



**REPORT**

# **ACTION ITEM WORK PLAN**

*Supplemental RI/FS, Former Hulett Lagoon Site*

Submitted to:

**City of Camdenton**

437 W. US Highway 54  
Camdenton, Missouri 65020

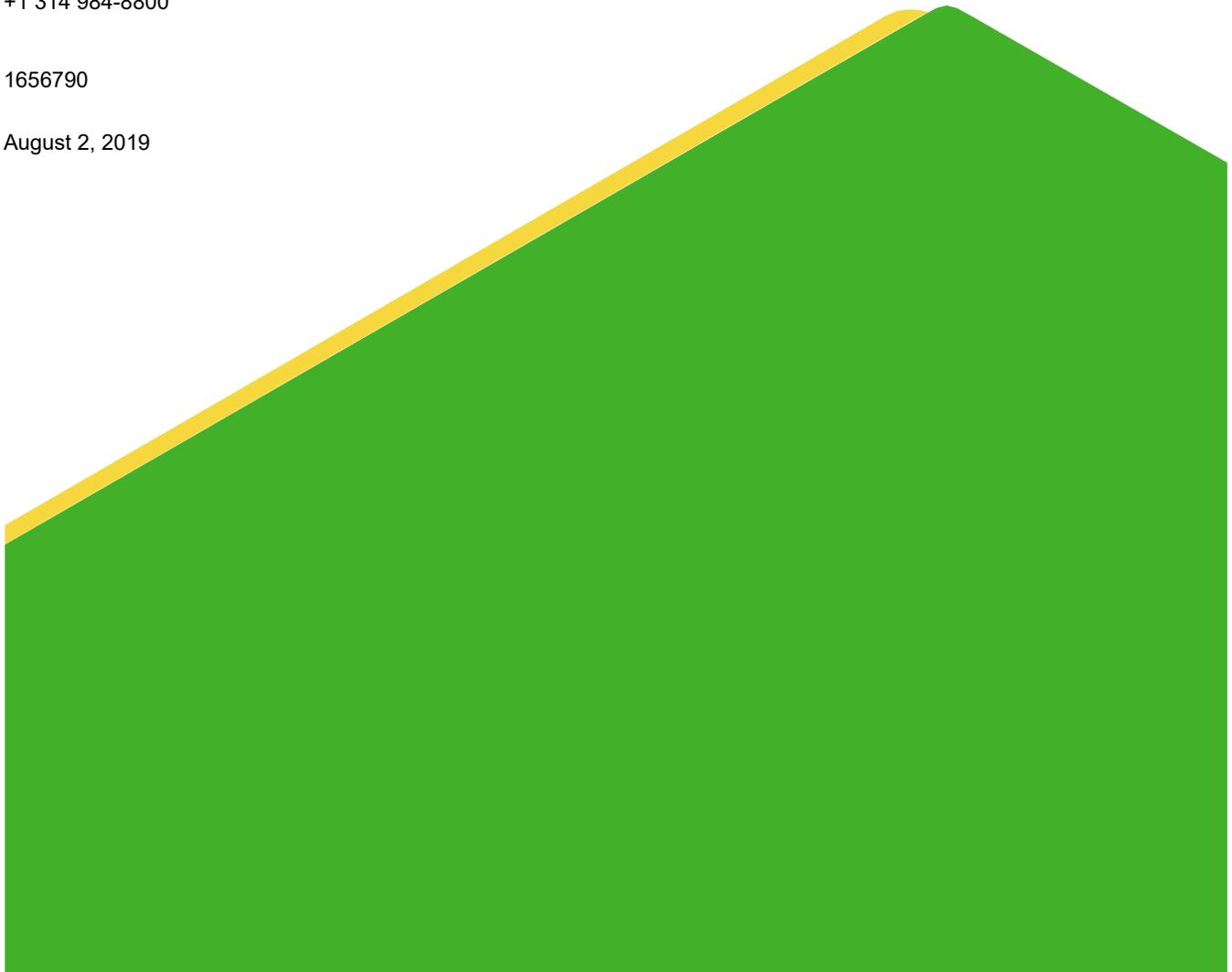
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August 2, 2019



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## 1.0 INTRODUCTION AND BACKGROUND

The City of Camdenton retained Golder Associates Inc. (Golder) to perform supplemental Remedial Investigation/Feasibility Study (RI/FS) activities at the Former Hulett Lagoon Facility and the Sunset Drive Facility (the Site) located in Camdenton, Missouri.

The 2016-2017 supplemental RI/FS activities were based on the scope of work identified in the Administrative Settlement and Abatement Order on Consent for Supplemental RI/FS (AOC) for the Site dated March 21, 2016 (Missouri Department of Natural Resources (MDNR), 2016).

As stated in the AOC, the objectives of the supplemental RI/FS activities were to investigate the water producing zones of the aquifer that are contributing to the groundwater contamination and develop alternatives for optimizing the use of the City of Camdenton's Mulberry Well to prevent the migration of TCE.

The Supplemental Remedial Investigation Report was submitted to MDNR on August 10, 2017 and approved on August 18, 2017. The Supplemental Feasibility Study Report was then submitted to MDNR on October 18, 2017 (collectively, the "Supplemental Reports"). To discuss potential additional work to build upon the information contained in the Supplemental Reports, MDNR and Respondent representatives met in Jefferson City, Missouri on August 1, 2018 and held a follow-up teleconference on November 16, 2018. Those discussions resulted in the MDNR January 25, 2019 letter. Without waiving the right to respond to or otherwise accepting the content of the MDNR's January 25, 2019 letter, this Action Item Work Plan (the "Work Plan") addresses the Phase 1 Action Items in the January 25, 2019 letter.

### 1.1 Investigation Objectives

This Work Plan details the planned field procedures and data evaluations that will be used to address the Phase 1 Action Items including:

- Action Item 1: Site-wide well hydraulic response to pumping in the Mulberry Well and City of Camdenton municipal wells
- Action Item 2: Conduct site-wide groundwater sampling
- Action Items 3, 4 and 5: Conduct additional remedial system evaluation for inclusion in a Revised FS Addendum Report and Conceptual Site Model (CSM) technical memorandum

Upon completion of the Action Items, it is expected that a joint technical meeting will be conducted to review the findings.

### 1.2 Site Background

The Site is located in the western portion of the City of Camdenton, Camden County, Missouri. The Mulberry Well is a former municipal well owned by the City of Camdenton. In March of 1993, trichloroethene (TCE) was detected below the United States Environmental Protection Agency's (USEPA's) Maximum Contaminant Level (MCL) in the well. The well is located about 1,000 feet south of the Former Hulett Lagoon Facility. In 1998, the City reported the detection of TCE above the MCL and removed the Mulberry Well from service. The City has since pumped the Mulberry Well and discharges the treated water to waste through a ravine that eventually discharges to the Lake of the Ozarks, according to a Missouri State Operating Permit and operating parameters developed by MDNR. Extracted groundwater is pumped to maintain hydraulic control of the TCE plume, preventing the spread to other

City wells. The most recent annual groundwater sampling results for TCE concentrations indicate City wells have not been impacted.

### 1.3 Previously Submitted Documents

Several phases of investigation have been performed for the Former Hulett Lagoon Site between 1997 and 2017. A summary of previous investigations is included in the AOC. The following previously submitted documents have been used for purposes of completing a Revised FS Addendum Report:

- MDNR, Department of Environmental Quality, Hazardous Waste Program. Combined Preliminary Assessment/Site Inspection Report, Former Hulett Lagoon Site, Camdenton. Missouri, March 30, 1999.
- SECOR International Incorporated. Field Sampling Plan, Former Hulett Lagoon, Camdenton, Missouri, 2000.
- SECOR International Incorporated. Quality Assurance Project Plan, Former Hulett Lagoon, Camdenton, Missouri, 2000.
- SECOR International Incorporated. Remedial Investigation Summary Report, Former Hulett Lagoon, Camdenton, Missouri. November 24, 2003.
- SECOR International Incorporated. Groundwater Flow Model Report, Former Hulett Lagoon, Camdenton, Missouri. September 10, 2004.
- SECOR International Incorporated. Targeted Risk Assessment, Former Hulett Lagoon, Camdenton, Missouri. September 10, 2004.
- Hamilton Sundstrand Corporation. Feasibility Study, Former Hulett Lagoon, Camdenton, Missouri. October 18, 2004.
- SECOR International Incorporated. Remedial Design/Remedial Action Work Plan, Former Hulett Lagoon, Camdenton, Missouri. January 2006.
- Stantec Consulting Corporation. Summary Report of Quarterly Groundwater Sampling (2006-2008), Former Hulett Lagoon, Camdenton, Missouri. March 25, 2009.
- Golder Associates Inc. Investigation-Derived Waste Plan, Former Hulett Lagoon Site, Camdenton, Missouri. May 20, 2016.
- Golder Associates Inc. Supplemental RI/FS Work Plan, Former Hulett Lagoon Site, Camdenton, Missouri. May 20, 2016.
- Golder Associates Inc. Supplemental Remediation Investigation Report Addendum, Former Hulett Lagoon Site, Camdenton, Missouri. August 10, 2017.
- Golder Associates Inc. Supplemental Feasibility Study Report/Addendum, Former Hulett Lagoon Site, Camdenton, Missouri. October 18, 2017.

## 2.0 IMPLEMENTATION OF ACTION ITEMS

Following approval of this Work Plan, Golder will implement the scope of work consisting of the activities outlined below. Golder will follow the existing MDNR-approved sampling and analysis procedures utilized during previous investigation activities for the Site throughout the implementation of the Supplemental RI/FS. All sampling and analyses performed will follow MDNR direction, approval, and guidance regarding sampling, Quality Assurance/Quality Control (QA/QC), data validation, and chain of custody procedures. Each of the Action Items is discussed below in the expected chronologic order in which they will be conducted.

### 2.1 Health and Safety

This work will be performed under a Site-Specific Health and Safety Plan (HASP), in accordance with OSHA regulation 29 CFR 1910.120 and in accordance with the HASP (Golder, 2016) previously approved by MDNR. Personnel working on this Site who may be potentially exposed to hazardous materials will have successfully completed 40-hour HAZWOPER training. This work will be conducted using Level D Protection.

### 2.2 Groundwater Sampling (MDNR Action Item 2)

Groundwater level measurements and sampling will be performed in the wells comprising the monitoring well network for the Site to assess the condition of groundwater compared to previous sampling event data (see Figure 1 and Table 1). The network of wells being sampled is consistent with previous sampling events for the Site. Wells not appearing in the numerical sequence are no longer available for sampling (or may not have been installed) and include:

- MW-3 – This well was abandoned in 2002 because the well was open hole across the “perched zone” and into the “deep” aquifer.
- MW-4 – This well was abandoned in 2002 because the well was open hole across the “perched zone” and into the “deep” aquifer.
- MW-6 – There is no record of MW-6 well installation in the project files. It appears this designation was reserved, but not used. In 1998 MW-5 was installed at the former City Lagoon #3 in July 1998. In 2002 additional well installations were made, beginning with MW-7, upgradient of the former City Lagoon #3.
- MW-15 – This well was abandoned due to access issues prior to Phase III RI activities in late 2002.

Field procedures will be in accordance with the Field Sampling Plan (SECOR, 2000) and Quality Assurance Project Plan (SECOR, 2000). These activities will be coordinated with an initial assessment of the condition of the Site monitoring wells. Based on the results of the condition assessment, monitoring wells will be developed as necessary prior to collecting samples. The process of assessment, development, gauging and sampling are described in further detail below. Activities will begin with monitoring wells that have historically shown no detections of VOCs and then proceeding through wells with increasing levels of detections to mitigate against potential cross contamination. Monitoring well assessment, development and sampling forms are in Appendix A.

#### 2.2.1 Monitoring Well Assessment and Gauging

Initial activity at each well will focus on assessing the well condition. The surface protective casing will be inspected, and any deficiencies will be noted. After opening the well, the depth to groundwater and bottom of the well will be measured with an electronic water level probe capable of providing measurement to the nearest 0.01 foot. The depth to water and bottom of the well will be compared to the most recent measurements to assess change in water elevation and accumulation of sediment in the well.

## 2.2.2 Monitoring Well Redevelopment

After gauging, each monitoring well will be developed using surging and purging methods. Surging of the monitoring wells will be accomplished using a combination of well scrub brushes and surge blocks to clean the screened intervals, with subsequent pumping of groundwater from the well for development. Development will continue until a maximum of 5 well volumes of water has been removed from the well. Less than 5 well volumes may be removed from the well if the well should pump dry during the redevelopment activities.

Water generated during well development will be containerized in 55-gallon drums or larger polyethylene tanks. Following well development work, sample(s) of the water will be submitted for laboratory analysis as needed to complete waste characterization and profiling. After characterization and profiling are complete, the disposal options for the water will be reviewed and an appropriate option selected. At this time, it is anticipated the water will be disposed as non-hazardous wastewater at an approved publically owned treatment works (POTW).

At the conclusion of development, the depth to water and bottom of the well, as well as field parameters (temperature, pH, specific conductance, oxidation reduction potential (ORP), and clarity/color (subjective)) will be recorded. The elevation of the top of casing, screen interval, well depth and water elevation will be reported as part of documentation for this work. The well will be allowed to equilibrate for a minimum of 24 hours following redevelopment before sampling.

## 2.2.3 Groundwater Sample Collection

Groundwater samples will be collected from the Site groundwater monitoring network for analysis by USEPA Method 8260B. Samples will also be collected from a subset of monitoring wells for analysis of geochemical parameters.

Geochemical analysis will be performed as a potential means of distinguishing the characteristic of water bearing units and include the analysis of calcium (Ca), magnesium (Mg), sodium (Na), potassium (K), carbonate (CO<sub>3</sub>), bicarbonate (HCO<sub>3</sub>), chloride (Cl), sulfate (SO<sub>4</sub>), total dissolved solids (TDS), iron (Fe), manganese (Mn), alkalinity and hardness. **Table 1** summarizes the wells to be sampled, analytical methods, field samples and QC samples.

**Table 1: Groundwater Sampling Program**

Monitoring Well Designation	Perched, Deep, or Production Well	Laboratory Analytical Parameters		Sample Order by Quartile <sup>5</sup>
		VOCs <sup>1</sup>	Geochemical <sup>2</sup>	
MW-1	Deep	X		third
MW-2	Deep	X		third
MW-5	Perched	X	X	fourth
MW-7	Perched	X		first
MW-8	Perched	X		fourth

Monitoring Well Designation	Perched, Deep, or Production Well	Laboratory Analytical Parameters		Sample Order by Quartile <sup>5</sup>
		VOCs <sup>1</sup>	Geochemical <sup>2</sup>	
MW-9	Perched	X		third
MW-10	Deep	X	X	second
MW-11	Perched	X		first
MW-12	Perched	X		third
MW-13	Perched	X	X	third
MW-14	Deep	X	X	third
MW-16	Deep	X		third
MW-17	Deep	X		first
MW-18	Deep	X		second
MW-19	Deep	X	X	fourth
MW-20	Deep	X	X	first
MW-21	Deep	X		first
MW-22	Deep	X	X	first
MW-23	Deep	X		second
MW-24	Perched	X		second
MW-25	Perched	X		fourth
Blair	Production	X	X	NA <sup>4</sup>
Mulberry	Production	X	X	NA
Total Number of field samples		23	9	NA
QA/QC Samples <sup>3</sup>		11	1	NA

Notes:

- 1) VOCs will be analyzed using USEPA Method 8260B.

- 2) Geochemical parameters include the following:
  - a. Metals: calcium (Ca), magnesium (Mg), sodium (Na), potassium (K), iron (Fe), manganese (Mn) by USEPA 6010/200.7
  - b. Anions: carbonate/bicarbonate alkalinity by SM 2320B, chloride by EPA 325.2, nitrate and sulfate by EPA 375.4.
  - c. Inorganics: total dissolved solids by EPA 160.1, alkalinity by EPA 310.1, and hardness by SM 2340B
- 3) QA/QC samples numbers are estimated and include 10% duplicates, 10% rinse blanks, and daily trip blanks (VOCs only)
- 4) NA indicates not applicable.
- 5) Based on measured VOC concentrations in groundwater at each monitoring well in past sampling events, with first quartile being least impacted and fourth quartile being most impacted

## 2.2.4 Low-flow Sampling Methods

Low flow sampling will be conducted using a submersible pump (or equivalent) with dedicated discharge tubing. During low-flow sampling the pump will be lowered slowly into the well with the pump intake placed near the mid-point of the well screen. The pump will be secured and activated at a low flow rate (200 ml/min or less). Discharge from the pump will be passed through a flow cell for purposes of measuring field parameters including temperature, pH, specific conductance, oxidation reduction potential (ORP), clarity/color (subjective). The pump discharge rate, water level (if possible), and volume removed will also be measured. Samples will be collected directly from the pump discharge after stabilization of the field parameters. Stabilization will be considered complete when, after purging 3 liters of water, three consecutive readings for all field parameters vary by less than 10% ( $\pm 0.1$  standard unit for pH). If the well purges dry, it will be allowed to recharge until a sufficient amount of water can be collected for the sample.

Geochemical samples will be collected following VOC sampling at monitoring wells MW-5, MW-10, MW-13, MW-14, MW-19, MW-20 and MW-22 as well as the Blair and Mulberry production wells.

## 2.3 Expanded Pumping Test and Recovery Test at the Mulberry Well (MDNR Action Item 1)

Following completion of groundwater sampling, a recovery test, a constant rate pumping test, and background water level monitoring will be conducted at the Mulberry Well to verify degree of hydraulic response in Site monitoring wells, the USGS well and active municipal wells. This section describes the technical approach and operational procedures to be used while conducting the hydrogeological testing.

### 2.3.1 Testing Equipment

The following equipment will be needed to conduct the testing.

- Pressure transducers for each of the Site monitoring wells (MW-1, MW-2, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23,

MW-24, MW-25), the Mulberry Well, the USGS well, Hickory Well, Rodeo Well and Blair Well (see Figure 1 for well locations)

- Barometric pressure transducer to monitor atmospheric pressure
- The 105 gallon per minute (gpm) submersible pump currently in use at the Mulberry Well and hardwired into the well house
- Packers currently hung in the Mulberry Well at a depth of approximately 600 feet below ground surface (installed on September 28, 2016)
- An approximately 300 gpm capacity contingency submersible pump (to be on call from drilling contractor)
- The existing flow totalizer and a backup totalizer of equal specifications
- 300-foot electronic water level meter
- Decontamination equipment (examination gloves, distilled water, Alconox and paper towels)
- A timekeeping device and a laptop computer
- Use of local weather station database for precipitation measurements
- Field forms to record information including project number, borehole ID, pertinent times, weather conditions, person conducting the testing, contractors (if used), type and size of equipment, transducer details, water level measurements, test well pressure, test flow rates, relevant stop/start times and a record of field analyzed water quality parameters.

## 2.3.2 Testing Approach

### 2.3.2.1 Background Water Level Monitoring

Prior to conducting pumping or recovery tests, background water levels should be measured and recorded to estimate static water levels and to observe pumping effects from municipal wells, if any. The general procedure is as follows.

- Install the barometric pressure transducer near the Site monitoring wells in a safe and dry location prior to the pumping and recovery tests (likely beneath the soffit of the Mulberry Well house), to measure changes in atmospheric pressure over the duration of testing and to evaluate barometric efficiency
- Instrument each of the Site monitoring wells, Mulberry Well, USGS well and municipal wells with pressure transducers to a two-minute logging frequency, all synchronized to the same computer time
- Collect and record water levels for each instrumented well at the time of pressure transducer deployment
- Collect background water level data for at least five days prior to inflating the packer in the Mulberry Well
- Inflate packer currently installed in the Mulberry Well, monitor inflation pressure/nitrogen take, to verify integrity (e.g. monitor for nitrogen gas leak)
- Collect background water level data for at least five days with packer inflated, prior starting pumping test or recovery test

- Collect precipitation data for the duration of the monitoring, including the recovery and pumping tests

### 2.3.2.2 Recovery Test

Upon completion of the background monitoring period, the pump in the Mulberry Well will be shut off and the changes in water levels (residual drawdowns) in the Mulberry Well and monitoring wells will be monitored as described below.

- Prior to beginning the recovery test phase, download water level data from each monitoring well pressure transducer and manually measure the water levels to provide depth correlation
- Set pressure transducers to record on the interval schedule in **Table 2**
- Once pressure transducers are set to the **Table 2** intervals, turn off the pump in the Mulberry Well and monitor water level recovery
- Record the final totalizer reading and lock out the pump switch to prevent operation during the recovery phase
- Continue monitoring recovery from the pumping phase for at least 5 days (120 hours)

Prior to beginning the constant rate pumping test, the water level data will be downloaded and the change in water levels attributable to shutting down the Mulberry Well pump will be measured. If the residual drawdowns at monitoring wells MW-20 and MW-21 are less than 0.5 feet, evaluation of outside pumping influences will be conducted to assess the need for replacing existing pump with a higher capacity pump. If needed, the existing Mulberry Well pump will be removed and a pump capable of pumping approximately 300 gpm will be installed for the constant rate pumping test.

**Table 2: Pressure Transducer Logging Intervals**

Pumping and Monitoring Wells	Time Since Pumping Started or Stopped (minutes)	Time Since Pumping Started or Stopped (hours)	Pressure Transducer Intervals
Pumping Well & Nearby Monitoring Wells (< 500 feet)	0 to 60	0 to 1	10-second
	60 to 300	1 to 5	5 minutes
	300 to end of test	5 to end of test	10 minutes
Distal Monitoring Wells	0 to end of test	0 to end of test	5 minutes
Barometric Readings	0 to end of test	0 to end of test	5 minutes

### 2.3.2.3 Constant Rate Pumping Test

- Prior to beginning the constant rate pumping test, download background water level data from each monitoring well pressure transducer and manually measure the water levels to provide depth correlation
- Place pressure transducers at depths in the water column such that they do not become dry during pumping-induced drawdown
- Set pressure transducers to record on the interval schedule in **Table 2**
- Once the pump is started, record the pumping flow rate at a minimum 10-minute interval for the first hour of testing to verify discharge rate
- Continue pumping for at least five days (120 hours)
- During pumping:
  - Record the totalizer readings in Mulberry Well and City municipal wells daily
  - Measure field water quality parameters prior to shutting down the pump as analytical samples are to be collected as part of Action Item 2.

### 2.3.2.4 Municipal Well Pumping Influence Monitoring

To evaluate the degree of Site-wide hydraulic response from pumping each of the municipal supply wells, a series of planned municipal well pump shutdowns will be conducted near the end of the recovery test while recording water levels in Site monitoring wells, the USGS well and the Mulberry Well. Based on conversations with the City of Camdenton, it is understood that each of the municipal supply wells (Hickory, Blair and Rodeo) can be shut down, one at a time (e.g. one well offline, two wells online), for approximately one day. Near the end of the recovery test phase (e.g. after recovery phase day 5), the following sequence of pump shutdowns is planned.

- Turn the Blair Well pump off for 24 hours, monitor Site monitoring wells, USGS well and Mulberry Well, then turn on for at least 2 days prior to next pump shutdown
- Turn the Rodeo Well pump off for 24 hours, monitor Site monitoring wells, USGS well and Mulberry Well, then turn on for at least 2 days prior to next pump shutdown
- Turn the Hickory Well pump off for 24 hours, monitor Site monitoring wells, USGS well and Mulberry Well, then turn on for at least 2 days prior to next pump shutdown, if any
- Turn the Blair Well Pump off for 24 hours and near the end of the shutdown, turn the Mulberry Well pump on to monitor for response in the Blair Well and MW-10

### 2.3.3 Test Data Evaluation

Constant rate pumping and recovery test data will be analyzed to verify hydraulic properties estimated during the 2016 supplemental RI activities and for the occurrence of hydraulic response to pumping in each of the Site monitoring wells, USGS well and municipal wells. The primary goals of the hydraulic testing are to obtain empirical results that help to 1) determine the hydraulic influence of pumping from the Mulberry Well on water levels at the Blair Well, MW-10 and MW-22, and 2) evaluate the hydraulic influence and the likely effect on plume capture on the upgradient monitoring wells (MW-20, MW-21). The testing results will be evaluated by

- Direct observation of monitoring well water level response to pumping will be presented on pressure/head drawdown versus time plots with pumping well drawdown and flow rate overlaid and annotated
- Displaying municipal well pumping influences on plots with recorded pumping periods from transducer data and monitoring well/municipal well water level response and associated discussions

A revised CSM will be prepared incorporating pumping test data, sampling results, and public database information (including precipitation data, as applicable); each of which will be included as an appendix to the Revised Supplemental FS Report. Additionally, evaluation of capture zone and Mulberry Well pump replacement contingency will be included.

## 2.4 Revised FS Addendum Report (MDNR Action Items 3, 4 and 5)

Golder will prepare a revised Supplemental FS Addendum Report for submittal to MDNR, detailing the activities and data collected as a part of the Work Plan Action Item scopes, including the following.

- Results of Site groundwater sampling, including results from MDNR's 2017 private well sampling event associated with the Dawson Metals Products Camdenton Facility #2
- Results of the expanded pumping and recovery tests conducted as outlined in this Work Plan
- Findings from the Missouri Geological Survey (MGS) GeoSTRAT database and include reference in revised conceptual site model technical memorandum
- Observations from a visit to the McCracken Core Library to review samples recovered from the Site, if available, and reference in the revised conceptual site model cross-section
- Evaluation of proposed remedial system sensitivity to
  - Groundwater extraction rate
  - Groundwater constituent concentration
  - Component energy consumption
  - Carbon loading from utilities and maintenance
- Evaluation of estimated remedial system operational costs with granular activated carbon (GAC) versus without GAC
- Perform one-dimensional dispersion analysis of the proposed remedial system exhaust (from air stripper) using SCREEN3 or AERSCREEN to estimate the distance to non-detectible VOC levels
- Submittal of the draft proposed remedial system design to MDNR's Air Pollution Control Program (APCP) for evaluation and include results of the evaluation in the Revised Supplemental FS Report
- Discuss municipal institutional controls, including estimated costs to the City of Camdenton, and include a figure showing the TCE plume in relation to the municipal boundary
- Provide estimated hydraulic performance monitoring costs and budget allotment for MDNR oversight

### 3.0 PROPOSED SCHEDULE

The proposed schedule for performing the scope of work detailed in this Work Plan is as follows.

**Table 3: Estimated Action Item Project Schedule**

Subtask ID	Action Item Task Description	Estimated Start Date	Estimated Duration
----	<b>Groundwater Sampling Event (MDNR Action Item 2)</b>	----	----
A	Well Assessment & Water Level Gauging	Anticipated within 4 to 6 weeks of Work Plan approval and pending contractor availability	1 week
B	Well Development	Within 1 week of Subtask A completion	1 week
C	Groundwater Sampling	Within 1 week of Subtask B completion	2 weeks
D	Laboratory Analysis Results	Within 1 week of Subtask C completion	3 weeks
E	Data Validation & Evaluation	Within 1 week of Subtask D completion	4 weeks
----	<b>Expanded Pumping and Recovery Tests (MDNR Action Item 1)</b>	----	----
F	Deploy transducers in monitoring wells	Within 2 weeks of Subtask C completion	1 week
G	Background water level monitoring	Upon completion of Subtask F	2 weeks
H	Packer Inflation in Mulberry Well	Upon completion of Subtask G	1 day
I	Continue background water level monitoring	Upon completion of Subtask H	2 weeks
J	Recovery Test Monitoring	Upon completion of Subtask I	2 weeks
K	Municipal Well Pumping Influence Monitoring	Upon completion of Subtask J	2 weeks
L	Test Data Validation	Within 2 weeks of	2 weeks

Subtask ID	Action Item Task Description	Estimated Start Date	Estimated Duration
		Subtask K completion	
----	<b>Revised FS Addendum Report (MDNR Action Items 3, 4 and 5)</b>	----	----
M	Data Review & Evaluation	Within 4 weeks of Subtask L completion	4 weeks
N	Develop and Issue Revised Conceptual Site Model Technical Memorandum	Within 4 weeks of Subtask M completion	4 weeks
O	Develop and Issue Revised FS Addendum Report	Within 4 weeks of Subtask M completion	4 weeks

The estimated start date of each subtask is based on the Work Plan approval (by MDNR) date. Delayed approval of the Work Plan will delay the start of each Action Item subtask and each subsequent Action Item subtask.

## 4.0 CLOSING

Golder appreciates the opportunity to assist the City of Camdenton with this project. Please feel free to contact Rick Booth with questions or comments at (314) 971-2711 or rbooth@golder.com.

### Golder Associates Inc.



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*Senior Geological Engineer*



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JCW/FMB

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Path: \\STL1\AFS\Comment\Projects\166790 - COC\Mulberry Well\BES\900 - FIGURES\DRAWINGS\PRODUCTION\1 File Name: 166790A005.dwg | Last Edited By: jcohen Date: 2019-02-20 Time: 6:48:51 PM | Printed By: J.White Date: 2019-02-20 Time: 6:49:14 PM



**LEGEND**  
 MW-1 WELL LOCATION

**NOTE(S)**  
 1. MONITORING WELL LOCATIONS FROM SUMMARY REPORT OF QUARTERLY GROUNDWATER SAMPLING (2006-2008), DATED MARCH 25, 2009, BY STANTEC.



CLIENT  
 CITY OF CAMDENTON

CONSULTANT



YYYY-MM-DD	2019-02-28
DESIGNED	JCW
PREPARED	PJJ
REVIEWED	JCW
APPROVED	FMB

PROJECT  
 ACTION ITEM WORK PLAN  
 SUPPLEMENTAL RI/FS  
 FORMER HULETT LAGOON SITE

TITLE  
**WELL LOCATION MAP**

PROJECT NO.	CONTROL	REV.	FIGURE
1656790		----	1

1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

**APPENDIX A**

**Monitoring Well Development and  
Sampling Forms**







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