



ALABAMA DEPARTMENT OF TRANSPORTATION

Bureau of Materials & Tests – Geotechnical Section
3700 Fairground Road, Montgomery, Alabama 36110
Phone: 334-206-2271 FAX: 334-264-6263



Robert Bentley
Governor

John Cooper
Transportation Director

December 11, 2014

Ms. Ashley Mastin
Land Division
Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, Al., 36110

RECEIVED
DEC 11 2014
ADEM

Re: Coliseum Boulevard Plume
Response to ADEM's February 14, 2014 Review and Comments: *Southwest Treatment Area Corrective Measures Implementation Report*, dated December 2013
Coliseum Boulevard Plume Site; Montgomery, AL
Project Fund: 348-211-9273

Dear Ms. Mastin,

The Alabama Department of Transportation (ALDOT) has addressed your questions on the above referenced report. Specifically, questions on this report were:

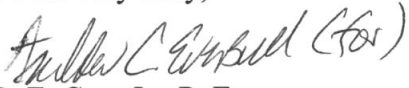
- Add discussion on the installation of PZ-4 and PZ-26;
- Clarify if "ABS" is an acronym or the brand name of the surface water pump, and;
- Clarify why surface water sample O1 was selected as a surface water sample location.

These questions have been addressed in the attached, "*Southwest Treatment Area Corrective Measures Implementation Report, Revision 1*" dated December 2014.

In addition, the report has been updated with current operational data from the surface water pumping system. One written copy and one CD of the report is provided with this response letter.

Should you have questions, please feel free to contact this office.

Yours very truly,



B. E. Cox, Jr., P. E.
Test and Materials – Bureau Chief

ACE:bec

Attachment:

Alabama Department of Public Health – Dr. John Guarisco (1-CD)

City of Montgomery - Chamberlain (1-CD)

Alabama Department of Transportation - Ippolito/Gathings (2-CDs)

ACCESS - Cousins (1-Hardcopy; 1-CD)

Holtsford, Gilliland, Higgins and Hitson, P.C. - Gilliland (1-Hardcopy, 2-CDs)

Malcolm Pirnie - Eversull (1-Hardcopy, 3-CDs)

Montgomery Public Library - Public Repository (1-Hardcopy)

Dr. Tola Moffet (1-CD)



Alabama Department of Transportation

Southwest Treatment Area Corrective Measures Implementation Report

December 2013

R1 - December 2014

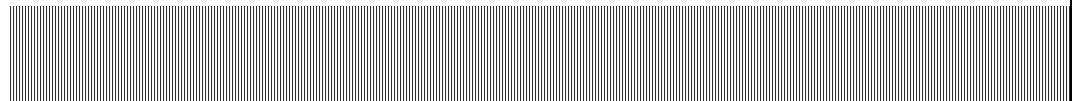


Table of Contents

1. Introduction	1-1
2. Construction	2-1
2.1. Construction Dates	2-1
2.2. Construction Areas	2-1
2.2.1. Dewatering Pond.....	2-1
2.2.2. Transfer Pond.....	2-2
2.2.3. Discharge Pond.....	2-2
2.2.4. Auxiliary Treatment Basin	2-2
2.2.5. Discharge Ditch	2-3
3. Dewatering Pond	3-1
3.1. Dewatering Pond Stabilization	3-1
3.2. Pump Installation and Controls.....	3-2
3.3. Surface Water Elevation Monitoring	3-4
4. Transfer Pond	4-1
5. Discharge Pond	5-1
5.1. Discharge Pond Construction	5-1
6. Auxiliary Treatment Basin	6-1
6.1. Design and Construction.....	6-1
7. Discharge Ditch	7-1
8. Additional Surface Water Monitoring	8-1
9. Additional Groundwater Sampling	9-1

List of Figures

Figure 1	Coliseum Boulevard Plume Corrective Measures Area
Figure 2	SWTA CMIR Photograph Location Index
Figure 3	Average Groundwater Elevations and Flow Direction (January 2012 to December 2012)
Figure 4	SWTA - Surface Water Monitoring Locations
Figure 5	Pump Telemetry Output
Figure 6	Dewatering Pond Surface Water Elevation and Nearby Groundwater Elevations



Appendixes

Appendix A	SWTA Monthly Checklist
Appendix B	ADEM NPDES Permit
Appendix C	PZ-26 Well Completion Report

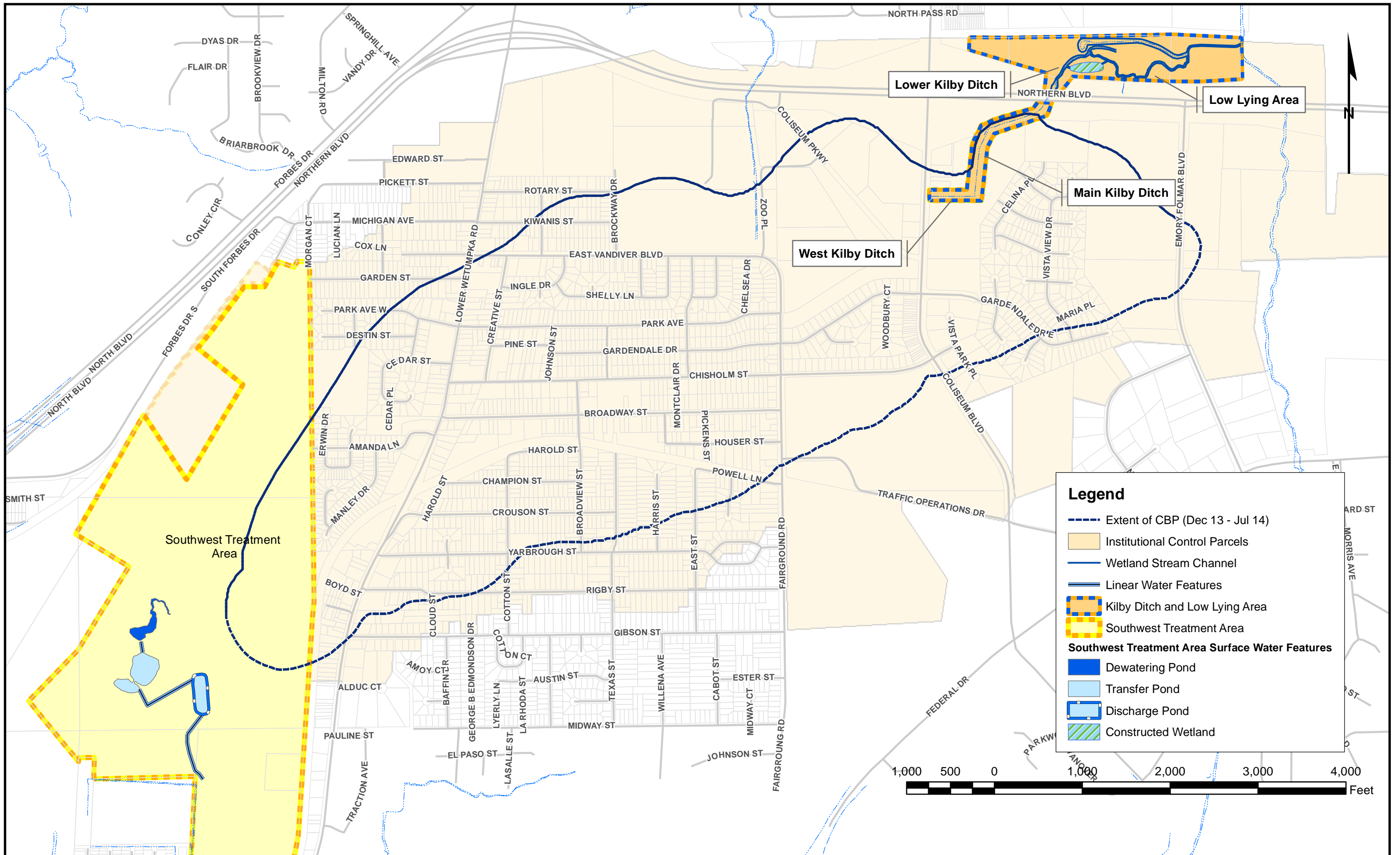


1. Introduction

The Alabama Department of Transportation (ALDOT), under the direction of the Alabama Department of Environmental Management (ADEM), has worked since 1999 to evaluate and mitigate dissolved concentrations of trichloroethylene (TCE) in the groundwater and surface water in the Coliseum Boulevard Plume (CBP) (Figure 1). Due to the size of the CBP site (approximately 1,200 acres) and complex groundwater movement of the CBP, multiple corrective measures are required to manage the CBP. Assessment, evaluation and corrective measure recommendations for the southwest portion of the CBP were presented in the report “Southwest Treatment Area Corrective Measures Implementation Plan” (SWTA CMIP) dated December 2011, revised September 2012. ADEM approved the recommendations in the SWTA CMIP in a concurrence letter to ALDOT on September 27, 2012.

This Report documents the completion of construction of the corrective measures and other activities implemented at the SWTA pursuant to the revised September 2012 SWTA CMIP to capture groundwater and control and mitigate dissolved TCE concentrations in the surface water in the southwest portion of the CBP. Photographs included with this Report document the activities at each construction area and at areas of interest, including pre- and post-construction photos of the SWTA corrective measures for specific locations (see Sections 3 through 7). The number provided with each photograph corresponds with the approximate location of the photograph on Figure 2.





Legend

- Extent of CBP (Dec 13 - Jul 14)
- Institutional Control Parcels
- Wetland Stream Channel
- Linear Water Features
- Kilby Ditch and Low Lying Area
- Southwest Treatment Area

Southwest Treatment Area Surface Water Features

- Dewatering Pond
- Transfer Pond
- Discharge Pond
- Constructed Wetland



ALABAMA DEPARTMENT OF TRANSPORTATION
 COLISEUM BOULEVARD PLUME
COLISEUM BOULEVARD PLUME CORRECTIVE MEASURES AREA

December 2014

Figure 1



ALABAMA DEPARTMENT OF TRANSPORTATION
COLISEUM BOULEVARD PLUME

**SOUTHWEST TREATMENT AREA CORRECTIVE MEASURES IMPLEMENTATION REPORT
PHOTOGRAPH LOCATION INDEX**

FIGURE 2
DECEMBER 2014

2. Construction

2.1. Construction Dates

Construction activities for the SWTA began in August 2009 and the majority of work was completed in August 2012. Due to sediment accumulation and management of vegetation in the Dewatering Pond, periodic maintenance in this area is anticipated throughout the duration of this corrective measure.

2.2. Construction Areas

Construction areas include the following treatment system components:

- Dewatering Pond
- Transfer Pond
- Discharge Pond
- Auxiliary Treatment Basin
- Discharge Ditch

These treatment system components were designed and constructed for the treatment of TCE. In addition to the treatment system components listed above, a chain-link fence with locking gates and perimeter access road was constructed around the approximate 300 acre SWTA area. Installation of the fence and perimeter road were completed in May 2012. The ALDOT performs a monthly inspection of the SWTA to ensure that the implemented corrective measures are monitored and maintained. The SWTA check-list form is included in Appendix A.

The SWTA was a former sand and gravel mining operation. Therefore, the Dewatering Pond, Transfer Pond and Auxiliary Treatment Basin were part of the active mining operation prior to ALDOT's acquisition of the property. Construction activities implemented in accordance with the SWTA CMIP enhanced, stabilized and added features in the SWTA to maintain groundwater control in the southwest portion of the CBP and treatment of surface water to meet regulatory requirements.

2.2.1. Dewatering Pond

The Dewatering Pond is the northern-most pond in the SWTA and provides groundwater hydraulic control in the southwest portion of the CBP. Surface water elevations in the



Dewatering Pond are maintained at approximately 116 feet (ft.) above mean sea level (amsl) using an ABS Model J200 HV MEX surface water pump (ABS pump). This surface water elevation is approximately 20 ft. below the groundwater elevation, if groundwater pumping was not active in this area. Figure 3 illustrates the groundwater elevations in the SWTA, and across the CBP, due to surface water pumping in the Dewatering Pond.

2.2.2. Transfer Pond

Surface water in the Dewatering Pond is pumped into the northern portion of the Transfer Pond. The Transfer Pond inlet pipe discharges water onto Class II riprap thereby providing aeration in the water to treat TCE. Water elevation in the Transfer Pond is approximately 130 ft. amsl. Two ABS surface water pumps are located in the southern portion of the Transfer Pond.

2.2.3. Discharge Pond

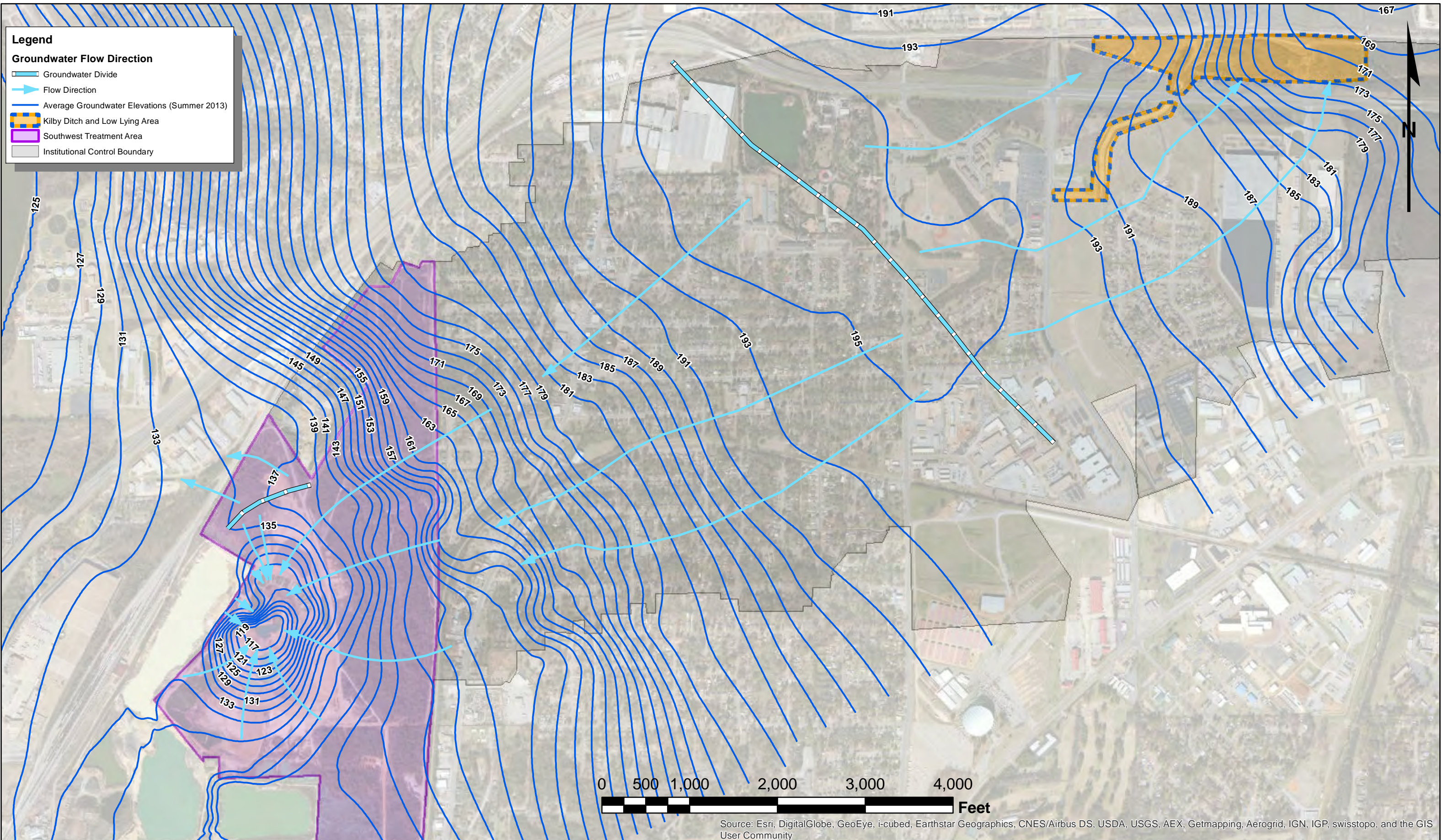
The Transfer Pond ABS pumps discharge water through an underground pipe system to a T-valve located on the south-side of the Transfer Pond perimeter road. This valve is used to divert water to the Discharge Pond, Auxiliary Treatment Basin or a combination of the two. To date, TCE concentrations in the Transfer Pond do not require additional treatment in the Auxiliary Treatment Basin; therefore, all water in the Transfer Pond is currently discharged directly to the Discharge Pond.

The Discharge Pond was constructed in spring 2011 and provides for sediment control and extended retention time. Water elevation in the Discharge Pond is approximately 190 ft. amsl. The Discharge Pond consists of a deep pool inlet, or forebay in the northern portion of the structure, a mid-section consisting of three cells separated by low berms and planted with cattails and a deep pool outlet. Water in the Discharge Pond is discharged through a metal grate in the southern portion of the structure and into an underground pipe. The underground pipe conveys water to the Discharge Ditch.

2.2.4. Auxiliary Treatment Basin

The Auxiliary Treatment Basin was used in the sand and gravel mining operation as a sediment basin. For the SWTA design, this feature has been retained to allow for future water treatment options, if necessary. An earthen berm and riprap ditch was added along the northeast portion of the Auxiliary Treatment Basin. Water discharged from the Transfer Pond underground pipe enters the riprap ditch and flows to the southern portion of the Auxiliary Treatment Basin. The Auxiliary Treatment Basin is sloped such that water flows to the north and back into the Transfer Pond.





Alabama Department of Transportation

AVERAGE GROUNDWATER ELEVATIONS AND FLOW DIRECTION (JUNE 2013)

December 2014

FIGURE 3



2.2.5. Discharge Ditch

The Discharge Ditch was constructed in the spring of 2011 following construction of the Discharge Pond. This stone lined ditch is approximately 560 feet in length with an approximate 24 foot elevation drop from the Discharge Ditch water inlet to the natural wetland. Surface water cascades through the Discharge Ditch allowing for TCE treatment via aeration and photolysis.

The ALDOT compliance point (DSN001, NPDES Permit AL0081167) is located at the end of the Discharge Ditch. Water in the Discharge Ditch enters an approximate 17 acre natural wetland and subsequently flows through the City of Montgomery flood gate into a municipal surface water ditch.

It should be noted that the ALDOT compliance point DSN001 for the SWTA was permitted at the City of Montgomery flood gate from August 2011 through July 2013. The compliance point location was modified in July 2013 and is located at the end of the Discharge Ditch. This modification has resulted in the following surface water sample location modifications:

- Former compliance point sample DSN001 (August 19, 2011 to July 30, 2013) located at the City of Montgomery flood gate will be designated as sample location Flood Gate (“FG”). Surface water samples will be collected on a quarterly basis.
- Former surface water sample SWA-5 located at the confluence of the Discharge Ditch to the natural wetland is currently permitted as compliance point sample DSN001. This sample will be collected on a bi-monthly basis as required in NPDES permit AL0081167.

All SWTA surface water sample locations are shown on Figure 4.

The current and previous NPDES permits for TCE treated surface water are included in Appendix B. The ADEM notification to terminate the former sand and gravel mining permit (NPDES Permit No. AL0071790) is also included in Appendix B. Notification to terminate the former sand and gravel mining permit includes the notification from the Alabama Department of Industrial Relations Mining and Reclamation Division (IRMRD) that the ALDOT had adequately reclaimed the property pursuant to the IRMRD requirements.





Legend

Long Term Monitoring Surface Water Locations

- SWTA Effectiveness Point (SWA)
- ◆
 SWTA Compliance Point (DSN001)
- ▲
 Voluntary Surface Water Monitoring Point
- Underground Pipe
- Discharge Ditch
- Southwest Treatment Area



3. Dewatering Pond

3.1. Dewatering Pond Stabilization

Prior to ALDOT's acquisition of the property in 2009, the Dewatering Pond was the groundwater control feature for the active sand and gravel mine. The following photographs illustrate the work performed by the ALDOT to reclaim the area from active mining to a stabilized Dewatering Pond structure.



Dewatering Pond
August 2008

Photograph Location 1



Dewatering Pond
September 2011

Photograph Location 1

3.2. Pump Installation and Controls

A new ABS pump and flotation unit was installed in the Dewatering Pond and automated pump controls installed for both the Dewatering Pond and Transfer Pond in May 2012. Operation of the Dewatering Pond and Transfer Pond pumps is controlled by water level devices on the flotation units. The desired low water elevation is set at the pump control panel and the ABS pump will operate until the desired water low level is reached. Once this condition is reached, the ABS pump automatically shuts off. Once the water level rises in the pond to a preset level, the pump begins operation again. The automatic control specifications are provided in the, “Southwest Treatment Area Corrective Measures Implementation Plan, Coliseum Boulevard Plume” dated December 2011, revised September 2012.

Operation of the automated pump system is tracked through a telemetry system that includes an alarm system that automatically alerts designated ALDOT contacts when there is a pump failure. The telemetry system also provides both historical and real-time information on pump operations including operational time, totalized flow, and flow rates for each pump (**Figure 5**)



Dewatering
Pond

ABS Pump

May 2012

Photograph Location 1



Dewatering Pond

Automatic Pump Controls

May 2012

Photograph Location 2

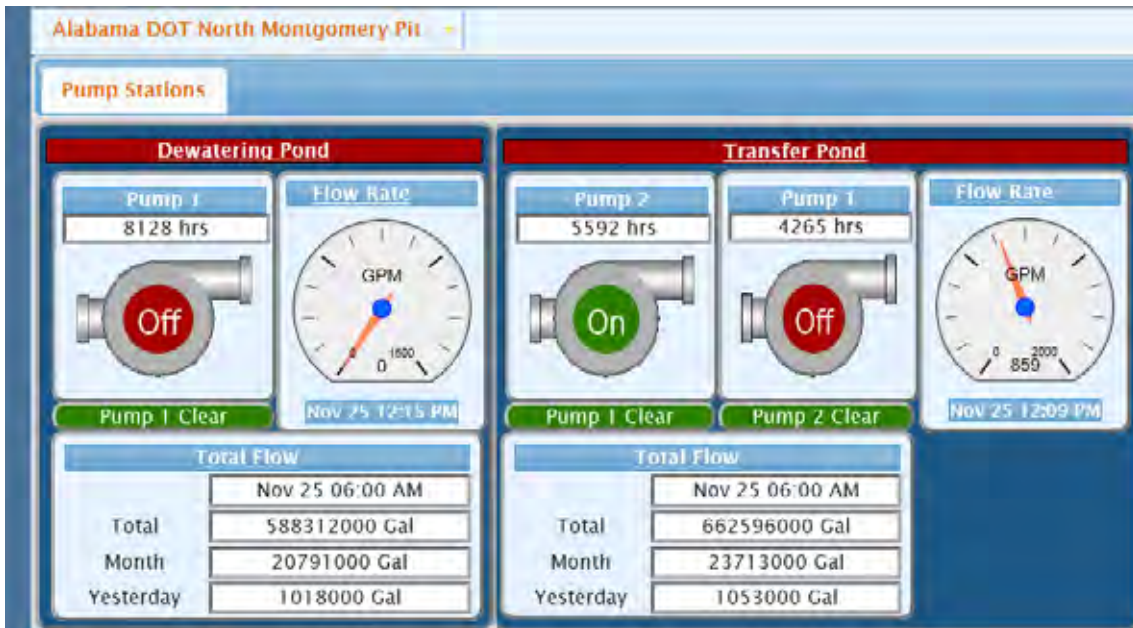


Figure 5 Pump Telemetry Output

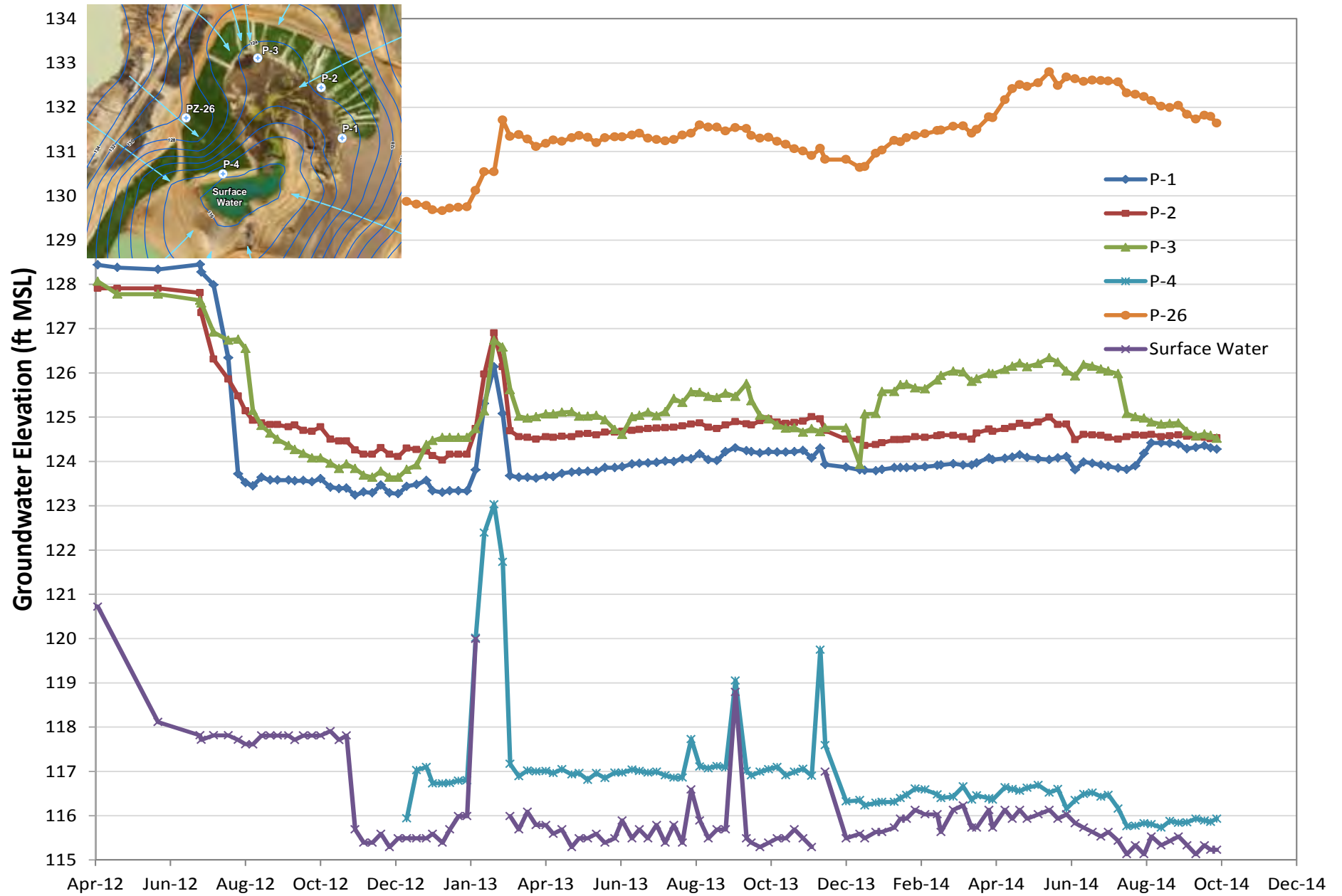
3.3. Surface Water Elevation Monitoring

Surface water elevations in the Dewatering Pond have been maintained at an average elevation 115.8 ft. amsl following improvements to the Dewatering Pond system in October 2012 to October 2014. In addition to monitoring the Dewatering Pond surface elevation, ALDOT measures groundwater elevations weekly in the toe of slope piezometers (Piezometers 1 to 4) near the edge of the Dewatering Pond and Piezometer 26 (PZ-26) located near the top of the Dewatering Pond western slope (Figure 6). Additional information on PZ-26 temporary groundwater sampling is provided in Section 9.0.

Discharge from the Dewatering Pond to the Transfer Pond has averaged 1.1 million gallons per day (MGD) from January 2013 to November 2014. Surface water sample SWA-01 is collected at the Dewatering Pond. Maximum TCE concentrations in the Dewatering Pond through October 2014 was 4 ug/L¹.

¹ All sample results are in the ALDOT Coliseum Boulevard Plume 2013 Annual Report. Dated April 2014





Dewatering Pond Groundwater and Surface Water Elevation Trends

Alabama Department of Transportation - Coliseum Boulevard Plume
 Montgomery, Alabama

December 2014

FIGURE 6



4. Transfer Pond

The Transfer Pond was an existing feature from the mining operation when ALDOT purchased the property in 2009. The side slopes have been stabilized and a dual pump ABS system with automated controls was installed in May 2012. The following photographs illustrate the Transfer Pond transition from a mining feature to a corrective measure unit in the SWTA.



Transfer Pond
June 2009

Photograph Location 3



Transfer Pond
September 2011

Photograph Location 3



Photograph Location 4

Transfer Pond
Dual ABS Pumps
May 2012



Photograph Location 5

Transfer Pond
Automatic Controls
May 2012

During the first year of operation, from May 2012 through November 2014, an average 1.2 MGD was pumped from the Transfer Pond to the Discharge Pond.

Surface water sample location SWA-02 is located at the Transfer Pond. TCE concentrations at this location in 2012 ranged from non-detect to 1.9 ug/L².

Water from the Transfer Pond is discharged through a six inch diameter high-density polyethylene pipe (HDPE). The HDPE pipe from the Transfer Pond enters a concrete junction box near the Transfer Pond access road. Two T-valves in the concrete junction box are used to divert water to the Discharge Pond; or if additional treatment of TCE is required, water can be diverted to the Auxiliary Treatment Basin.

² All sample results are in the ALDOT Coliseum Boulevard Plume 2012 Annual Report. Dated April 2013, revised October 20131

The photograph below shows the valves for both the Discharge Pond and Auxiliary Treatment Basin in the junction box.



T-Valve Connections

Transfer Pond to Discharge
Pond or Auxiliary
Treatment Basin

May 2011

Photograph Location 6

5. Discharge Pond

5.1. Discharge Pond Construction

The Discharge Pond was constructed in 2011. This corrective measure was added to provide for sediment control and extended retention time. Water entering the Discharge Pond is aerated by splashing onto stones placed beneath the Discharge Pond inlet pipe. The Discharge Pond is sloped to provide gravity flow through the constructed wetland into the deep outlet pool. Below ground pipe-inlets in the southern wall of the Discharge Pond allows gravity flow via an underground pipe into the Discharge Ditch. The Discharge Pond is shown during construction and post construction in the following photographs.

Surface water sampling locations SWA-3 and SWA-4 are located at the inlet and outlet of the Discharge Pond. In 2012, the TCE concentrations ranged from non-detect to 1.8 ug/L at SWA-3 and non-detect to 1.2 ug/L at SWA-4³.



Photograph Location 7

Discharge Pond
Construction

May 2011

³ All sample results are in the ALDOT Coliseum Boulevard Plume 2012 Annual Report. Dated April 2013, revised October 2013





Photograph Location 7

Discharge Pond Inlet and
Surface Water Sample
Location SWA-3

April 2012



Photograph Location 8

Discharge Pond Inlet and
Constructed Wetlands

April 2012



Photograph Location 9

Discharge Pond Outlet and
Surface Water Sample
Location SWA-4

April 2012

6. Auxiliary Treatment Basin

6.1. Design and Construction

The Auxiliary Treatment Basin was a former sediment settling pond during the active mining operation. In 2011, an earthen berm was constructed approximately 150 feet in length along the eastern portion of the Auxiliary Treatment Basin. The purpose of the berm is to channel water discharged from the Transfer Pond to the southern portion of the Auxiliary Treatment Basin. The Auxiliary Treatment Basin is sloped from south to north; therefore, water will gravity flow back to the Transfer Pond. TCE in this surface water would be reduced via photolysis, vegetative uptake and aeration. The May 2011 photo shows the Auxiliary Treatment Basin with sparse vegetation.



Auxiliary Treatment Basin

May 2011

Photograph Location 10

By September 2012, the Auxiliary Treatment Basin was covered with natural vegetation. To date, TCE concentrations in the SWTA surface water are significantly below the allowable discharge limits in the NPDES permit; therefore, the ALDOT has not diverted water into the Auxiliary Treatment Basin for additional treatment.



Auxiliary Treatment Basin

September 2012

Photograph Location 10



7. Discharge Ditch

The Discharge Ditch was constructed in 2011 to convey surface water from the Discharge Pond to the natural wetlands. The channel bottom and side-walls are lined with stone. Underground pipes convey water from the Discharge Pond and enter the ditch at elevation 183 ft. amsl and discharge to the natural wetlands at elevation 159 ft. amsl. The slope along several portions of the Discharge Ditch is sufficient to create turbulent flow; thereby, aerating the water. The following photographs show surface water flowing in the Discharge Ditch and entering the natural wetlands.



Discharge Ditch

April 2012

Photograph Location 11



Discharge Ditch

April 2012

Photograph Location 12





Photograph Location 13

Discharge Ditch
Confluence with Natural
Wetland.

Compliance Surface Water
Sample Location DSN001
(formerly SWA-5)

April 2012

Surface water TCE concentrations obtained at this location in 2012, designated as SWA-5, are all non-detect.

As noted earlier, beginning in July 2013, the Discharge Ditch confluence with the natural wetlands is SWTA compliance point DSN001. This location is sampled twice a month. Surface water in the natural wetlands is present on multiple properties; therefore, this water body is considered waters of the state.

8. Additional Surface Water Monitoring

Based on the compliance point sample location modification in 2013, ALDOT is voluntarily collecting surface water samples at the city of Montgomery flood gate; however, this sample location will be designated as Flood Gate (“FG”). Bi-monthly samples collected at FG in 2012 were all non-detect, with one exception in April 2012, when a sample contained 1.7 micrograms per liter (ug/L). Periodic surface water samples will be collected at FG to document surface water quality exiting the ALDOT property and discharging to the city of Montgomery municipal storm water system.



Photograph Location 14

Flood Gate
(previously compliance
point sample DSN001)

April 2012



Photograph Location 15

City of Montgomery
Municipal storm water ditch

April 2012

Surface water sample O1 is located to the west of Lower Wetumpka Road (see Figure 4). Storm water runoff from Lower Wetumpka Road flows onto the ALDOT property and ALDOT voluntarily monitors this location for contaminants on a periodic basis. No TCE



was detected at this sample location in 2012; however, petroleum constituents (benzene, toluene, ethylbenzene, m,p-xylenes and o-xylenes) were detected in concentrations below regulatory action levels.



9. Additional Groundwater Sampling

At the request of ADEM, ALDOT agreed to install piezometers PZ-26 and P-4, near the top-of-slope and toe-of-slope along the west side of the Dewatering Pond. These wells provide groundwater elevation data, west of the Dewatering Pond, downgradient to the CBP. These wells, in addition to several wells to the north, east and south of the Dewatering Pond are used to measure hydraulic capture of the plume as graphically illustrated through groundwater flow-nets and potentiometric maps. Installation report for PZ-26 and P-4 is provided in Appendix C.

In addition to measuring groundwater elevation, ADEM requested ALDOT to collect groundwater samples in PZ-26. The purpose of these samples is to demonstrate a general decreasing trend for residual TCE groundwater concentrations in mine overburden and wash water sediments west of the Dewatering Pond. ALDOT and ADEM agreed that groundwater samples would be collected over a three year period, 2013, 2014 and 2015 to evaluate TCE groundwater concentration trends relative to the control and capture of the CBP. This information is provided to ADEM in the, “PZ-26 Sampling Report; Southwest Treatment Area.” This report is submitted to ADEM by December 31st for each of the years identified earlier.



SOUTHWEST TREATMENT AREA MONTHLY CHECKLIST

SWTA Corrective Measures Implementation Report

COLISEUM BOULEVARD PLUME SITE
MONTGOMERY, ALABAMA



Southwest Treatment Area Inspection Form

Date: _____

Time: _____

Inspection type: Monthly Other _____

Inspector Name/Organization: _____

Contact Information: _____

Security - Perimeter Fence - Gates

Item # (Item # locations are shown on the attached checklist figure)	Yes	No
1 Are locks present and operable	<input type="checkbox"/>	<input type="checkbox"/>
2 Perimeter fencing in good condition	<input type="checkbox"/>	<input type="checkbox"/>
3 No indication of unauthorized entry	<input type="checkbox"/>	<input type="checkbox"/>
4 Signage is present and secure	<input type="checkbox"/>	<input type="checkbox"/>

Perimeter and Internal Roads - Site Drainage

5 Road is in good condition	<input type="checkbox"/>	<input type="checkbox"/>
6 Culverts free of obstructions	<input type="checkbox"/>	<input type="checkbox"/>
7 Drainage ditches in good condition	<input type="checkbox"/>	<input type="checkbox"/>

Dewatering Pond

8 No Slope stability or erosion issues	<input type="checkbox"/>	<input type="checkbox"/>
9 Pump operating properly	<input type="checkbox"/>	<input type="checkbox"/>
10 Pump inlet free of obstruction	<input type="checkbox"/>	<input type="checkbox"/>
11 Hoses and pipes in acceptable condition	<input type="checkbox"/>	<input type="checkbox"/>
12 Electrical panel, lines and associated equipment in good condition	<input type="checkbox"/>	<input type="checkbox"/>
13 Pump intake free of obstructions / sediment	<input type="checkbox"/>	<input type="checkbox"/>
14 Toe of Slope in good condition	<input type="checkbox"/>	<input type="checkbox"/>
15 Access ramps in good condition	<input type="checkbox"/>	<input type="checkbox"/>
16 Staff Gage 1 in good condition: Elevation _____	<input type="checkbox"/>	<input type="checkbox"/>
17 Staff Gage 2 in good condition: Elevation _____	<input type="checkbox"/>	<input type="checkbox"/>
18 No beaver impacts	<input type="checkbox"/>	<input type="checkbox"/>

Transfer Pond

19 No slope stability or erosion issues	<input type="checkbox"/>	<input type="checkbox"/>
20 Pumps operating properly	<input type="checkbox"/>	<input type="checkbox"/>
21 Pump inlets free of obstruction	<input type="checkbox"/>	<input type="checkbox"/>
22 Hoses and pipes in acceptable condition	<input type="checkbox"/>	<input type="checkbox"/>
23 Electrical panel, lines, and associated equipment in good condition	<input type="checkbox"/>	<input type="checkbox"/>
24 Pump intake free of obstructions / sediment	<input type="checkbox"/>	<input type="checkbox"/>
25 Access ramps in good condition	<input type="checkbox"/>	<input type="checkbox"/>

Junction Box

26 Pipe flanges are secure / no leaks	<input type="checkbox"/>	<input type="checkbox"/>
27 Junction box in good condition	<input type="checkbox"/>	<input type="checkbox"/>

Comments / Observations:

Signatures: _____

**Southwest Treatment Area
Inspection Form**

Date: _____

Time: _____

Yes No

Auxiliary Treatment Basin

- 28 Inlet pipe clear from obstructions Yes No
- 29 No flow restriction from inlet pipe Yes No
- 30 Intermediate Berm in good condition Yes No
- 31 Vegetation in good condition Yes No

Discharge Pond

- 32 Inlet pipe clear from obstructions Yes No
- 33 Inlet basin/slopes in good condition Yes No
- 34 Intermediate berms in good condition Yes No
- 35 Wetland vegetation in good condition Yes No
- 36 Outlet pipe is clear of obstructions Yes No
- 37 Outlet basin and slopes in good condition Yes No

Rip-rap Channel

- 38 Rip-rap placement in good condition Yes No
- 39 Channel slopes in good condition Yes No
- 40 Channel is free from obstructions or erosional issues Yes No

Floodgate / Natural Wetlands

- 41 No beaver impacts Yes No
- 42 Floodgate in good condition Yes No

New Town Storm Culvert

43 Water level in culvert: _____

Are Separate pages or photos attached with this form Yes No

Observations in the SWTA that may require follow-up actions:

Signatures: _____

ADEM NPDES PERMIT

**Southwest Corrective Measures
Implementation Report**

**COLISEUM BOULEVARD PLUME SITE
MONTGOMERY, ALABAMA**



LANCE R. LEFLEUR
DIRECTOR



ROBERT J. BENTLEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

JULY 31 2013

MR RONNIE BALDWIN
CHIEF ENGINEER
ALDOT CBP SW AREA
1409 COLISEUM BOULEVARD
MONTGOMERY AL 36110

RE: NPDES PERMIT NUMBER AL0081167
PERMIT MODIFICATION

Dear Mr. Baldwin:

Attached is the issued copy of the above referenced permit modification. Please note the permit limitations and conditions with which the permittee must comply.

Future monitoring data should be submitted in accordance with the conditions of your permit. Please see PART I.C for your reporting requirements. To reduce the paperwork burden for both the Department and the Permittee, when submitting the required Discharge Monitoring Reports (DMRs), please **do not submit** lab worksheets, logs, reports or other paperwork not specifically required by the permit unless requested by ADEM staff.

For your convenience, DMR forms for the first three months following the permit effective date are attached. In the future, you should receive pre-printed DMR forms from the Department near the beginning of each calendar quarter.

Please be aware that Part I.C.1.c of your permit requires that you apply for participation in the Department's web-based electronic environmental (E2) reporting system for submittal of DMRs within 180 days of the effective date of this permit unless valid justification as to why you cannot participate is submitted in writing. After 180 days, hard copy DMRs may be used only with written approval from the Department. The E2 DMR system allows ADEM to electronically validate, acknowledge receipt, and upload data to the state's central wastewater database. This improves the accuracy of reported compliance data and reduces costs to both the regulated community and ADEM. The Permittee Participation Package may be downloaded online at <https://e2.adem.alabama.gov/npdes> or you may obtain a hard copy by submitting a written request or by e-mailing e2admin@adem.alabama.gov.

If you have questions regarding this permit or monitoring requirements, please contact Brian Marshall by e-mail at bmmarshall@adem.state.al.us or by phone at (334)271-7895.

Sincerely,

Scott Ramsey, Chief
Industrial Section
Industrial/Municipal Branch
Water Division

Enclosure: Final Permit

cc: EPA Region IV: Final Permit
Montgomery Field Office: Final Permit

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S. W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)



Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: ALDOT CBP SW AREA

FACILITY LOCATION: 1588 CONCRETE DRIVE
MONTGOMERY, AL 36110

PERMIT NUMBER: AL0081167

RECEIVING WATERS: DSN001: UNNAMED TRIBUTARY TO THE ALABAMA RIVER

In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1378 (the "FWPCA"), the Alabama Water Pollution Control Act, as amended, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 (the "AWPCA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, §§22-22A-1 to 22-22A-15, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to discharge into the above-named receiving waters.

ISSUANCE DATE: AUGUST 19, 2011

EFFECTIVE DATE: AUGUST 19, 2011

EXPIRATION DATE: AUGUST 18, 2016

MODIFICATION ISSUED DATE: JULY 31, 2013

MODIFICATION EFFECTIVE DATE: JULY 31, 2013

Glenna L. Dean
Alabama Department of Environmental Management

**INDUSTRIAL SECTION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT**

TABLE OF CONTENTS

PART I	DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS	1
A.	DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS	1
B.	DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS	2
1.	Representative Sampling	2
2.	Test Procedures	2
3.	Recording of Results	2
4.	Records Retention and Production.....	2
5.	Monitoring Equipment and Instrumentation	3
C.	DISCHARGE REPORTING REQUIREMENTS	3
1.	Reporting of Monitoring Requirements	3
2.	Noncompliance Notification.....	5
D.	OTHER REPORTING AND NOTIFICATION REQUIREMENTS	5
1.	Anticipated Noncompliance	5
2.	Termination of Discharge.....	5
3.	Updating Information	6
4.	Duty to Provide Information.....	6
5.	Cooling Water and Boiler Water Additives	6
6.	Permit Issued Based On Estimated Characteristics.....	6
E.	SCHEDULE OF COMPLIANCE	7
PART II	OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES	8
A.	OPERATIONAL AND MANAGEMENT REQUIREMENTS	8
1.	Facilities Operation and Maintenance.....	8
2.	Best Management Practices	8
3.	Spill Prevention, Control, and Management	8
B.	OTHER RESPONSIBILITIES	8
1.	Duty to Mitigate Adverse Impacts.....	8
2.	Right of Entry and Inspection.....	8
C.	BYPASS AND UPSET	8
1.	Bypass	8
2.	Upset	9
D.	DUTY TO COMPLY WITH PERMIT, RULES, AND STATUTES	9
1.	Duty to Comply	9
2.	Removed Substances	10
3.	Loss or Failure of Treatment Facilities	10
4.	Compliance with Statutes and Rules.....	10
E.	PERMIT TRANSFER, MODIFICATION, SUSPENSION, REVOCATION, AND REISSUANCE.....	10
1.	Duty to Reapply or Notify of Intent to Cease Discharge	10
2.	Change in Discharge.....	10
3.	Transfer of Permit.....	11
4.	Permit Modification and Revocation	11
5.	Permit Termination.....	12
6.	Permit Suspension	12
7.	Request for Permit Action Does Not Stay Any Permit Requirement.....	12
F.	COMPLIANCE WITH TOXIC POLLUTANT STANDARD OR PROHIBITION	12
G.	DISCHARGE OF WASTEWATER GENERATED BY OTHERS	12
PART III	OTHER PERMIT CONDITIONS	13
A.	CIVIL AND CRIMINAL LIABILITY	13
B.	OIL AND HAZARDOUS SUBSTANCE LIABILITY	13
C.	PROPERTY AND OTHER RIGHTS	13
D.	AVAILABILITY OF REPORTS	14
E.	EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES	14
F.	COMPLIANCE WITH WATER QUALITY STANDARDS	14
G.	GROUNDWATER.....	14
H.	DEFINITIONS	14
I.	SEVERABILITY.....	17
PART IV	ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS	18

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN0011: Remediated Groundwater 3/

Such discharge shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>			<u>MONITORING REQUIREMENTS 1/</u>				
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum REPORT S.U.</u>	<u>Monthly Average</u>	<u>Daily Maximum REPORT S.U.</u>	<u>Measurement Frequency 2/</u>	<u>Sample Type</u>	<u>Seasonal</u>
pH	-	-	-	-	-	Once/2 Weeks	Grab	-
Trichloroethylene	-	-	-	17.47 ug/l	37.94 ug/l	Once/2 Weeks	Grab	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Once/2 Weeks	Calculated	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

- 1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.
- 2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.
- 3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

B. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this permit.

2. Test Procedures

For the purpose of reporting and compliance, permittees shall use one of the following procedures:

a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h). If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance; however, should EPA approve a method with a lower minimum level during the term of this permit the permittee shall use the newly approved method.

b. For pollutants parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B.

Permittees may develop an effluent matrix-specific ML, where an effluent matrix prevents attainment of the established ML. However, a matrix specific ML shall be based upon proper laboratory method and technique. Matrix-specific MLs must be approved by the Department, and may be developed by the permittee during permit issuance, reissuance, modification, or during compliance schedule.

In either case the measured value should be reported if the analytical result is at or above the ML and "0" reported for values below the ML.

c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the permit limit using the most sensitive EPA approved method. For the purpose of calculating a monthly average, "0" shall be used for values reported less than the detection limit.

The Minimum Level utilized for procedures A and B above shall be reported on the permittee's DMR. When an EPA approved test procedure for analysis of a pollutant does not exist, the Director shall approve the procedure to be used.

3. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The facility name and location, point source number, date, time and exact place of sampling;
- b. The name(s) of person(s) who obtained the samples or measurements;
- c. The dates and times the analyses were performed;
- d. The name(s) of the person(s) who performed the analyses;
- e. The analytical techniques or methods used, including source of method and method number; and
- f. The results of all required analyses.

4. Records Retention and Production

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the above reports or the application for this permit, for a period of at least three years from the date of the sample measurement, report or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director or his designee, the permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records shall not be submitted unless requested.

All records required to be kept for a period of three years shall be kept at the permitted facility or an alternate location approved by the Department in writing and shall be available for inspection.

5. Monitoring Equipment and Instrumentation

All equipment and instrumentation used to determine compliance with the requirements of this permit shall be installed, maintained, and calibrated in accordance with the manufacturer's instructions or, in the absence of manufacturer's instructions, in accordance with accepted practices. The permittee shall develop and maintain quality assurance procedures to ensure proper operation and maintenance of all equipment and instrumentation. The quality assurance procedures shall include the proper use, maintenance, and installation, when appropriate, of monitoring equipment at the plant site.

C. DISCHARGE REPORTING REQUIREMENTS

1. Reporting of Monitoring Requirements

- a. The permittee shall conduct the required monitoring in accordance with the following schedule:

MONITORING REQUIRED MORE FREQUENTLY THAN MONTHLY AND MONTHLY shall be conducted during the first full month following the effective date of coverage under this permit and every month thereafter.

QUARTERLY MONITORING shall be conducted at least once during each calendar quarter. Calendar quarters are the periods of January through March, April through June, July through September, and October through December. The permittee shall conduct the quarterly monitoring during the first complete calendar quarter following the effective date of this permit and is then required to monitor once during each quarter thereafter. Quarterly monitoring may be done anytime during the quarter, unless restricted elsewhere in this permit, but it should be submitted with the last DMR due for the quarter, i.e. (March, June, September and December DMRs).

SEMIANNUAL MONITORING shall be conducted at least once during the period of January through June and at least once during the period of July through December. The permittee shall conduct the semiannual monitoring during the first complete calendar semiannual period following the effective date of this permit and is then required to monitor once during each semiannual period thereafter. Semiannual monitoring may be done anytime during the semiannual period, unless restricted elsewhere in this permit, but it should be submitted with the last DMR due for the month of the semiannual period, i.e. (June and December DMRs).

ANNUAL MONITORING shall be conducted at least once during the period of January through December. The permittee shall conduct the annual monitoring during the first complete calendar annual period following the effective date of this permit and is then required to monitor once during each annual period thereafter. Annual monitoring may be done anytime during the year, unless restricted elsewhere in this permit, but it should be submitted with the December DMR.

- b. The permittee shall submit discharge monitoring reports (DMRs) on the forms provided by the Department and in accordance with the following schedule:

REPORTS OF MORE FREQUENTLY THAN MONTHLY AND MONTHLY TESTING shall be submitted on a **quarterly** basis. The first report is due on the **28th** day of **October, 2011**. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF QUARTERLY TESTING shall be submitted on a quarterly basis. The first report is due on the 28th day of []. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF SEMIANNUAL TESTING shall be submitted on a semiannual basis. The reports are due on the 28th day of JANUARY and the 28th day of JULY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF ANNUAL TESTING shall be submitted on an annual basis. The first report is due on the 28th day of JANUARY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

- c. The Department is utilizing a web-based electronic environmental (E2) reporting system for submittal of DMRs. The E2 DMR system allows ADEM to electronically validate, acknowledge receipt, and upload data to the state's central wastewater database. This improves the accuracy of reported compliance data and reduces costs to both the regulated community and ADEM. **If the permittee is not already participating in the e-DMR system, within 180 days of coverage under this permit, permittee must apply for participation in the e-DMR system unless the facility submits in writing valid justification as to why they cannot participate and the Department approves in writing utilization of hard copy DMR submittals.** To participate in this program, the Permittee Participation Package may be downloaded online at <https://e2.adem.alabama.gov/npdes>. If the electronic environmental (E2) reporting system is down (i.e. electronic submittal of DMR data is unable to be completed due to technical problems originating with the

Department's system: this could include entry/submittal issues with an entire set of DMRs or individual parameters), permittee is not relieved of their obligation to submit DMR data to the Department by the required submittal date. However, if the E2 system is down on the 28th day of the month or is down for an extended period of time as determined by the Department when a DMR is required to be submitted, the facility may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within five calendar days of the E2 system resuming operation, the permittee shall enter the data into the E2 reporting system, unless an alternate timeframe is approved by the Department. An attachment should be included with the E2 DMR submittal verifying the original submittal date (date of the fax, copy of dated e-mail, or hand-delivery stamped date). If a permittee is allowed to submit via the US Postal Service, the DMR must be legible and bear an original signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this permit. If the permittee, using approved analytical methods as specified in Provision I.B.2 monitors any discharge from a point source for a limited substance identified in Provision I.A of this permit more frequently than required by this permit, the results of such monitoring shall be included in the calculation and reporting of values on the DMR form and the increased frequency shall be indicated on the DMR form. In the event no discharge from a point source identified in Provision I.A of this permit and described more fully in the permittee's application occurs during a monitoring period, the permittee shall report "No Discharge" for such period on the appropriate DMR form.

- d. All reports and forms required to be submitted by this permit, the AWPCA and the Department's Rules and Regulations, shall be electronically signed (or, if allowed by the Department, traditionally signed) by a "responsible official" of the permittee as defined in ADEM Administrative Code Rule 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Administrative Code Rule 335-6-6-.09 and shall bear the following certification:

"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 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 and imprisonment for knowing violations."

- e. The permittee may certify in writing that a discharge will not occur for an extended period of time and after such certification shall not be required to submit monitoring reports. Written notification of a planned resumption of discharge shall be submitted at least 30 days prior to resumption of the discharge. If an unplanned resumption of discharge occurs, written notification shall be submitted within 7 days of the resumption. In any case, all discharges shall comply with all provisions of this permit.
- f. All Discharge Monitoring Report forms required to be submitted by this permit, the AWPCA, and the Department's Rules shall be addressed to:

**Alabama Department of Environmental Management
Permits and Services Division
Environmental Data Section
Post Office Box 301463
Montgomery, Alabama 36130-1463**

Certified and Registered Mail containing Discharge Monitoring Reports shall be addressed to:

**Alabama Department of Environmental Management
Permits and Services Division
Environmental Data Section
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2059**

- g. All other correspondence and reports required to be submitted by this permit, the AWPCA, and the Department's Rules shall be addressed to:

**Alabama Department of Environmental Management
Water Division
Post Office Box 301463
Montgomery, Alabama 36130-1463**

Certified and Registered Mail shall be addressed to:

Alabama Department of Environmental Management
Water Division
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2059

- h. If this permit is a reissuance, then the permittee shall continue to submit DMRs in accordance with the requirements of their previous permit until such time as DMRs are due as discussed in Part I.C.1.b. above.

2. Noncompliance Notification

a. 24-Hour Noncompliance Reporting

The permittee shall report to the Director, within 24-hours of becoming aware of the noncompliance, any noncompliance which may endanger health or the environment. This shall include but is not limited to the following circumstances:

- (1) does not comply with any daily minimum or maximum discharge limitation for an effluent characteristic specified in Provision I. A. of this permit which is denoted by an "(X)";
- (2) threatens human health or welfare, fish or aquatic life, or water quality standards;
- (3) does not comply with an applicable toxic pollutant effluent standard or prohibition established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a);
- (4) contains a quantity of a hazardous substance which has been determined may be harmful to public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. Section 1321(b)(4);
- (5) exceeds any discharge limitation for an effluent characteristic as a result of an unanticipated bypass or upset; and
- (6) is an unpermitted direct or indirect discharge of a pollutant to a water of the state (unpermitted discharges properly reported to the Department under any other requirement are not required to be reported under this provision).

The permittee shall orally report the occurrence and circumstances of such discharge to the Director within 24-hours after the permittee becomes aware of the occurrence of such discharge. In addition to the oral report, the permittee shall submit to the Director or Designee a written report as provided in Part I.C.2.c no later than five (5) days after becoming aware of the occurrence of such discharge.

- b. If for any reason, the permittee's discharge does not comply with any limitation of this permit, the permittee shall submit to the Director or Designee a written report as provided in Part I.C.2.c below, such report shall be submitted with the next Discharge Monitoring Report required to be submitted by Part I.C.1 of this permit after becoming aware of the occurrence of such noncompliance.
- c. Any written report required to be submitted to the Director or Designee by Part I.C.2 a. or b. shall be submitted using a copy of the Noncompliance Notification Form provided with this permit and shall include the following information:
- (1) A description of the discharge and cause of noncompliance;
 - (2) The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
 - (3) A description of the steps taken and/or being taken to reduce or eliminate the noncomplying discharge and to prevent its recurrence.

D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

The permittee shall give the Director written advance notice of any planned changes or other circumstances regarding a facility which may result in noncompliance with permit requirements.

2. Termination of Discharge

The permittee shall notify the Director, in writing, when all discharges from any point source(s) identified in Provision I. A. of this permit have permanently ceased. This notification shall serve as sufficient cause for instituting procedures for modification or termination of the permit.

3. Updating Information

- a. The permittee shall inform the Director of any change in the permittee's mailing address, telephone number or in the permittee's designation of a facility contact or office having the authority and responsibility to prevent and abate violations of the AWPCA, the Department's Rules, and the terms and conditions of this permit, in writing, no later than ten (10) days after such change. Upon request of the Director or his designee, the permittee shall furnish the Director with an update of any information provided in the permit application.
- b. If the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information with a written explanation for the mistake and/or omission.

4. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director or his designee may request to determine whether cause exists for modifying, revoking and re-issuing, suspending, or terminating this permit, in whole or in part, or to determine compliance with this permit.

5. Cooling Water and Boiler Water Additives

- a. The permittee shall notify the Director in writing not later than thirty (30) days prior to instituting the use of any biocide corrosion inhibitor or chemical additive in a cooling or boiler system, not identified in the application for this permit, from which discharge is allowed by this permit. Notification is not required for additives that do not contain a heavy metal(s) as an active ingredient and that pass through a wastewater treatment system prior to discharge nor is notification required for additives that should not reasonably be expected to cause the cooling water or boiler water to exhibit toxicity as determined by analysis of manufacturer's data or testing by the permittee. Such notification shall include:
 - (1) name and general composition of biocide or chemical;
 - (2) 96-hour median tolerance limit data for organisms representative of the biota of the waterway into which the discharge will ultimately reach;
 - (2) quantities to be used;
 - (3) frequencies of use;
 - (4) proposed discharge concentrations; and
 - (6) EPA registration number, if applicable.
- b. The use of a biocide or additive containing tributyl tin, tributyl tin oxide, zinc, chromium or related compounds in cooling or boiler system(s), from which a discharge regulated by this permit occurs, is prohibited except as exempted below. The use of a biocide or additive containing zinc, chromium or related compounds may be used in special circumstances if (1) the permit contains limits for these substances, or (2) the applicant demonstrates during the application process that the use of zinc, chromium or related compounds as a biocide or additive will not pose a reasonable potential to violate the applicable State water quality standards for these substances. The use of any additive, not identified in this permit or in the application for this permit or not exempted from notification under this permit is prohibited, prior to a determination by the Department that permit modification to control discharge of the additive is not required or prior to issuance of a permit modification controlling discharge of the additive.

6. Permit Issued Based On Estimated Characteristics

- a. If this permit was issued based on estimates of the characteristics of a process discharge reported on an EPA NPDES Application Form 2D (EPA Form 3510-2D), the permittee shall complete and submit an EPA NPDES Application Form 2C (EPA Form 3510-2C) no later than two years after the date that discharge begins. Sampling required for completion of the Form 2C shall occur when a discharge(s) from the process(s) causing the new or increased discharge is occurring. If this permit was issued based on estimates concerning the composition of a stormwater discharge(s), the permittee shall perform the sampling required by EPA NPDES Application Form 2F (EPA Form 3510-2F) no later than one year after the industrial activity generating the stormwater discharge has been fully initiated.
- b. This permit shall be reopened if required to address any new information resulting from the completion and submittal of the Form 2C and or 2F.

E. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the discharge limitations specified in Provision I. A. in accordance with the following schedule:

COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities only when necessary to achieve compliance with the conditions of the permit.

2. Best Management Practices

- a. Dilution water shall not be added to achieve compliance with discharge limitations except when the Director or his designee has granted prior written authorization for dilution to meet water quality requirements.
- b. The permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with 40 C.F.R. Section 112 if required thereby.
- c. The permittee shall prepare, submit for approval and implement a Best Management Practices (BMP) Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a significant potential for discharge, if so required by the Director or his designee. When submitted and approved, the BMP Plan shall become a part of this permit and all requirements of the BMP Plan shall become requirements of this permit.

3. Spill Prevention, Control, and Management

The permittee shall provide spill prevention, control, and/or management sufficient to prevent any spills of pollutants from entering a water of the state or a publicly or privately owned treatment works. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and which shall prevent the contamination of groundwater and such containment system shall be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided.

B. OTHER RESPONSIBILITIES

1. Duty to Mitigate Adverse Impacts

The permittee shall promptly take all reasonable steps to mitigate and minimize or prevent any adverse impact on human health or the environment resulting from noncompliance with any discharge limitation specified in Provision I. A. of this permit, including such accelerated or additional monitoring of the discharge and/or the receiving waterbody as necessary to determine the nature and impact of the noncomplying discharge.

2. Right of Entry and Inspection

The permittee shall allow the Director, or an authorized representative, upon the presentation of proper credentials and other documents as may be required by law to:

- a. enter upon the permittee's premises where a regulated facility or activity or point source is located or conducted, or where records must be kept under the conditions of the permit;
- b. have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- c. inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and
- d. sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

C. BYPASS AND UPSET

1. Bypass

- a. Any bypass is prohibited except as provided in b. and c. below:

- b. A bypass is not prohibited if:
 - (1) It does not cause any discharge limitation specified in Provision I. A. of this permit to be exceeded;
 - (2) It enters the same receiving stream as the permitted outfall; and
 - (3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system.
- c. A bypass is not prohibited and need not meet the discharge limitations specified in Provision I. A. of this permit if:
 - (1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and
 - (3) The permittee submits a written request for authorization to bypass to the Director at least ten (10) days prior to the anticipated bypass (if possible), the permittee is granted such authorization, and the permittee complies with any conditions imposed by the Director to minimize any adverse impact on human health or the environment resulting from the bypass.
- d. The permittee has the burden of establishing that each of the conditions of Provision II.C.1.b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in a. and an exemption, where applicable, from the discharge limitations specified in Provision I. A. of this permit.

2. Upset

- a. A discharge which results from an upset need not meet the discharge limitations specified in Provision I. A. of this permit if:
 - (1) No later than 24-hours after becoming aware of the occurrence of the upset, the permittee orally reports the occurrence and circumstances of the upset to the Director or his designee; and
 - (2) No later than five (5) days after becoming aware of the occurrence of the upset, the permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, or other relevant evidence, demonstrating that (i) an upset occurred; (ii) the permittee can identify the specific cause(s) of the upset; (iii) the permittee's facility was being properly operated at the time of the upset; and (iv) the permittee promptly took all reasonable steps to minimize any adverse impact on human health or the environment resulting from the upset.
- b. The permittee has the burden of establishing that each of the conditions of Provision II. C.2.a. of this permit have been met to qualify for an exemption from the discharge limitations specified in Provision I.A. of this permit.

D. DUTY TO COMPLY WITH PERMIT, RULES, AND STATUTES

1. Duty to Comply

- a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the AWPCA and the FWPCA and is grounds for enforcement action, for permit termination, revocation and reissuance, suspension, modification; or denial of a permit renewal application.
- b. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of the permit shall not be a defense for a permittee in an enforcement action.
- c. The discharge of a pollutant from a source not specifically identified in the permit application for this permit and not specifically included in the description of an outfall in this permit is not authorized and shall constitute noncompliance with this permit.
- d. The permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this permit or to minimize or prevent any adverse impact of any permit violation.
- e. Nothing in this permit shall be construed to preclude and negate the permittee's responsibility or liability to apply for, obtain, or comply with other ADEM, Federal, State, or Local Government permits, certifications, licenses, or other approvals.

2. Removed Substances

Solids, sludges, filter backwash, or any other pollutant or other waste removed in the course of treatment or control of wastewaters shall be disposed of in a manner that complies with all applicable Department Rules.

3. Loss or Failure of Treatment Facilities

Upon the loss or failure of any treatment facilities, including but not limited to the loss or failure of the primary source of power of the treatment facility, the permittee shall, where necessary to maintain compliance with the discharge limitations specified in Provision I. A. of this permit, or any other terms or conditions of this permit, cease, reduce, or otherwise control production and/or all discharges until treatment is restored. If control of discharge during loss or failure of the primary source of power is to be accomplished by means of alternate power sources, standby generators, or retention of inadequately treated effluent, the permittee must furnish to the Director within six months a certification that such control mechanisms have been installed.

4. Compliance with Statutes and Rules

- a. This permit has been issued under ADEM Administrative Code, Chapter 335-6-6. All provisions of this chapter, that are applicable to this permit, are hereby made a part of this permit. A copy of this chapter may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Blvd., Montgomery, AL 36130.
- b. This permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

E. PERMIT TRANSFER, MODIFICATION, SUSPENSION, REVOCATION, AND REISSUANCE

1. Duty to Reapply or Notify of Intent to Cease Discharge

- a. If the permittee intends to continue to discharge beyond the expiration date of this permit, the permittee shall file a complete permit application for reissuance of this permit at least 180 days prior to its expiration. If the permittee does not intend to continue discharge beyond the expiration of this permit, the permittee shall submit written notification of this intent which shall be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Administrative Code Rule 335-6-6-.09.
- b. Failure of the permittee to apply for reissuance at least 180 days prior to permit expiration will void the automatic continuation of the expiring permit provided by ADEM Administrative Code Rule 335-6-6-.06 and should the permit not be reissued for any reason any discharge after expiration of this permit will be an unpermitted discharge.

2. Change in Discharge

- a. The permittee shall apply for a permit modification at least 180 days in advance of any facility expansion, production increase, process change, or other action that could result in the discharge of additional pollutants or increase the quantity of a discharged pollutant such that existing permit limitations would be exceeded or that could result in an additional discharge point. This requirement applies to pollutants that are or that are not subject to discharge limitations in this permit. No new or increased discharge may begin until the Director has authorized it by issuance of a permit modification or a reissued permit.
- b. The permittee shall notify the Director as soon as it is known or there is reason to believe:
 - (1) That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
 - (a) one hundred micrograms per liter;
 - (b) two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dini-trophenol; and one milligram per liter for antimony;
 - (c) five times the maximum concentration value reported for that pollutant in the permit application; or
 - (2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - (a) five hundred micrograms per liter;
 - (b) one milligram per liter for antimony;

(c) ten times the maximum concentration value reported for that pollutant in the permit application.

3. Transfer of Permit

This permit may not be transferred or the name of the permittee changed without notice to the Director and subsequent modification or revocation and reissuance of the permit to identify the new permittee and to incorporate any other changes as may be required under the FWPCA or AWPCA. In the case of a change in name, ownership or control of the permittee's premises only, a request for permit modification in a format acceptable to the Director is required at least 30 days prior to the change. In the case of a change in name, ownership or control of the permittee's premises accompanied by a change or proposed change in effluent characteristics, a complete permit application is required to be submitted to the Director at least 180 days prior to the change. Whenever the Director is notified of a change in name, ownership or control, he may decide not to modify the existing permit and require the submission of a new permit application.

4. Permit Modification and Revocation

a. This permit may be modified or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:

- (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to revoke and reissue this permit instead of terminating the permit;
- (2) If a request to transfer this permit has been received, the Director may decide to revoke and reissue or to modify the permit; or
- (3) If modification or revocation and reissuance is requested by the permittee and cause exists, the Director may grant the request.

b. This permit may be modified during its term for cause, including but not limited to, the following:

- (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to modify this permit instead of terminating this permit;
- (2) There are material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;
- (3) The Director has received new information that was not available at the time of permit issuance and that would have justified the application of different permit conditions at the time of issuance;
- (4) A new or revised requirement(s) of any applicable standard or limitation is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA;
- (5) Errors in calculation of discharge limitations or typographical or clerical errors were made;
- (6) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;
- (7) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, permits may be modified to change compliance schedules;
- (8) To agree with a granted variance under 301(c), 301(g), 301(h), 301(k), or 316(a) of the FWPCA or for fundamentally different factors;
- (9) To incorporate an applicable 307(a) FWPCA toxic effluent standard or prohibition;
- (10) When required by the reopener conditions in this permit;
- (11) When required under 40 CFR 403.8(e) (compliance schedule for development of pretreatment program);
- (12) Upon failure of the state to notify, as required by Section 402(b)(3) of the FWPCA, another state whose waters may be affected by a discharge permitted by this permit;
- (13) When required to correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions; or

- (14) When requested by the permittee and the Director determines that the modification has cause and will not result in a violation of federal or state law, regulations or rules.

5. Permit Termination

This permit may be terminated during its term for cause, including but not limited to, the following:

- a. Violation of any term or condition of this permit;
- b. The permittee's misrepresentation or failure to disclose fully all relevant facts in the permit application or during the permit issuance process or the permittee's misrepresentation of any relevant facts at any time;
- c. Materially false or inaccurate statements or information in the permit application or the permit;
- d. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;
- e. The permittee's discharge threatens human life or welfare or the maintenance of water quality standards;
- f. Permanent closure of the facility generating the wastewater permitted to be discharged by this permit or permanent cessation of wastewater discharge;
- g. New or revised requirements of any applicable standard or limitation that is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA that the Director determines cannot be complied with by the permittee; or
- h. Any other cause allowed by the ADEM Administrative Code, Chapter 335-6-6.

6. Permit Suspension

This permit may be suspended during its term for noncompliance until the permittee has taken action(s) necessary to achieve compliance.

7. Request for Permit Action Does Not Stay Any Permit Requirement

The filing of a request by the permittee for modification, suspension or revocation of this permit, in whole or in part, does not stay any permit term or condition.

F. COMPLIANCE WITH TOXIC POLLUTANT STANDARD OR PROHIBITION

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a), for a toxic pollutant discharged by the permittee and such standard or prohibition is more stringent than any discharge limitation on the pollutant specified in Provision I. A. of this permit, or controls a pollutant not limited in Provision I. A. of this permit, this permit shall be modified to conform to the toxic pollutant effluent standard or prohibition and the permittee shall be notified of such modification. If this permit has not been modified to conform to the toxic pollutant effluent standard or prohibition before the effective date of such standard or prohibition, the permittee shall attain compliance with the requirements of the standard or prohibition within the time period required by the standard or prohibition and shall continue to comply with the standard or prohibition until this permit is modified or reissued.

G. DISCHARGE OF WASTEWATER GENERATED BY OTHERS

The discharge of wastewater, generated by any process, facility, or by any other means not under the operational control of the permittee or not identified in the application for this permit or not identified specifically in the description of an outfall in this permit is not authorized by this permit.

PART III OTHER PERMIT CONDITIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained or performed under the permit shall, upon conviction, be subject to penalties as provided by the AWPCA.

2. False Statements

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be subject to penalties as provided by the AWPCA.

3. Permit Enforcement

a. Any NPDES permit issued or reissued by the Department is a permit for the purpose of the AWPCA and the FWPCA and as such any terms, conditions, or limitations of the permit are enforceable under state and federal law.

b. Any person required to have a NPDES permit pursuant to ADEM Administrative Code Chapter 335-6-6 and who discharges pollutants without said permit, who violates the conditions of said permit, who discharges pollutants in a manner not authorized by the permit, or who violates applicable orders of the Department or any applicable rule or standard of the Department, is subject to any one or combination of the following enforcement actions under applicable state statutes.

(1) An administrative order requiring abatement, compliance, mitigation, cessation, clean-up, and/or penalties;

(2) An action for damages;

(3) An action for injunctive relief; or

(4) An action for penalties.

c. If the permittee is not in compliance with the conditions of an expiring or expired permit the Director may choose to do any or all of the following provided the permittee has made a timely and complete application for reissuance of the permit:

(1) initiate enforcement action based upon the permit which has been continued;

(2) issue a notice of intent to deny the permit reissuance. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;

(3) reissue the new permit with appropriate conditions; or

(4) take other actions authorized by these rules and AWPCA.

4. Relief from Liability

Except as provided in Provision II.C.1 (Bypass) and Provision II.C.2 (Upset), nothing in this permit shall be construed to relieve the permittee of civil or criminal liability under the AWPCA or FWPCA for noncompliance with any term or condition of this permit.

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the FWPCA, 33 U.S.C. Section 1321.

C. PROPERTY AND OTHER RIGHTS

This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of federal, state, or local laws or regulations, nor does it authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any waters of the state or of the United States.

D. AVAILABILITY OF REPORTS

Except for data determined to be confidential under Code of Alabama 1975, Section 22-22-9(c), all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential.

E. EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES

1. If this permit was issued for a new discharger or new source, this permit shall expire eighteen months after the issuance date if construction of the facility has not begun during the eighteen-month period.
2. If this permit was issued or modified to allow the discharge of increased quantities of pollutants to accommodate the modification of an existing facility and if construction of this modification has not begun during the eighteen month period after issuance of this permit or permit modification, this permit shall be modified to reduce the quantities of pollutants allowed to be discharged to those levels that would have been allowed if the modification of the facility had not been planned.
3. Construction has begun when the owner or operator has:
 - a. begun, or caused to begin as part of a continuous on-site construction program:
 - (1) any placement, assembly, or installation of facilities or equipment; or
 - (2) significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or
 - b. entered into a binding contractual obligation for the purpose of placement, assembly, or installation of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under the paragraph. The entering into a lease with the State of Alabama for exploration and production of hydrocarbons shall also be considered beginning construction.

F. COMPLIANCE WITH WATER QUALITY STANDARDS

1. On the basis of the permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this permit should assure compliance with the applicable water quality standards.
2. Compliance with permit terms and conditions notwithstanding, if the permittee's discharge(s) from point sources identified in Provision I. A. of this permit cause or contribute to a condition in contravention of state water quality standards, the Department may require abatement action to be taken by the permittee in emergency situations or modify the permit pursuant to the Department's Rules, or both.
3. If the Department determines, on the basis of a notice provided pursuant to this permit or any investigation, inspection or sampling, that a modification of this permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification and, in cases of emergency, the Director may prohibit the discharge until the permit has been modified.

G. GROUNDWATER

Unless specifically authorized under this permit, this permit does not authorize the discharge of pollutants to groundwater. Should a threat of groundwater contamination occur, the Director may require groundwater monitoring to properly assess the degree of the problem and the Director may require that the Permittee undertake measures to abate any such discharge and/or contamination.

H. DEFINITIONS

1. Average monthly discharge limitation - means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).
2. Average weekly discharge limitation - means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

3. Arithmetic Mean – means the summation of the individual values of any set of values divided by the number of individual values.
4. AWPCA - means the Alabama Water Pollution Control Act.
5. BOD – means the five-day measure of the pollutant parameter biochemical oxygen demand.
6. Bypass - means the intentional diversion of waste streams from any portion of a treatment facility.
7. CBOD – means the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand.
8. Daily discharge - means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.
9. Daily maximum - means the highest value of any individual sample result obtained during a day.
10. Daily minimum - means the lowest value of any individual sample result obtained during a day.
11. Day - means any consecutive 24-hour period.
12. Department - means the Alabama Department of Environmental Management.
13. Director - means the Director of the Department.
14. Discharge - means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other wastes into waters of the state". Code of Alabama 1975, Section 22-22-1(b)(8).
15. Discharge Monitoring Report (DMR) - means the form approved by the Director to accomplish reporting requirements of an NPDES permit.
16. DO – means dissolved oxygen.
17. 8HC – means 8-hour composite sample, including any of the following:
 - a. The mixing of at least 5 equal volume samples collected at constant time intervals of not more than 2 hours over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
 - b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
18. EPA - means the United States Environmental Protection Agency.
19. FC – means the pollutant parameter fecal coliform.
20. Flow – means the total volume of discharge in a 24-hour period.
21. FWPCA - means the Federal Water Pollution Control Act.
22. Geometric Mean – means the Nth root of the product of the individual values of any set of values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered one (1).
23. Grab Sample – means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.
24. Indirect Discharger – means a nondomestic discharger who discharges pollutants to a publicly owned treatment works or a privately owned treatment facility operated by another person.
25. Industrial User – means those industries identified in the Standard Industrial Classification manual, Bureau of the Budget 1967, as amended and supplemented, under the category “Division D – Manufacturing” and such other classes of significant waste producers as, by regulation, the Director deems appropriate.
26. MGD – means million gallons per day.
27. Monthly Average – means, other than for fecal coliform bacteria, the arithmetic mean of the entire composite or grab samples taken for the daily discharges collected in one month period. The monthly average for fecal coliform bacteria is the geometric

mean of daily discharge samples collected in a one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period.

28. New Discharger – means a person, owning or operating any building, structure, facility or installation:
 - a. from which there is or may be a discharge of pollutants;
 - b. that did not commence the discharge of pollutants prior to August 13, 1979, and which is not a new source; and
 - c. which has never received a final effective NPDES permit for dischargers at that site.
29. NH3-N – means the pollutant parameter ammonia, measured as nitrogen.
30. Permit application - means forms and additional information that is required by ADEM Administrative Code Rule 335-6-6-.08 and applicable permit fees.
31. Point source - means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, . . . from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. Section 1362(14).
32. Pollutant - includes for purposes of this permit, but is not limited to, those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and those effluent characteristics specified in Provision I. A. of this permit.
33. Privately Owned Treatment Works – means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a “POTW”.
34. Publicly Owned Treatment Works – means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.
35. Receiving Stream – means the “waters” receiving a “discharge” from a “point source”.
36. Severe property damage - means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
37. Significant Source – means a source which discharges 0.025 MGD or more to a POTW or greater than five percent of the treatment work’s capacity, or a source which is a primary industry as defined by the U.S. EPA or which discharges a priority or toxic pollutant.
38. TKN – means the pollutant parameter Total Kjeldahl Nitrogen.
39. TON – means the pollutant parameter Total Organic Nitrogen.
40. TRC – means Total Residual Chlorine.
41. TSS – means the pollutant parameter Total Suspended Solids.
42. 24HC – means 24-hour composite sample, including any of the following:
 - a. the mixing of at least 12 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;
 - b. a sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected; or
 - c. a sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.
43. Upset - means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
44. Waters - means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the state, natural or artificial. This does not include waters which are entirely confined and retained completely upon the

property of a single individual, partnership or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, Section 22-22-1(b)(2). Waters "include all navigable waters" as defined in Section 502(7) of the FWPCA, 22 U.S.C. Section 1362(7), which are within the State of Alabama.

45. Week - means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.
46. Weekly (7-day and calendar week) Average – is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.

I. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

PART IV ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. BEST MANAGEMENT PRACTICES (BMP) PLAN REQUIREMENTS

1. BMP Plan

The permittee shall develop and implement a Best Management Practices (BMP) Plan which prevents, or minimizes the potential for, the release of pollutants from ancillary activities, including material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas, to the waters of the State through plant site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage.

2. Plan Content

The permittee shall prepare and implement a best management practices (BMP) plan, which shall:

- a. Establish specific objectives for the control of pollutants:
 - (1) Each facility component or system shall be examined for its potential for causing a release of significant amounts of pollutants to waters of the State due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.
 - (2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g. precipitation), or circumstances to result in significant amounts of pollutants reaching surface waters, the plan should include a prediction of the direction, rate of flow, and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.
- b. Establish specific best management practices to meet the objectives identified under paragraph a. of this section, addressing each component or system capable of causing a release of significant amounts of pollutants to the waters of the State, and identifying specific preventative or remedial measures to be implemented;
- c. Establish a program to identify and repair leaking equipment items and damaged containment structures, which may contribute to contaminated stormwater runoff. This program must include regular visual inspections of equipment, containment structures and of the facility in general to ensure that the BMP is continually implemented and effective;
- d. Prevent the spillage or loss of fluids, oil, grease, gasoline, etc. from vehicle and equipment maintenance activities and thereby prevent the contamination of stormwater from these substances;
- e. Prevent or minimize stormwater contact with material stored on site;
- f. Designate by position or name the person or persons responsible for the day to day implementation of the BMP;
- g. Provide for routine inspections, on days during which the facility is manned, of any structures that function to prevent stormwater pollution or to remove pollutants from stormwater and of the facility in general to ensure that the BMP is continually implemented and effective;
- h. Provide for the use and disposal of any material used to absorb spilled fluids that could contaminate stormwater;
- i. Develop a solvent management plan, if solvents are used on site. The solvent management plan shall include as a minimum lists of the total organic compounds on site; the method of disposal used instead of dumping, such as reclamation, contract hauling; and the procedures for assuring that toxic organics do not routinely spill or leak into the stormwater;
- j. Provide for the disposal of all used oils, hydraulic fluids, solvent degreasing material, etc. in accordance with good management practices and any applicable state or federal regulations;
- k. Include a diagram of the facility showing the locations where stormwater exits the facility, the locations of any structure or other mechanisms intended to prevent pollution of stormwater or to remove pollutants from stormwater, the locations of any collection and handling systems;
- l. Provide control sufficient to prevent or control pollution of stormwater by soil particles to the degree required to maintain compliance with the water quality standard for turbidity applicable to the waterbody(s) receiving discharge(s) under this permit;

- m. Provide spill prevention, control, and/or management sufficient to prevent or minimize contaminated stormwater runoff. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and shall prevent the contamination of groundwater. The containment system shall also be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided;
- n. Provide and maintain curbing, diking or other means of isolating process areas to the extent necessary to allow segregation and collection for treatment of contaminated stormwater from process areas;
- o. Be reviewed by plant engineering staff and the plant manager; and
- p. Bear the signature of the plant manager.

3. Compliance Schedule

The permittee shall have reviewed (and revised if necessary) and fully implemented the BMP plan as soon as practicable but no later than six months after the effective date of this permit.

4. Department Review

- a. When requested by the Director or his designee, the permittee shall make the BMP available for Department review.
- b. The Director or his designee may notify the permittee at any time that the BMP is deficient and require correction of the deficiency.
- c. The permittee shall correct any BMP deficiency identified by the Director or his designee within 30 days of receipt of notification and shall certify to the Department that the correction has been made and implemented.

5. Administrative Procedures

- a. A copy of the BMP shall be maintained at the facility and shall be available for inspection by representatives of the Department.
- b. A log of the routine inspection required above shall be maintained at the facility and shall be available for inspection by representatives of the Department. The log shall contain records of all inspections performed for the last three years and each entry shall be signed by the person performing the inspection.
- c. The permittee shall provide training for any personnel required to implement the BMP and shall retain documentation of such training at the facility. This documentation shall be available for inspection by representatives of the Department. Training shall be performed prior to the date that implementation of the BMP is required.
- d. BMP Plan Modification. The permittee shall amend the BMP plan whenever there is a change in the facility or change in operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.
- e. BMP Plan Review. The permittee shall complete a review and evaluation of the BMP plan at least once every three years from the date of preparation of the BMP plan. Documentation of the BMP Plan review and evaluation shall be signed and dated by the Plant Manager.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 WATER DIVISION – INDUSTRIAL AND MUNICIPAL SECTIONS
NONCOMPLIANCE NOTIFICATION FORM

PERMITTEE NAME: _____ PERMIT NO: _____

FACILITY LOCATION: _____

DMR REPORTING PERIOD: _____

1. DESCRIPTION OF DISCHARGE: (Include outfall number (s))

2. DESCRIPTION OF NON-COMPLIANCE: (Attach additional pages if necessary):

LIST EFFLUENT VIOLATIONS (If applicable)			
Outfall Number (s)	NONCOMPLIANCE PARAMETER(S)	Result Reported (Include units)	Permit Limit (Include units)
LIST MONITORING / REPORTING VIOLATIONS (If applicable)			
Outfall Number (s)	NONCOMPLIANCE PARAMETER(S)	Monitoring / Reporting Violation (Provide description)	

3. CAUSE OF NON-COMPLIANCE (Attach additional pages if necessary):

4. PERIOD OF NONCOMPLIANCE: (Include exact date(s) and time(s) or, if not corrected, the anticipated time the noncompliance is expected to continue):

5. 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):

"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 fine and imprisonment for knowing violations."

 NAME AND TITLE OF RESPONSIBLE OFFICIAL (type or print)

 SIGNATURE OF RESPONSIBLE OFFICIAL / DATE SIGNED

ADEM PERMIT RATIONALE

PREPARED DATE: May 31, 2013
CLARIFICATION DATE: July 26, 2013
PREPARED BY: Brian Marshall

Permittee Name: ALDOT
Facility Name: ALDOT CBP SW Area
Permit Number: AL0081167

PERMIT IS MODIFICATION

DISCHARGE SERIAL NUMBERS & DESCRIPTIONS:

DSN001: Remediated Groundwater

INDUSTRIAL CATEGORY: NON-CATEGORICAL

MAJOR: N

STREAM INFORMATION:

Receiving Stream: Unnamed Tributary to the Alabama River
Classification: Fish & Wildlife
River Basin: Alabama
7Q10: 0.0 cfs
7Q2: 0.0 cfs
1Q10: 0.0 cfs
Annual Average Flow: 0.0 cfs
303(d) List: NO
Impairment: N/A
TMDL: NO

DISCUSSION:

Based on a request from the facility, the permit will indicate that the groundwater remediation facilities discharge to an Unnamed Tributary (UT) to the Alabama River through DSN001-1. The current permit has the discharge going to the Alabama River. This was incorrect because the discharge is actually to a Water of the State upstream of the Alabama River. The purpose of this modification is to correct the receiving stream and appropriate outfall location.

It should be noted that the facility submitted antidegradation information with the original application (permit issued August 19, 2011). This discharge is expected to have the same considerations with a slightly different sampling point. Additional antidegradation information is therefore not required for this modification.

At the discharge point, the UT to Alabama River is classified as fish & wildlife with a 7Q₁₀ of 0.0 cfs, a 1Q₁₀ of 0.0 cfs, and an average annual flow of 0.0 cfs. Consideration of available data indicate this section of the UT to Alabama River is considered a Tier II waterbody as defined by ADEM Administrative Rule 335-6-10-.12. and is not listed on the 2012 Alabama 303(d) list as being impaired nor have any TMDLs been developed. All permit conditions were reconsidered based upon the correct discharge location and no changes were necessary.

PZ-26 Well Completion Report

Southwest Corrective Measures Implementation Report

COLISEUM BOULEVARD PLUME SITE
MONTGOMERY, ALABAMA



Piezometer Installation Report

Southwest Treatment Area

Coliseum Boulevard Plume Investigation

This letter report documents the installation of piezometers PZ-26 and P-4 which completes the well installation activities in the Southwest Treatment Area (SWTA) to document groundwater elevations and trichloroethylene (TCE) concentrations in groundwater. PZ-26 and P-4 well construction information is provided, along with PZ-26 well development, sampling and groundwater sample results.

Background

The Alabama Department of Transportation (ALDOT) developed SWTA corrective measures to control, capture and treat groundwater containing TCE in the southwest portion of the Coliseum Boulevard Plume (CBP). These corrective measures are documented in the, "Southwest Treatment Area Corrective Measures Plan; dated December 2011, revised September 2012". After reviewing the Plan, the Alabama Department of Environmental Management (ADEM) requested that ALDOT install one additional piezometer, PZ-26, in the SWTA. ALDOT agreed to construct piezometer PZ-26 west of the Dewatering Pond and collect an annual groundwater sample from this location for three consecutive years. In addition, ALDOT installed a toe-of-slope piezometer (P-4) along the approximate flow path between PZ-26 and the Dewatering Pond. These two piezometers will be used to verify that the recovery of groundwater at the Dewatering Pond is intercepting the southwestern part of the CBP and capturing groundwater between the Long Pond and the Dewatering Pond. Figure 1 shows the locations of piezometers PZ-26 and P-4 and monitoring wells in the SWTA.

PZ-26 Construction

Southern Earth Sciences, Inc. (SESI) supervised the construction of piezometer PZ-26 by Layne Drilling Services from December 4 through 6, 2012. The well was installed by using a roto-sonic drill rig. The drill rig and associated equipment were steam cleaned prior to arrival at the construction site.

Drilling and Sediment Sampling

Sediment samples were collected at PZ-26 using a 4-inch diameter core barrel advanced in 10-foot intervals. Each 10-foot interval was evaluated by the on-site geologist for lithological description. The sequence of sampling was performed as follows:

- The 4-inch diameter core barrel is advanced to a depth of 10 feet; thereby collecting sediment inside the hollow core barrel liner. The 4-inch diameter core barrel remains in place;
- The drill-stem is disconnected from the 4-inch diameter core barrel and connected to a 6-inch override casing. This casing is advanced around the 4-inch diameter core barrel to a depth of 10 feet;
- Following installation of the override casing, the 4-inch diameter core barrel is retracted and the core barrel liner is removed to obtain the sediment sample for lithological description;
- A clean core barrel liner is inserted in the hollow core barrel, attached to the drill stem and inserted into the boring to a depth of 20 feet, thus collecting a sediment sample from 10 feet to 20 feet below land surface (ft. BLS);

Piezometer Installation Report

Southwest Treatment Area

Coliseum Boulevard Plume Investigation

- Following the core barrel advancement to 20 feet, a new 10-foot section of override casing is attached to the override casing from land surface to 10-foot in the boring and advanced to a depth of 20 feet. This process was repeated to a depth of 65 ft. BLS.

The sediments comprise silty to micaceous clays, sands, and gravels. The on-site geologist noted that sediments were saturated with water beginning at 37 ft. BLS.

In addition to evaluating sediment samples for lithological descriptions, the on-site geologist field screened the sediment samples at 5-foot intervals for ionizable compounds with a MiniRAE Lite photo ionization detector (PID) with a 10.6 eV lamp. Ionizable compounds were not detected in the samples. Lithologic descriptions and results of the PID screenings are provided on the attached Well Construction and Lithologic form.

Piezometer Construction

PZ-26 is constructed of 2-inch diameter, Schedule 40 polyvinyl chloride (PVC) casing that is thread coupled to a 15-foot length of 0.010-inch slotted well screen. Ground elevation is 162.93 feet above mean sea level (ft. AMSL), and the piezometer terminates at a clay layer at approximately 99 ft. AMSL. The annulus of the piezometer is filled with filter sand from the bottom of the well to about 116 ft. AMSL, 5 feet of bentonite from 116 to 121 ft. AMSL and neat cement/grout mix from 121 ft. AMSL to the land surface. The well is completed within a steel stickup with bollards for protection. The steel stickup is fitted with a lock to prevent tampering.

A diagram of the PZ-26 construction is presented on the attached Well Construction and Lithologic Description.

Piezometer Development

SESI developed PZ-26 at about 5 gallons per minute on December 6, 2012 by using a decontaminated submersible pump. Development continued until temperature, conductivity, dissolved oxygen, pH, redox potential, and turbidity stabilized (Table 1). Well development produced approximately 150 gallons of water. Development water was discharged incident to on-site NPDES permit AL0081167.

Groundwater Sample Collection

The first groundwater sample, of three annual samples, was collected from PZ-26 on January 2, 2013. Prior to sample collection, PZ-26 was purged using low-flow methods until the groundwater parameters of temperature, conductivity, pH and turbidity were stable. The sample was shipped overnight to Envirochem Environmental Laboratories in a cooler with proper chain-of-custody documentation. The groundwater purging data and Laboratory report are included as Attachment A. Two constituents were detected: chloroform at 1.9 micrograms per liter ($\mu\text{g/L}$) and TCE at 15.4 $\mu\text{g/L}$.

Piezometer Installation Report

Southwest Treatment Area

Coliseum Boulevard Plume Investigation

Piezometer P-4 Installation

P-4 was installed on December 5, 2012 to measure groundwater elevations adjacent to the western edge of the Dewatering Pond (see Figure 1). This piezometer was installed by hand driving a 1-1/4 inch galvanized well point and riser to about 10 ft. BLS. The piezometer has a 3-foot long screen that extends from 115.7 ft. above mean sea level (AMSL) to 112.7 ft. AMSL. No sediment samples were collected during the installation of P-4. P-4 will be used for water level measurements only.

Updated Dewatering System Cross-Section

The Lithology encountered during the installation of PZ-26 may be indicative of mining overburden or wash-water fines from historical mining operations in this area. Such deposits typically exhibit lower hydraulic conductivities in comparison to in-situ sand and gravel deposits.

Figure 2 depicts the lithology in the SWTA along a southeast to northwest cross-section. Based on the groundwater elevations measured along this cross-section, groundwater flows radially to the Dewatering Pond (Figure 3). Measured groundwater elevations in PZ-26 and P-4 confirm that groundwater between the Long Pond and Dewatering Pond flows east to the Dewatering Pond. Concentrations of residual TCE in the area of PZ-26 that predate installation of the groundwater recovery system are expected to diminish gradually.

As noted above, ALDOT will collect groundwater samples from PZ-26 annually for three years to monitor the residual dissolved TCE and establish a trend. ALDOT will consult with ADEM on the need for any additional groundwater samples from PZ-26 or the redesignation of the piezometer as an Effectiveness Monitoring Well if the monitoring data shows a statistically significant increasing trend in TCE concentrations.



Piezometer Installation Report

Southwest Treatment Area

Coliseum Boulevard Plume Investigation

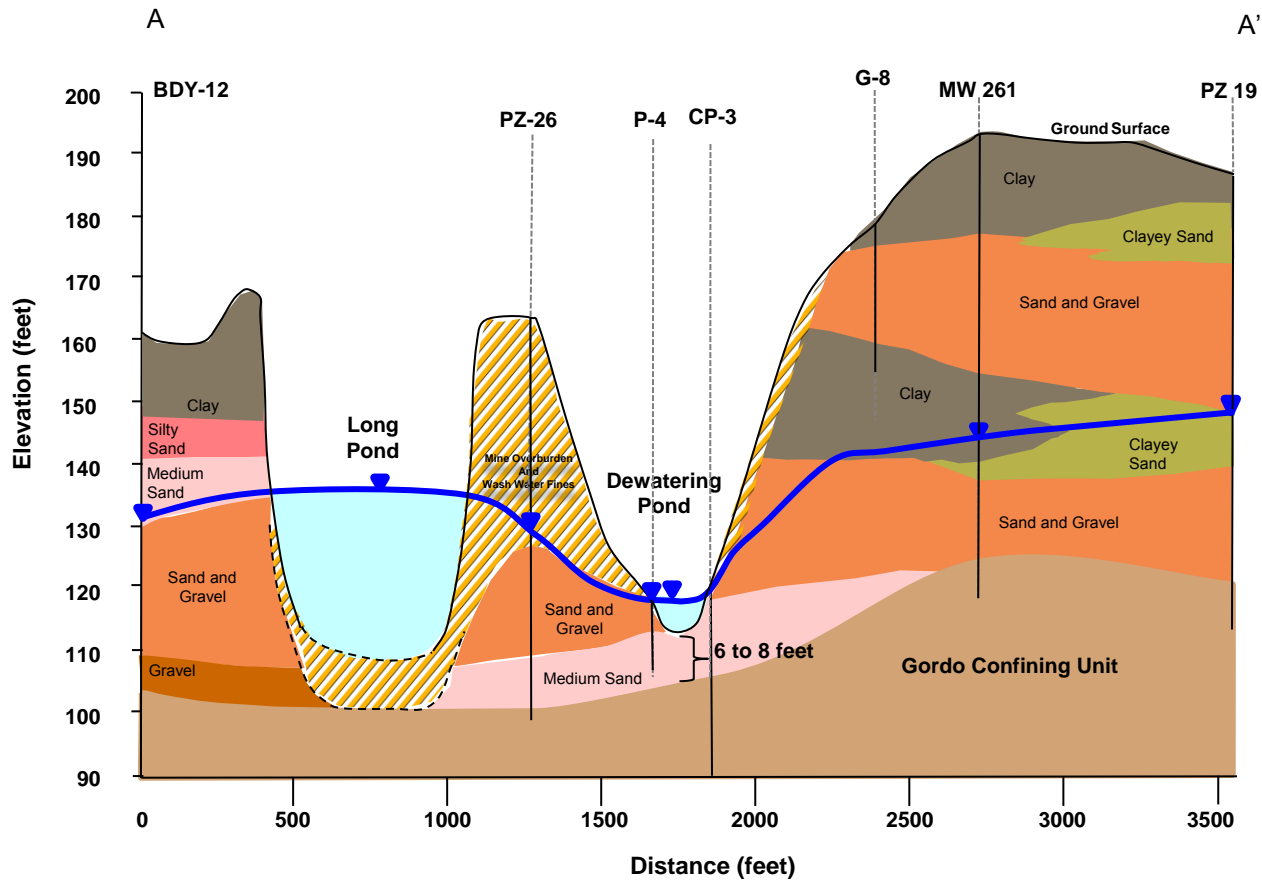
FIGURES



**COLISEUM BOULEVARD PLUME
 SOUTHWEST TREATMENT AREA
 LOCATION OF PZ-26 AND CROSS-SECTION**

February 2013

Figure 1



Horizontal Scale Approximately 1 inch = 200 feet
 20x Vertical Exaggeration
 Boring CP-3 extends to 77 ft MSL terminating in the Gordo Confining Unit

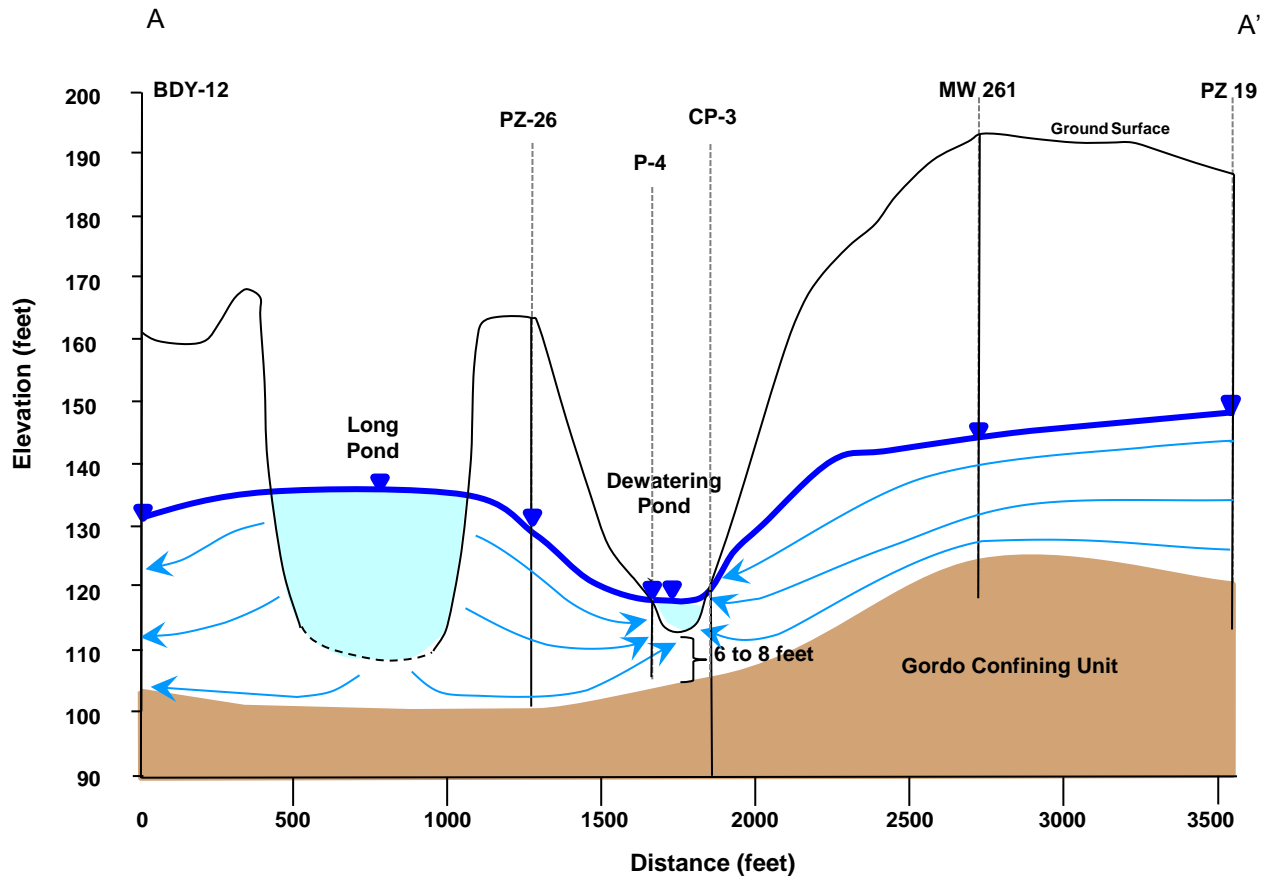
Geologic Area Cross Section A-A'

Alabama Department of Transportation - Coliseum Boulevard Plume
 Montgomery, Alabama

March 2013

FIGURE 2





Horizontal Scale Approximately 1 inch = 200 feet
 20x Vertical Exaggeration
 Boring CP-3 extends to 77 ft MSL terminating in the Gordo Confining Unit

Flow Net Section A-A'

Alabama Department of Transportation - Coliseum Boulevard Plume
 Montgomery, Alabama

March 2013

FIGURE 3





Piezometer Installation Report

Southwest Treatment Area

Coliseum Boulevard Plume Investigation

TABLE

Table 1
PZ-26 Development Data (12/6/12)

Time	Temperature (° C)	Conductivity (μ S/cm)	Dissolved Oxygen (mg / l)	pH	ORP	Turbidity (NTU)
08:40	19.85	105	10.16	5.41	-11.7	186
08:50	19.41	91	5.72	4.84	-10.2	7.03
09:00	19.43	89	5.56	4.82	-11.1	2.21
09:10	19.43	88	5.53	4.78	-8.1	1.47

NOTE: Development flow rate measured at ~ 5 gpm
 Total depth = 64.80 feet.
 Initial Depth to Water = 36.11 feet.
 Final Depth to Water = 36.12 feet.



Piezometer Installation Report

Southwest Treatment Area

Coliseum Boulevard Plume Investigation

WELL CONSTRUCTION LOG

WELL CONSTRUCTION AND LITHOLOGIC DESCRIPTION

BORING NO.: PZ-26

METHOD: ROTOSONIC

Page 1 of 1

PROJECT NO.: C06-401

TOC ELEVATION: 165.99

PROJECT: COLISEUM BOULEVARD PLUME

GROUND ELEVATION: 162.93

PROJECT LOCATION: SOUTHWEST AREA

DATE COMPLETED: 12/06/12

LOCATION: N32°24'23.56" W86°17'52.98"

WATER LEVEL DATE: 12/10/12

DATE DRILLED: 12/04/12

DRILLER: LAYNE

WATER LEVEL: 36.12 ft

WELL DIAMETER: 2 INCHES

GEOL / ENGR: ERIC GUARINO

SCREEN SLOT SIZE: 0.010"

ERIC L:\PROJECTS\JOB FOLDERS\2000-09\2006\06\401-COLISEUM PLUME\BORING LOGS\CBP LOGS COLOR 2012.GPJ SO_EARTH_COLOR.GDT 1/8/13

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	Description	PID ppm
0				
160		CL	SILTY CLAY TO CLAY, GLEY1-7/10Y IN COLOR; WELL INDURATED, IRON CONCENTRATIONS NUMEROUS AT 7.5 YR 5/6; 100% RETURNS	0.1
10			VERY LOOSE FORMATIONS, 2% RETURNS,	
150				
20				
140				
30		CH	MOIST, MALLEABLE, 10 YR 5/4 IN COLOR; 70% RETURNS ON THE 30 TO 40' SAMPLE RUN	0.1
130		SC-CL	MOIST; 10YR 5/4 IN COLOR	0.1
40		GP	POORLY SORTED, VERY MOIST, SATURATED, COLOR VARIES, 10YR 6/4, 7.5YR 5/1, 7.5YR 5/6, 7.5YR, 7/1	0.1
120				0.1
50				0.1
110		CH SM	SATURATED, WELL INDURATED, COLOR 10YR 5/2 WITH MINOR MOTTLING FINE TO COARSE GRAINS, SATURATED, 7.5YR 6/6 TO 5YR 4/6 IN COLOR	0.1
60				0.1
100		CH	MICACEOUS, HEAVY MOTTLING, BASE COLOR 10YR 7/1 AND MOTTLING 7.5YR 6/6 TO 7.5YR 6/8	0.1
70				

Remarks:

- Bentonite
 - Filter Sand
 - Neat Cement

Attachment A

Groundwater Sample Collection

And

Laboratory Data



4320 Midmost Drive Mobile, Alabama 3660
(251) 344-9106 Phone (251) 344-9106 Fax

Report Date: 02/01/13 13:35

Report To: Southern Earth Sciences-Montgomery
Post Office Box 231238
Montgomery AL, 38123
Attention: Hal Wood

Project: ALDOT CBP-Monitoring Wells
Project Number: 06-401

ANALYTICAL REPORT

This report includes the results of analyses for the samples listed below that were received by the laboratory on 01/03/13 12:49 . The associated quality control data is not included in this report but is available upon request. If you have any questions concerning this report, please feel free to call Susan Maynard at (251) 344-9106.

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PZ-26	13A0050-03	Ground Water	01/02/13 12:00	01/03/13 12:49

Susan Maynard

Susan Maynard, Lab Director



The test results in this report meet NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the sample(s) received by this laboratory. This report must be reproduced in its entirety unless approved by the laboratory.

Results are reported on a "wet weight basis", unless otherwise noted.

Southern Earth Sciences-Montgomery

Sample Name: PZ-26

Sample Date: 01/02/13 12:00

Date Received: 01/03/13 12:49

Sampled by: Kyle Hodges

Sample Type: Grab

Matrix: Ground Water

Analyte	Result	Units	Reporting			Analyzed	Method	Batch	Lab Number
			Limit	Analyst	Prepared				
<u>Volatile Organic Compounds by EPA Method 8260</u>									
Chloromethane	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
Vinyl chloride	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
Chloroethane	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
Trichlorofluoromethane	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
Methylene Chloride	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
trans-1,2-Dichloroethene	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
1,1-Dichloroethane	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
cis-1,2-Dichloroethene	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
Chloroform	1.9	ug/L	1.0	JWT	01/07/13 11:50	01/07/13 19:28	EPA 8260	3A04008	13A0050-03RE1
Carbon Tetrachloride	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
1,1,1-Trichloroethane	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
Benzene	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
1,2-Dichloroethane	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
Trichloroethene	15.4	ug/L	1.0	JWT	01/07/13 11:50	01/07/13 19:28	EPA 8260	3A04008	13A0050-03RE1
1,2-Dichloropropane	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
Bromodichloromethane	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
cis-1,3-Dichloropropene	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
Toluene	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
Tetrachloroethene	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
trans-1,3-Dichloropropene	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
1,1,2-Trichloroethane	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
Dibromochloromethane	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
Chlorobenzene	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
Ethylbenzene	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
1,1,1,2-Tetrachloroethane	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
m,p-Xylene	< 2.0	ug/L	2.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
o-Xylene	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
Bromoform	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
1,1,2,2-Tetrachloroethane	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
1,3-Dichlorobenzene	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
1,4-Dichlorobenzene	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03
1,2-Dichlorobenzene	< 1.0	ug/L	1.0	JWT	01/03/13 11:00	01/03/13 16:20	EPA 8260	3A03021	13A0050-03



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Results are reported on a "wet weight basis", unless otherwise noted.