



May 12, 2026

Hon. Bobby Cox, Mayor
City of Ocean Springs
1018 Porter Avenue
Ocean Springs, MS 39564

**Re: Report of Findings
Independent Evaluation of Environmental Risk
Leica Site, 2006 N. Government Street, Ocean Springs, MS
Covington Project No. 16659.01**

Dear Mayor Cox:

Covington Civil & Environmental, LLC (Covington) has completed reviewing all documents related to the Leica Site available from the Mississippi Department of Environmental Quality (MDEQ) through a Freedom of Information Act (FOIA) request. Covington reviewed forty (40) documents received through the FOIA request. These included groundwater monitoring reports (quarterly and annual), additional remedial action work plans, and remediation reports. The earliest document reviewed was dated May 11, 2011 and the latest document reviewed was dated January 5, 2026. It should be noted that no documentation was available through the FOIA request for the Site Characterization Studies performed by Environmental Management Services (EMS) in 2007 or for the remediation activities performed under the direction of TRC Environmental Corporation (TRC) in 2009 and 2010. Documents from these periods are maintained in MDEQ files but would require someone going to MDEQ's offices and copying the files. It was felt that this is not necessary at this time but may be considered by the City of Ocean Springs if there is a desire to have a complete record of activities which were conducted on the Leica site.

The initial Site Characterization Reports for the site were prepared by EMS in 2007. The purpose of the Site Characterization Reports was to identify and determine the horizontal and vertical extent of any soil and/or groundwater contamination on the site. Based on this information and through negotiation with MDEQ, a Remediation Plan was prepared and implemented under the direction of TRC in 2009-2010. The remediation activities included demolishing on-site buildings, removing the source of contamination (soil contaminated with toluene and trichloroethene), removing underground storage tanks (USTs), installing TreeWells on the property as a phytoremediation measure, injecting zero valent iron into the groundwater to treat groundwater contamination and installing permanent monitoring wells on the site to identify the limits of groundwater contamination and to monitor the groundwater remediation. Attachment 1 shows the on-site and off-site monitoring well and TreeWells which have been installed. A Corrective Action Plan (CAP) presenting the remediation and groundwater monitoring plan, including the criteria by which MDEQ will consider the remediation complete in order to issue a No Further Action (NFA)

letter, was approved by MDEQ on 3/13/2009. Since this document was not included with the FOIA request documents, Covington has not been able to review the approved CAP. Since 2011, as additional groundwater monitoring data has been obtained, the CAP has been modified through supplemental work plans. These supplemental work plans have included installing additional groundwater monitoring wells, additional treatment of groundwater and off-site vapor monitoring.

Discussions Covington has had with representatives of MDEQ indicates that remediation of the site and off-site area will be complete when the groundwater concentrations for trichloroethene, cis-1-2-Dichloroethene, 1,1-Dichloroethene, and vinyl chloride are below their respective Tier 1 Groundwater Target Remedial Goal (TRG). Cis-1-2-Dichloroethene, 1,1-Dichloroethene and vinyl chloride are degradation products of trichloroethene.

The on-site soil contamination (source) seems to have been addressed through the remediation activities undertaken in 2009-2010. There is, however, both on-site and off-site groundwater contamination that has continue to be monitored and has received additional remediation measures through the injection of enhanced treatment solutions. Groundwater contamination is present in the shallow aquifer (water table aquifer - 0'-14' below ground surface) and in an underlying confined aquifer (confined aquifer – greater than 22' below ground surface). There is a clay layer approximately 8'-10' thick between both aquifers, which acts as an aquitard (confining layer). Attachment 2 shows a geologic cross-section through the site with the two aquifers, the dividing clay layer, on-site and off-site monitoring wells and general area of groundwater contamination in November 2019.

TRC has been monitoring groundwater in the Water Table Aquifer and Confined Aquifer since 2011. In 2013, TRC injected additional in-situ treatment solutions in both aquifers and again in 2020 in the off-site wells. TRC also installed additional off-site monitoring wells to identify the limits of contamination in the Confined Aquifer. TRC installed additional monitoring wells along the north property line and across Government Street to monitor whether groundwater contamination is migrating off-site. To date, there is no indication that this has occurred. The groundwater monitoring has shown that the groundwater in the Water Table aquifer flows in a northwesterly direction and in the Confined aquifer in a southwesterly direction. The groundwater monitoring has also shown that the in-situ treatment as well as natural attenuation is continuing to degrade the contaminants both on-site and off-site. Attachment 3 from the most recent groundwater monitoring (September/October 2025) shows the vinyl chloride contaminant plume on the site in the Water Table aquifer and Attachment 4 shows the off-site vinyl chloride contamination plume in the Confined aquifer. Vinyl chloride is the last degradation product and represents the remaining, largest contamination plume in each aquifer.

Since 2011, MDEQ has required TRC to conduct additional investigations based on monitoring results and citizens' concerns. These include vapor testing of the Armory Building south of the site and vapor testing of the O'Keefe Preschool Center and Ryan Youth Center (YMCA).

In November 2012, TRC concluded that vapor testing of the Armory Building was not necessary since:

- Groundwater flow direction in the Water Table aquifer is from south to north toward the site and the Armory Building is, therefore, outside the source of contamination.
- No contamination was found in soil samples near the building in the Water Table Aquifer.
- There was a low level of contamination found in 1 soil sample in Confined aquifer and since the Confined aquifer was separated from the Armory Building by a thick clay layer, no vapor intrusions should occur, therefore, there was no need to conduct vapor intrusion sampling.

MDEQ concurred with evaluation and did not require vapor testing of the Armory Building.

TRC submitted a Vapor Assessment Workplan for the O’Keefe Preschool Center and Ryan Youth Center (YMCA) in April 2021. After receiving approval of the Workplan, TRC collected three (3) soil vapor samples at the Preschool and one (1) at the YMCA. An ambient air sample was collected at each site and the Leica site. TRC conducted two (2) sampling rounds, 6 months apart in May - June 2021 and November – December 2021. We did not receive the results from the May - June 2021 sampling submitted July 9, 2021 through the FOIA request. The second-round results (November – December 2021) showed one (1) soil vapor exceedance for naphthalene (slightly above regulatory limit) at the Preschool. One (1) soil vapor sample location could not be sampled due to groundwater. TRC’s conclusions from second round sampling were:

- The Leica Site was not contributing to the outdoor air quality.
- Naphthalene exceedance at the Preschool was from background, cross-contamination or from a source other than the Leica site, since Naphthalene was not a contaminant associated with the Leica site.
- TRC concluded that no more soil or air sampling was required at either location (Preschool or YMCA).

MDEQ’s agreed with TRC’s conclusion that naphthalene was probably a cross-contaminate or from another source since naphthalene was not a chlorinated solvent used at the Leica site or a degradation product of that chlorinated solvent. Based on the results, MDEQ did not required further soil vapor sampling. On June 4, 2025, Thomas Wallace, MDEQ, responded to a request from Jara Miller, CEO, MS Gulf Coast YMCA concluding “(a)s to your concerns regarding any changes in site conditions that may affect YMCA occupants, MDEQ does not have any concerns at this time and is not requiring additional actions....If site conditions change or new information becomes available, MDEQ will notify the YMCA as appropriate.”

PPM Consultants (PPM) performed a Phase II Environmental Site Assessment of the site in November – December 2023 as part of a Brownfields grant to Southern Mississippi Planning & Development District, Inc. PPM advanced 12 soil borings/temporary wells on the site (10 in the area of a proposed hotel and 2 in the area of an outbuilding). There were no exceedances for chlorinated solvents in the soil or groundwater samples. Soil vapor samples were collected from eight (8) of the twelve (12) soil

borings. There were contaminants present in four (4) of the eight (8) soil vapor samples, but only one (1) exceedance which was above USEPA limits (vinyl chloride = 140 ug/m³, USEPA Residential VISL Limit = 5.59 ug/m³). PPM recommendation was:

“(t)he exceedance and near exceedance of VISL limits indicate the conditions are present for a completed vapor intrusion pathway (VI) to structures located on the property, unless preemptive actions are taken to prevent or eliminate the VI pathway. PPM recommends for future enclosed structures at the site, the protection afforded by a VI barrier should be included in any development plan.”

MDEQ, during a presentation to the City of Ocean Springs in March 2024, presented its current conclusions and requirements for the site:

- Chlorinated solvent concentrations across the site have been significantly reduced.
- Groundwater monitoring continues to be required on an annual basis and will continue until on-site and off-site groundwater achieves remedial goals (below Tier 1 Groundwater TRGs for trichloroethene and degradation products).
- Vapor intrusion and drinking water pathways are incomplete and do not create an exposure.
- The site presently does not pose a risk to human health and the environment
- Any redevelopment will need to be protective of human health and the environment. MDEQ will require from the potential developer:
 - A Redevelopment/reuse plan
 - A Corrective Action Plan
 - Other considerations (stormwater permitting)
 - At this time, until the remedial goals are achieved, MDEQ will require any future building/foundation to have a vapor barrier and MDEQ would not allow a bottom/first floor occupation, if used for apartments, lofts, or hotel rooms.

In its response to TRC’s 2023 Annual Report on February 5, 2024, MDEQ requested a plan to reduce contaminants at the site within 5 years. MDEQ required TRC to provide a timeline and, if its estimate exceeds 5 years, propose institutional controls for any off-site property where groundwater exceedances occur and provide an environmental covenant for the site if no remedial actions are proposed to expedite reduction of groundwater contaminants on site. In response letter to TRC’s 2024 Annual GW Report on May 21, 2025, MDEQ again required that TRC provide “an estimated timeline for contaminant degradation...The timeline should indicate when contaminant concentrations are expected to decline below target remedial goals and include long-and short-term recommendations for the site based on the anticipated timeline.”

Based on recent conversations with MDEQ personnel, TRC has not presented the required timeline nor proposed institutional controls for off-site properties or environmental covenants for the site. We are continuing to monitor and encourage MDEQ to press TRC to provide requested information.

When the City of Ocean Springs hired Covington to review available documentation, we were asked to consider two questions:

1. Is everything being done to insure the health of humans and the environment? and
2. What needs to be done to put the Leica site back into use?

Response to Question 1: From our experience, it is our opinion that MDEQ is carefully reviewing and considering the data developed by TRC and continues to require TRC to meet the remediation standards (groundwater concentrations below Tier 1 TRGs). MDEQ is most concerned about the off-site groundwater contamination, the potential for on-site contamination to cross Government Street and the on-site groundwater contamination and the potential vapor intrusion into any planned development on the site. MDEQ does, however, need to press TRC to present a plan to reduce contaminants at the site within 5 years and, if timeline exceeds 5 years, propose institutional controls for any off-site property where groundwater exceedances occur and provide an environmental covenant for the site if no remedial actions are proposed to expedite reduction of groundwater contaminants on the site. This information is important so the City of Ocean Springs can understand potential re-development opportunities for the site and be assured that human health and the environment are being properly addressed.

Response to Question 2: MDEQ will require a potential developer to address any remaining contamination on the site and vapor intrusion into any proposed facilities on the site. Presently, MDEQ is requiring that there be a foundation vapor barrier on any buildings to be occupied with a restriction on the first-floor use that there be no apartments or hotel rooms. While these conditions present a challenge for any developer, these requirements can be met but will require cooperation/negotiation with present owner (Leica) and MDEQ. We would recommend that if the City of Ocean Springs is approached by a potential developer, Covington be engaged to educate the developer and discuss potential options. This should be done as soon as the developer considers the site before they may receive disinformation. There are developers that have experience in dealing with contaminated sites.

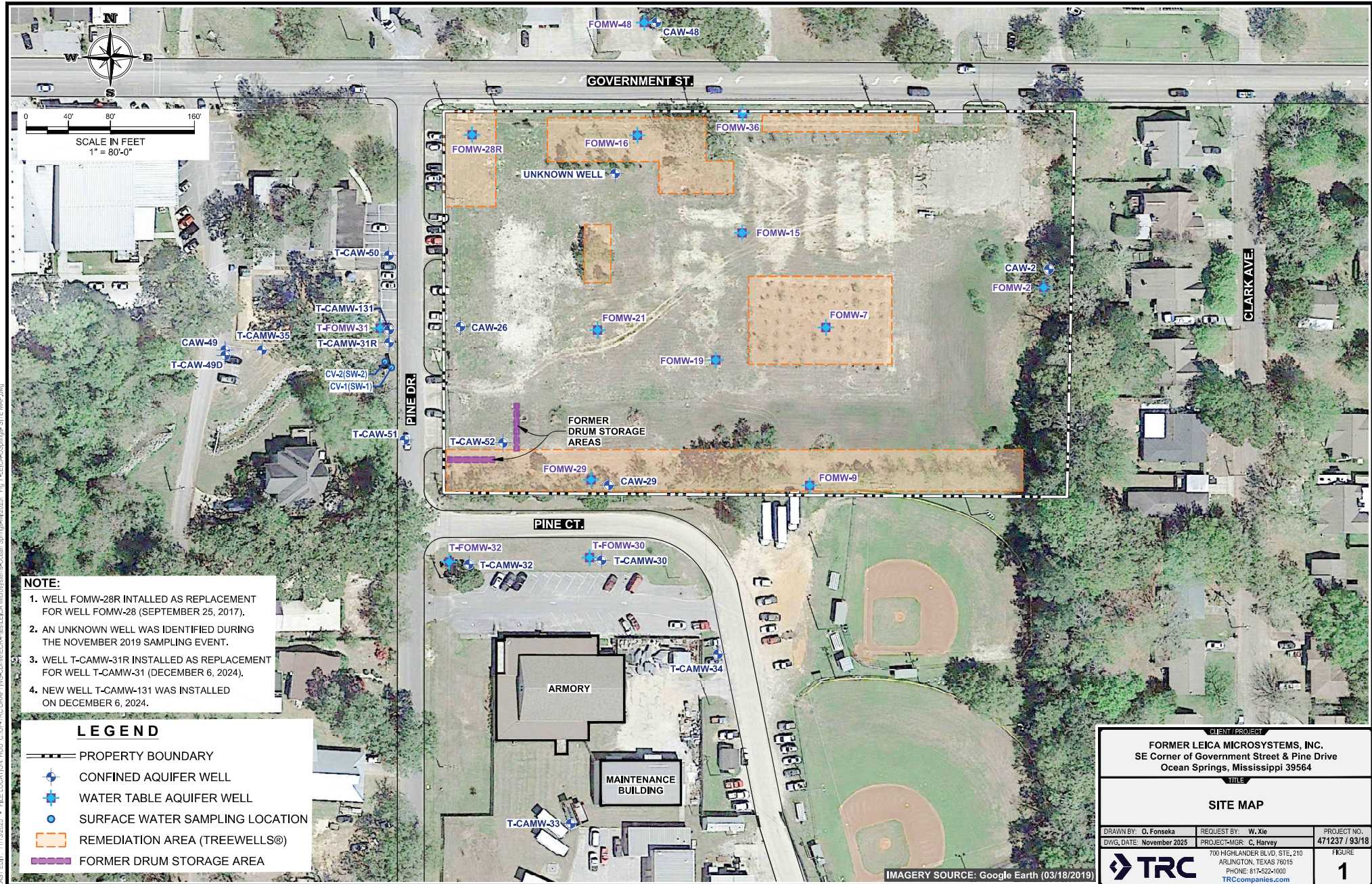
If, after reviewing the information presented in this letter report, you have any questions, we would be pleased to discuss this with you further. We appreciate being given the opportunity to provide you and the City of Ocean Springs with our services.

Sincerely yours,



Rimmer Covington, Sr.
Principal

ATTACHMENTS



NOTE:

1. WELL FOMW-28R INTALLED AS REPLACEMENT FOR WELL FOMW-28 (SEPTEMBER 25, 2017).
2. AN UNKNOWN WELL WAS IDENTIFIED DURING THE NOVEMBER 2019 SAMPLING EVENT.
3. WELL T-CAMW-31R INSTALLED AS REPLACEMENT FOR WELL T-CAMW-31 (DECEMBER 6, 2024).
4. NEW WELL T-CAMW-131 WAS INSTALLED ON DECEMBER 6, 2024.

LEGEND

	PROPERTY BOUNDARY
	CONFINED AQUIFER WELL
	WATER TABLE AQUIFER WELL
	SURFACE WATER SAMPLING LOCATION
	REMEDIATION AREA (TREETWELLS®)
	FORMER DRUM STORAGE AREA

CLIENT/PROJECT
FORMER LEICA MICROSYSTEMS, INC.
 SE Corner of Government Street & Pine Drive
 Ocean Springs, Mississippi 39564

SITE MAP

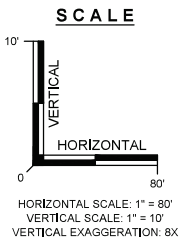
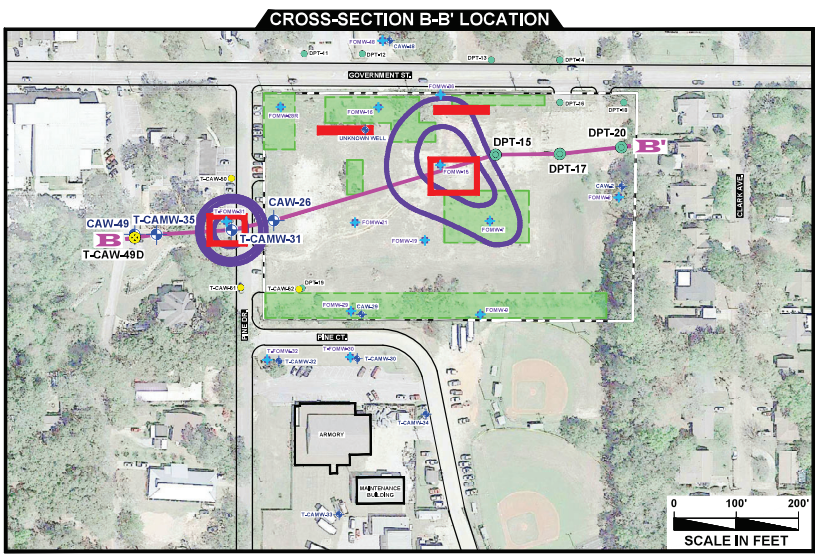
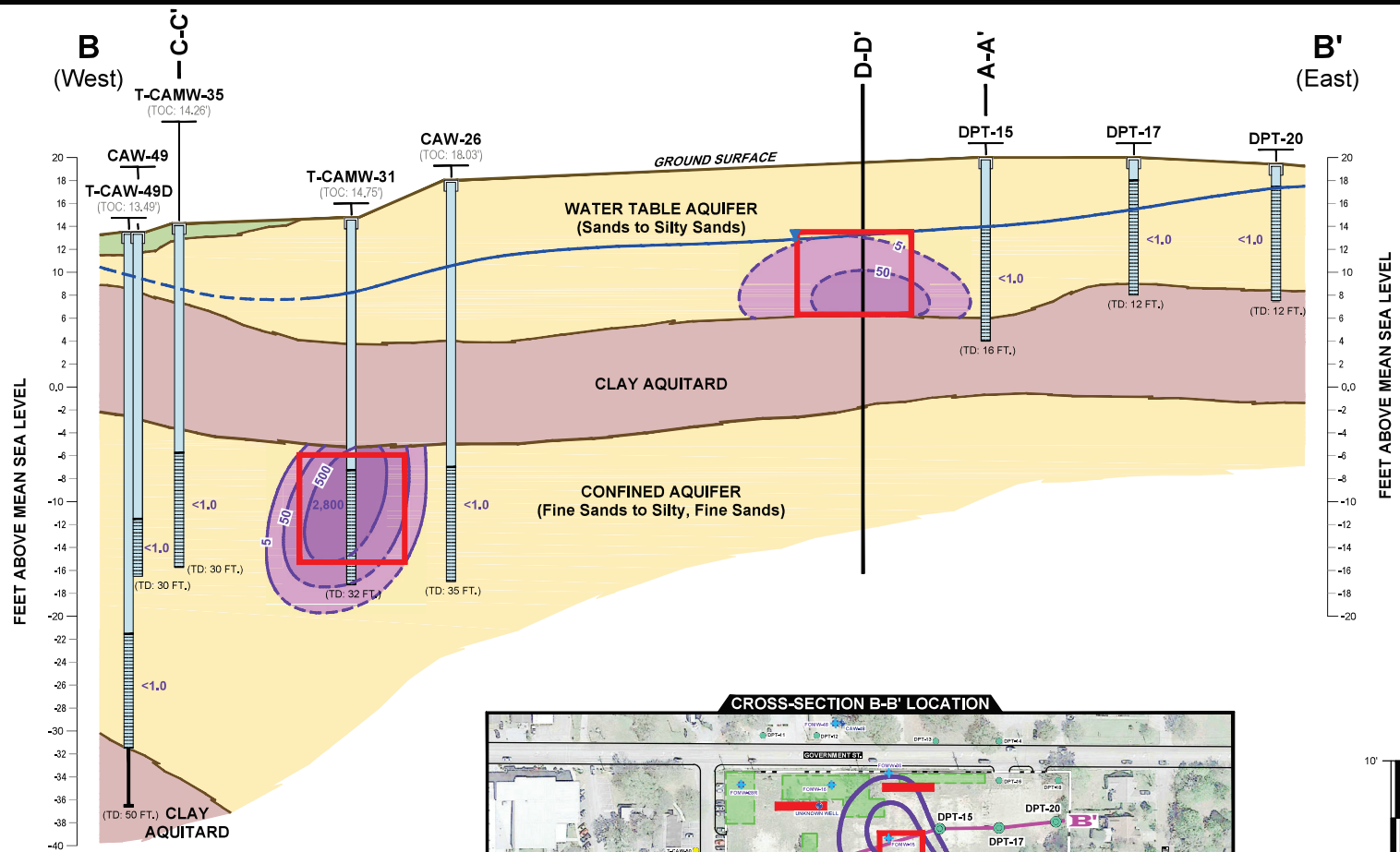
DRAWN BY: O. Fonseca	REQUEST BY: W. Xie	PROJECT NO: 471237 / 93/18
DWG. DATE: November 2025	PROJECT-MGR: C. Harvey	FIGURE 1
		700 HIGHLANDER BLVD. STE. 210 ARLINGTON, TEXAS 76015 PHONE: 817-522-1000 TRCcompanies.com

IMAGERY SOURCE: Google Earth (03/18/2019)

LAST EDIT: 11/13/2025 - FILE LOCATION: H:\01-PROJECTS\2025-11\01-LEICA-Ocean Springs\11-2025 - Fig 1-LEICA-Ocean Springs\11-2025 - Fig 1-LEICA-Ocean Springs - SITE MAP.dwg

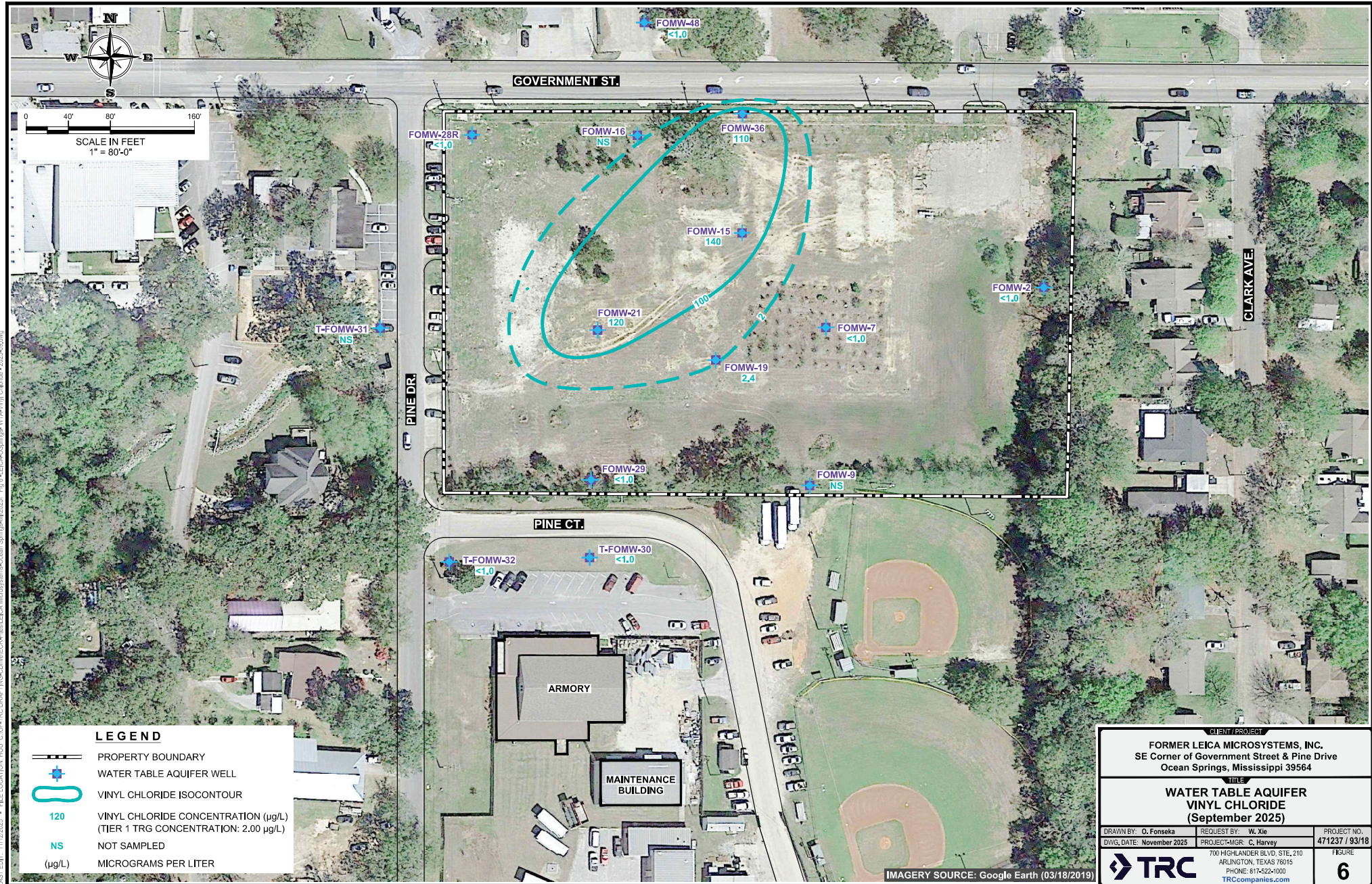
DRAWING By: Oskar Fonseca - FILE NAME: Fig 1-LEICA-Ocean Springs - SITE MAP.dwg

HOU_C:\P\TRC\DR\FT\N-C-Drive\EG&C\Final\LEICA_Microsystems-Ocean Springs\ML02020-07 - Figures\Fig 6 - LEICA-OceanSprings\ML -X-SectionB- Proposed Remediation Area.dwg - 07/14/20



LEGEND			
	CONFINED AQUIFER WELL		CLAY
	CONFINED AQUIFER BORING		SAND / SILTY SAND
	WATER TABLE AQUIFER BORING		TOPSOIL
	PHYTOREMEDIATION AREA		WATER TABLE (NOVEMBER 2019)
	2,800 TRICHLOROETHENE CONCENTRATION (µg/L)		PROPOSED EISB INJECTION AREA
	TRICHLOROETHENE ISOCONTOUR		

PROJECT	
FORMER LEICA MICROSYSTEMS, INC. SE Corner of Government Street & Pine Drive Ocean Springs, Mississippi 39564	
TITLE	
CROSS-SECTION B - B' Proposed In Situ Remediation Area	
DRAWN BY: O. FONSEKA	PROJECT No. 160735 / 000000 / 002400
REQUEST BY: A. SELLWOOD	
PROJECT MGR: J. HOUSE	FIGURE 6
DATE: JULY 2020	
700 Highlander Blvd. Suite 210 Arlington, TX 76015 Phone: 862-300-2342	



CLIENT/PROJECT FORMER LEICA MICROSYSTEMS, INC. SE Corner of Government Street & Pine Drive Ocean Springs, Mississippi 39564		
TITLE WATER TABLE AQUIFER VINYL CHLORIDE (September 2025)		
DRAWN BY: O. Fonseca DWG. DATE: November 2025	REQUEST BY: W. Xie PROJECT-MGR: C. Harvey	PROJECT NO. 471237 / 93/18
		FIGURE 6
700 HIGHLANDER BLVD. STE. 210 ARLINGTON, TEXAS 76015 PHONE: 817-522-1000 TRCcompanies.com		

LAST EDIT: 11/12/2025 - FILE LOCATION: H:\01-TRC\DR\T\NG-03\wta\LEICA_Microsystems\Ocean_Springs\112025 - Fig 6-LEICA-Osprings-WTA-Vinyl Chloride - 2025-09.dwg
 DRAWING By: Oskar Fonseca - FILE NAME: Fig 6-LEICA-Osprings-WTA-Vinyl Chloride - 2025-09.dwg



LEGEND

- PROPERTY BOUNDARY
- CONFINED AQUIFER WELL
- VINYL CHLORIDE ISOCONTOUR
- 490 VINYL CHLORIDE CONCENTRATION (µg/L)
(TIER 1 TRG CONCENTRATION: 2.00 µg/L)
- (µg/L) MICROGRAMS PER LITER

NOTE:

1. AN UNKNOWN WELL WAS IDENTIFIED DURING THE NOVEMBER 2019 SAMPLING EVENT.

CLIENT / PROJECT		
FORMER LEICA MICROSYSTEMS, INC. SE Corner of Government Street & Pine Drive Ocean Springs, Mississippi 39564		
TITLE		
CONFINED AQUIFER VINYL CHLORIDE (September 2025)		
DRAWN BY: O. Fonseca	REQUEST BY: W. Xie	PROJECT NO: 471237 / 93/18
DWG. DATE: November 2025	PROJECT-MGR: C. Harvey	FIGURE 9
IMAGERY SOURCE: Google Earth (03/18/2019)		
<small>700 HIGHLANDER BLVD, STE. 210 ARLINGTON, TEXAS 76015 PHONE: 817-522-1000 TRCcompanies.com</small>		

LAST EDIT: 11/12/2025 - FILE LOCATION: H:\01-TRC\DATA\FIG\2025\Fig 9-LEICA-OSprings-CA-Vinyl Chloride - 2025-09.dwg
 DRAWING By: Oskar Fonseca - FILE NAME: Fig 9-LEICA-OSprings-CA-Vinyl Chloride - 2025-09.dwg