) _____

SIGNATURE: _____ DATE: _____

SOCIAL SECURITY NUMBER: _____

RESPIRATOR MAKE: _____ FIT TEST SIZE: _____ STYLE: _____

FACIAL FEATURES : CLEAN SHAVEN _____ MUSTACHE _____ BEARD _____ OTHER _____

WEIGHT: _____ FIT TEST METHOD: _____

FIT-TESTED BY: _____ DATE: _____

COMMENTS: _____

**Site Safety and Health Plan
SOLUTIA ANNISTON FACILITY**

**APPENDIX F
HEAT STRESS**

(TO BE INCLUDED)

**Site Safety and Health Plan
SOLUTIA ANNISTON FACILITY**

**APPENDIX G
SOLUTIA SITE
HEALTH AND SAFETY PLAN**

(TO BE INCLUDED)
