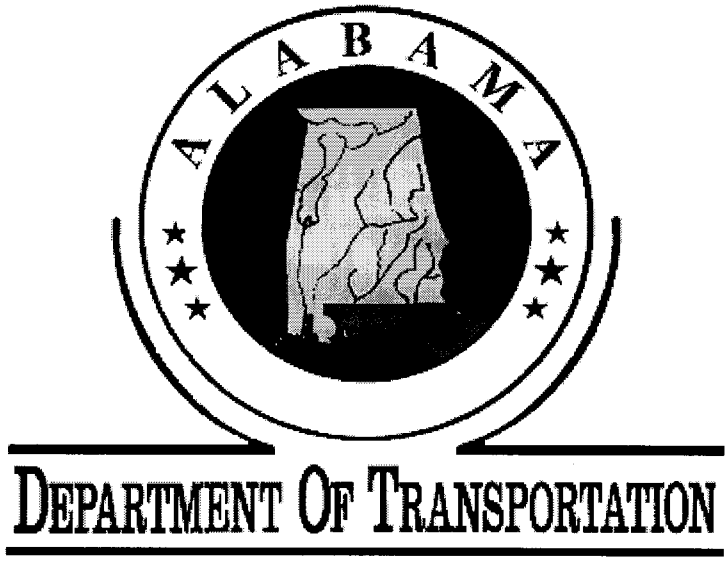
Addendum 6

COLISEUM BOULEVARD PLUME SITE



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The following Scope of Work is an addendum to the Work Plan for Rapid Response, Interim Corrective Measures and Comprehensive Site Assessment (Work Plan), which was approved on June 8, 2001. It is a modification of Section 4.5.2.2, Monitoring Wells, and Section 4.6, Deep Zone Assessment, to provide specific locations for monitoring wells and deep stratigraphic borings and to outline the technical specifications for the installation of the monitoring wells. The work described herein is not intended to address the area around Probehole PH12, although three monitoring well locations have been tentatively identified for this area. Additional monitoring wells may be required in this area, but will be addressed after the work proposed in Addendum 03, which is currently under review by the Alabama Department of Environmental Management, is completed.

Background

To date, 21 ground-water monitoring wells have been installed as part of the on-going investigation of the Coliseum Boulevard Plume. In September 1999, five monitoring wells (MW-1A through MW-5A) were installed by and on property owned by Alfa Mutual Fire Insurance Company (Alfa). The wells were installed as part of an investigation conducted by Alfa shortly after TCE was found in the shallow ground water. Construction characteristics of these five monitoring wells are provided on the attached Table 1. Figure 1 shows the locations of these monitoring wells. Ground-water samples have been collected from these monitoring wells by ALDOT one time. Table 2 provides the analytical results of this sampling event. ALDOT proposes to continue sampling the Alfa wells during quarterly monitoring.

In October 1999, the ALDOT installed nine monitoring wells (MW-1 through MW-9) on ALDOT property. The wells were constructed as part of an investigation to evaluate if the ALDOT Central Complex was a potential source of the TCE detected in the shallow ground water. Construction characteristics of the monitoring wells are shown on Table 1. The attached Figure 1 shows the monitoring well locations. Two rounds of ground-water samples were collected from these wells. Refer to Table 2 for a summary of the analytical results of these sampling events. It should be noted that these monitoring wells will only be used for water level measurements in the future.

Monitoring wells MW-101, MW-201, MW-102, MW-202, MW-103, and MW-203 (formerly MW-101S, MW-101D, MW-102S, MW102D, MW103S, MW-103D, respectively – see section below on monitoring well nomenclature for a discussion of new system of identifying wells) were installed along the west and main branches of the Kilby Ditch in April and May 2001. These monitoring well clusters were installed to measure water levels and to evaluate TCE concentrations within shallow and deeper zones of ground water within the shallow water-bearing zone in the immediate vicinity of the Kilby Ditch. Refer to Table 1 for the construction

characteristics of the monitoring wells, and Table 2 for a summary of analytical results from the two times the wells have been sampled.

Monitoring well MW-304 (formerly MW-104) was installed in the ALDOT complex on May 15, 2001. This well was installed as part of a demonstration of the sonic drilling technique. Because this well was not installed as part of an approved work plan, a ground-water sample was not collected at the time of installation. Furthermore, the general area of MW-304 (formerly MW-104) has not been the target of an investigation since May 2001, thus a ground-water sample has not been collected. Refer to Table 1 for the construction characteristics of this monitoring well.

General

The Work Plan indicates that approximately 26 monitoring well clusters will be installed across the site to evaluate ground-water quality in the shallow water-bearing zone. Figure 4-1 of the Work Plan shows the general locations of each of the proposed monitoring well clusters. Based on the results of recent soil and ground-water sampling and analysis, five additional monitoring well clusters are recommended to better monitor the perimeter of the plume. Additionally, three monitoring well cluster locations are currently proposed in the vicinity of Probehole PH12. The actual number and locations of well clusters in this area may be modified once results of the work described in Addendum 03 has been performed. The proposed monitoring well locations shown on Figure 4-1 of the Work Plan have been modified slightly. The monitoring well locations were adjusted to account for physical obstructions, and to attempt to keep the wells on public property, where possible. In general, monitoring well locations were selected to place the wells around the perimeter of the plume, as well as at locations within the plume to further define the distribution and provide for monitoring of TCE within the plume.

The following sections of this Addendum present specifications for completing the groundwater monitoring wells for the Coliseum Boulevard Plume area site-wide investigation. The following may not be applicable to wells installed in the Probehole PH12 area. The construction characteristics of the wells in the Probehole PH12 area will be determined upon completion of the Geoprobe activities proposed in Addendum 03.

Consistent with the approved Work Plan, for the purpose of this phase of the investigation, wells to be installed in the first water bearing unit are termed “shallow” wells. Two types of wells will be installed in this water-bearing zone:

- A shallow zone cluster well array
- A shallow zone single well

The first water bearing unit beneath the first retarding clay (aquitard), but above the Gordo Formation, will be referred to as the "deep" zone. Four wells will be installed in the deep zone to evaluate potential vertical hydraulic gradients and water quality in the deep zone. Additional deep wells will be proposed after the "shallow zone wells are completed and results of the four "deep" zone wells have been reviewed. Design and construction characteristics for deep zone monitoring wells will be submitted to ADEM for approval prior to construction of additional wells in the deep zone.

Two-well cluster arrays will be installed in the shallow zone in locations where more than 25 feet of saturated aquifer is present above the retarding clay. The cluster wells will serve a dual purpose. First, the cluster wells will be instrumental in modeling groundwater flow in the shallow zone. Second, previous investigations indicate that TCE concentrations may vary significantly from the top of the saturated zone to the bottom of the saturated zone. Cluster wells will aid in better defining the vertical distribution of TCE in the shallow zone. The top 10 feet of the saturated zone will be screened by the shallower of the two wells and the lower five or 10 feet of the saturated zone immediately overlying the retarding clay will be screened by the deeper of the two wells. Horizontal spacing between the two wells will not exceed 25 feet and will not be less than 10 feet.

A single well will be installed in the shallow zone in locations where less than 20 feet of saturated aquifer is present above the retarding clay. The lower five or 10 feet of the saturated zone immediately overlying the retarding clay will be screened by the well. Refer to Table 3 for the anticipated screened interval for each proposed monitoring well.

A single well will be installed in the deep zone (the first water bearing layer present below the retarding clay or aquitard but above the Gordo Formation).

Stratigraphic information, water levels, and water quality data from the cluster and single wells in the shallow zone will be used for modeling purposes. Modeling of the groundwater flow will play an integral part in determining the transportation and fate of the TCE. The following sections will outline the specifics of the well installations.

Technical Specifications

General

Installation and completion of the groundwater monitoring wells in the Coliseum Boulevard Plume area will be performed based on the following specifications.

- Advance soil conductivity probes at each location not previously assessed to evaluate the depth to the first retarding clay layer.
- Drill exploratory borings at each well (cluster) location.
- Collect soil samples during boring advancement for the purpose of geologic logging and PID screening.
- Install two-inch diameter groundwater monitoring wells.
- Install above ground or flush mount protective casing/shroud.
- Develop completed wells.
- Collect a ground water sample from each well following development
- Perform a slug/bail test at each well following sampling.

A groundwater monitoring well system for the Coliseum Boulevard Plume area will include the installation of approximately 60 additional two-inch diameter monitoring wells. Figure 1 depicts the proposed locations for the shallow and deep zone groundwater monitoring wells. Table 3 is a list of the proposed soil boring depths and well screen intervals. The actual well screen intervals will be selected by the field geologist based on the stratigraphy at each well location.

Monitoring Wells

Monitoring Well Nomenclature

- Monitoring well nomenclature shown on the attached Figure 1 is temporary. As wells are installed (except the three to be installed in the vicinity of Probehole PH12), permanent identification numbers will be assigned using the following system.
    - Wells installed to intercept the water table will receive a 100-series identifier (i.e. MW-109).
    - Wells installed to a depth just above the first distinct clay layer, will receive a 200-series identifier (i.e. MW-209).
    - Wells installed beneath the first distinct clay, but above the Gordo

Formation, will receive a 300-series identifier (i.e. MW-304).

- Existing monitoring well identifiers have been changed to reflect the new numbering system.

Boring Advancement

- All borings will be performed using sonic drilling techniques. A core barrel will be advanced in five (5) to ten (10) foot intervals to collect an undisturbed soil sample. Once the sample barrel reaches the end of its sample depth, the overdrive casing will be advanced to the depth of the sample barrel and then the sample barrel will be removed. This method of boring advancement will continue to the designated boring depth. Actual depths of borings may be increased or decreased based on field conditions encountered (see Table 3).

- Undisturbed soil samples will be collected from the core barrel using plastic sleeves. The lithology of the soil cores will be described.

- Drill test borings at each well/cluster location to depths ranging from 15 feet below ground surface (bgs) to 80 ft bgs.

- Drill four test borings to the top of the Gordo Formation into the deep water-bearing zone beneath the first distinct clay. These test borings will be in areas where TCE is known not to be present above the first distinct clay.

Sample Collection

- Collect soil samples for purposes of geologic logging and PID screening from locations were monitoring wells will be installed.

- The core samples will be field screened using a photo-ionization detector (PID) or comparable field screening tool. If at any of the boring locations the core exhibits an unusually high PID reading, that section of the core will be sampled for laboratory analysis. Samples will be analyzed for volatile organic compounds (VOCs).

Casing and Screen

- All casing and screen shall consist of two-inch diameter Schedule 40 flush threaded PVC.
- The screen shall be five (5) or ten (10) feet in length with a 0.01-inch slot size. Refer to Table 3 for the anticipated screened interval for each proposed monitoring well.
- For wells screening the upper portion of the shallow zone, the top of the screen shall be installed so that approximately two feet of the 10-foot screen extends above the saturated zone.
- For wells screening the lower portion of the shallow zone, the bottom of the screen will be set on top of the clay aquitard and screen the five (5) or ten (10) feet of saturated aquifer overlying this clay (screen length for this is dependent on total saturated zone thickness – refer to Table 1).
- For wells installed in the deep water-bearing unit, the top 10 feet of the first saturated zone encountered below the clay aquitard will be screened.
- Wells advanced into the deep zone will be double cased using over-ride casings, as needed, to minimize the potential for down-hole migration of water during drilling.

Filter Pack

- The material used as a filter pack shall consist of clean, well rounded, quartz sand graded to the size range appropriate for the screened interval.
- The filter pack shall extend from the bottom of the well screen to two feet above the top of the well screen.

Bentonite Seal

- Bentonite seal consisting of high-grade sodium bentonite, in a pellet form, with a minimum diameter of 1/4 inch and a maximum diameter of 1/2 inch.

- The bentonite seal shall extend two feet above the filter pack.

Grouting

- After adequate pellet hydration the remainder of the annular space will be grouted to the surface using cement/bentonite grout.

Well Protection

- Locking caps with lock and key.
- A 2-foot by 2-foot by 4-inch concrete pad with 4-inch by 4-inch by 5-foot stainless steel stickup protective casing.
- A 2-foot by 2-foot by 4-inch concrete pad with a new 10-inch or larger watertight flush mount manhole protector (shroud).
- For wells installed in City of Montgomery streets, the 2-foot by 2-foot by 4-inch concrete pad will be completed a minimum of 2 inches below grade. Asphalt will be placed above the concrete pad to land surface.
- Three protective bollards around well stickups. Bollards will be constructed of 4-inch diameter steel pipe, filled with concrete.

Well Development

- No sooner than 24 hours after completion, the wells will be developed either by pumping or surge block methods to reduce turbidity and will continue until the water is stable with respect to turbidity, specific conductance, and temperature. A minimum of three well volumes will be evacuated. Specific conductance, pH, turbidity, and temperature readings will be measured before, during, and after development and recorded in the field log books. Wells will be considered developed when turbidity, pH, temperature, and conductivity readings have stabilized for three readings and all are within 10 percent of the previous two readings.

In-Situ Permeability Test (Slug Tests)

- Slug tests will be performed at each monitoring well installed under this work plan using the following procedures.
  - Ground-water levels within the wells will be measured prior to the performance of the slug tests.
  - To achieve an instantaneous change in water level, a slug will be removed from each well resulting in a change of the water level in the well.
  - A Hermit data logger and transducer will be used to measure water level changes resulting from the introduction or removal of the slug.
  - Data from the Hermit data logger will be downloaded into an appropriate computer program and values of hydraulic conductivity will be calculated for the well tested.

Surveying

- At each monitoring well location, the land surface and top of casing will be surveyed to the nearest 0.01 foot by a Professional Land Surveyor.

Ground-Water Monitoring

As the monitoring wells are installed and developed, ground-water samples will be collected and analyzed for VOCs. A ground-water sample will be collected from monitoring well MW-304 during the week of October 29, 2001. The information gathered by sampling the monitoring wells as they are installed will be used to evaluate the need for additional monitoring wells. Once all of the monitoring wells proposed herein are installed and developed, a complete round of ground-water samples will be collected from all newly installed wells, existing wells MW-101, MW-201, MW-102, MW-202, MW-103, and MW-203 (formerly MW-101 S/D, MW-102S/D, and MW-103S/D, respectively), and MW-304 (formerly MW-104). All of the monitoring wells at the site, excluding monitoring wells ALDOTMW-1 – ALDOTMW-9, and wells installed at locations AB, AC, and AD will be sampled quarterly for one year.

Water Level Measurements

- On a monthly basis, water level measurements will be made at all newly installed and existing monitoring wells and piezometers (i.e. ALDOTMW-1 through ALDOTMW-9 and AlfaMW-1 through AlfaMW-5). Water level measurements will begin during the first month after monitoring well installation begins.

- Water levels will be collected using an electronic water level indicator, which has been properly decontaminated between each well location.

Ground-Water Sampling

- Prior to collection of ground-water samples, each monitoring well will be purged a minimum of three well volumes of water, using a pneumatic pump. Purging will continue until readings of temperature, pH, and conductivity stabilize (3 consecutive readings within 10%). Purging will not be required in wells that have been developed within the previous 24 hours.
- Ground-water samples will be collected using a bladder pump from each monitoring well and placed in quadruplicate 40-milliliter glass vials, preserved with hydrochloric acid, and sealed with a Teflon®-lined lids. The samples will be placed immediately on ice.

Analytical

- Soil/sediment samples, if collected, will be placed on ice, in a cooler, and shipped to **TTL's** laboratory. Analyses of the samples will be in accordance with Method 5035/8260 outlined in Test Methods for Evaluating Solid Waste Physical/ Chemical Methods, EPA, SW-846, 3rd Edition, November, 1986. A list of the Method 8260 constituents that will be analyzed is attached.

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Quality Assurance/Quality Control

- Duplicate samples will be collected from 10 percent of the total number of samples collected.

- A trip blank will accompany every shipment containing ground-water samples for VOC analyses.

- An equipment rinsate will be collected each day of drilling.

Decontamination

- A decontamination pad will be set up at the central staging area of the ALDOT Complex. All down-hole drilling equipment will be steam-cleaned within the decon pad.

- The following procedures will be used to clean the sampling equipment used to collect the soil/sediment samples. The procedures are those published in: *Environmental Investigations Standard Operating Procedures and Quality Assurance Manual,* EPA, Region IV; May 1996; Athens, Georgia; Section 2.2.3, pages B-1 through 6.

- Conductivity probe rods will be cleaned between each probehole.

- Sampling equipment and rods will be cleaned with tap water and soap using a brush, if necessary, to remove particulate matter and surface films. The tap water will be obtained from the Montgomery Water Works and Sanitary Sewer Board public-water supply. The soap will be a standard brand of phosphate-free laboratory detergent (such as Liquinox®).

- Equipment will be rinsed thoroughly with tap water; then rinsed thoroughly with organic/analyte free water (deionized water); and then thoroughly rinsed with isopropyl alcohol. After rinsing with the isopropyl alcohol, the equipment will again be rinsed with deionized water. PVC or plastic items will not be rinsed with alcohol.

- Sampling equipment will be removed from the decontamination area and covered with clean unused plastic.

Schedule

Drilling

- Conductivity probing has been conducted at the monitoring well locations.

- The proposed shallow zone well clusters will be installed and developed within 90 days of final decision on this Addendum 06 to the Work Plan. The wells will be installed in general areas in the following approximate order: ALDOT Central Complex, perimeter wells, Chisholm area, Eastern Meadows area, and Vista View area. The order may be adjusted based on resident comments.

- The proposed 4 deep zone wells will be installed and developed within 10 days of completion of the shallow-zone wells.

- The proposed wells in the source area (MW-BA, BB, and BC) will be installed following completion of the work described in Addendum 03. It is anticipated that these wells will be installed as part of the other work described herein. However, it is possible that a second drill rig mobilization, or use of a different type of rig may be warranted.

- Boring logs for wells installed each month of drilling will be submitted to the ADEM with the Monthly Status Reports.

Water Levels

- Water level measurements collected each month will be submitted in tabular format to the ADEM in the Monthly Status Reports. Additionally, a potentiometric surface map will be provided.

Ground-Water Sampling

- For ground-water samples collected from monitoring wells as they are installed, analytical results will be submitted to the ADEM with the Monthly Status Reports.

- The first complete round of ground-water sampling (first "quarterly" sampling event) will be conducted in April 2002. For the first year, all monitoring wells (excluding ALDOTMW-1-ALDOTMW-9 and wells installed at locations AB, AC, and AD) will be sampled quarterly (i.e. April 2002, July 2002, October 2002, and January 2003). A revised monitoring schedule will be submitted after the initial year. A report summarizing the analytical data, with accompanying site map, will be submitted to the ADEM within 45 days of receipt of analytical results.

VOLATILE ORGANIC HYDROCARBONS

List of Analytes - Ground Water and Soil

Chloromethane
Vinyl Chloride
Chloroethane
Trichlorofluoromethane
1,1-Dichloroethene
Methylene Chloride
Trans-1,2-Dichloroethene
1,1-Dichloroethane
Cis-1,2-Dichloroethene
Chloroform
1,1,1-Trichloroethane
Carbon Tetrachloride
Benzene
1,2-Dichloroethane
Trichloroethylene
1,2-Dichloropropane
Bromodichloromethane
Cis-1,3-Dichloropropene
Toluene
Trans-1,3-Dichloropropene
1,1,2-Trichloroethane
Tetrachloroethylene
Dibromochloromethane
Chlorobenzene
1,1,1,2-Tetrachloroethane
Ethylbenzene
M,P-Xylenes
O-Xylene
Bromoform
1,1,2,2-Tetrachloroethane
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2-Dichlorobenzene

TABLE 1. Summary of monitoring well construction characteristics; Coliseum Blvd. Plume Investigation; Montgomery, Alabama.

Well/ Piezometer I.D.	Location	Date Augered/ Constructed	Total Depth (ft. BLS)[1]	Diameter of Borehole (Inches)	Diameter of PVC Casing (Inches)	Screened Interval (ft. BLS)	Slot Size of Screen (Inches)	Sand Pack (ft. BLS)	Bentonite Pellet Seal (ft. BLS)	Cement/ Bentonite Seal (ft. BLS)
MONITORING WELLS										
ALDOT Central Complex										
ALDOT MW1	ALDOT Central Complex	10/6/99	64	8.25	2	14-63	0.010	11-64	9-11	0-9
ALDOT MW2	ALDOT Central Complex	10/6-7/99	71	8.25	2	16-70	0.010	13-71	11-13	0.5-11
ALDOT MW3	ALDOT Central Complex	10/7/99	52.5	8.25	2	15-51.5	0.010	13-52.5	11-13	0.5-11
ALDOT MW4	ALDOT Central Complex	10/8/99	62.5	8.25	2	13-62	0.010	11-62.5	9-11	0.5-9
ALDOT MW5	ALDOT Central Complex	10/11/99	54.5	8.25	2	14.5-53.5	0.010	12.5-54.5	10.5-12.5	0.5-10.5
ALDOT MW6	ALDOT Central Complex	10/11-12/99	60.5	8.25	2	15.5-59.5	0.010	13-60.5	11-13	0.5-11
ALDOT MW7	ALDOT Central Complex	10/12/99	65	8.25	2	20-64	0.010	17-65	15-17	0.5-15
ALDOT MW8	ALDOT Central Complex	10/13/99	62	8.25	2	17-61	0.010	15-62	13-15	0.5-13
ALDOT MW9	ALDOT Central Complex	10/13/99	57	8.25	2	17-56	0.010	15-57	13-15	0.5-13
MW-304	ALDOT Central Complex	5/24/2001	92.5	6.0	2	72.5-87	0.010	70-87	68-70	0-68
Kilby Ditch										
MW 101[2]	Kilby Ditch	5/1/01	13	8.25	2	8-12	0.010	6-13	4-6	0.5-4
MW 201	Kilby Ditch	5/2/01	28	8.25	2	23-27	0.010	20-28	18-20	0.5-18
MW 102	Kilby Ditch	5/3/01	14.5	8.25	2	9.5-13.5	0.010	7.5-14.5	5.5-7.5	0.5-5.5
MW 202	Kilby Ditch	5/3/01	24	8.25	2	19-23	0.010	17-24	15-17	0.5-15
MW 103	Kilby Ditch	4/30/01	17	8.25	2	12-16	0.010	10-17	8-10	0.5-8
MW 303	Kilby Ditch	5/2/01	34	8.25	2	29-33	0.010	26-34	24-26	0.5-24
Alfa Property										
MW-1A	Alfa Property	9/99	43.3	8.25	2	32.8-42.8	Unknown	30.8-43.3	28.8-30.8	0-28.8
MW-2A	Alfa Property	9/99	45	8.25	2	34.5-44.5	Unknown	18-45	16-18	0-16
MW-3A	Alfa Property	9/99	41	8.25	2	30.5-40.5	Unknown	28.5-41	26.5-28.5	0-26.5
MW-4A	Alfa Property	9/99	49	8.25	2	38.5-48.5	Unknown	36.5-49	34.5-36.5	0-34.5
MW-5A	Alfa Property	9/99	24.7	8.25	2	14.2-24.2	Unknown	13-24.7	11-13	0-11

[1] Feet below land surface.

[2] Monitoring wellsin Kilby Ditch area previously designated at MW-101S/D, MW-102S/D, and MW103S/D, respectively.

TABLE 2. Results of analyses[1] for volatile organic compounds in ground-water samples; Coliseum Boulevard Plume Investigation; Montgomery, Alabama.

Well Identifier	Sample Date	1,1-Dichloroethene	cis-1,2-Dichloroethene	Chloroform	Benzene	Trichloroethylene	Tetrachloroethene
		Concentrations in milligrams per liter (mg/L)					
Monitoring Wells (ALDOT Central Complex)							
ALDOT MW1	10/20/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	11/18/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ALDOT MW2	10/20/1999	<0.005*	<0.005	**0.006**	<0.005	<0.005*	<0.005
	11/17/1999	<0.005*	<0.005	<0.005*	<0.005	0.005	<0.005
	11/18/99[2]	<0.005	<0.005	<0.005*	<0.005	**0.006**	<0.005
ALDOT MW3	10/19/1999	<0.005	<0.005	<0.005*	<0.005	**0.029**	<0.005
	11/18/1999	<0.005	<0.005	<0.005	<0.005	**0.030**	<0.005
	11/18/99[3]	<0.005	<0.005	<0.005*	<0.005	**0.033**	<0.005
ALDOT MW4	10/20/1999	<0.005	<0.005	<0.005*	<0.005	<0.005*	<0.005
	11/18/1999	<0.005	<0.005	<0.005	<0.005	<0.005*	<0.005
ALDOT MW5	10/19/1999	<0.005	<0.005	<0.005*	<0.005	<0.005	<0.005
	11/16/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ALDOT MW6	10/19/1999	<0.005	<0.005	<0.005*	<0.005	<0.005	<0.005
	11/16/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ALDOT MW7	10/20/1999	<0.005	<0.005	<0.005*	<0.005	**0.008**	<0.005
	11/17/1999	<0.005	<0.005	<0.005	<0.005	**0.014**	<0.005
ALDOT MW8	10/19/1999	<0.005	<0.005	**0.008**	<0.005	<0.005	<0.005
	11/17/1999	<0.005	<0.005	<0.005*	<0.005	<0.005	<0.005
ALDOT MW9	10/19/1999	<0.005	<0.005	**0.012**	<0.005	<0.005*	<0.005
	11/17/1999	<0.005	<0.005	**0.005**	<0.005	**0.006**	<0.005
Monitoring Wells (Vista View Development)[4]							
Alfa MW-1	11/18/1999	**0.005**	<0.005	<0.005	<0.005	**0.952**	<0.005
Alfa MW-2	11/18/1999	<0.005	<0.005	<0.005*	<0.005	**0.012**	<0.005
Alfa MW-3	11/18/1999	**0.018**	<0.005	<0.005*	<0.005	**0.297**	<0.005
Alfa MW-4	11/17/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Alfa MW-5	11/18/1999	<0.005	**0.018**	<0.005	<0.005	**0.030**	<0.005
Monitoring Wells (Kilby Ditch)							
MW 101S	5/24/01	<0.001	<0.001	<0.001	<0.001	**0.133**	<0.001
	8/1/01	<0.001	<0.001	<0.001	<0.001	**0.101**	<0.001
MW 101D	5/24/01	**0.0042**	<0.001	<0.001	<0.001	**0.797**	<0.001
	8/1/01	**0.0040**	<0.001	<0.001	<0.001	**0.914**	<0.001
MW 102S	5/23/01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	8/2/01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW 102D	5/23/01	<0.001	<0.001	<0.001	**0.0015**	<0.001	<0.001
	8/1/01	<0.001	<0.001	<0.001	<0.001	**0.0011**	<0.001
MW 103S	6/7/01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	8/3/01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW 103D	5/24/01	**0.0051**	**0.0017**	<0.001	<0.001	**0.946**	<0.001
	8/2/01	**0.0058**	**0.0024**	<0.001	<0.001	**1.060**	<0.001

[1] Testing of the samples was in accordance with Method 8260 outlined in Test Methods for Evaluating Solid Waste Physical/Chemical Methods, EPA, SW-846, Third Edition, November, 1986.

[2] Ground-water sample collected about 35 feet below land surface.

[3] Ground-water sample collected about 30 feet below land surface.

[4] Results provided are from TTL laboratory.

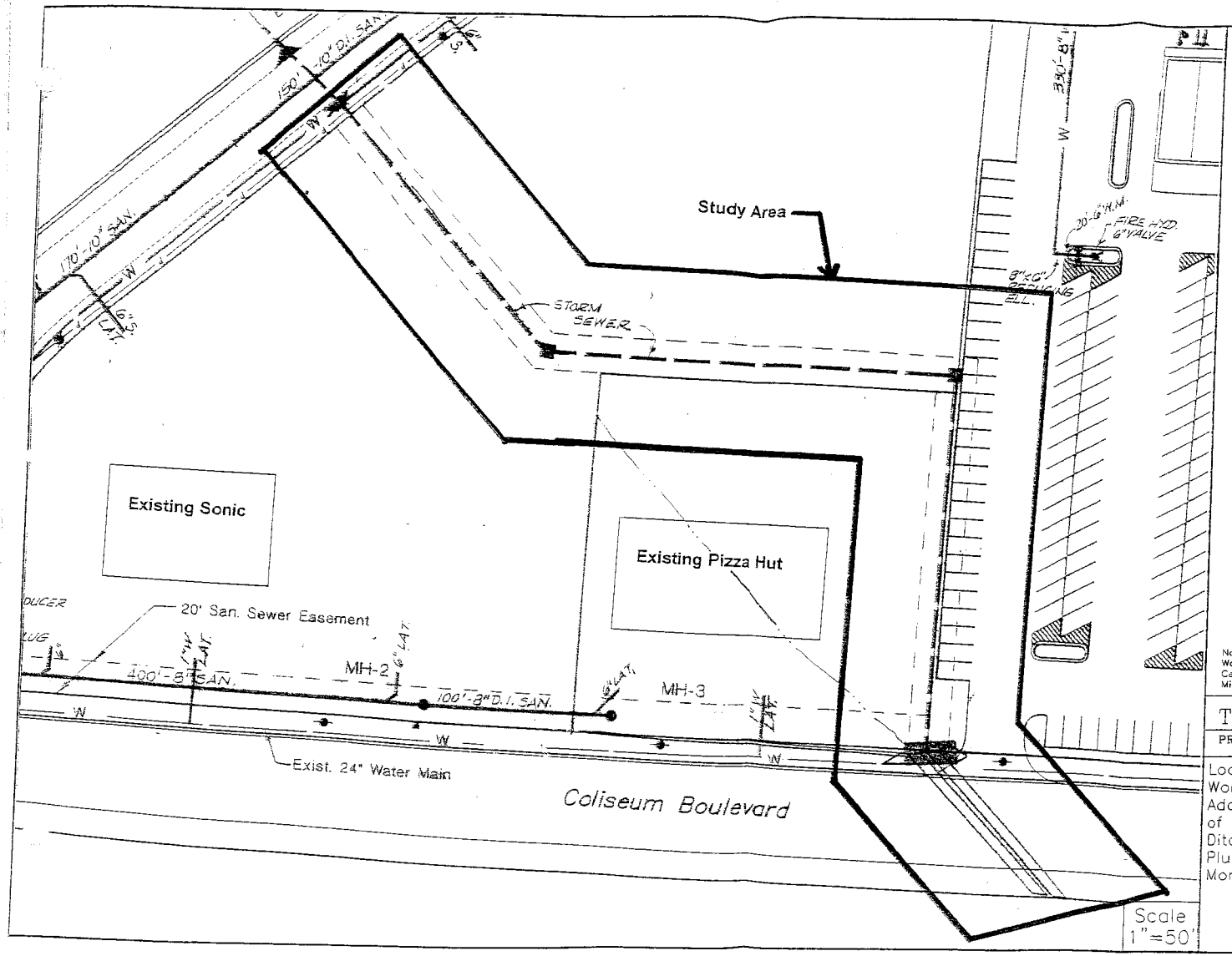
* Indicates that compound was detected but concentration was below the PQL.

TABLE 3. Preliminary Monitoring Well Installation Specifications; Coliseum Boulevard Plume Investigation, Montgomery, Alabama.

Temporary MW CODE	Approx. Depth to Clay (ft)	Estimated Saturated Thickness (ft)	Proposed Screened Interval (ft)	Location Rationale
			Shallow Zone	
A	25	15	15-25	On outer edge of plume to monitor plume margin
B	35	20	25-35	To fill data gaps and to monitor eastern margin of plume
C	40	25	15-25	To fill data gaps and to monitor eastern margin of plume
	40	25	35-40	To fill data gaps and to monitor eastern margin of plume
D	40	25	15-25	To fill data gaps and to monitor eastern margin of plume
	40	25	35-40	To fill data gaps and to monitor eastern margin of plume
E	50	35	15-25	To fill data gaps and to monitor potential source area
	50	35	40-50	To fill data gaps and to monitor potential source area
F	60	40	20-30	To fill data gaps and to monitor western margin of plume
	60	40	50-60	To fill data gaps and to monitor western margin of plume
G	75	40	34-45	On outer edge of plume to monitor plume margin
	75	40	65-75	On outer edge of plume to monitor plume margin
H	80	40	40-50	On outer edge of plume to monitor plume margin
	80	40	70-80	On outer edge of plume to monitor plume margin
I	70	40	30-40	On outer edge of plume to monitor plume margin
	70	40	60-70	On outer edge of plume to monitor plume margin
J	45	25	20-30	To fill data gaps and to monitor western margin of plume
	45	25	40-45	To fill data gaps and to monitor western margin of plume
K	45	30	15-25	To fill data gaps and to monitor western margin of plume
	45	30	35-45	To fill data gaps and to monitor western margin of plume
L	40	25	15-25	To fill data gaps and to monitor eastern margin of plume
	40	25	35-40	To fill data gaps and to monitor eastern margin of plume
M	60	40	20-30	To fill data gaps and to monitor potential source area
	60	40	50-60	To fill data gaps and to monitor potential source area
N	60	40	20-30	To fill data gaps and to monitor potential source area
	60	40	50-60	To fill data gaps and to monitor potential source area
O	60	40	20-30	On outer edge of plume to monitor plume margin
	60	40	50-60	On outer edge of plume to monitor plume margin
P	60	40	20-30	On outer edge of plume to monitor plume margin
	60	40	50-60	On outer edge of plume to monitor plume margin
Q	65	40	25-35	On outer edge of plume to monitor plume margin
	65	40	55-65	On outer edge of plume to monitor plume margin
R	60	40	20-30	To fill data gaps and to monitor eastern margin of plume
	60	40	50-60	To fill data gaps and to monitor eastern margin of plume
S	55	40	15-25	On outer edge of plume to monitor plume margin
	55	40	72.5-87	On outer edge of plume to monitor plume margin (existing MW 104)
T	60	40	20-30	On outer edge of plume to monitor plume margin
	60	40	50-60	On outer edge of plume to monitor plume margin
U	40	20	30-40	To fill data gaps and to monitor eastern margin of plume
V	30	20	20-30	To fill data gaps and to monitor eastern margin of plume
W	35	20	25-35	To fill data gaps and to monitor eastern margin of plume
X	35	20	25-35	To fill data gaps and to monitor eastern margin of plume
Y	15	10	5-15	On outer edge of plume to monitor plume margin
Z	20	10	10-20	On outer edge of plume to monitor plume margin
AA	---	---	15-25	On outer edge of plume to monitor plume margin to the southwest
AB	---	---	30-40	To monitor water elevatations and water quality
	---	---	55-65	To monitor water elevatations and water quality
AC	---	---	25-35	To monitor water elevatations and water quality
	---	---	50-60	To monitor water elevatations and water quality
AD	---	---	25-35	To monitor water elevatations and water quality
	---	---	50-60	To monitor water elevatations and water quality
AE	---	---	15-25	On outer edge of plume to monitor plume margin to the northeast
			Deep Zone	
DZ1	125	---	115-125	Outer edge of plume area to monitor water levels and water quality
DZ2	125	---	115-125	Outer edge of plume area to monitor water levels and water quality
DZ3	125	---	115-125	Outer edge of plume area to monitor water levels and water quality
DZ4	125	---	115-125	Outer edge of plume area to monitor water levels and water quality

Note: Well depths and screened intervals are estimated based on existing information and may vary based on actual field conditions

Note: Where information on depth to clay and saturated thickness is uncertain, the cell contains "---"



Note: Figure compiled from Drawing C6, Water and Sewer Plan for Vista View Shopping Center Coliseum Boulevard by Goodwyn, Mills and Cawood.

TTL, Inc.

PRACTICING IN THE GEOSCIENCES

Location of Stormsewer Survey. Work Plan Addendum 05; Addendum to the Assessment of the West Branch of Kilby Ditch; Coliseum Boulevard Plume Investigation; Montgomery, Alabama.

Scale 1"=50'