Seneca Companies

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The Complete Solution

July 19, 2016

CON 12-15
Doc #32068

Hylton Jackson
DNR
502 East 9th Street
Des Moines, IA 50319

SUBJECT: **WORK PLAN**
FORMER BAKERS FOOD AND FUEL PROPERTY, 8901 SW 9TH STREET, DES MOINES
REGISTRATION NO. 198606841 LUST NO. 8LTM14

Mr. Jackson,

Seneca Companies (Seneca) is submitting the requested Work Plan on behalf of our client, West Lakes Properties.

Due to increasing concentrations at MW3, Seneca recommended additional groundwater monitoring at all wells in the monitoring plan. Additionally, Seneca recommended the installation of three (3) groundwater monitoring wells bracketing MW3 to fully evaluate the extent of the groundwater contamination.

Please feel free to contact me at jbaker@senecaco.com or 515-261-7759 if you have any questions regarding this process.

Thank you,

Jennifer Baker
Project Manager

Cc: 6360477
Aimee Staudt – West Lakes Properties, LC 5000 Westown Parkway, Suite 400, West Des Moines, IA 50266

Seneca Companies, Inc.
Des Moines, IA

WORK PLAN

Former Baker Food & Fuel
8901 SW 9th Street
Des Moines, Warren County, IA

Prepared for:

Aimee Staudt
West Lakes Properties, LC
5000 Westown Parkway, Ste 400
West Des Moines, IA

Prepared by:

Jennifer Baker, CGP #2086
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4140 East 14th Street
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(800) 369-5500

July 19, 2016

Seneca Project: 6360477

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APPENDICES

1.0 INTRODUCTION

West Lakes Properties, LC has retained Seneca Environmental Services to complete a Work Plan for additional contaminant delineation at the above referenced property under the supervision of the Iowa Department of Natural Resources (IDNR) and in accordance with the guidelines provided in Chapter 133 of the Iowa Administrative Code. The following Work Plan is intended to provide West Lakes Properties, LC and the IDNR with a proposed scope of work for additional site monitoring. The monitoring program has been designed to provide an ongoing evaluation of potential changes to human health risk factors.

2.0 BACKGROUND

The Former Baker's Food and Fuel was constructed in 1999. The business consisted of a convenience store and gas station. The fuel tanks for the gas station were aboveground storage tanks (ASTs) stored within a concrete bunker on the southeast corner of the property. The site had diesel dispensers east of the former building and gasoline dispensers west of the former building. Underground products lines were utilized to deliver the products to the dispensers. The site was closed in 2008.

A Limited Phase II ESA was performed by MPS Engineers in 2008. Elevated levels of benzene were detected in monitoring well MW-9 which is located directly south of the former conversion sump and southwest of the former AST bunker. No petroleum hydrocarbons were detected in the other soil and groundwater samples collected.

A Limited Phase II ESA was completed by Allender Butzke Engineers, Inc. in October 2012. Elevated levels of petroleum hydrocarbons were present in the soil samples collected from borings TB-1 and TB-2. TB-1 was located southeast of the conversion sump and TB-2 was located directly south of where the product lines exited the bunker containing the ASTs.

At the time both Limited Phase II ESAs were completed, the ASTs, bunker, product lines, and dispensers had not been removed. Therefore, it was unknown if contamination was present underneath the bunker, lines, and/or dispensers.

The building was razed and ASTs were removed from the bunker during the first week of December 2013 by DeCarlo Demolition Company. The concrete bunker was removed on December 18, 2013 and the lines, concrete surrounding the dispensers, and dispenser sumps were removed on December 19, 2013.

Upon removal of the ASTs and product piping, excavation style sampling was conducted across the base of the AST bunker. Product piping was observed every 20 feet and sampled where contamination was noted. Soil sample laboratory results corresponding to sample locations T1, T2, T3, T4, T5, L1, and D1 returned benzene concentrations greater than Iowa Risk Based Corrective Action (RBCA) Tier 1 levels. Based on the results of the tank and piping removal sampling and Phase II investigations, excavation activities were proposed. The purpose of the excavation was to remove the soil source beneath the former AST bunker and the soil surrounding sample D1 from the product piping closure. This soil source beneath the AST bunker was believed to be causing elevated groundwater concentrations in monitoring wells MW-9 and TB-2. The final excavation dimensions around and under the AST bunker were (47'-49') x 35' x 21', on average the top 8 feet of soil was stockpiled. The entire length of the former AST basin was not removed due to the depth of contamination and budget constraints. The excavation area around the dispenser was 10' x 5' x 6'. The excavations were completed between June 9 and June 12, 2014 with backfilling being completed June 23 through June 25, 2014. A total of 1,178.25 tons of soil were removed from the two excavation areas. The excavated soil was taken to the Metro Park East Landfill in Mitchellville, Iowa.

On July 22, 2014, monitoring wells MW-4 and TB-2 that were destroyed during the razing of the property and excavation activities were re-installed. MW-4R and TB-2R were each drilled to a depth of 30 feet below ground surface.

3.0 Scope of Work

Due to increasing concentrations at MW3, Seneca recommended additional groundwater monitoring at all wells in the monitoring plan. Additionally, Seneca recommended the installation of three groundwater monitoring wells bracketing MW3 to fully evaluate the extent of the groundwater contamination.

3.1 Monitoring Well Installation

Three (3) monitoring wells will be installed utilizing a truck mounted geo-probe unit. The wells will be installed to a depth of twenty (20) feet below grade. Please see the map included in Appendix A showing the approximate location of the proposed wells.

3.2 Data Collection

Soil and groundwater samples will be collected from each monitoring well. Field screening of the soil samples will be completed utilizing a photo-ionization detector (PID). Soil samples of the sediment core will be placed in labeled Zip-Lock™ baggies. Following sufficient time for vapor equilibration, the PID will be used to detect volatile organic compounds (VOCs) inside the soil sample bags. Soil samples will be collected at areas exhibiting high PID values to evaluate native soil. All samples will be collected utilizing nitrile gloves to eliminate the risk of cross-contamination.

The monitoring wells will be hand purged with a disposable bailer for approximately three calculated well volumes or until dry. Following purging, the groundwater was allowed to recharge. Groundwater samples will be collected using clean disposable bailers. The samples will be visually inspected for the presence of free product, emulsion, or product sheen. The samples will then be transferred to laboratory cleaned 40 ml vials, iced, and shipped to a certified laboratory for analysis. The purging and sampling processes described above were adopted after U.S. EPA protocols for groundwater sampling and monitor well purging. This method assures minimum risk of cross-contamination and allows for collection of groundwater which is representative of the surrounding formation.

3.3 Report Submittal

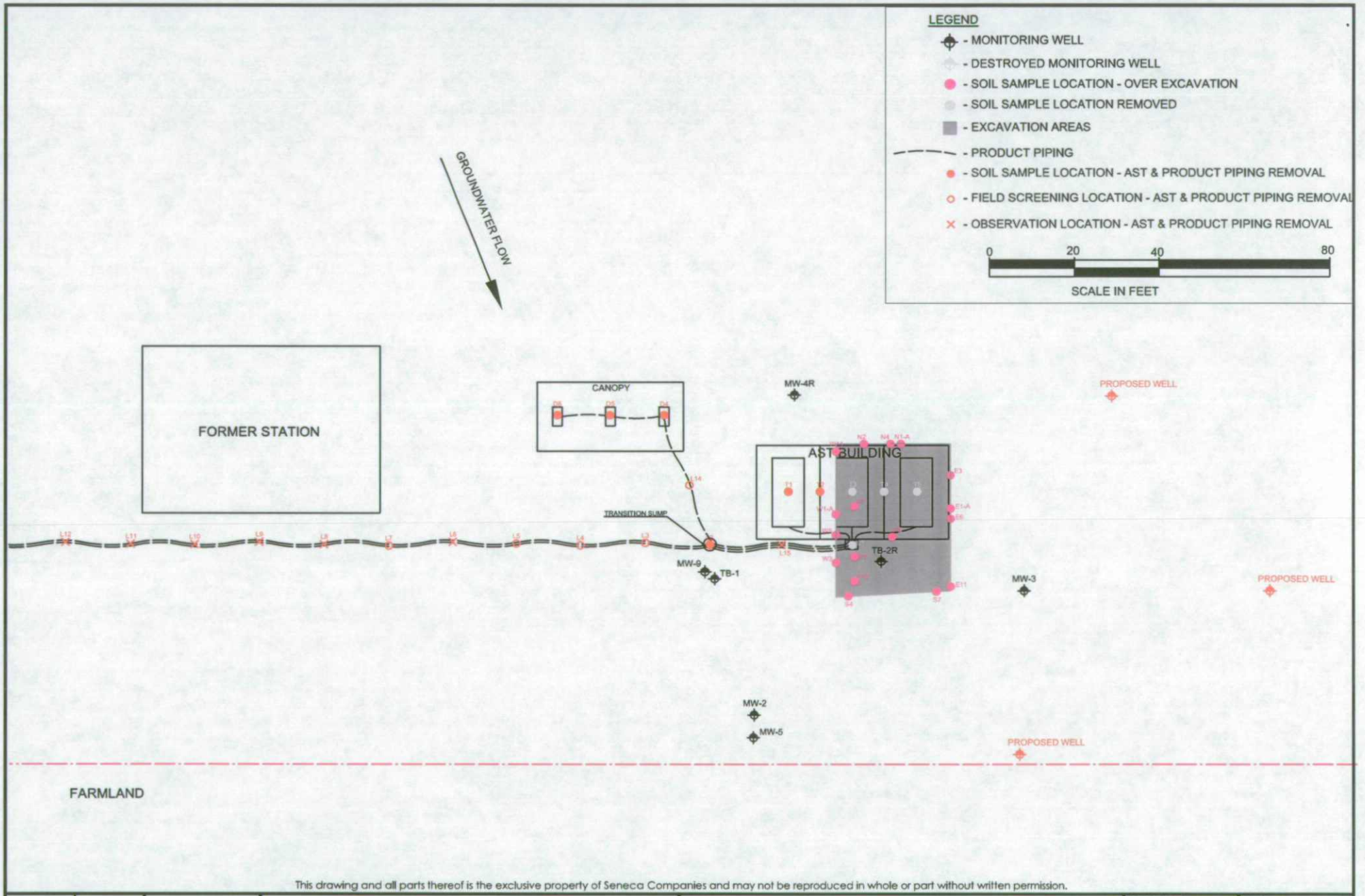
Soil and groundwater samples will be collected at the three (3) newly installed wells. Additionally, groundwater samples will be collected at the remaining wells in the monitoring plan, TB-2R, MW-2, MW-3, MW-4R, and MW5. The sample results will be summarized in the semi-annual monitoring report, to be submitted by 10/30/2016.

4.0 Project Schedule

Work Plan Submittal ---- 2016-7-31
IDNR Approval----------2016-8-31
Drilling and sampling-----2016-9-30
Report Submittal----------2016-10-30

APPENDIX A

SITE MAP



REV. NO.	DATE:

N W E S

Seneca Companies
The Complete Solution

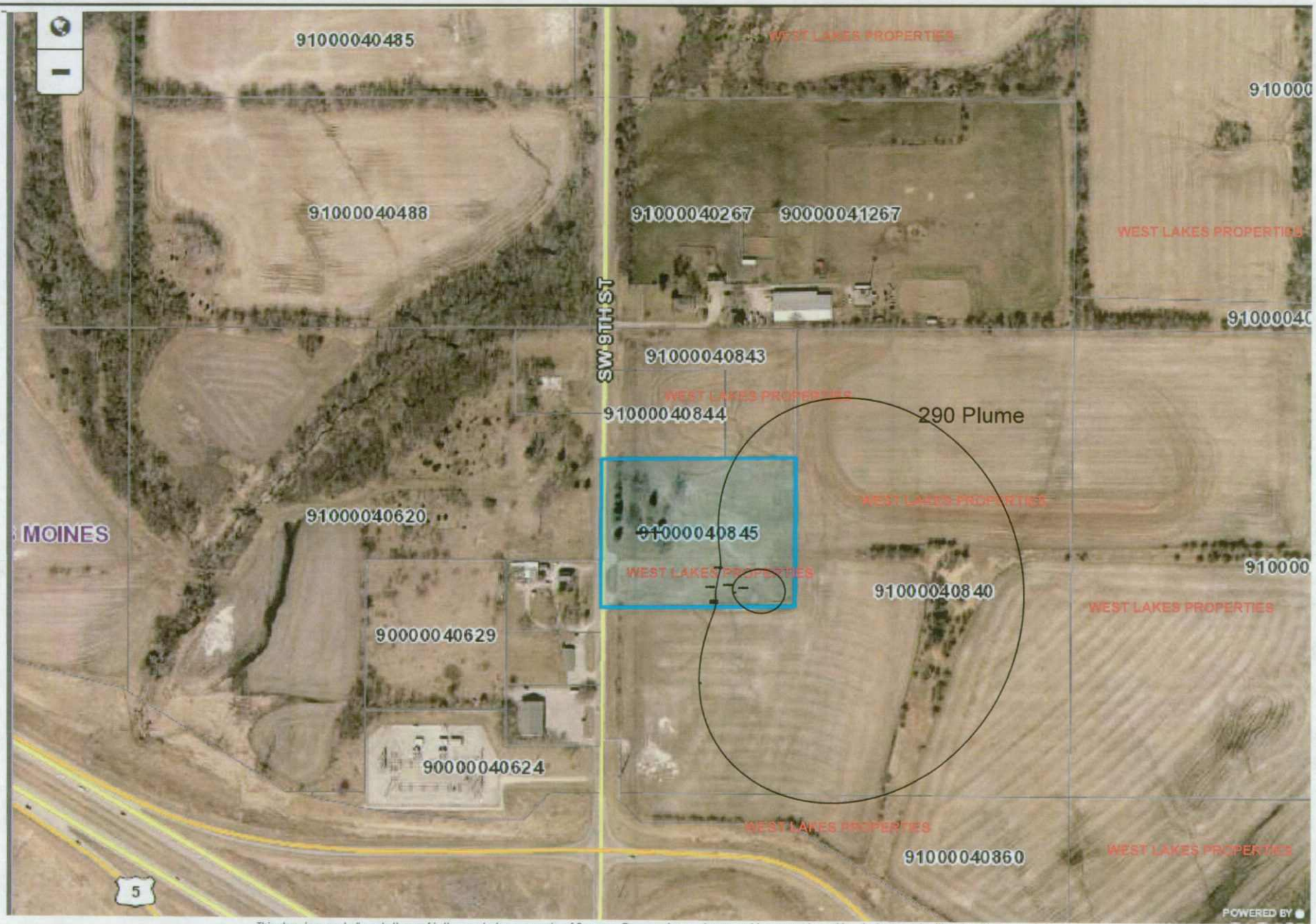
JOB DESCRIPTION:
FORMER BAKER FOOD & FUEL
8901 SW 9TH STREET
DES MOINES, IA

SHEET TITLE:
SCALED SITE MAP

CHECKED BY: BLAINE KUSSATZ	DATE: 12/20/2013
SCALE: 1" = 40'	DRAWN BY: BRADY KNUDSON
FILENAME: 6360477A	SHEET NO. 1 OF 1
PROJECT NO: 6360477	

APPENDIX B

GROUNDWATER CONTAMINANT PLUME UNDEFINED



REV. NO.	DATE:

N W E S

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The Complete Solution

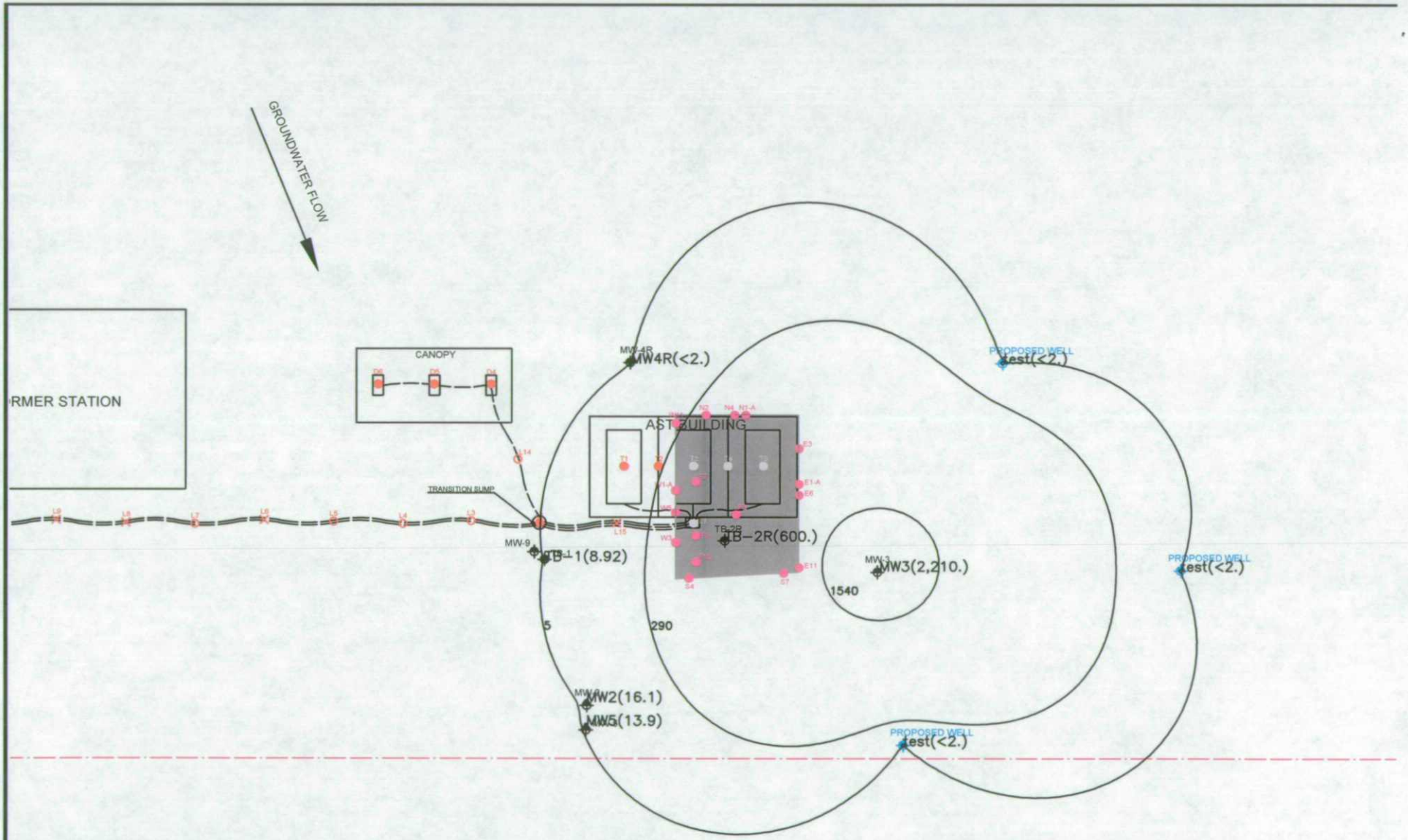
JOB DESCRIPTION:
FORMER BAKER FOOD & FUEL
8901 SW 9TH STREET
DES MOINES, IA

SHEET TITLE:
MAP COURTESY OF WARREN COUNTY ASSESSOR
SCALED SITE MAP

CHECKED BY:	BLAINE KUSSATZ
SCALE:	1" = 400'
FILENAME:	6360477A
PROJECT NO:	6360477
DATE:	12/20/
DRAWN BY:	BRADY KN
SHEET NO.	1 OI

APPENDIX C

ESTIMATED CONTMINANTE PLUME DELINEATED



WEST LAKES PROPERTIES

REV. NO.	DATE:

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SHEET NO:	1 OI