



Alabama Department of Environmental Management
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March 10, 2015

CERTIFIED MAIL #

91 7108 2133 3936 7151 9142

Mr. Scott W. George
Acting Chief, Bureau of Materials and Tests
Alabama Department of Transportation
3700 Fairground Road
Montgomery, Alabama 36110

Re: **Final Determination: Modification of the Settlement Agreement for Voluntary Response**
Coliseum Boulevard Plume Site
Montgomery, Alabama
Permit Number ALSFN 040 7037

Dear Mr. George:

The Department has made a final determination to modify the Settlement Agreement for Voluntary Response (Agreement) between the Alabama Department of Environmental Management (ADEM) and the Alabama Department of Transportation (ALDOT) for the Coliseum Boulevard Plume Site.

A public comment period was held from January 19, 2015 to March 5, 2015. The *Kilby Ditch/Low-lying Area Corrective Measures Implementation Plan (CMIP)*, *Southwest Treatment Area CMIP*, *Long-term Monitoring Plan (LTMP)*, and *Institutional Control Program (ICP)* were available for public review electronically via <http://www.ademstate.al.us/newEvents/PublicNotice.cnt> and at the Department's main office in Montgomery during the comment period. The reason for the modification was to document changes to the groundwater sampling schedule, as well as update corrective measures implementation plans referenced in the Agreement. No comments were received during the public comment period. Attached is an original signed copy of the Agreement.

An Agreement may be appealed as provided in §22-22-A-7 of the Code of Alabama. The procedures for hearing appeals are outlined in ADEM Admin. Code r. 335-2-1, "Rules of Procedures for Hearing Appeals of Administrative Actions of the Alabama Department of Environmental Management."

Regarding the Agreement, please note that the CMIP, LTMP, and ICP documents have been incorporated into the Agreement by reference and, as such, must be maintained together with the Agreement. ALDOT should be aware of the Agreement conditions containing compliance schedules. Failure to comply with compliance schedules will constitute a violation and may result in enforcement actions by the Department.



Mr. Scott W. George
March 10, 2015
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If questions or comments should arise concerning this matter, please contact Ashley T. Mastin of the Remediation Engineering Section at (334) 271-7797.

Sincerely,

A handwritten signature in black ink, appearing to read "Phillip D. Davis", with a long horizontal flourish extending to the right.

Phillip D. Davis, Chief
Land Division

Attachments

cc: Ralph Howard, US EPA Region 4 (w/ enclosures)

cc/via email: ADEM: Jason Wilson, Kelley Hartley

State of Alabama
Department of Environmental Management

SETTLEMENT AGREEMENT FOR VOLUNTARY RESPONSE

I. Introduction

This Site Response Agreement (“Agreement”) is entered into voluntarily by the Alabama Department of Environmental Management (“ADEM”) and the Alabama Department of Transportation (“ALDOT”), (collectively “the Parties”). This Agreement provides for the continued performance of site response actions involving the assessment and remediation of contaminated surface water and groundwater at the Coliseum Boulevard area located in Montgomery, Alabama (the “Site”). The Parties had previously entered into a Voluntary Assessment Agreement (“VAA”), executed by ADEM on September 20, 2000 and a Settlement Agreement for Voluntary Response (“Settlement Agreement”), executed on December 19, 2001. This Agreement replaces and supersedes the VAA and the Settlement Agreement.

II. Jurisdiction and General Provisions

This Agreement is entered into pursuant to the Alabama Environmental Management Act, Code of Alabama (1975), §§ 22-22A-1 through 22-22A-16, as amended, the Alabama Water Pollution Control Act, Code of Alabama (1975), §§ 22-22-1 through 22-22-14, as amended, the Hazardous Wastes Management and Minimization Act, Code of Alabama (1975), §§ 22-30-1 through 22-30-24, as amended, and the Alabama Hazardous Substance Cleanup Fund, Code of Alabama (1975), §§ 22-30A-1 through 22-30A-11, as amended.

The participation of ALDOT in this Agreement shall not constitute or be construed as any admission or evidence that ALDOT bears any responsibility or liability for any surface or groundwater contamination associated with the Site, and nothing in this Agreement may be used against ALDOT except to enforce the terms of this Agreement in a court of competent jurisdiction. To achieve the mutual objectives of the Parties and for ADEM and ALDOT to act as responsible state agencies, ALDOT consents to the continuing response actions this Agreement requires. Furthermore, by signing this Agreement, ADEM acknowledges that ALDOT does not waive any claims or defenses that it might raise in any proceeding involving ADEM or any other governmental agency or person, except that in any action to enforce the terms of this Agreement ALDOT shall be limited to the defenses of Force Majeure (as defined in Section XVII. of this Agreement), compliance with the Agreement, physical impossibility, and technical impracticability.

For purposes of this Agreement, and to facilitate record keeping at ADEM, this site shall be known as the Coliseum Boulevard Plume Site. All correspondence should reference the specific site name.

III. Parties Bound

This Agreement shall apply to and be binding upon ADEM, ALDOT, and their agents, successors, assigns, officers, directors, and principals. The signatories of this Agreement certify that they are authorized to execute and legally bind the Party they represent to this Agreement.

IV. Statement of Purpose

This Agreement provides for the continued performance by ALDOT of a voluntary assessment action at the Site, and for the remediation of site conditions as may be necessary, because of a release of hazardous substances into the environment at or near the Site.

In entering into this Agreement, the mutual objectives of the Parties are to limit and control access to groundwater at the Site and to areas of surface water contamination, to propose and implement appropriate response actions regarding groundwater and surface water contamination, to evaluate the horizontal and vertical extent and rate of migration of the groundwater contamination at the Site, and to provide for the evaluation, implementation and continued monitoring of appropriate response and remediation actions.

V. Relevant Historical Information

In November 1999, dissolved trichloroethylene (TCE) was found in the groundwater near the intersection of Coliseum Boulevard and Northern Boulevard in Montgomery, Alabama. In compliance with the subsequent VAA executed by ADEM and ALDOT in September 2000, and the Settlement Agreement for Voluntary Response executed in 2001, ALDOT has sampled and monitored air, soil, sediment, groundwater and surface water and conducted intensive comprehensive hydrogeological investigations throughout the area to assess the horizontal and vertical extent of the TCE contamination within the Site. The area where the concentration of dissolved TCE in the shallow groundwater equals or exceeds five (5) parts per billion ("ppb") is referred to as the Coliseum Boulevard Plume ("CBP"). The resulting data incident to relative concentrations of TCE in the groundwater and the rates and directions of migration of groundwater within the CBP were used as a basis for consideration and evaluation of potential remedial measures. Results from all sampling, hydrogeological, and land use investigations have been submitted to ADEM in quarterly status reports and study-specific area reports.

Using data from the comprehensive hydrogeological studies conducted since 1999, ALDOT created a computer model that predicts the fate and transport of the CBP through 2039. Going forward, the model will be refined and modified when appropriate as data from future groundwater/surface water sampling become available.

The comprehensive investigation revealed that the present area of the CBP may expand to comprise an area of approximately 1,200 acres by 2039. For purposes of this Agreement, the area predicted to be impacted by the release in 2039, is considered to be the Coliseum Boulevard Plume Site (hereinafter "Site").

The Site extends from a low-lying area adjacent to Three Mile Branch, northeast of the North Boulevard and Coliseum Boulevard intersection in the northeast to a former sand and gravel mining operation east of North Court Street in the southwest. The Site is located in an area of mixed land use, with state offices, municipal and commercial property, undeveloped land, and residential properties.

ALDOT evaluated potential corrective measures to address areas of elevated concentrations of TCE, and areas of potential exposure, by using both short-term and long-term treatment objectives in conjunction with institutional controls, i.e., non-engineering measures. Evaluation factors included, but were not limited to, ability to achieve target clean-up levels, long-term effectiveness, and cost. Reports of all evaluations were submitted to ADEM.

On November 2, 2007, ALDOT submitted its final Corrective Measures Evaluation Report ("CME Report"). The CME Report, which was revised July 10, 2008, provided details of ALDOT's proposed remediation plan, including engineering measures to be implemented at the Kilby Ditch/Low Lying Area of the Northeast portion of the Site ("Kilby Ditch/Low-Lying Area Corrective Measures Implementation Plan"), and engineering measures to be implemented at the former sand and gravel mining operation in the Southwest portion of the Site ("Southwest Treatment Area Corrective Measures Implementation Plan"). The CME Report included an implementation schedule, milestone submittal schedule, and provisions for implementing appropriate quality assurance and quality control procedures. All assessment and remediation evaluations activities were performed under the supervision of an engineer and a geologist licensed to practice in the State of Alabama. In addition, the CME Report provided details of a comprehensive Institutional Control Program focused on obtaining deed restrictions to minimize and limit exposure to groundwater at approximately 2,200 parcels of real property presently involved and/or predicted to become wholly or partially involved in the Site by 2039.

ALDOT developed a Community Involvement and Outreach Plan that includes, but is not limited to: an information web site, establishment of a community outreach group ("COG") comprised of individuals from the community representing both residential and commercial property owners, the preparation and distribution of a newsletter, a public repository of all assembled information updated on a regular basis, and an information telephone line providing callers with updates and schedules.

VI. Work to Be Performed

The scope of work to be performed by ALDOT and the reporting of the results of that work shall be in accordance with the following terms and conditions:

- a. ALDOT shall continue comprehensive groundwater and surface water monitoring to detect the presence of any chemical constituent of concern (see Table VIII.2.) in the groundwater and/or surface water (see Section VIII.) at the Site.
- b. ALDOT shall implement the selected engineering and/or non-engineering corrective measures approved by ADEM .
- c. ALDOT shall report on the status and progress of all investigations, monitoring, and corrective actions in accordance with Sections VII. and VIII. of this Agreement.
- d. ALDOT shall report, annually, the status of the Institutional Control Program.
- e. All work and reporting by ALDOT shall adhere to any approved schedule for the work and reports unless modified by agreement of the parties or deferred incident to an event of Force Majeure. (See Section XVII.)

- f. At least 180 days prior to each ten-year anniversary of the effective date of the Agreement, the Parties will conduct a comprehensive review of the Agreement and make such modifications and amendments as the Parties shall jointly approve.

VII. CORRECTIVE MEASURES IMPLEMENTATION

VII.A. APPLICABILITY

The conditions of this Part apply to the Coliseum Boulevard Plume Site, including those specific areas described herein or in prior CBP Plans and/or Studies as Kilby Ditch, Low-Lying Area, and Southwest area of the CBP.

VII.B. GENERAL CONDITIONS

1. ALDOT is required to perform corrective measures for the areas identified in Condition VII.A. The approved remedy for these areas, waterway areas, or land parcels, includes any and all actions set forth in this agreement and in the approved Interim Measures (IM) Plans, Corrective Measures Studies (CMS), and Corrective Measures Implementation (CMI) Plans approved by the Department, as noted below:

Applicable Area	Documents	Approval Date
Kilby Ditch/ Low-Lying Area	Kilby Ditch/Low-Lying Area Corrective Measures Implementation Plan - Rev.2	March 10, 2015
CBP/Sitewide	Institutional Control Plan - Rev.3	March 10, 2015
CBP/Sitewide	Long Term Monitoring Plan - Rev.3	March 10, 2015
Southwest Area	Southwest Treatment Area Corrective Measures Implementation Plan - Rev.2	March 10, 2015

2. Remedial Goals

Upon approval, pursuant to the CMI Plan designating applicable remedial goal(s), the remedial goal(s) for the area(s) specific to the CMI Plan will be deemed to be a condition of this Agreement.

3. Groundwater Monitoring and Remediation

Where required pursuant to Section VII.B.1. of this Agreement, ALDOT shall comply with the general groundwater monitoring requirements of Part VIII. of this Agreement.

4. Land Use Controls

- a. Pursuant to Section VII.B.1. of this Agreement and the denoted Institutional Control Program, ALDOT shall establish site-wide appropriate land use controls to achieve protection of human health and the environment by means of an environmental covenant, in a form in accordance with ADEM Admin. Code r. 335-5, that contains a deed restriction on access and use of groundwater applicable to each parcel of real property in the Site that will run

with the land in perpetuity and give notice to anyone with an actual or contingent interest in a parcel of property within the CBP that:

- i. The groundwater beneath the subject parcel of property is now or may in the future be contaminated with trichloroethylene, its breakdown components and carbon tetrachloride; and
 - ii. The use of the subject property is restricted whereby the use of, access of, interference with, and /or consumption of the groundwater beneath the subject property is hereby forever in perpetuity prohibited without the prior written consent of ALDOT.
- b. ALDOT shall record a fully executed copy of each environmental covenant in the Office of the Judge of Probate of Montgomery County to provide legal notice of the deed restriction to anyone with an actual or contingent interest in the subject parcel of property, and shall provide ADEM with a copy of the recorded covenant.
- c. In each Annual Report, ALDOT will provide ADEM a list of properties in the CBP for which a fully executed environmental covenant has been obtained and recorded, and a list of properties for which a fully executed environmental covenant has not been obtained and recorded. For the properties for which a fully executed environmental covenant has not been obtained and recorded, the report should include the actions that have been taken during the reporting period and actions that will be taken during the next reporting period to obtain the environmental covenant for these properties. In the event ALDOT determines that continued efforts to obtain an executed covenant for a specific parcel will likely be futile, ALDOT shall propose an alternate land use control for that parcel subject to ADEM's review and approval.

5. Survey Plat

For corrective measures where residual concentrations of contaminants will remain in-place at levels greater than those appropriate for unrestricted land use, as well as for corrective measures that rely on land use controls, ALDOT must:

- a. Within 90 calendar days following the effective date of an agreement modification addressing remedy selection, submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Department, a survey plat indicating the location and dimensions of the units/areas, and capped or partially remediated areas with respect to permanently surveyed benchmarks, the locations of sampling points, and the concentrations of hazardous constituents detected. This plat must be prepared and certified by a professional land surveyor registered in the State of Alabama. The plat must be filed with the local zoning authority or the authority with jurisdiction over local land use and must contain a note, prominently displayed, which states ALDOT's obligation to limit the property to the specified restricted uses.

- b. Maintain the survey plat as described in Condition VII.B.5.a. of this agreement and in the CMI Plan(s) until ALDOT has demonstrated, to the satisfaction of the Department, that the levels of hazardous constituents in all contaminated media are within limits appropriate for unrestricted land uses.
- c. The requirements of Sections VII.B.5.a. and VII.B.5.b., herein above, may be satisfied by the recordation of environmental covenants (see Section VII.B.4.) that contain a legal description for each of the subject parcels of property at the Office of the Judge of Probate of Montgomery County, and the annual submittal to ADEM of a list of the recorded covenants and a list of properties for which ALDOT has not obtained and recorded an environmental covenant (see Section VII.B.4.c.), and by annual submittal to ADEM and the City of Montgomery a GIS file that identifies or depicts the boundaries of the Institutional Control Boundary of the CBP, the location of boundary wells, monitoring wells, and effectiveness wells (see Section VIII.), and the areas of the Corrective Measures (i.e. Kilby Ditch Treatment System and Southwest Area Treatment System).

6. Security

Security measures, where required by Section VII.B.1. of this Agreement, will be conducted in accordance with the approved CMI Plan(s).

7. Inspection

ALDOT shall conduct inspections on a scheduled basis to ensure continued integrity of the remedy and to ensure that land use remains appropriately restricted per the environmental covenant(s) established pursuant to Section VII.B.4. Inspections shall be as prescribed in the approved CMI Plan(s).

VII.C. CORRECTIVE MEASURES IMPLEMENTATION (CMI) REPORTS

1. CMI Progress Reports

If the time required to complete implementation of a specific set of corrective measures, as described in the ADEM-approved CMI Plan(s), is greater than 180 calendar days, ALDOT shall provide ADEM with progress reports according to the schedule approved by ADEM in the CMI Plan(s). The progress reports shall, at a minimum, contain the following information:

- a. A description of the portion of CMI completed;
- b. Summaries of and deviations from the approved CMI during the reporting period;
- c. Summaries of current and potential problems, including recommended solutions and alternatives as well as corrective actions undertaken;

- d. Any monitoring data, including analytical data (soil, air, dust, water) collected during the construction; and,
- e. Projected work for the next period and impacts to the approved schedule.

2. Final CMI Reports

Upon completion of construction of corrective measures systems, implementation of land use controls, interim removal actions, or other short-term activities required by this Agreement and/or the approved CMI Plan(s), ALDOT shall submit to ADEM a Final CMI Report containing, at a minimum, the following:

- a. A description of activities completed;
- b. For constructed remedies where wastes or contaminated materials will remain in place, provide as-built construction drawings presenting the final in-place three-dimensional location of contaminated material. A plan view of the remediated areas shall be presented in addition to a cross section of the constructed areas.
- c. Hazardous waste manifests indicating the handling of any excavated material that has been shipped off-site to a Department-approved, certified landfill;
- d. For remedies involving land use controls, a copy of the survey plat or list of environmental covenants required by Section VII.B. of this Agreement;
- e. Any monitoring data, including analytical data (soil, air, dust, water) collected during the construction period; and,
- f. Certification, prepared by ALDOT and an independent professional engineer registered in the State of Alabama, that the corrective measures implementation phase (i.e., construction) required by this agreement is complete and that the approved system and/or facilities are ready for operation in accordance with the intended design (i.e., CMI Plan).

3. Corrective Measures (CM) Effectiveness Reports

- a. For fully implemented corrective measures that must operate for a period of time to achieve remedial goals, ALDOT shall submit CM Effectiveness Reports annually, unless otherwise approved by ADEM. The report shall be submitted by April 1 for evaluation of the system for the prior year of operation. The CM Effectiveness Reports shall include, at a minimum, the following:
 - i. A detailed narrative presenting an evaluation of the effectiveness of the selected remedy;
 - ii. Summaries of compliance with and progress toward achieving remedial goals;

- iii. Any significant revisions, adjustments, or proposed modifications to the selected remedy;
 - iv. Tabulated environmental sampling and monitoring data including, but not limited to, groundwater quality, elevation data, and a graphical representation of all constituents detected during each sampling event from recovery wells, monitoring wells, drinking water wells, and other locations;
 - v. Chain of custody, field reports, and laboratory data sheets to include the date of collection, the date the sample was extracted, and the date of sample analysis for samples collected during the reporting period;
 - vi. Any monitoring data, including analytical data (soil, air, dust, water) collected during the post-construction period;
 - vii. Isoconcentration maps depicting the distribution of parameters for each sampling event;
 - viii. Time versus concentration plots for each monitoring parameter for each recovery well and a representative number of effectiveness wells;
 - ix. Tabulated volumetric data on groundwater pumped and pumping rates (monthly and cumulative) for each recovery well;
 - x. Records of any groundwater recovery system operation time, including shutdown periods, not including any minor (less than 24 hours) shutdowns for repairs, maintenance, etc.;
 - xi. Potentiometric surface maps;
 - xii. Description of land use during the reporting period at the designated area requiring corrective measures; and,
 - xiii. Findings of ALDOT inspection/evaluation of the continued effectiveness of land use controls per Condition VII.B.
- b. If, at any time, ALDOT determines that any remedy or portion thereof specified in Section VII.B. of this Agreement no longer satisfies the applicable requirements of this Agreement for releases of hazardous waste or hazardous constituents originating from the areas specified in Section VII.A., ALDOT must, within 90 calendar days, submit a modification request to make any appropriate changes to the CMI Plan(s).
- c. The request for changes in the CMI Plan(s), including changes in inspection and monitoring provisions of the CMI Plan(s), shall be submitted to ADEM for approval.

4. Final Report of Corrective Measures

Within 90 calendar days following attainment of remedial goals as outlined in the Agreement and the approved CMI Plan(s), ALDOT shall submit to the Department a Final Report of Corrective Measures (FRCM). The FRCM shall contain a certification by ALDOT and an independent professional engineer registered in the State of Alabama that all remedial measures required by this Agreement and the approved CMI Plan(s) have been completed.

The FRCM shall outline any procedures and schedules for dismantling of corrective measures systems, groundwater monitoring or recovery systems, removal of land use controls, and any other remedial systems or controls required by this Agreement or the approved CMI Plan(s).

VIII. GROUNDWATER MONITORING AND CORRECTIVE ACTION

VIII.A. REQUIRED PROGRAM(S)

1. Groundwater monitoring shall consist of the General Groundwater Monitoring Program contained in Section VIII.B., and the Corrective Action Monitoring Program contained in Section VIII.E.
2. ALDOT shall commence groundwater monitoring as required by this Agreement no later than 120 calendar days after the effective date of this Agreement.

VIII.B. GENERAL GROUNDWATER MONITORING PROGRAM

1. Well Location, Installation and Construction

ALDOT shall install and/or maintain a groundwater monitoring system to comply with the requirements of this Agreement as applicable and as specified below:

- a. ALDOT shall maintain all groundwater monitoring wells at the facility as identified in Table VIII.1. of this Agreement, and any other groundwater monitoring wells specified by Section VIII.B.1.c. pursuant to the following conditions:
 - i. All groundwater monitoring wells shall be maintained in accordance with this Agreement.
 - ii. A groundwater monitoring well shall not be removed from any monitoring program specified in this Agreement without an approval by ADEM.
 - iii. If a groundwater monitoring well is damaged, ALDOT shall immediately notify ADEM in writing, which includes a description of the well repair activities to be conducted. The well repair procedures must be approved by ADEM prior to implementation. Within 30 calendar days after the well is repaired, ALDOT shall submit a

written notification to ADEM that the well repair activities were conducted in accordance with the approved procedures.

iv. If a groundwater monitoring well is deleted from the monitoring program(s) required by this Agreement in accordance with Section VIII.B.1.a.ii., it shall be abandoned within 90 calendar days after deletion using procedures to be approved by ADEM. Within 30 calendar days after the well is abandoned, ALDOT shall submit a written notification to ADEM that the well abandonment activities were conducted in accordance with the approved procedures.

b. ALDOT shall maintain groundwater monitoring wells MW-112/212 as the background monitoring wells for the entire facility as specified in this Agreement.

c. ALDOT shall install and maintain additional groundwater monitoring wells as necessary to assess changes in the rate and extent of any plume of contamination or as otherwise deemed necessary to maintain compliance.

A work plan specifying the design, location and installation of any additional monitoring wells shall be submitted to ADEM at least 90 calendar days prior to installation which, at a minimum, shall include:

- i. Well construction techniques including casing depths and proposed total depth of well(s);
- ii. Well development method(s);
- iii. A complete description of well construction materials;
- iv. A schedule of implementation for construction; and,
- v. Provisions for determining the lithologic characteristics, hydraulic conductivity, grain size distribution, and porosity for the applicable aquifer unit(s) at the location of the new well(s).

2. General Groundwater Monitoring Requirements

a. ALDOT shall determine the groundwater surface elevation from all monitoring wells listed in Table VIII.1. of this Agreement at least semi-annually and each time a comprehensive sampling event for all wells is conducted. The results of these determinations should be submitted in accordance with Section VIII.B.6. Elevation data should be recorded and reported as mean sea level (MSL) and referenced to an appropriate national geodetic vertical datum (NGVD) benchmark.

- b. ALDOT shall determine the groundwater flow rate and direction in the underlying aquifer(s) at least annually and submit the results in accordance with Section VIII.B.6. of this Agreement.
- c. ALDOT shall determine background concentrations of hazardous constituents and other chemical parameters required to be monitored by this Agreement.

3. Groundwater Protection Standard

The groundwater protection standard shall consist of Table VIII.3.a. of this Agreement which lists the constituents of concern and their respective concentration limits.

4. Compliance Period

- a. The compliance period, during which the groundwater protection standard specified in Section VIII.B.3. and defined in Table VIII.3.a. of this Agreement applies, shall begin at the time of the first sampling event of the compliance monitoring program or the corrective action monitoring program, whichever is earlier.
- b. The compliance period shall continue (after beginning pursuant to the Agreement Section VIII.B.4.a.) until the groundwater protection standard as defined in Table VIII.3.a. has not been exceeded throughout the CBP area for a period of three (3) consecutive years.
- c. If ALDOT is engaged in a corrective action program pursuant to Section VIII.E., then the compliance period shall continue until the groundwater protection standard has not been exceeded throughout the CBP area for a period of three (3) consecutive years after corrective action has been terminated and this Agreement has been modified to implement a compliance monitoring program pursuant to Section VIII.D. or a detection monitoring program pursuant to Section VIII.C.

5. Sampling and Analysis Procedures

ALDOT shall use the following techniques and procedures when obtaining and analyzing samples from the groundwater monitoring wells described in Section VIII.B.1. to provide a reliable indication of the quality of the groundwater.

- a. Samples shall be collected, preserved, and shipped (when shipped off-site for analysis) in accordance with the procedures specified in the Alabama Environmental Investigation and Remediation Guidance.
 - i. Samples shall be analyzed according to the procedures specified in the Alabama Environmental Investigation and Remediation Guidance, the most recent edition of SW-846 or other appropriate methods approved by ADEM. Analytical method detection limits shall be less

than or equal to the concentration limits specified in the Groundwater Protection Standard defined in Table VIII.3.a. unless otherwise approved in writing by ADEM.

- b. Samples shall be tracked and controlled using the chain-of-custody procedures specified in the Alabama Environmental Investigation and Remediation Guidance.
 - c. Statistical analyses used to evaluate the groundwater monitoring data shall be as described in the Alabama Environmental Investigation and Remediation Guidance.
 - d. All samples taken in accordance with this Agreement shall not be filtered prior to analysis.
6. Recordkeeping and Reporting
- a. ALDOT shall keep and maintain all monitoring, testing, and analytical data obtained in accordance with Sections VIII.B., VIII.C., VIII.D., and VIII.E.
 - b. ALDOT shall submit to ADEM a written report to include all analytical sampling data, established background values, statistical evaluations, groundwater elevations, associated potentiometric maps, and the annual groundwater flow rate and direction determinations. The analytical method and the method detection limit (MDL) for each constituent must be integrated into all reports of analysis. The report shall be submitted by April 1 of each calendar year for data collected during the prior calendar year. Copies of this report shall be kept at the facility.
 - i. ALDOT shall submit progress reports to ADEM describing implementation of groundwater monitoring and/or corrective action activities at the site as required by Part VIII. of this Agreement on a quarterly basis.

The first progress report shall be submitted to ADEM within 90 calendar days after the effective date of this Agreement. The progress reports shall continue until such time as the required monitoring and/or corrective action systems and activities required by this Agreement are fully constructed and operational. In the event that additional monitoring and/or corrective action requirements are imposed through a modification of this Agreement, the quarterly reporting requirement shall resume, commencing upon the effective date of the modified Agreement and continuing until the required monitoring and/or corrective action systems and activities are again fully constructed and operational.

VIII.C. DETECTION MONITORING PROGRAM [RESERVED]

VIII.D. COMPLIANCE MONITORING PROGRAM [RESERVED]

VIII.E. CORRECTIVE ACTION MONITORING PROGRAM

The requirements of this Section are applicable to the Coliseum Boulevard Plume site. Except as specified otherwise in this Agreement, the Corrective Action Monitoring Program shall be implemented in accordance with this Agreement.

1. Monitoring Systems

In addition to the background monitoring well system identified in condition VIII.B.1.b., ALDOT shall:

- a. Maintain groundwater monitoring wells BDY-1R, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11R, 12, 13, and 14 as boundary wells for the entire facility as shown in Table VIII.1. of this Agreement.
- b. Maintain groundwater monitoring wells as effectiveness wells for the entire facility as shown in Table VIII.1. of this Agreement.

2. Corrective Action Program

- a. ALDOT shall conduct a Corrective Action Program, as described in Section VII. of this Agreement, to remediate all hazardous constituents that exceed their respective groundwater protection standards as described in Table VIII.3.a. of this Agreement within and beyond the facility boundary.
- b. ALDOT shall continue to implement the corrective action program as described in Section VII. of this Agreement and in accordance with the approved Long Term Monitoring Plan ("LTMP"), Kilby Ditch/Low Lying Area ("Kilby Ditch/LLA") Corrective Measures Implementation Plan, Institutional Control Program and the Southwest Treatment Area ("SWTA") Corrective Measure Implementation Plan.
- c. ALDOT shall handle or treat groundwater in accordance with Section VIII. of this Agreement.

3. Monitoring Requirements

In addition to the general groundwater monitoring requirements specified in Section VIII.B.2., ALDOT shall:

- a. Sample all background, boundary, and effectiveness monitoring wells according to the schedule shown in Table VIII.1. of this Agreement and analyze for the constituents of concern listed in Table VIII.2. which should continue through the end of the compliance period.
- b. Sample all background, effectiveness, and boundary monitoring wells shown in Table VIII.1. of this Agreement and analyze for temperature (degrees F or C), specific conductance (Mhos/cm), and pH (standard units) each time the

well is sampled. The data obtained should be submitted as raw data in the reports required by Section VIII.B.6.

- c. When evaluating the monitoring results to determine the effectiveness of the corrective measures, in accordance with Section VIII.E.4., ALDOT shall:
 - i. Determine if the corrective action system effectively addresses the entire plume of contamination;
 - ii. Determine any change in the concentration of the hazardous constituents with respect to concentrations in Table VIII.3.b. (i.e., pH increasing or decreasing toward neutrality, as applicable) in the effectiveness wells specified in Section VIII.A.1.;
 - iii. Determine if hazardous waste or hazardous constituents are being released into the environment; and,
 - iv. Determine if hazardous constituents have been detected in the boundary wells specified in Section VIII.E.1.a.

4. Reporting and Response Requirements

In addition to the recordkeeping and reporting requirements specified in Section VIII.B.6.:

- a. ALDOT shall report the effectiveness of the corrective action program annually. These reports shall be submitted to ADEM on April 1st of each calendar year for data collected during the prior calendar year. The reports shall include data from groundwater monitoring, an analysis of the data, and any conclusions regarding the effectiveness of the program in accordance with Section VIII.E.3.c. If the analysis of the data warrants any change to the corrective action program, ALDOT must include these revisions in the annual report.
- b. If corrective action is terminated under Section VIII.B.4.c., ALDOT must sample all background, effectiveness and boundary sampling locations and analyze for constituents listed in ADEM Admin. Code r. 335-14-5 Appendix IX.

VIII.F. SURFACE WATER MONITORING PROGRAMS

ALDOT shall adhere to any previously-approved and/or subsequently proposed surface water monitoring of corrective measures, including but not limited to, the Kilby Ditch/LLA CMI Plan, the SWTA CMI Plan, and the terms and conditions of any National Pollution Discharge and Elimination System (NPDES) permit issued by ADEM for the Site.

1. General

- a. Surface water compliance and effectiveness monitoring points specified in Tables VIII.4. and VIII.5. shall be maintained and monitored at the Site.
- b. Discharges at surface water compliance point LLCP-1 (see Table VIII.4.) shall be monitored in accordance with the terms and conditions of the Kilby Ditch/LLA CMI Plan.
- c. Discharges at surface water compliance point, DSN001 (see Table VIII.4.), shall be monitored in accordance with the terms and conditions of NPDES permit AL0081167 issued by ADEM, and the SWTA CMI Plan.

2. Monitoring

- a. During the term of this Agreement, ALDOT shall collect grab samples of the discharge to surface waters from each point source identified in Tables VIII.4. and VIII.5., the SWTA CMI Plan, Kilby Ditch/LLA CMI Plan, and NPDES Permit.
- b. ALDOT shall collect samples at the nearest accessible location just prior to discharge and after final treatment. Any alternate location must be approved in writing by ADEM.
- c. Surface water samples and measurements taken as required herein shall be representative of the nature of the monitored discharge. For each measurement or sample taken, ALDOT shall record the following information:
 - i. The facility name and location, point- source number, date, time and exact place of sampling or measurements;
 - ii. The name(s) of the person(s) who obtained/collected the samples or measurements;
 - iii. The dates and times the analyses were performed;
 - iv. The name(s) of the person(s) who performed the analyses;
 - v. The analytical techniques or methods used; and,
 - vi. The results of all required analyses.
- d. ALDOT shall inspect at least quarterly all point sources identified in Tables VIII.4. and VIII.5., and all treatment or control facilities or systems used by ALDOT to achieve compliance with the terms and conditions of this Agreement.

3. Reporting

- a. ALDOT shall retain records of the surface water monitoring, including calibration and maintenance records, copies of reports, and records of data used for reports, for a period of at least three (3) years from the date of the sample collection, report, or application. All records shall be kept at a central repository and shall be available for public inspection.
- b. All surface water monitoring reports shall be submitted to ADEM in accordance with the provisions of this Agreement and in accordance with the NPDES Permit.

TABLE VIII.1.
MONITORING WELL DESIGNATIONS

WELL NUMBER	WELL TYPE	WELL NORTHINGS ¹	WELL EASTINGS ¹	UNIT(S)	WELL DEPTH (ft)	GROUND ELEVATION (ft. AMSL)	TOP-OF-RISER ELEVATION (ft. AMSL)	SCREENED INTERVAL (ft. AMSL)	MONITORED ZONE
Semiannual (January & July)									
MW-111	EFF ²	695240.72	515945.52	CBP ³	46.0	211.8	211.5	175- 166	Shallow
MW-116	EFF	698205.58	524771.29	CBP	19.0	194.0	194.0	185- 176	Shallow
MW-117	EFF	695960.52	516570.77	CBP	44.0	219.0	218.9	185- 176	Shallow
MW-123	EFF	695320.83	518782.13	CBP	26.0	217.0	216.4	200- 191	Shallow
MW-125	EFF	698189.52	523510.93	CBP	25.0	207.0	206.4	192- 183	Shallow
MW-153	EFF	694518.50	516408.95	CBP	113.9	239.4	239.0	135- 126	Shallow
MW-156	EFF	694004.39	515632.90	CBP	77.8	185.3	185.0	117- 107	Shallow
MW-211	EFF	695252.43	515950.66	CBP	81.0	212.1	211.8	141- 132	Shallow
MW-216	EFF	698191.24	524770.46	CBP	40.5	194.0	194.0	163- 154	Shallow
MW-217	EFF	695960.05	516558.79	CBP	74.5	209.0	218.9	144- 135	Shallow
MW-221	EFF	694620.34	515055.95	CBP	26.5	184.0	183.6	169- 158	Shallow
MW-221C	EFF	694654.55	515054.41	CBP	75.0	184.2	184.2	119- 109	Shallow
MW-223	EFF	695333.90	518785.88	CBP	70.0	217.0	216.3	156- 147	Shallow
MW-225	EFF	698194.95	523522.16	CBP	40.5	207.0	206.3	176- 167	Shallow
MW-237C	EFF	696031.72	519555.91	CBP	52.5	213.6	213.5	166- 161	Shallow
MW-250C	EFF	697340.58	521416.11	CBP	36.0	208.0	207.7	177- 172	Shallow
MW-260	EFF	694087.17	513732.52	CBP	75.0	189.0	189.0	124- 114	Shallow
MW-262	EFF	695147.43	513254.47	CBP	76.5	177.5	177.5	111- 101	Shallow
MW-263	EFF	693770.83	514832.07	CBP	68.0	182.2	182.2	124- 114	Shallow
MW-264	EFF	694436.28	514369.23	CBP	68.5	182.1	182.1	114- 104	Shallow
MW-265	EFF	695005.50	514732.75	CBP	66.0	181.4	181.4	125- 115	Shallow
MW-357	EFF	698264.05	519272.89	CBP	64.0	206.8	206.7	152- 143	Deep
MW-358	EFF	699019.47	524953.06	CBP	48.0	191.1	191.0	148- 143	Deep
BDY-01R	BDY ⁴	698777.36	515688.72	ICB	52.0	204.6	204.4	177- 152	Shallow
BDY-02	BDY	699805.22	517736.85	ICB	27.0	206.0	205.8	194- 179	Shallow
BDY-03	BDY	699908.28	520189.15	ICB	46.0	199.7	199.6	184- 154	Shallow
BDY-04	BDY	700249.56	522305.25	ICB	14.0	203.8	203.5	200- 190	Shallow
BDY-05	BDY	700173.01	524779.99	ICB	10.0	178.4	178.2	173- 168	Shallow
BDY-06	BDY	699321.47	526484.22	ICB	38.0	178.7	178.5	161- 141	Shallow
BDY-07	BDY	697606.78	525611.55	ICB	57.0	188.5	188.2	162- 132	Shallow
BDY-08	BDY	696149.46	523851.91	ICB	70.0	221.1	220.9	181- 151	Shallow
BDY-09	BDY	695153.99	520311.12	ICB	69.0	220.3	220.1	181- 151	Shallow
BDY-10	BDY	693154.22	515931.95	ICB	80.0	181.6	181.3	137- 102	Shallow
BDY-11R	BDY	692058.50	512502.37	ICB	70.0	167.6	171.1	128- 98	Shallow
BDY-12	BDY	694823.33	512279.91	ICB	59.0	160.8	163.8	122- 102	Shallow
BDY-13	BDY	695848.63	513035.48	ICB	56.0	176.0	178.6	135- 120	Shallow
BDY-14	BDY	697729.73	514713.61	ICB	57.0	201.5	204.1	170- 145	Shallow

TABLE VIII.1.
MONITORING WELL DESIGNATIONS

WELL NUMBER	WELL TYPE	WELL NORTHINGS ¹	WELL EASTINGS ¹	UNIT(S)	WELL DEPTH (ft)	GROUND ELEVATION (ft. AMSL)	TOP-OF-RISER ELEVATION (ft. AMSL)	SCREENED INTERVAL (ft. AMSL)	MONITORED ZONE
Annual (January-only)									
MW-5A	EFF	699292.83	522925.46	CBP	28.6	200.3	203.4	186- 176	Shallow
MW-104	EFF	696075.08	522212.71	CBP	31.0	217.8	217.7	196- 187	Shallow
MW-106	EFF	695945.17	520302.92	CBP	35.0	223.0	222.2	198- 189	Shallow
MW-108	EFF	696431.06	521015.13	CBP	25.0	213.0	212.6	197- 188	Shallow
MW-109	EFF	695683.23	521389.78	CBP	33.0	221.0	220.9	197- 188	Shallow
MW-113	EFF	697939.04	520140.32	CBP	20.5	207.0	207.4	196- 187	Shallow
MW-115	EFF	698710.06	518320.20	CBP	25.0	212.0	212.1	196- 187	Shallow
MW-118	EFF	698185.04	516865.34	CBP	19.0	203.0	203.2	193- 184	Shallow
MW-128	EFF	696720.42	517956.03	CBP	24.0	212.0	212.1	195- 186	Shallow
MW-129	EFF	697289.08	521917.65	CBP	27.5	215.0	214.6	197- 188	Shallow
MW-130	EFF	696744.29	519257.44	CBP	28.0	216.0	215.7	197- 188	Shallow
MW-131	EFF	697454.93	520993.60	CBP	24.0	206.0	205.9	189- 182	Shallow
MW-132	EFF	696013.14	518786.11	CBP	29.0	216.0	215.2	196- 187	Shallow
MW-133	EFF	698278.90	521198.85	CBP	18.5	205.0	205.0	196- 187	Shallow
MW-134	EFF	697911.88	518320.96	CBP	26.0	210.0	209.3	198- 184	Shallow
MW-135A	EFF	696455.95	520469.48	CBP	36.0	217.9	217.5	187- 182	Shallow
MW-136A	EFF	697098.04	520273.72	CBP	24.5	211.4	211.1	191- 187	Shallow
MW-137A	EFF	696031.38	519522.05	CBP	36.5	213.6	213.4	182- 177	Shallow
MW-143A	EFF	698401.79	522383.61	CBP	13.5	201.9	201.9	194- 189	Shallow
MW-144A	EFF	694915.67	519590.47	CBP	31.5	214.5	214.3	193- 183	Shallow
MW-146A	EFF	698591.42	522367.45	CBP	15.0	200.5	200.0	190- 185	Shallow
MW-147A	EFF	698602.61	522342.70	CBP	15.0	201.1	200.5	191- 186	Shallow
MW-150A	EFF	697340.59	521416.11	CBP	18.0	208.0	207.7	200- 190	Shallow
MW-154	EFF	694419.84	517338.24	CBP	105.3	245.4	245.1	149- 140	Shallow
MW-155	EFF	693819.51	516261.69	CBP	99.0	216.3	216.0	127- 117	Shallow
MW-204	EFF	696024.34	522207.05	CBP	64.0	218.0	217.9	161- 154	Shallow
MW-206	EFF	695933.98	520301.81	CBP	54.5	223.0	222.2	170- 161	Shallow
MW-208	EFF	696430.64	521003.31	CBP	52.0	213.0	212.8	166- 162	Shallow
MW-209	EFF	695674.21	521372.54	CBP	70.0	221.0	220.3	160- 151	Shallow
MW-210	EFF	699544.79	523614.28	CBP	9.0	189.0	188.7	184- 180	Shallow
MW-213	EFF	697925.48	520139.08	CBP	36.0	208.0	207.4	176- 172	Shallow
MW-215	EFF	698725.65	518319.46	CBP	39.5	212.0	211.8	182- 173	Shallow
MW-218	EFF	698184.98	516852.84	CBP	39.5	204.0	203.2	169- 165	Shallow
MW-219	EFF	699307.96	521802.64	CBP	19.5	203.0	202.9	193- 184	Shallow
MW-228	EFF	696719.76	517945.09	CBP	50.5	213.0	212.2	172- 163	Shallow
MW-229	EFF	697290.69	521905.95	CBP	40.0	215.0	214.3	184- 175	Shallow
MW-230	EFF	696743.70	519247.85	CBP	51.5	216.0	215.7	174- 165	Shallow

**TABLE VIII.1.
MONITORING WELL DESIGNATIONS**

WELL NUMBER	WELL TYPE	WELL NORTHINGS ¹	WELL EASTINGS ¹	UNIT(S)	WELL DEPTH (ft)	GROUND ELEVATION (ft. AMSL)	TOP-OF-RISER ELEVATION (ft. AMSL)	SCREENED INTERVAL (ft. AMSL)	MONITORED ZONE
Annual (January-only)									
MW-231	EFF	697449.71	520984.10	CBP	33.0	206.0	205.9	177- 173	Shallow
MW-232	EFF	696012.92	518774.85	CBP	56.5	216.0	215.3	170- 161	Shallow
MW-233	EFF	698286.84	521192.28	CBP	30.5	205.0	204.9	179- 175	Shallow
MW-234	EFF	697922.43	518320.67	CBP	39.5	210.0	209.5	175- 171	Shallow
MW-235B	EFF	696456.05	520487.17	CBP	44.5	217.7	217.4	178- 173	Shallow
MW-235C	EFF	696456.20	520503.17	CBP	54.5	217.4	216.9	167- 163	Shallow
MW-236B	EFF	697093.97	520288.49	CBP	31.5	211.3	211.0	184- 180	Shallow
MW-236C	EFF	697099.05	520302.81	CBP	38.5	211.0	210.6	177- 172	Shallow
MW-237B	EFF	696031.53	519539.04	CBP	45.5	213.7	213.4	173- 168	Shallow
MW-243B	EFF	698401.79	522383.60	CBP	23.5	201.9	201.9	184- 179	Shallow
MW-244B	EFF	694915.67	519590.48	CBP	47.5	214.5	214.3	177- 167	Shallow
MW-244C	EFF	694915.67	519590.48	CBP	62.5	214.5	214.3	162- 152	Shallow
MW-246B	EFF	698591.41	522367.44	CBP	24.0	200.5	200.3	181- 176	Shallow
MW-247B	EFF	698602.61	522342.70	CBP	24.5	201.1	200.8	181- 176	Shallow
MW-250B	EFF	697340.59	521416.11	CBP	27.0	208.0	207.8	186- 181	Shallow
MW-259	EFF	693535.27	515438.40	CBP	66.5	181.9	181.9	125- 115	Shallow
MW-261	EFF	693039.47	513787.09	CBP	71.0	195.4	195.4	134- 124	Shallow
MW-304	EFF	696075.08	522212.71	CBP	87.0	218.0	217.6	146- 132	Deep
MW-311	EFF	695226.88	515937.55	CBP	83.5	211.0	210.8	122- 118	Deep
MW-339	EFF	696204.83	520257.91	CBP	108.5	223.4	223.2	124- 115	Deep
MW-340	EFF	696033.50	519658.19	CBP	91.0	215.2	215.0	134- 124	Deep
MW-341	EFF	697054.69	519491.42	CBP	54.5	212.0	211.6	162- 157	Deep
MW-342	EFF	696458.55	520580.64	CBP	86.0	216.0	215.6	134- 130	Deep
MW-457	EFF	698269.21	519287.76	CBP	147.5	207.2	207.0	84- 60	Deep
MW-112	BKG ⁵	695559.12	524021.71	CBP	35.0	221.0	220.3	195- 186	Shallow
MW-212	BKG	695548.74	524029.59	CBP	71.0	221.0	220.4	159- 150	Shallow

- 1) Well Northing and Easting, State Plane, Alabama East, NAD 1983 (Feet)
- 2) EFF – Corrective Action Effectiveness Monitoring Well
- 3) CBP – Coliseum Boulevard Plume
- 4) BDY – Boundary Monitoring Well
- 5) BKG- Background Wells

TABLE VIII.2.

GROUNDWATER QUALITY MONITORING CONSTITUENTS

CONSTITUENTS OF CONCERN	UNIT
Chloroform	CBP, ICB
1,1-Dichloroethene	
cis-1,2-Dichloroethene	
Trichloroethylene	
Vinyl Chloride	
1,1-Dichloroethane	
Carbon Tetrachloride	
Chloroethane	
Tetrachloroethylene	
Methylene Chloride	

CBP – Coliseum Boulevard Plume
ICB – Institutional Control Boundary

TABLE VIII.3.a.

GROUNDWATER PROTECTION STANDARDS FOR BOUNDARY WELLS

CONSTITUENTS OF CONCERN ¹	UNIT	CONCENTRATION LIMIT (mg/L) ²
Chloroform	ICB	0.08
1,1-Dichloroethene	ICB	0.007
cis-1,2-Dichloroethene	ICB	0.07
Trichloroethylene	ICB	0.005
Vinyl Chloride	ICB	0.002
1,1-Dichloroethane	ICB	0.081
Carbon Tetrachloride	ICB	0.005
Chloroethane	ICB	0.0046
Tetrachloroethylene	ICB	0.005
Methylene Chloride	ICB	0.005

1 - Coliseum Boulevard Plume Site Constituents of Concern (COC)

2 - From ADEM Alabama Risk-Based Corrective Action Guidance Manual, Preliminary Screening Values, Table 2-2, April 2008

ICB -Institutional Control Boundary (e.g., Boundary Wells BDY 1R through 14 in Table VIII.1)

TABLE VIII.3.b.

EFFECTIVENESS MONITORING CONCENTRATIONS

WELL NUMBER	TCE ¹ CONCENTRATION LIMIT (mg/L) ²	WELL NUMBER	TCE CONCENTRATION LIMIT (mg/L)
MW-106	20	MW-217	0.5
MW-206	20	MW-133	0.5
MW-137A	20	MW-233	0.5
MW-237B	20	MW-210	0.5
MW-237C	20	MW-221	0.5
MW-131	15	MW-221C	0.5
MW - 123	15	MW-156	0.5
MW - 223	15	MW-259	0.5
MW- 231	15	MW-260	0.5
MW-135A	15	MW-263	0.5
MW-235B	15	MW-264	0.5
MW-235C	15	MW-265	0.5
MW-136A	15	MW-154	0.5
MW-236B	15	MW-155	0.5
MW-236C	15	MW-125	0.5
MW-150A	15	MW-225	0.5
MW-250B	15	MW-144A	0.5
MW-250C	15	MW-244B	0.5
MW-108	5	MW-244C	0.5
MW-208	5	MW-261	0.5
MW-129	5	MW-109	0.1
MW-229	5	MW-209	0.1
MW-130	5	MW-115	0.1
MW-230	5	MW-215	0.1
MW-132	5	MW-116	0.1
MW-232	5	MW-216	0.1
MW-143A	5	MW-118	0.1
MW-243B	5	MW-218	0.1
MW-146A	5	MW-219	0.1
MW-246B	5	MW-262	0.1
MW-147A	5	MW-311	0.005
MW-247B	5	MW-339	0.005
MW-128	1	MW-340	0.005
MW-228	1	MW-341	0.005
MW-134	1	MW-342	0.005
MW-234	1	MW-104	0.005
MW-153	1	MW-204	0.005
MW-5A	0.5	MW-304	0.005
MW-113	0.5	MW-112 ³	0.005
MW-213	0.5	MW-212 ³	0.005
MW-111	0.5	MW-357	0.005
MW-211	0.5	MW-457	0.005
MW-117	0.5	MW-358	0.005

1 - Trichloroethylene is the Coliseum Boulevard Plume Corrective Action Effectiveness Indicator Parameter
 2 - Effectiveness Monitoring Concentrations developed for Corrective Measure (Effectiveness-EFF) wells.
 3 - Background wells.

TABLE VIII.4.

SURFACE WATER COMPLIANCE POINTS

Table VIII.4.a. Low-Lying Area Compliance Point

POINT IDENTIFICATION	POINT DESCRIPTION	MONITORING SCHEDULE	NORTHING AND EASTING¹	MONTHLY AVERAGE TCE CONCENTRATION ALLOWABLE (PPB)²
LLCP-1	Lower Kilby Ditch at the confluence with Three Mile Branch	Every two weeks	N 700218.85 E 525429.50	37.38

¹ State Plane, Alabama East, NAD 1983 (Feet)

²PPB = parts per billion (micrograms per liter)

Table VIII.4.b. Southwest Area Compliance Point

POINT IDENTIFICATION	POINT DESCRIPTION	MONITORING SCHEDULE	NORTHING AND EASTING¹	AVERAGE TCE CONCENTRATION ALLOWABLE (PPB)²
DSN001	Southwest Area	Every two weeks	N 691836.91 E 513660.36	37.94/17.47

¹ State Plane, Alabama East, NAD 1983 (Feet)

²PPB = parts per billion (micrograms per liter)

TABLE VIII.5.

SURFACE WATER EFFECTIVENESS POINTS

Table VIII.5.a. Low-Lying Area Effectiveness Monitoring Points

POINT IDENTIFICATION	POINT DESCRIPTION	MONITORING SCHEDULE	NORTHINGS AND EASTINGS¹
LLA-1	Low-Lying Area – upstream of constructed wetland	Quarterly	N 699878.64 E 523381.01
LLA-2	Low-Lying Area- discharge from constructed wetland	Quarterly	N 699990.71 E 523684.38
LLA-3	Low-Lying Area- internal constructed wetland	Quarterly	N 699996.83 E 523854.62
LLA-4	Low-Lying Area- small tributary south of existing wetland	Quarterly	N 699800.83 E 524107.32
LLA-5	Low-Lying Area- groundwater interceptor trench pond	Quarterly	N 700254.35 E 523639.42
LLA-6	Low-Lying Area- groundwater interceptor trench before confluence with lower Kilby Ditch	Quarterly	N 700096.52 E 524805.57
LLA-7	Low-Lying Area- lower Kilby Ditch after confluence with groundwater interceptor trench	Quarterly	N 700196.52 E 525265.81
LLA-8	Low-Lying Area- existing wetland	Quarterly	N 699976.44 E 524421.23
LLA-9	Unnamed tributary immediately south of Northern Boulevard	Quarterly	N 699480.97 E 524158.67
LLA-10	Surface water south of Northern Boulevard groundwater seeps from west of unnamed tributary	Quarterly	N 699478.84 E 524186.09
LLA-11	Discharge from Russell Distribution facility storm water/groundwater	Quarterly	N 699471.75 E 524191.21

¹ State Plane, Alabama East, NAD 1983 (Feet)

Table VIII.5.b. Southwest Area Effectiveness Monitoring Points

POINT IDENTIFICATION	POINT DESCRIPTION	MONITORING SCHEDULE	NORTHINGS AND EASTINGS¹
SWA-1	Dewatering Pond	Quarterly	N 693491.68 E 512941.54
SWA-2	Transfer Pond	Quarterly	N 692895.39 E 512861.25
SWA-3	Inlet structure at Discharge Pond from Transfer Pond	Quarterly	N 692992.61 E 513529.03
SWA-4	Outlet structure at Discharge Pond	Quarterly	N 692628.30 E 513642.34

¹ State Plane, Alabama East, NAD 1983 (Feet)

Table VIII.5.c. Other Effectiveness Monitoring Points

POINT IDENTIFICATION	POINT DESCRIPTION	MONITORING SCHEDULE	NORTHINGS AND EASTINGS ¹
BB	Stream and Wetland East of Bama Budweiser Facility	Quarterly	N 698785.41 E 525518.23
ZP	Zoo Pond	Quarterly	N 699530.88 E 519019.93
ZD	Zoo Ditch	Quarterly	N 699527.48 E 519807.66

¹ State Plane, Alabama East, NAD 1983 (Feet)

Table VIII.5.d. Three Mile Branch Effectiveness Monitoring Points

POINT IDENTIFICATION	POINT DESCRIPTION	MONITORING SCHEDULE	NORTHINGS AND EASTINGS ¹
TMB-1	Upstream Point	Quarterly	N 698070.74 E 525787.38
TMB-2	Upstream at Northern Boulevard	Quarterly	N 699431.09 E 525939.61
TMB-3	Downstream Point	Quarterly	N 700374.82 E 525444.65

¹ State Plane, Alabama East, NAD 1983 (Feet)

IX. Obligation of the Parties

Unless otherwise specified herein, all actions required by this Agreement shall be subject to the following stipulations:

- IX.A. All actions performed by or on behalf of ALDOT shall be under the direction and supervision of a qualified professional engineer and registered geologist licensed to practice in the State of Alabama or other qualified professional with specific expertise and experience in site characterization, investigation and cleanup.
- IX.B. Actions performed by or on behalf of ALDOT under this Agreement should be conducted in a manner consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (“NCP”) promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. §9605, codified at 40 CFR Part 300, and with applicable United States Environmental Protection Agency (EPA) policies and guidance.
- IX.C. In pursuing activities under this Agreement, the Parties shall cooperate and seek to establish mutual objectives, as jointly agreed upon by the Parties, to further evaluate groundwater conditions at the Site and to provide for the remediation of groundwater conditions.

IX.D. ALDOT shall provide reimbursement to the Alabama Hazardous Substance Cleanup Fund for ADEM's reasonable costs of overseeing the response actions to be undertaken at the Site by ALDOT as provided in Section XII. of this Agreement.

IX.E. Reports, work plans, data, and other correspondence to be submitted to ADEM pursuant to this Agreement should be sent to:

Chief, Governmental Hazardous Waste Branch
Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, Alabama 36130-1463

Telephone: (334) 271-7739

Express mail, overnight or hand deliveries should be sent to:

Chief, Governmental Hazardous Waste Branch
Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2059

Telephone: (334) 271-7739

IX.F. Correspondence to ALDOT should be sent to:

Material and Tests Engineer
Materials and Tests Bureau
Alabama Department of Transportation
1409 Coliseum Boulevard
Montgomery, Alabama 36110

Telephone: (334) 206-2201

Express mail or overnight deliveries should be sent to:

Material and Tests Engineer
Materials and Tests Bureau
Alabama Department of Transportation
1409 Coliseum Boulevard
Montgomery, Alabama 36110

Telephone: (334) 206-2201

IX.G. ADEM shall arrange for an appropriate level of oversight and review of all activities conducted under this Agreement.

X. Submittals

Major submittals required under this Agreement are presented in Table 1. ADEM reserves the right to review, comment on, and request changes for all plans, proposals, reports, studies, and laboratory data reports submitted under this Agreement. ADEM shall specify the type and number of copies of plans, reports, studies, and data submitted under this Agreement in accordance with applicable laws.

Unless stated otherwise, ALDOT shall submit two (2) copies of all documents to ADEM, one (1) copy of all documents to the City of Montgomery, one (1) copy of all documents to EPA, and one (1) copy of all documents to the Alabama Department of Public Health. In addition, one (1) copy shall be maintained in a public repository that may be established pursuant to this Agreement. Additional copies shall be furnished upon request.

XI. Participation in Community Relation Activities

ADEM shall give ALDOT at least seventy-two (72) hours advance notice of media releases or public meetings that ADEM may hold or sponsor to explain activities at or concerning the Site or to address the presence of contaminants or pollutants nearby, except when special circumstances arise or when information must be provided to the public on an emergency basis, in which instance ADEM shall give ALDOT notice immediately prior to or immediately upon issuance of the media release.

XII. Reimbursement of ADEM's Oversight Costs

- XII.A. Within thirty (30) days after the completion of each fiscal year quarter, ADEM shall prepare and submit to ALDOT an invoice for the reasonable oversight costs for this Site incurred by ADEM during the preceding quarter, and documentation describing such costs, for reimbursement into the Alabama Hazardous Substance Cleanup Fund in accordance with the Alabama Hazardous Substance Cleanup Fund Act, Code of Alabama (1975), §§ 22-30A-1 to 22-30A-11, as amended.
- XII.B. ALDOT shall reimburse the Alabama Hazardous Substance Cleanup Fund, all properly documented costs of ADEM's oversight activities at the Coliseum Boulevard Plume Site, as stipulated in Section IX.D. of this Agreement. Any payment by ALDOT pursuant to this Section shall not constitute or be evidence of any admission by ALDOT of any liability to ADEM or to any other person or entity with respect to the Site. Upon review and approval of each invoice, ALDOT shall process the same for payment in accordance with standard and normal state procedure.

Reimbursement shall be made in a timely manner. Checks or payments made by other means shall be made payable to "The Alabama Department of Environmental Management" and specifically reference the Site Number, and be forwarded to:

Alabama Department of Environmental Management
Chief, Fiscal Branch
P.O. Box 301463
Montgomery, Alabama 36130-1463

- XII.C. ADEM shall make a reasonable effort, as staff availability allows, to respond to each major deliverable as outlined in Table 1. and for other general project matters.
- XII.D. ALDOT shall reimburse ADEM for its oversight costs pursuant to this Agreement for the duration of the activities required by this Agreement. ADEM shall provide ALDOT with an estimate of its expected regulatory oversight costs for each fiscal year, to assist ALDOT with its budget planning. The cost estimate for each new fiscal year shall be provided to ALDOT by July 1 of the previous fiscal year.
- XII.E. Should ALDOT and ADEM be unable to reach agreement with respect to the payment of any claim by ADEM for its oversight costs, ALDOT shall have the right to invoke the dispute resolution under Section XIII. of this Agreement.

XIII. Dispute Resolution

If ALDOT objects to any ADEM decision pertaining to (i) the payment of oversight costs pursuant to Section XII. above, or (ii) the performance of the work under this Agreement, then ALDOT shall notify ADEM in writing of its objections within fourteen (14) days of receipt of the decision or dispute regarding payment. The Parties shall have an additional thirty (30) days from ADEM's receipt of the written notification of such an objection in which to reach agreement. Dispute resolution will be conducted at ADEM by a committee comprised of the Director of ADEM and Land Division Chief, and up to two (2) representatives from ALDOT, as appropriate. If agreement cannot be reached on any issue within the 30 day period, each party reserves all rights and defenses regarding such matter, and ADEM shall have the right to (i) seek an order in a court of competent jurisdiction to compel action by ALDOT, or (ii) take any other legal or administrative action authorized by law. In any such proceeding, ALDOT fully reserves all rights and defenses to contest such action.

XIV. Compliance with Law

All activities required under this Agreement shall be performed in compliance with all applicable federal, state and local laws and regulations.

XV. Termination

All obligations of the Parties under this Agreement shall terminate upon satisfactory completion as determined in writing by ADEM of the work set forth in Section VI. of this Agreement. Once it has been determined that all activities required under Section VI. of this Agreement have been satisfactorily completed, ADEM shall confirm such in writing to ALDOT. ADEM agrees not to unreasonably withhold the issuance of any such determination.

XVI. Reservation of Rights

- XVI.A. Other than the parties hereto, ADEM and ALDOT reserve their rights to bring action against any potentially liable party for the recovery of costs.
- XVI.B. ADEM reserves the right to perform clean-up and to seek recovery of costs from any potentially liable parties.
- XVI.C. ALDOT expressly denies liability as set out in Section II. of this Agreement, reserves its rights to deny liability and to defend any claims brought against it by any party, and reserves its right to bring an action against any potentially liable party for the recovery of costs, including attorney's fees and costs previously incurred, and all such fees and costs incurred to prosecute the cost recovery action.

XVII. Force Majeure

A Force Majeure is defined as any event arising from causes that are not foreseeable and are beyond the reasonable control of ALDOT, including its contractors and consultants, which could not be overcome by reasonable due diligence (i.e., causes which could have been overcome or avoided by the exercise of reasonable due diligence will not be considered to be beyond the reasonable control of ALDOT) and which delays or prevents performances by a date required by this Agreement. Events such as unanticipated or increased costs of performance, changed economic circumstances, normal precipitation events, or failure to obtain federal, state or local permits shall not constitute Force Majeure. Any request for a modification of a deadline must be accompanied by the reasons (including documentation) for each extension and the proposed extension time. This information shall be submitted to the Department within five (5) working days of when ALDOT obtained, or should have obtained, knowledge of the Force Majeure event, or, when possible, a minimum of two (2) working days prior to the original anticipated completion date, whichever is sooner. If the Department, after review of the extension request, finds the work was delayed because of conditions beyond the control and without the fault of ALDOT, the Department may extend the time as justified by the specific circumstances. The Department may also grant any other additional time extension for good cause shown but is not obligated to do so.

XVIII. Good Faith Settlement

This Agreement was negotiated in good faith by ADEM and ALDOT. Accordingly, the Parties intend that this Agreement shall constitute an administratively approved settlement of the matters covered by this Agreement. Therefore, by entering into and carrying out the terms of this Agreement, ADEM agrees that all claims it had or has against ALDOT, its Director of employees in both their official and individual capacities, and its agents, servants, contractors or consultants, whether administrative or otherwise, are fully resolved for matters covered by this Agreement. This Agreement is limited to the matters contained herein and does not preclude ADEM from taking enforcement action regarding any violation of law or regulation administered by ADEM.

XIX. Other Claims

ADEM is not liable for any personal injuries or property damages arising from the acts or omissions of ALDOT, or their principals, contractors, agents or employees, in the execution of activities required by this Agreement. ADEM is not liable as a party to any contract executed by ALDOT in furtherance of this Agreement. ALDOT shall not be liable for the contracts, acts or omissions of ADEM, its agents, employees or contractors in the execution of ADEM's duties under this Agreement.

XX. Subsequent Modification

This Agreement may be amended in part or in whole upon the express, mutual written agreement of the Parties. The Parties expressly understand and agree that an amendment or revision approved by both Parties may be limited to a specific part, section, provision or table of this Agreement or any portion of said part, provision or table without any requirement to replace or revise any other portion of the Agreement or any requirement for execution of a new agreement.

XXI. Severability

If any provision or authority of this Agreement is held by any judicial or administrative authority to be invalid, the application of such provisions to other parties or circumstances and the remainder of this Agreement shall remain in force and shall not be affected thereby.

XXII. Cooperation

The Parties hereby mutually agree to cooperate with each other to the fullest extent possible in the implementation of this Agreement.

XXIII. Agreement History

This Agreement is effective as of December 19, 2001, as revised December 6, 2011 and March 10, 2015, and shall remain in effect until terminated pursuant to Section XV.

For Alabama Department of Transportation

Name: John R. Cooper

Print Name John R. Cooper

Title: Director

Date: _____

Approved as to Form:

Name: Jim Ippolito

Print Name JIM IPPOLITO

Title: Chief Counsel

Date: 12/17/14

For Alabama Department of Environmental Management

Name: Phillip D Davis

Print Name Phillip D Davis

Title: Chief, Land Division

Date: 3/10/15

TABLE 1.
Documents To Be Submitted

Report	Due Date
Annual Report Status of Corrective Measures Coliseum Boulevard Plume Site, Montgomery, Alabama	Prior to April 1 of each year