HOWELL TOWNSHIP BOARD
REGULAR MEETING
3525 Byron Road
Howell, MI 48855
August 11, 2025
6:30 pm

1. Call to Order

2. Roll Call:
( ) Mike Coddington
( ) Sue Daus
( ) Jonathan Hohenstein
( ) Matt Counts
( ) Bob Wilson
( ) Tim Boal
( ) Shane Fagan

3. Pledge of Allegiance

4. Call to the Board

5. Approval of the Minutes:
   A. Regular Board Meeting July 14, 2025

6. Call to the Public

7. Closed Session – Confidential Written Legal Opinion

8. Unfinished Business:
   A. Fee Schedule and Application Update - ADU
   B. Howell-Mason LLC v. Howell Township
   C. Howell Township v. Shane Fagan

9. New Business:
   A. Financial Report
   B. Eagleview Renewal

10. Call to the Public

11. Reports:
   A. Supervisor B. Treasurer C. Clerk D. Zoning
   E. Assessing F. Fire Authority G. MHOG H. Planning Commission
   I. ZBA J. WWTP K. HAPRA L. Property Committee
   M. Park & Recreation Committee N. Shiawassee River Committee

12. Disbursements: Regular and Check Register

13. Adjournment

This meeting is open to all members of the public under Michigan's Open Meetings Act.
Persons with disabilities who need accommodations to participate in this meeting should contact the Township Clerk's Office at 517-546-2817 at least two (2) business days prior to the meeting.

5A

DRAFT

HOWELL TOWNSHIP REGULAR BOARD
MEETING MINUTES
3525 Byron Road Howell, MI 48855
July 14, 2025
6:30 P.M.

MEMBERS PRESENT:		**MEMBERS ABSENT:**
Mike Coddington	Supervisor	
Sue Daus	Clerk	
Jonathan Hohenstein	Treasurer	
Tim Boal	Trustee	
Matt Counts	Trustee	
Shane Fagan	Trustee	
Bob Wilson	Trustee	

Also in Attendance:
Six people signed in.

Supervisor Coddington called the meeting to order at 6:30 p.m.

All rose for the Pledge of Allegiance.

CALL TO THE BOARD:
Trustee Fagan declared that he would abstain from voting on item 7-B, Howell Twp. v Fagan – Appeal, due to conflict of interest.
Trustee Boal requested to add item 7-E, American Legion.

APPROVAL OF THE AGENDA:
July 14, 2025
Motion by Hohenstein, **Second** by Boal, **"To approve the agenda, as amended."** Motion carried – one dissent

APPROVAL OF BOARD MEETING MINUTES:
June 9, 2025
REGULAR BOARD MEETING MINUTES
Motion by Hohenstein, **Second** by Daus, **"To accept the minutes for the regular board meeting of June 9th as presented."** Motion carried – one dissent.

Request to add Trustee Wilson's statement as an addendum to the May Board meeting
Motion by Daus, **Second** by Wilson, **"I'll support that."** Roll call vote: Hohenstein – no, Counts – yes, Wilson – yes, Boal – no, Daus – yes, Coddington – yes, Fagan – yes. Motion carried (5-2).

Request to add Trustee Boal's rebuttal to Trustee Wilson's statement as an addendum to the May Board meeting
Motion by Daus, **Second** by Counts, **"I'll make the motion."** Roll call vote: Coddington – yes, Boal – yes, Daus – yes, Counts – yes, Fagan – yes, Hohenstein – no, Wilson – no. Motion carried (5-2).

CALL TO THE PUBLIC:

No response from the public

UNFINISHED BUSINESS:

Supervisor Coddington and Treasurer Hohenstein requested to deviate to item 7-B, Howell Twp v. Fagan – Appeal

A. Howell Township Hall Renovations and Community Center
Supervisor Coddington discussed Lindhout's proposal to provide the oversight of the Township Hall renovations. Discussion followed. **Motion** by Hohenstein, **Second** by Counts, **"To accept the contract with Lindhout Associates for $21,875.00 as presented."** Motion carried - one dissent.

It was the consensus of the Board to table discussion of the Community Center.

Motion by Hohenstein, **Second** by Counts, **"To deviate to 8-E."** Motion carried.

B. Howell Twp v. Fagan – Appeal
Treasurer Hohenstein explained that the court documents for Howell Township v. Fagan were added to the packet for the Board's review.

C. Cybersecurity / IT – Discussion
Treasurer Hohenstein discussed creating an AD Hock Committee. Discussion followed. **Motion** by Daus, **Second** by Boal, **"To approve the Committee."** Motion carried.

D. ADU Ordinance
Treasurer Hohenstein explained that there were changes made to the ADU. Discussion followed. **Motion** by Hohenstein, **Second** by Boal, **"To accept the Zoning Ordinance to permit ADUs, which is Ordinance No. 292 as presented."** Roll call vote: Wilson – no, Hohenstein – yes, Boal – yes, Fagan – no, Coddington – yes, Daus – yes, Counts – yes. Motion carried (5-2).

E. American Legion
Trustee Boal inquired if further legal opinion had been obtained on the matter of the American Legion's ticket. Discussion followed.

Motion by Daus, **Second** by Counts, **"To go back to 7-A."** Motion carried.

NEW BUSINESS:

A. NSC Zoning District – Text Amendment
Treasurer Hohenstein discussed that the Planning Commission has been working on updating the NSC Zoning District Ordinance to include more uses. **Motion** by Hohenstein, **Second** by Boal, **"To accept the changes to the NSC Zoning District Ordinance No. 293 as presented."** Roll call vote: Boal – yes, Fagan – yes, Daus – yes, Hohenstein – yes, Wilson – yes, Counts – yes, Coddington – yes. Motion carried (7-0).

B. Cemetery Digitization Proposal
Clerk Daus is requesting the Board's approval of a digital mapping software program for Pioneer & Fleming Road Cemeteries. Discussion followed. **Motion** by Hohenstein, **Second** by Daus, **"To accept the agreement with Cemify to digitize the Township Cemetery records as presented."** Motion carried.

C. EMS Polling Place Lease Agreement

Clerk Daus explained that the EMS Polling Place Lease Agreement is due to be renewed. Clerk Daus also indicated that due to disruptive actions at the polling location this will be the last lease agreement that EMS will grant for the Township to utilize as a Polling location. Discussion followed. **Motion** by Hohenstein, **Second** by Daus, **"To accept the amendment to the Polling Place Lease Agreement with Livingston County extending it thru November 2028 as presented."** Motion carried.

D. Wrangler's Saloon REU Reduction Request
Treasurer Hohenstein indicated that the Township Sewer Ordinance allows entities to request a reduction in their REUs, and Wrangler's Saloon has requested a REU reduction for the new building that they are proposing. **Motion** by Hohenstein, **Second** by Daus, **"To accept Wrangler's REU reduction from 29 REUs to 18 REUs with the understanding the Township reserves the right to reevaluate and adjust REUs based on factual findings in the future."** Motion carried.

E. Letter of Intent to Purchase – Marr Road and Oak Grove Road Property
Eileen Zilch with Community Catalyst discussed the letter of intent (LOI) for the proposed purchase of the Township's 73.58-acre parcel located on the corner of Marr and Oak Grove Roads. Megan Farkas with DA Building gave a brief overview of the role DA Building would have in working with Community Catalyst. Jim Tischler from the State of Michigan gave a brief overview of how Tax Increment Financing (TIF) works and how Community Catalyst and DA Building would be able to put the TIF into place for a mixed income community. It was the consensus of the Board to table the topic until further information can be obtained. **Motion** by Daus, **Second** by Fagan, **"To table it until next month."** Motion carried.

F. Park Master Plan Proposal
Treasure Hohenstein indicated that a Board decision needs to be made for the park master plan. Carlisle Wortman and Spicer Group provided a proposal for the Board to review. **Motion** by Counts, **Second** by Fagan, **"To accept the proposal by Carlisle Wortman and Associates to prepare a Park Master Plan."** Motion carried.

CALL TO THE PUBLIC

Tess Ware spoke on TIFs and affordable housing in Livingston County

REPORTS:

A. SUPERVISOR:
No report

B. TREASURER:
Treasurer Hohenstein reported on the following: The changeover has been completed for the new credit card processing system, and Comcast has been installed down Brewer Road.

C. CLERK:
No report

D. ZONING:
See Zoning Administrator Hohenstein's report. Discussion on Bain Road violation. Discussion on Warner Road violation.

E. ASSESSING:
See Assessor Kilpela's report

F. FIRE AUTHORITY:
Supervisor Coddington reported on Fire Authority

G. MHOG:
Trustee Counts reported on MHOG

H. PLANNING COMMISSION:
Trustee Boal reported on Planning Commission. See draft minutes. Discussion on Planning Commission attendance

I. ZONING BOARD OF APPEALS (ZBA):
No report

J. WWTP:
See report. Treasurer Hohenstein indicated that there may be a future possibility for renting the storage structure on the WWTP property for cold storage

K. HAPRA:
Discussed the upcoming Melon Fest Event

L. PROPERTY COMMITTEE:
Treasurer Hohenstein indicated that a letter was received from the EPA (see report)

M. PARK & RECREATION COMMITTEE:
Treasurer Hohenstein spoke on the Phase II Environmental Site Assessment

N. SHIAWASSEE COMMITTEE:
No report

DISBURSEMENTS: REGULAR AND CHECK REGISTER:

Motion by Hohenstein, **Second** by Daus, **"To accept the disbursements as presented and any normal and customary payments for the month."** Motion carried.

ADJOURNMENT:

Motion by Daus, **Second** by Counts, **"To adjourn."** Motion carried. The meeting adjourned (8:41 pm).

_____
Howell Township Clerk
Sue Daus

_____
Mike Coddington
Howell Township Supervisor

_____
Tanya Davidson, Recording Secretary

8A

	Application Fee	Escrow Amount	
Residential Land Use Permits			
Waiver	$10.00		
Deck/Fence/Pool	$50.00		
New Construction (single dwelling)	$75.00		
New Construction (multiple units)	$75.00	per unit	
Additions	$75.00		
Accessory Structures	$75.00		
Temporary Use Permit	$50.00		
Temporary Structure (mobile home)	$50.00	$2,000.00	
Demolition Permit	$50.00	$3,000.00	
Sewer Connection	$5,000.00		
Water Conn. (assessed property)	$5,000.00		
Water Conn. (unassessed property)	$5,000.00	Plus $3,500.00 to MHOG	
Delivery to Building Department	$60.00		
Accessory Dwelling Unit (ADU)	$75.00	Plus Recording Fee	
Commerical Land Use Permits			
Waiver	$50.00		
Accessory Structures	$150.00		
Grading	$250.00		
New Construction / Additions	$250.00		
Temporary Use Permit	$150.00	$3,000.00	
Demolition Permit	$150.00	$3,000.00	minimum
Sewer Connection per REU	$5,000.00		
Water Conn. per REU (assessed property)	$5,000.00		
Water Conn. Per REU (unassessed property)	$5,000.00	Plus $3,500.00 to MHOG	
Sign Permit			
Temporary Sign	$75.00		
Signs under 32 sq ft	$150.00		
Signs over 32 sq ft	$225.00		
Outdoor Advertising (Billboards)	$1,000.00		
Address Assignment			
Addressing	$25.00	per address	
Zoning Board of Appeals			
Single Family Residential / Agricultural	$400.00		
Commercial	$900.00		
Planning - Site Plan Review			
Temporary Use	$250.00	$500.00	
Special Land Use	$500.00	$1,000.00	
Private Road	$500.00	$4,000.00	

Preliminary Site Plan Review	Residential		
Development	Commercial/Office/Industrial	$1,400.00	$6,000.00
Final Site Plan Review			
Residential Development			
Commercial/Office/Industrial		$1,400.00	$6,000.00
Pre-application Meeting			
Zoning Administrator, Planner, Engineer		$350.00	per unit or as billed
Planned Unit Development		$2,000.00	$20,000.00
PUD Plan Amendment		$500.00	
Rezoning/Text Amendment		$1,000.00	

HOWELL TOWNSHIP
APPLICATION FOR ZONING LAND USE PERMIT – RESIDENTIAL

3525 Byron Road, Howell MI 48855
PHONE 517 546 2817 ext. 108
E-Mail inspector@howelltownshipmi.org

PROPERTY OWNER_____ PARCEL I.D. # 4706-_____-_____-_____

PROPERTY ADDRESS_____

PHONE (____) _____-_____ FAX (____) ____-_____ E-MAIL _____

CONTACT/CONTRACTOR NAME _____

PHONE (____) _____-_____ FAX (____) _____-_____ E-MAIL _____

APPLICATION TYPE	GENERAL SCOPE OF WORK	DESCRIPTION	FEE
☐ **Residential Waiver**	Home improvements, i.e., siding, shingles, windows, interior, or as determined by Township		**$ 10.00**
☐ **Land Use Permit** Accessory	Attached or detached deck, pool, fence, or as determined by Township		**$ 50.00**
☐ **Land Use Permit** New Accessory Structure	Accessory structures, barns, detached garages		**$ 75.00**
☐ **Land Use Permit** New Construction	New home construction, residential addition		**$ 75.00**
☐ **Land Use Permit** Demolition	Demolition of residential and accessory structures		**$ 50.00 fee** **$ 3,000.00 deposit***
☐ **SEWER PERMIT** ☐ **WATER PERMIT**	Connection to the water or sewer lines		**$ 5,000.00** --- **$ 5,000.00**

All fees, fines, penalties and costs levied by the Township per Ordinance Section 21.04 must be paid in full before a permit will be issued.

NOTE DEMOLITION MUST BE COMPLETED AND PROPERTY CLEARED AND FREE OF DEBRIS WITHIN 30 DAYS OF PERMIT

*$3,000.00 Refundable deposit. Deposit will be refunded upon completion of work and disposal receipts have been submitted.

RESIDENTIAL SETBACKS:

AR…….FRONT: 50’ MINIMUM FROM ROW SIDES: EACH 20’ REAR: 50’ (OTHER SETBACKS MAY APPLY)

SFR ….FRONT: 30’ FROM ROW SIDES: 10' MIN. REAR: 40’

NORMAL PROCESSING WITHIN THREE DAYS

HOWELL TOWNSHIP

APPLICATION FOR ZONING LAND USE PERMIT – RESIDENTIAL

3525 Byron Road, Howell MI 48855
PHONE 517 546 2817 ext. 108
E-Mail inspector@howelltownshipmi.org

PROPERTY OWNER_____PARCEL I.D. # 4706-_____-_____-_____

PROPERTY ADDRESS_____

PHONE (____) _____-_____FAX (____) _____-_____ E-MAIL _____

CONTACT/CONTRACTOR NAME _____

PHONE (____) _____-_____FAX (____) _____-_____ E-MAIL _____

APPLICATION TYPE	GENERAL SCOPE OF WORK	DESCRIPTION	FEE
☐ **Residential Waiver**	Home improvements, i.e., siding shingles, windows, interior, solar panels or as determined by Township		**$ 10.00**
☐ **Land Use Permit** Accessory	Attached or detached decks in-ground pools, fence, as required by the Township		**$ 50.00**
☐ **Land Use Permit** Accessory Dwelling Unit ADU	Accessory Dwelling Unit construction, recording of restriction on property deed		**$ 75.00 Plus Recording Fee**
☐ **Land Use Permit** New Construction	New home construction, residential addition, accessory structures, barns, detached garages		**$ 100.00**
☐ **Land Use Permit** Demolition	Demolition residential & agricultural homes and accessory structures		**$ 50.00** **$ 3,000.00***
☐ **SEWER PERMIT** ☐ **WATER PERMIT**	Connection to the water or sewer lines		**$ 5,000.00** ---------- **$ 5,000.00**

All fees, fines, penalties and costs levied by the Township per Ordinance Section 21.04 shall be paid in full before a permit is issued.

NOTE DEMOLITION MUST BE COMPLETED AND PROPERTY CLEARED AND FREE OF DEBRIS WITHIN 30 DAYS OF PERMIT

*$3,000.00 Refundable deposit. Deposit will be refunded upon completion of work and disposal receipts have been submitted.

RESIDENTIAL SETBACKS:

AR…….FRONT: 50' MINIMUM FROM ROW	SIDES: EACH 20'	REAR: 50' (OTHER SETBACKS MAY APPLY)
SFR ….FRONT: 30' FROM ROW	SIDES: 10' MIN.	REAR: 40'

NORMAL PROCESSING WITHIN THREE DAYS

8B

STATE OF MICHIGAN
IN THE 44TH CIRCUIT COURT FOR THE COUNTY OF LIVINGSTON

HOWELL-MASON, LLC,
a Michigan Limited Liability Company,

Plaintiff,

Case No. 24-32242-CZ

v

HON. MATTHEW J. McGIVNEY

HOWELL TOWNSHIP,
a Michigan General Law Township,

Defendant.
_____/

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Jeffrey D. Alber (P76530)
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_____/

DEFENDANT'S MEDIATION BRIEF

Mediator: Hon. (Ret.) Michael P. Hatty
Date: July 23, 2025
Time: 10:00 a.m.

EXECUTIVE SUMMARY AND PROCEDURAL BACKGROUND

In 2017, Howell-Mason (a/k/a "Mugg and Bopps") purchased property located entirely within a wellhead protection area. Its intent was to increase its gas station monopoly in the Livingston County area. Howell-Mason knew when purchasing the property that gas stations require special land use approval under the Howell Township Zoning Ordinance. More fundamentally, Howell-Mason also knew that the Zoning Ordinance restricts gas stations within 300 feet of wellhead protection areas, making its desired use legally impossible.

Recognizing this reality, in 2021 Howell-Mason attempted to rewrite the Township's Zoning Ordinance by informally requesting a text amendment. The Township considered and rejected Howell-Mason's proposed amendment. That should have served as the end of Howell-Mason's desired gas station.

Remarkably, after failing to change local policy through the democratic process, Howell-Mason made the unjustifiable decision to spend a significant amount of money on engineering studies and expert reports to pursue what it knew it could not accomplish. After its investment, and despite failing to secure regulatory changes within the Township, Howell-Mason submitted a special land use application in June 2023. That application is the focus of this case.

The Township and public closely studied the application. The public, in particular, was vehemently opposed to the proposed gas station. The public's outcry was partially related to the request to site the gas station within the wellhead protection area, but there were larger concerns as well. Noise, traffic, nearby residential areas, and more were on the list of public concerns. No one in the public supported the project.

The Township Board, in light of the evidence and given the plain language of its Zoning Ordinance properly denied the request for special land use permit. The Township found four independent legal grounds to deny the request. Rather than accept this inevitable and lawful decision, Howell-Mason chose litigation as its solution, seeking through the courts what they could not achieve through democratic process.

Howell-Mason filed two actions against the Township. First, on January 26, 2024, Howell-Mason filed an appeal to the Livingston County Circuit Court challenging the Township Board's denial of its special land use application (the "Appeal," Case No. 24-350-AA). Then, on March 19, 2024, Howell-Mason filed an original action alleging constitutional claims, violations of Michigan law, and unjust enrichment (the "Original Action," Case No. 24-32242-CZ).

On September 16, 2024, Judge McGivney issued a comprehensive 15-page written opinion in the Appeal. Judge McGivney's opinion affirmed the Township Board's decision to deny Howell-Mason's special land use application on the four aforementioned grounds: (1) the gas station would not be harmonious with the community (§16.06(A)); (2) the gas station would be hazardous to existing and future uses (§16.06(D)); (3) the gas station would substantially impact the surrounding environment (§16.06(F)); and (4) the gas station would be located within 300 feet of a wellhead protection area (§16.11(C)(8)) (Exhibit A). Judge McGivney's comprehensive analysis outlined all arguments made by Howell-Mason and thoroughly rejected every claim of error made by Howell-Mason.

Howell-Mason appealed Judge McGivney's decision to the Michigan Court of Appeals on October 7, 2024, through an application for leave to appeal. On April 11, 2025, the Michigan Court of Appeals denied leave to appeal, finding "lack of merit in the grounds presented" (Exhibit B). This determination by the Court of Appeals underscores the absence of significant legal error or

constitutional infirmity. Unswayed, Howell-Mason filed an application for leave to the Michigan Supreme Court. The Township is currently awaiting the anticipated denial of Howell-Mason's application from the Michigan Supreme Court (Exhibit C)[1].

Meanwhile, the claims in the Original Action were subject to dispositive motion practice. On January 16, 2025, Judge McGivney granted summary disposition on Counts IV, VII, and VIII of Howell-Mason's complaint, finding they failed to state valid causes of action, and thereby dismissing claims alleging a violation of Michigan Zoning Enabling Act, unjust enrichment, and injunctive relief (Exhibit D). Regarding the remaining claims, the Court found that Counts I, II, III, and IX (substantive due process, procedural due process, equal protection, and state law preemption) were nearly identical in substance to the arguments raised, argued, and litigated in the Appeal and should be barred by res judicata.[2] The Court subsequently allowed the Township to amend its affirmative defenses on February 27, 2025, meaning these four claims will likely face dismissal on res judicata grounds upon proper motion practice.[3] The Circuit Court indicated the other two claims brought by Howell-Mason warranted discovery: the regulatory takings claim and the Open Meetings Act (OMA) violation claim.

[1] The Township has attached its brief, without exhibits, that was filed in the Michigan Supreme Court in the event Judge Hatty desires to see the arguments supporting the Circuit Court's decision below.

[2] The Court denied the Township's res judicata argument without prejudice due to a procedural error—the Township had failed to raise res judicata as an affirmative defense in its initial pleading because the Appeal had not yet been decided (Exhibit D).

[3] The Township is confident that these claims will fail largely because of the Court's opinion in denying a Motion for Reconsideration filed by Howell-Mason: "The amendment was not futile because all the elements of res judicata appear to be present on several counts of the First Amendment Complaint" (Exhibit E).

Following the Circuit Court's ruling, the Township immediately and diligently pursued discovery. On January 30, 2025, the Township served comprehensive interrogatories, requests for production, and requests to admit on Howell-Mason, and sought two depositions. The discovery requests were pointed and are directed at the heart of the remaining claims. Howell-Mason provided a timely response to the requests to admit, but completely failed to comply with the Michigan Court Rules in any other meaningful way. The Township filed a motion to compel, Judge McGivney directed the parties to mediate the discovery dispute, giving rise to these proceedings.

The Township has found its way to mediation, but not through a lack of effort to resolve the issues that prompted its motion to compel. The following timeline presents the Township's good faith efforts to meet, confer, and resolve this dispute:[4]

- **February 11, 2025**: Howell-Mason requested a 30-day extension to respond to discovery requests.
- **February 18, 2025**: Township offered reasonable compromise—extension to March 14, 2025, in exchange for deposition dates for Todd Lekander II and Paul LeBlanc before the April 1, 2025 discovery cutoff. No response from Howell-Mason was received.
- **February 28, 2025**: Township followed up requesting deposition dates and confirmation of March 14, 2025 deadline for written responses—again, no response from Howell-Mason.
- **March 5, 2025**: Township served formal deposition notices for March 20 and March 27, 2025, after repeated requests for dates were ignored.
- **March 6, 2025**: Howell-Mason finally responded vaguely, stating it was "contacting everyone for availability" and would "circle back."
- **March 10, 2025**: Howell-Mason offered only post-discovery dates for the LeBlanc deposition (April 11, 14, and 21, 2025) despite more than a month's notice.
- **March 12, 2025**: Howell-Mason offered May 5, 2025—more than a month after discovery closes—for Lekander's deposition.

[4] All of these communications are attached to the Township's Motion to Compel (Exhibit F) that is the subject of this mediation.

- **March 14, 2025**: Howell-Mason served inadequate discovery responses, two weeks late, consisting of blanket objections and refusal to produce any documents.
- **March 17, 2025**: Township made final good-faith attempt with detailed email explaining why objections were without merit, offering a protective order for confidentiality concerns, and requesting complete responses by March 18, 2025 at 3:00 p.m.
- **March 18, 2025**: Township attempted to call Howell-Mason's counsel after receiving no response—calls were not returned.

The point is the Township extensively sought to resolve these issues without court intervention, demonstrating a willingness to provide reasonable extensions and accommodate scheduling conflicts.

After these extensive efforts were ignored, and Howell-Mason failed to respond to the Township's March 18, 2025, deadline, the Township filed its Motion to Compel on March 26, 2025 (Exhibit F). Howell-Mason did not respond until it was required to in advance of the hearing on the Motion to Compel. At that time, Howell-Mason sent counsel for the Township a letter moments before filing its response (Exhibit G), which was obviously an attempt to create an exhibit that gave the appearance of compliance. The letter included less than 10 documents and purported that the documents were "all the information" in Howell-Mason's possession.

Notably, prior to scheduling mediation, the Township reached out to Howell-Mason for a meet and confer, which occurred on May 29, 2025. It appeared clear after the phone call that there were issues with the written discovery responses. However, after the meet and confer, none of Howell-Mason's three attorneys responded with any information to resolve the dispute.

The Township is still awaiting proper interrogatory responses, a legitimate document production, and witnesses depositions. It is the Township's sincere hope that these issues can be resolved through mediation. In the event that this matter is unable to be resolved through mediation, consistent with the direction of the Circuit Court, the Township requests that Judge

Hatty submit a Report and Recommendation indicating that Howell-Mason violated the Michigan Court Rules through insufficient discovery responses, that proper discovery responses should be ordered, and that costs should be awarded to the Township under MCR 2.313(A)(5)(a). The Township will be able to litigate this matter to a proper conclusion once these discovery issues are resolved.

DISCOVERY ISSUES

The Circuit Court ordered mediation pursuant to MCR 2.411(H) and has requested Judge Hatty issue a Report and Recommendation as to how to resolve the discovery disputes in this case. The Township, being the moving party with respect to the discovery issues, submits that there are four issues presented for resolution:

1. **Interrogatories** – The issue is whether Howell-Mason has violated MCR 2.309(B)(1) by failing to provide full and complete answers under oath to the Township's Interrogatories, instead offering non-responsive directives to "see complaint, appeal, and all subsequent briefs" despite this Court's prior finding that the complaint's factual allegations were "thin on the ground and largely conclusory," and by making blanket objections without attempting good-faith resolution with the Township as required.

2. **Requests to Produce** - The issue is whether Howell-Mason has violated MCR 2.310 by initially refusing to produce any documents whatsoever in response to the Township's Requests for Production, then providing only a minimal number of documents (fewer than 10) in apparent response to the Township's Motion to Compel, while continuing to withhold the vast majority of requested documents based on blanket objections claiming unsubstantiated proprietary and confidential grounds without explaining the basis for such claims, seeking a protective order, or providing a privilege log.

3. **Depositions** - The issue is whether Howell-Mason has violated its discovery obligations by deliberately delaying the scheduling of depositions until after the April 1, 2025 discovery cutoff, offering only post-discovery dates for both Todd Lekander II (May 5, 2025) and Paul LeBlanc (April 11, 14, and 21, 2025) despite more than a month's notice from the Township, and by attempting to schedule these depositions without first producing the documents necessary for proper preparation and examination of witnesses.

4. **Attorney Fees and Costs** - The issue is whether the Township is entitled to reasonable expenses and attorney fees under MCR 2.313(A)(5)(a) due to Howell-Mason's unjustified discovery obstruction that occurred despite the Township's extensive good-faith attempts to resolve these disputes without court intervention.

The Township is hopeful that all issues can be resolved through mediation, however, submits that in the event these issues are not resolved, Judge Hatty should submit a Report and Recommendation that would indicate the Township prevails on each of these issues for the reasons set forth below.

I. Interrogatories: Howell-Mason's responses to Howell Township's Interrogatories plainly violated the Michigan Court Rules.

MCR 2.309 governs interrogatories. A party must answer interrogatories with the information that is available to it or that could be obtained by it through reasonable inquiry. MCR 2.309(B)(1). "Each interrogatory must be answered separately and fully in writing under oath." MCR 2.309(B)(1).

Howell-Mason systematically violated these fundamental discovery requirements by providing non-responsive, evasive, and incomplete answers to the Township's interrogatories (Exhibit H). In fact, Howell-Mason's approach can hardly be characterized as "answers" at all. Howell-Mason largely provided generic references to legal filings and made boilerplate objections based on unsubstantiated proprietary and confidential grounds without explaining the basis for such claims and without seeking a protective order to avoid their production.

The most egregious examples of Howell-Mason's discovery violations appear in Interrogatory Nos. 1, 2, 3, 4, 5, 9, 12 and 15 where Howell-Mason merely directs the Township to "see complaint, appeal, and all subsequent briefs" or something similar thereto. Such responses are patently insufficient under the Michigan Court Rules: **a reference to pleadings is not a substitute for providing specific, responsive answers under oath as required by MCR**

2.309(B)(1). Interrogatories serve a distinct purpose from pleadings—they seek specific information beyond the general allegations in a complaint.

Howell-Mason also repeatedly lodged improper conclusory objections to other interrogatories, never providing a legitimate basis for withholding the information. For instance, in response to Interrogatory No. 6 regarding Howell-Mason's total investment in the property, Howell-Mason objected: "Objection as information sought is proprietary and confidential. Irrelevant not proportionate to needs of case." The same type of objection was made with respect to Interrogatories Nos. 6, 7, 11, and 16. These types of blanket, boilerplate objections fail to explain why information about Howell-Mason's investment is "proprietary and confidential" and/or "privileged." The answers also fail to explain why the requests are not proportionate to the needs of the case—particularly when Howell-Mason has asserted claims for regulatory taking and unjust enrichment that directly place the value of the property and Howell-Mason's investment at issue. Of course, it is highly relevant to know what types of gas stations and other properties Howell-Mason owns elsewhere to determine the potential profitability of the disputed property. Similarly, to prepare a defense, the Township needs to understand when, how, and why Howell-Mason made investments in its property it knew could never be a gas station.

The obvious deficiencies in Howell-Mason's interrogatory responses are not minor or technical—they are fundamental failures that strike at the heart of the discovery process. Despite the Township's good-faith efforts to resolve these issues without Court intervention, Howell-Mason has maintained its position and refused to provide proper responses or further explain what legitimate objections may exist.

* * *

Howell-Mason has failed to comply with the Michigan Court Rules regarding interrogatory responses. The Township is prepared to mediate this issue, but Howell-Mason must recognize that they are required to file appropriate responses that actually answer the questions posed. To the extent they wish to object to specific interrogatories, they must do so with a specific legal basis and explain the foundation for their objections, which they have not yet done. The current practice of directing the Township to "see complaint, appeal, and all subsequent briefs" is wholly inadequate and violates the fundamental purpose of interrogatory discovery under MCR 2.309(B)(1).

II. Requests to Produce: Howell-Mason's blanket refusal to produce documents in response to the Township's Requests for Production plainly violates the Michigan Court Rules.

MCR 2.310 governs requests for production of documents. Under MCR 2.310, a party may request production of documents within the scope of discovery defined by MCR 2.302(B)(1), which broadly allows for discovery of non-privileged and otherwise relevant information.

Howell-Mason's approach to the Township's Requests for production has been even more obstructive than its handling of interrogatories (Exhibit I). Despite the intentional specificity of the Township's requests, Howell-Mason did not produce a single document until responding to the Township's Motion to Compel; even then, Howell-Mason provided fewer than 10 documents that largely were invoices of bills it paid. This wholesale refusal to produce documents is contrary to the letter and spirit of the Michigan Court Rules governing discovery.

To provide some examples of deficient responses, consider Requests for Production Nos. 5-8, which seek communications and property information directly relevant to Howell-Mason's knowledge of zoning restrictions, regulatory taking claims, and equal protection arguments.

Howell-Mason refused these requests with boilerplate objections of "irrelevant," "proprietary," and "burdensome" **without explaining how documents central to its own claims could be irrelevant or why confidentiality concerns couldn't be addressed through a protective order**. MCR 2.302(C) (plainly providing that the burden is on the party from whom discovery is sought to seek a protective order). Similarly, Howell-Mason refused Requests for Production Nos. 9-10 seeking expert materials from its own identified expert witness Paul LeBlanc—standard discovery expressly contemplated by MCR 2.302(B)(4) and essential for the Township's trial preparation.

In essence, Howell-Mason has erected an impenetrable wall around every category of documents relevant to this lawsuit while offering only vague, conclusory objections. Howell-Mason's refusal to produce documents in response to legitimate discovery requests is not merely technical non-compliance—it is a fundamental subversion of the discovery process. Without these documents, the Township cannot adequately prepare its defense or evaluate Howell-Mason's claims.

* * *

Similar to the issue with interrogatory responses, the Township is committed to resolving this document production dispute through mediation, but Howell-Mason must acknowledge that their wholesale refusal to produce any documents violates MCR 2.310 and the fundamental principles of discovery. To the extent Howell-Mason believes certain documents are protected by privilege or confidentiality, they must either seek an appropriate protective order or provide a privilege log. The requested documents are directly relevant to the remaining claims in this litigation, including regulatory taking allegations and Open Meetings Act claims, and without the documents, the Township will have a difficult time litigating this matter to a conclusion consistent with the direction of the Circuit Court.

III. Depositions: Howell-Mason's deliberate strategy to push critical depositions well beyond discovery deadlines violated the Stipulated Scheduling Order and is an improper sequence of discovery.

MCR 2.306 governs depositions and expressly permits parties to depose both opposing parties and their experts. For experts, MCR 2.302(B)(4) provides for their examination through deposition with reasonable compensation (the Township has never objected to paying Howell-Mason's expert witness).

Against this backdrop, the Township made diligent efforts to schedule the depositions of Howell-Mason, LLC, and its expert witness Paul LeBlanc within the April 1, 2025, stipulated discovery deadline, but the Township's efforts to schedule these depositions were met with a pattern of delay and obstruction by Howell-Mason, and the following timeline of events demonstrates Howell-Mason's deliberate strategy to push these critical depositions beyond the discovery cutoff date:

- On February 18, 2025, the Township requested deposition dates for Todd Lekander II and Paul LeBlanc.
- Despite follow-up requests on February 28 and March 5, Howell-Mason provided no dates.
- On March 5, 2025, the Township served formal deposition notices for March 20 and 27.
- Only then did Howell-Mason respond, offering only post-discovery dates for LeBlanc (April 11, 14, and 21).
- On March 12, Howell-Mason offered May 5—more than a month after discovery closes—for Lekander's deposition.

Howell-Mason offered no justification for failing to produce witnesses within the discovery period despite having nearly two months to arrange availability.

The point is that the Township made every reasonable effort to schedule these depositions within the discovery timeframe—requesting dates, following up multiple times, serving formal notices, and even offering to stipulate to post-discovery depositions while maintaining the overall cutoff.

Howell-Mason clearly violated the Stipulated Scheduling Order by declining to produce witnesses within the discovery timeframe despite nearly two months' notice. Setting aside that violation for purposes of mediation, this appears to be the easiest issue to resolve. If Howell-Mason provides the written discovery responses discussed above, the parties appear to be in agreement that these depositions may proceed. The Township appreciates the opportunity to resolve this matter efficiently through the mediation process.

IV. Attorney Fees and Costs: The Township is entitled to reasonable expenses and attorney fees under MCR 2.313(A)(5)(a) because Howell-Mason's discovery obstruction is unjustified and occurred despite good-faith resolution attempts.

MCR 2.313(A)(5)(a) provides that when a motion to compel discovery is granted, the court may require the non-complying party to pay the moving party's reasonable expenses, including attorney fees. The rule states that the court should award these expenses unless: (1) the moving party filed the motion before attempting in good faith to obtain discovery without court action, (2) the opposition to the motion was substantially justified, or (3) other circumstances make an award of expenses unjust. In this case, none of these exceptions apply.

The Township has demonstrated extensive good-faith efforts to resolve these issues without court intervention through multiple communications and compromise offers; Howell-Mason did not even extend the professional courtesy of providing a response to these efforts. More fundamentally, Howell-Mason's blanket objections and complete refusal to produce any documents lack substantial justification, particularly given the clearly relevant nature of the

discovery sought and this Court's express recognition that discovery is necessary in this case. Finally, there are no special circumstances that would make an award unjust—to the contrary, failing to award expenses would effectively reward Howell-Mason's strategy of obstruction and delay, undermining both the Circuit Court's scheduling order and the fundamental purpose of discovery to "promote the discovery of the true facts and circumstances of a controversy, rather than aid in their concealment." *Domako v Rowe*, 438 Mich 347, 361 (1991) (citations omitted).

Should these discovery disputes remain unresolved following mediation, attorney fees and costs under MCR 2.313(A)(5)(a) are unquestionably warranted. The record demonstrates the Township's exhaustive good-faith efforts to resolve these matters without judicial intervention, including multiple extensions, reasonable accommodations, and detailed explanations of Howell-Mason's deficient responses. A Report and Recommendation awarding costs (if there is no resolution) is essential to maintain the integrity of discovery practice and prevent the weaponization of procedural delays.

OTHER ISSUES THAT MAY BE DISCUSSED

The Township understands there may be a desire to consider other issues involved in the case to determine if a complete resolution may be reached. Candidly, the Township's position is that the Court has already adjudicated as a matter of law the following issues:

Claim	Legal Basis for Dismissal
Count I – Substantive Due Process (alleges zoning regulations violate substantive due process)	Argued in Appeal that zoning regulations violated substantive due process both facially and as applied. Barred by res judicata - identical claims already litigated and decided on the merits.
Count II – Procedural Due Process (alleges denial of special land use permit violated procedural due process)	Argued in Appeal that denial of special land use permit violated procedural due process. Barred by res judicata - identical claims already litigated and decided on the merits.

Count III - Equal Protection – (alleges unequal treatment under zoning regulations)	Argued in Appeal that zoning regulations violated equal protection clause. Barred by res judicata - identical claims already litigated and decided on the merits
Count IX - State Law Preemption – (alleges Township zoning regulations preempted by state law)	Argued vigorously in Appeal that the Township's zoning regulations were preempted by state law. Barred by res judicata - identical claims already litigated and decided on the merits.

To be clear, the Circuit Court thoroughly addressed each of these claims through its opinion in the Appeal (Exhibit A). None of these issues are ripe to reopen at this juncture provided the procedural posture of the case and the overwhelming unlikelihood of the Michigan Supreme Court granting review as it relates to these judicial decisions by the Court.

As for the other claims (which discovery is sought to dismiss), they face a significant likelihood of dismissal:

Claim	**Basis to Dismiss After Discovery**
Count V – Open Meetings Act Violation (alleges Township Board made a predetermined decision and manipulated notice requirements)	Fails to establish "ongoing violation" required for injunctive relief under MCL 15.271. *Citizens for a Better Algonac Cmty Schs v Algonac Cmty Schs*, 317 Mich App 171, 181 (2016). Declaratory relief not available under OMA. *Speicher v Columbia Twp Bd of Trs*, 497 Mich 125, fn 31 (2014).
Count VI – Regulatory Taking (alleges the Township Board committed a taking through unconstitutional zoning restrictions and interfering with investment back expectations)	Cannot establish denial of all economically viable use - four broad land uses permitted by right in zoning district. *K&K Const, Inc v Dep't of Natural Resources*, 456 Mich 570, 585 (1998). Purchased with knowledge of restrictions, accepting business risk. *Grand/Sakwa of Northfield, LLC v Twp of Northfield*, 304 Mich App 137, 151 (2014).

Specifically, the Open Meetings Act claim is likely to fail because Howell-Mason will be unable to identify any legitimate violations beyond their complaints that the Township did not decide the

way they wanted; Howell-Mason has yet to explain what notices were "manipulated" or confirm what meetings they believe violated the Open Meetings Act. Discovery will confirm these faults. As for the alleged regulatory taking, Howell-Mason purchased the property with knowledge of the restrictions and accepted the risk – discovery will confirm this further.

CONCLUSION

This case presents a straightforward factual and legal narrative: Howell-Mason purchased property subject to zoning restrictions that prohibited its desired gas station use, then filed suit seeking through litigation what it could not achieve through regulatory processes. Every court that has considered the merits has conclusively determined that the Township's zoning restrictions are lawful.

The Township seeks a simple resolution: either Howell-Mason provides the complete discovery responses required under the Michigan Court Rules, or the parties reach a settlement that acknowledges these established legal realities. If this mediation cannot resolve these discovery disputes, the Township respectfully requests that Judge Hatty submit a Report and Recommendation compelling proper discovery responses and awarding the Township its reasonable costs and attorney fees under MCR 2.313(A)(5)(a).

Respectfully submitted,

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By: _____

Dated: July 18, 2025

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STATE OF MICHIGAN
IN THE 44TH CIRCUIT COURT FOR THE COUNTY OF LIVINGSTON

HOWELL-MASON, LLC,
a Michigan Limited Liability Company,

Plaintiff,

v

HOWELL TOWNSHIP,
a Michigan General Law Township,

Defendant.
_____/

Case No. 24-32242-CZ

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INDEX OF EXHIBITS

Exhibit A	September 16, 2024 Circuit Court Opinion and Order
Exhibit B	April 11, 2025 Court of Appeals Order Denying Application for Leave
Exhibit C	May 29, 2025 Township's Answer to Application for Leave to Appeal to the Michigan Supreme Court

Exhibit D	January 16, 2025 Order Granting in Part Township's Motion for Summary Disposition
Exhibit E	May 7, 2025 Opinion and Order Denying Plaintiff's Motions for Reconsideration
Exhibit F	March 26, 2025 Township's Motion to Compel Discovery
Exhibit G	May 15, 2025 Plaintiff's Response to Motion to Compel Discovery
Exhibit H	March 14, 2025 Plaintiff's Response to First Set of Interrogatories
Exhibit I	March 14, 2025 Plaintiff's Response to First Request for Production

Respectfully submitted,

Fahey Schultz Burzych Rhodes PLC
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Dated: July 18, 2025

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STATE OF MICHIGAN
IN THE 44th CIRCUIT COURT FOR THE COUNTY OF LIVINGSTON

HOWELL TOWNSHIP,

Plaintiff/Appellant,

v

SHANE RAY FAGAN,

Defendant/Appellee.
_____/

Circuit Court Case No. 25-398-AV

District Court Case No. HOMV0158 ON

HON. L. SUZANNE GEDDIS

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APPELLANT HOWELL TOWNSHIP'S REPLY BRIEF

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INTRODUCTION

The Township's opening brief demonstrated three clear legal errors in the District Court's interpretation of the Howell Township Zoning Ordinance. Rather than address these errors, Mr. Fagan's response confirms the need for appellate correction by defending legally contradictory positions: a finding that activities causing "unreasonable noise that did affect the welfare of the neighbors" somehow qualify as permissible home occupations, that 35% satisfies a 25% limitation in mathematical calculations, and that courts should ignore plain ordinance language when individual property owners find it inconvenient.

Mr. Fagan's arguments demonstrate precisely why this Court's intervention is essential. Courts must apply zoning ordinances as written, not rewrite them to accommodate violations that clearly occurred on the undisputed record. This reply brief addresses each of the District Court's legal errors and Mr. Fagan's corresponding defenses, demonstrating that his responses only reinforce the necessity for reversing the District Court's judicial overreach and restoring the proper separation between legislative policy-making and judicial interpretation.

REPLY-ARGUMENT

I. The District Court found violations of the definition of a "home occupation" but ignored them—Mr. Fagan's deflection in response confirms this legal error.

Mr. Fagan fundamentally mischaracterizes the Township's position through a classic strawman argument. He incorrectly claims the Township argues that *any* activity in a garage is categorically prohibited under the definition of a "home occupation" as if that were the Township's primary argument. Appellee's Brief, p. 4. This mischaracterization allows him to sidestep the Township's actual arguments: (1) that speed shops are not uses "customarily conducted entirely within the dwelling" because they are industrial operations typically conducted in commercial

facilities, not residential living quarters; and (2) more fundamentally, that the District Court's own factual finding of "unreasonable noise that did affect the welfare of the neighbors" definitively disqualifies the operation under the ordinance's explicit prohibition on uses that "endanger the health, safety, and welfare" of neighboring residents.

There is simply no reconciling the District Court's factual findings and their conflict with the Zoning Ordinance:

District Court's Factual Finding	Conflict with the Zoning Ordinance
Mr. Fagan operates a speed shop in his garage. March 26, 2025, Hearing Transcript, p. 60-61.	The Zoning Ordinance only allows for uses "customarily conducted entirely within the dwelling" and further defines "dwelling" to exclude buildings for "automobile chassis." Zoning Ordinance, § 2.02.
Mr. Fagan's speed shop "did cause unreasonable noise that did affect the welfare of the neighbors." March 26, 2025, Hearing Transcript, p. 61.	The Zoning Ordinance definitionally excludes land uses that "endanger[s] the health, safety, and welfare of any other persons residing in that area by reasons of noise, noxious odors, unsanitary or unsightly conditions, fire hazards and the like." Zoning Ordinance, § 2.02.

The District Court's findings speak for themselves, as to the clear disqualification of such use being a permitted home occupation. This logical impossibility constitutes clear legal error that demands reversal through this de novo review. *Cain v Dep't of Corrections*, 451 Mich 470, 503 n 38; 548 NW2d 210 (1996) (explaining an appellate court reviews "how the trial court applied facts to the relevant law de novo"); *Book-Gilbert v Greenleaf*, 302 Mich App 538 (2013) ("Application of the law to the facts presents a question of law subject to review de novo.").[1]

[1] Mr. Fagan's argument with respect to these issues concludes the "Township simply has not presented arguments sufficient to demonstrate … the result reached by the trial court was clearly erroneous." Appellee's Br, p 7. The conclusion rests on an incorrect standard of review and should be disregarded in the context it is presented.

The simplicity of these issues must not be lost amid the arguments: the Township Board expressly defined "home occupations," the District Court found Mr. Fagan's use comprised characteristics that fell outside the definition, yet it approved the use anyway. Mr. Fagan's response, and lack of legal authority on this point proves the District Court erred and exceeded its authority in overriding the legislative decisions made by the Township Board. *Brae Burn, Inc v City of Bloomfield Hills*, 350 Mich 425, 430-431; 86 NW2d 166 (1957); see also *Schwartz v City of Flint*, 426 Mich 295; 395 NW2d 678 (1986). Only by reversing can this Court restore both the integrity of legislative language and the Township's fundamental authority to enact protective zoning standards.

II. The District Court rewrote the strict floor area limitation for "home occupation" in accessory structures by allowing 35% to satisfy a 25% limitation—Mr. Fagan's attack on the "wisdom" of the Zoning Ordinance is foreclosed by Michigan law.

Nowhere in Mr. Fagan's response does he dispute that his 504 square-foot garage constitutes 35% of his 1,440 square-foot principal structure's gross floor area. Appellee's Brief, p. 1-12. That mathematical concession, and lack of defense, alone forecloses compliance with Section 14.19(B), which limits accessory structures used for "home occupations" to no more than 25% of "the gross floor area of the principal structure." His failure to contest this basic arithmetic is dispositive on proving errors below.

Unable to dispute the straightforward application of the floor area limitation, Mr. Fagan instead attacks the "wisdom" of the restriction itself: "if the section is read in the fashion proposed by the Township — the outcomes obtained can be anomalous, to say the least." Appellee's Br., p. 8. This approach collides head-on with black letter law from the Michigan Supreme Court: courts do not sit as "super zoning commissions" empowered to rewrite ordinances they find inconvenient. *Brae Burn, Inc*, 350 Mich at 430-431; see also *Schwartz*, 426 Mich 295. It simply does not matter

whether Mr. Fagan or the District Court believes the Zoning Ordinance should allow for the use of larger accessory structures, calculate square footage differently, or impose different restrictions entirely. The Township Board made a clear legislative decision to restrict certain-sized accessory structures for "home occupations" and courts must apply that restriction as written. If anything, Mr. Fagan's arguments demonstrate the necessity for this appeal.[2]

Mr. Fagan's speculative hypotheticals that are nowhere before the Court are similarly misplaced.[3] However, examining them reveals the rational design behind the floor limitation and why the Township Board chose to restrict the accessory structure itself rather than the floor space used within it. Section 14.19(B) represents a clear policy that "home occupations" are conducted within dwellings—not "accessory structures." This is evident by the clear restriction on the size of "accessory structures" and not the floor space of the "accessory structures." Moreover, the 25% threshold creates a bright-line rule that prevents large accessory structures from hosting extensive commercial activities that would dominate the residential character, while also streamlining enforcement by requiring Township officials to measure only the accessory structure against the principal structure, eliminating complex disputes about actual usage within the accessory structure. There are clearly valid rationales underlying the design of limitation on the use of accessory structures for "home occupations."

[2] It is worth noting that if Mr. Fagan disagrees with a ruling strictly applying the language of the Zoning Ordinance, he is able (and well situated as a Trustee for the Township) to petition for a Zoning Ordinance amendment to effectuate his desired legislative policy.

[3] It is important to emphasize when considering the hypotheticals by Mr. Fagan that they are not representative of his situation. There is no dispute whatsoever that Mr. Fagan used the entirety of his garage (and even outdoor space at times) for his speed shop.

It is also highly relevant to point out in response to Mr. Fagan's argument attacking the "wisdom" of the regulations here that other communities in Livingston County have adopted similar or more restrictive standards:[4]

Community	Restrictions on "Home Occupations"
City of Brighton	"Home occupations shall be conducted entirely within the dwelling unit… No equipment or process shall be used which creates noise, vibration, glare, dust, fumes, odors, electrical interference, or water use than what is customary in a residential neighborhood" (Attachment 1, City of Brighton Zoning Ordinance § 98-4.1)
Genoa Township Zoning Ordinance	"The home occupation may utilize up to a maximum of twenty percent (20%) of the floor area of the principal building. When the home occupation is conducted in an accessory building, the home occupation may utilize up to a maximum of fifty percent (50%) of the floor area of the accessory building … no equipment or process shall be used in the home occupation which creates noise, vibration, glare, fumes, odors…" Attachment 2, Genoa Township Zoning Ordinance § 3.03.02(a)).
Green Oak Charter Township	"The home occupation shall utilize no more than twenty-five percent (25%) of the total floor area of any one (1) story of the residential structure used for such home occupation." (Attachment 3, Green Oak Charter Township § 38-194).
City of Howell	"The total floor area utilized by the home occupation shall not exceed an area defined as not more than twenty-five (25) percent of the total floor area of any one (1) story of the residential premises so used" (Attachment 4, City of Howell Zoning Ordinance § 5.09).
Tyrone Township	"A home occupation shall not occupy more than ten (10) percent of the usable floor area of the dwelling. Attached garages, detached garages and other detached accessory buildings may be utilized for storage, assembly/construction, or general exercise of the craft, hobby, or business the home occupation is based upon, however such uses shall not occupy the entire structure and shall be an accessory or supplemental

[4] It is appropriate for this Court to take judicial notice of "ordinances and regulations" of other municipalities as part of these proceedings. MRE 202(a)(3); (b); *People v Sinclair*, 387 Mich 91, 103; 194 NW2d 878 (1972) (explaining it is appropriate for an appellate court to take judicial notice).

	use of the structure and shall not be used as the primary functioning business location for home occupations" (Attachment 5, Tyrone Township Zoning Ordinance § 21.14(B)(8)). Further, "repair shops" which may create a nuisance due to noise, vibration, glare, fumes, odors or electrical interference" are not allowed (Tyrone Township Zoning Ordinance § 21.14(C)(2) and "repair" of automobiles, machinery, trucks, boats, recreational vehicles and similar items" are flatly prohibited (Tyrone Township Zoning Ordinance § 21.14(C)(6)).

The point is that communities in Livingston County regulate "home occupations" in different ways, each exercising their legislative prerogative to protect residential neighborhoods. Some communities restrict "home occupations" to dwellings only; some allow certain floor space of accessory structures to be used; and some (like Howell Township) limit "home occupations" in accessory structures based on the size of the accessory structure. These legislative policy decisions in how a "home occupation" is regulated within any community are not subject to judicial rewriting simply because one property owner disagrees with the chosen approach.

The Township requests this Court to correct the District Court's erroneous legal conclusion that Mr. Fagan's 504-square-foot garage operation complied with Section 14.19(B)'s 25% floor area limitation when it mathematically constituted 35% of his principal structure's gross floor area, and to hold that accessory structures exceeding 25% of the principal structure's gross floor area cannot be used for home occupations under the plain language of the Zoning Ordinance.

III. The District Court categorically exempted "home occupations" from loading requirements contrary to plain language—Mr. Fagan's policy arguments cannot cure this textual misreading.

Section 18.03 of the Zoning Ordinance establishes mandatory off-street loading and unloading requirements "in connection with every use" throughout the Township that "customarily

receive or distribute material … by vehicle." The narrow exemption from this requirement for certain "dwelling unit structures" is inapplicable because, by definition, a "home occupation" is a distinct land use from the underlying residential use. Zoning Ordinance § 2.02 (defining a "home occupation" as "any use" that meets the definition). The focus thus is on whether a "home occupation" customarily receives or distributes material by vehicle—not whether not whether the structure maintains its residential zoning designation.

In an attempt to make the requirement that "home occupations" that receives regular deliveries have approved loading facilities seems unreasonable (again, attacking the "wisdom" of the Zoning Ordinance), Mr. Fagan conjures unrealistic requirements: "essentially every single home-based proprietor who receives any deliveries … would need not only to provide for off-street loading and unloading spaces, but would also … be required to enclose those loading and unloading spaces with a wall, a fence, or a six foot tall hedge." Appellee's Br, p 12. This is an improper extrapolation of the requirements.

For a "home occupation" that "customarily" receives or distributes materials, the requirements mandate submitting plans and specifications with appropriate dimensions that ensure proper ingress, egress, and interior circulation. Zoning Ordinance §§ 18.03(A), (B) and (F). As for any additional restrictions (such as those applicable for spaces near residential homes in Section 18.03(D)), the property owners merely need to comply with the requirements. For those property owners who believe the literal application of the Zoning Ordinance is impractical (such as Mr. Fagan), the resolution is straightforward: seek a dimensional variance. Zoning Ordinance § 22.07.

Moreover, Mr. Fagan's suggestion that Amazon deliveries and FedEx packages would require plans, defies the plain language that contemplates plans for commercial delivery trucks (not residential package delivery). See Zoning Ordinance § 18.03(B) (mandating 55-foot minimum

lengths designed for commercial truck operations). The real departure from common sense lies in Mr. Fagan's assertion that his commercial operation should operate without the very planning requirements the Zoning Ordinance was designed to impose.

The zoning scheme here makes sense: "home occupations" that customarily (not occasionally) receive or distribute materials must comply with Section 18.03, and a deviation of those requirements is allowed via a variance request to the Zoning Board of Appeals. The District Court's categorical exemption of "home occupations" from the plain requirements were in error, and Mr. Fagan's hypotheticals fail under a proper reading of the Zoning Ordinance.

CONCLUSION

This appeal arises because the District Court, despite correctly finding Mr. Fagan responsible, made three fundamental legal errors that effectively rewrote the Township's Zoning Ordinance in violation of separation of powers principles. The Township does not seek remand for further factual development, as the record is complete and the District Court's factual findings are undisputed. Rather, the Township seeks a partial reversal with respect to the District Court's erroneous legal conclusions by this Court issuing an order:

- Reversing the legal conclusion that Mr. Fagan's speed shop satisfied the definition of a "home occupation" in Section 2.02 because (1) speed shops are not uses customarily conducted entirely within dwellings, and (2) the District Court found the operation caused "unreasonable noise that did affect the welfare of the neighbors," which violates the definition's prohibition on activities that endanger neighbor welfare;

- Reversing the legal conclusion that Mr. Fagan's garage operation did not violate Section 14.19(B)'s floor area limitation because his 504-square-foot accessory structure mathematically constitutes 35% of his 1,440-square-foot principal structure's gross floor area, exceeding the strict 25% limitation; and

- Reversing the legal conclusion that Section 18.03's off-street loading requirements do not apply to "home occupations" because the plain language requires all land uses that "customarily receive or distribute material or merchandise" by vehicle to have approved loading plans, including "home occupations" that receive commercial deliveries.

The Township requests all other aspects of the District Court's judgment to remain unchanged. Such a narrow ruling from this Court would restore the proper judicial role of interpreting—rather than rewriting—zoning ordinances while ensuring consistent enforcement of the Township's legislative determinations.

The Township understands there are a multitude of ways this Court may proceed forward in rendering a decision. To the extent this Court schedules oral argument and determines the District Court's legal conclusions require correction consistent with the Township's arguments, for the convenience of the Court, the Township has prepared a proposed Opinion and Order Reversing In-Part the District Court's Ruling (Attachment 6) outlining the specific relief sought to help facilitate a ruling from the bench.

Respectfully submitted,

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Dated: July 22, 2025

By: _____

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ATTACHMENT 1

98-4.0 Use Standards

98-4.1 HOME OCCUPATIONS

Home occupations shall be permitted in any zoning district, within an otherwise permitted residential dwelling unit, provided the following criteria are met:

A. The home occupation shall not generate pedestrian or vehicular traffic, parking, sewerage, fire and safety hazards, noise, dirt, odor, dust, gas, glare, fumes, vibration or water use in excess of what is normal in a residential neighborhood.

B. Traffic generated by a home occupation shall not exceed the volume that would normally be expected in the zoning district in which the home occupation is conducted. Truck deliveries or pick-ups associated with the home occupation shall be permitted only between 7 a.m. and 7 p.m. Customers may visit the site only between 7 a.m. to 9 p.m.

C. Signs for home occupations are limited to one square foot.

D. Home occupation shall be conducted entirely within the dwelling unit and only by family members. Up to one (1) employee not living in the home is permitted.

E. No home occupation may occupy more than twenty-five (25%) percent of the living area of said dwelling.

F. There shall be no change to the outside appearance of the residence.

G. The sale of goods manufactured elsewhere is prohibited.

H. No equipment or process shall be used which creates noise, vibration, glare, dust, fumes, odors, electrical interference, or water use greater than what is customary in a residential neighborhood.

I. Exterior storage of materials, equipment or refuse shall be prohibited.

J. Home occupations including tutoring or lessons in a craft, music, dance or other fine arts shall be permitted provided not more than four (4) students are instructed simultaneously.

K. A registered primary caregiver, in compliance with the General Rules of the Michigan Department of Community Health, the Michigan Medical Marihuana Act, P.A. 2008, Initiated Law, MCL 333.26423(d) and the requirements of this Chapter, shall be allowed as a home occupation. Nothing in this Chapter, or in any companion regulatory provision adopted in any other provision of this Code, is intended to grant, nor shall they be construed as granting, immunity from criminal prosecution for growing, sale, consumption, use, distribution, or possession of marihuana not in strict compliance with that Act and the General Rules. Also, since federal law is not affected by that Act or the General Rules, nothing in this Chapter, or in any companion regulatory provision adopted in any other provision of this Code, is intended to grant, nor shall they be construed as granting, immunity from criminal prosecution under federal law. The Michigan Medical Marihuana Act does not protect users, caregivers or the owners of properties on which the medical use of marihuana is occurring from federal prosecution, or from having their property seized by federal authorities under the Federal Controlled Substances Act. The following requirements for a registered primary caregiver shall apply:

1. The medical use of marihuana shall comply at all times and in all circumstances with the Michigan Medical Marihuana Act and the General Rules of the Michigan Department of Community Health, as they may be amended from time to time.
2. A registered primary caregiver must be located outside of a 1,000-foot radius from any school, including child care or day care facility, to insure community compliance with federal "Drug-Free School Zone" requirements.
3. Not more than one primary caregiver shall be permitted to service qualifying patients on a parcel.
4. Not more than five qualifying patients shall be assisted with the medical use of marihuana within any given calendar week.
5. All medical marihuana shall be contained within the main building in an enclosed, locked facility inaccessible on all sides and equipped with locks or other security devices that permit access only by the registered primary caregiver or qualifying patient, as reviewed and approved by the building official and the Brighton Police Department.
6. All necessary building, electrical, plumbing and mechanical permits shall be obtained for any portion of the residential structure in which electrical wiring, lighting and/or watering devices that support the cultivation, growing or harvesting of marihuana are located.

7. If a room with windows is utilized as a growing location, any lighting methods that exceed usual residential periods between the hours of 11:00 p.m. to 7:00 a.m. shall employ shielding methods, without alteration to the exterior of the residence, to prevent ambient light spillage that may create a distraction for adjacent residential properties.
8. That portion of the residential structure where energy usage and heat exceeds typical residential use, such as a grow room, and the storage of any chemicals such as herbicides, pesticides, and fertilizers shall be subject to inspection and approval by the Brighton Area Fire Department to insure compliance with the Michigan Fire Protection Code.

98-4.2 PLACES OF WORSHIP AND ACCESSORY USES

Places of worship and accessory uses where assembly (i.e. meeting halls, recreational facilities and etc.) and/or non-single-family housing occurs are permitted as a special land use in the A1, A-2, R -1, R-1-O, R-3 and as a permitted use in the R-4 districts, provided that the following conditions are met:

A. In the A-1, A-2, R-1, R-1-O, R-3, and R-4 districts, off-street parking in accordance with Article III is provided.
B. In the A-1, A-2, R-1 and R-1-O districts, there shall be no parking in any front yard, nor closer than 35 feet from any side or rear lot line.
C. In the A-1, A-2, R-3 and R-4 districts, the site shall contain a minimum area of one acre of land. In addition, one half acre shall be provided per 100 seats in the primary worship space, auditorium, or hall.
D. In the A-1 and A-2 districts, no building shall be closer than 50 feet to any property line.
E. In the R-1 and R-1-O districts:
    1. No building shall be closer than 35 feet to any property line.
    2. Any building or structure that exceeds 25 feet in building height is required to be setback a minimum of 40 feet from any property line.
    3. In the event that sufficient landscaping, screen walls, other methods or combinations thereof can be utilized to effectively screen parking from adjacent residential uses, the City Council, upon recommendation from the Planning Commission, may permit parking closer than 35 feet, but not less than ten feet, from any side or rear lot line.
F. In the R-4 district, height, area, and site regulations shall be in accordance with the R-4 district.

98-4.3 PRIVATE SCHOOLS

Private schools having no rooms regularly used for housing or sleeping purposes are permitted as a special land use in the A-1, A-2, R-1, and R-1-O districts, provided that the following conditions are met:

A. In the A-1, A-2, R-1, and R-1-O districts:
    1. The site shall contain a minimum area of one acre.
    2. The ratio of students to total size of the lot shall be 500 square feet per student.
    3. There shall be no parking in any front yard, nor closer than 35 feet from any side or rear lot line.
    4. That off-street parking in accordance with Article III is provided
B. In the A-1 and A-2 districts, no buildings shall be closer than 50 feet to any property line.
C. In the R-1 and R-1-O districts:
    1. No buildings or structures shall be closer than 35 feet to any property line.
    2. Any building or structure that exceeds 25 feet in building height is required to be setback a minimum of 40 feet from any property line.
    3. In the event that sufficient landscaping, screen walls, other methods or combinations thereof can be utilized to effectively screen parking from adjacent residential uses, the City Council, upon recommendation from the Planning Commission, may permit parking closer than 35 feet, but not less than ten feet, from any side or rear lot line.

ATTACHMENT 2

3.03.02 **Use Conditions:** Uses noted above shall only be allowed where the following requirements are complied with:

(a) Home occupations shall be permitted as an accessory to a residential use, subject to the following requirements. These regulations do not apply to farms.

(1) Only members of the family residing in the principal dwelling shall be engaged in the conduct of any home occupation with the exception of one (1) full time employee or (2) part time employees.

(2) The use of the dwelling for a home occupation must be clearly accessory, incidental, subordinate to the permitted principal residential use.

(3) The home occupation may utilize up to a maximum of twenty percent (20%) of the floor area of the principal building. When the home occupation is conducted in an accessory building, the home occupation may utilize up to a maximum of fifty percent (50%) of the floor area of the accessory building.

(4) All home occupations shall be conducted entirely indoors so as not to be noticeable from the exterior of the building. There shall be no change in the outside appearance of the principal dwelling, or accessory buildings or any other visible evidence of the conduct of the home occupation except for one (1) sign not exceeding one (1) square foot in area. In the Agricultural District only, the sign area may be increased up to a maximum of four (4) square feet. There shall be no outdoor storage of materials, goods, supplies or equipment used in the home occupation.

(5) Traffic generated by the combined home and home occupation shall be compatible with traffic normally expected in a residential district, and shall in no case be greater than twenty (20) vehicle trips per day (10 in and 10 out).

(6) No equipment or process shall be used in the home occupation which creates noise, vibration, glare, fumes, odors, interference with radio or television reception or fluctuation in line voltage detectable off the premises greater than is associated by residential dwelling unit as determined by the Zoning Administrator. (as amended 2/25/11)

(b) Bed-and-breakfast inns shall comply with the following requirements:

(1) Required parking areas shall be located off-street and shall not be located in any required front yard.

(2) No bed-and-breakfast inn shall be located closer than 300 feet to another bed-and-breakfast inn.

(3) Meals or other services provided on the premises shall only be available to residents, employees and overnight guests of the inn.

(4) The dwelling unit in which the bed and breakfast establishment is located shall be the principal residence of the operator, and said operator shall live on the premises while the establishment is active.

ATTACHMENT 3

with the architectural materials used in the site development. The location of the dumpster or other trash container, unless a specific exception is provided by the Planning Commission, shall be adjacent to the building. The Planning Commission may further require internal storage and/or the use of trash compactors where, in the determination of the Planning Commission, the public health, safety, and welfare is served. A temporary trash and construction debris storage area shall be required to be located on the site of all construction and renovation projects for the duration of the project. All trash and debris shall be removed from the property and disposed of properly.

Sec. 38-193. Street, alley, railroad right-of-way, and abandoned railroad right-of-way.

All streets, alleys, railroad rights-of-way, and abandoned railroad rights-of-way, if not otherwise specifically designated, shall be deemed to be in the same zone as the property immediately abutting upon such streets, alleys, railroad rights-of-way, and abandoned railroad rights-of-way. Where the centerline of a street, alley, railroad right-of-way, or abandoned railroad right-of-way serves as a district boundary, the zoning of such street, alley, railroad right-of-way, or abandoned railroad right-of-way, unless otherwise specifically designated, shall be deemed to be the same as that of the abutting property up to such centerline. No building or structure may be erected, constructed, or altered upon any right-of-way unless appurtenant to the right-of-way.

Sec. 38-194. Home occupations.

(a) ***Medical Marihuana Home Occupations and Recreational Use.***

(1) ***Intent and Purpose***. On November 4, 2008, Michigan voters approved a ballot initiative that legalized medical marijuana, and on December 4, 2008, Michigan's Medical Marihuana Act, MCL 333.26421, *et seq.* (MMMA) took effect allowing both patients and/or their caregivers to cultivate medical marihuana within an enclosed, locked facility in order for those individuals to be entitled to the MMMA protections.

The Stille-Derossett-Hale Single State Construction Code Act, MCL 125.1501, *et seq.* allows a local unit of government to legally adopt and enforce the State Building Code at the local level. The purpose of the Building Code is to enforce public health, safety, and welfare by protecting life and property from all hazards related to the design, erection, repair, removal, demolition, or use and occupancy of buildings, structures, or premises. This is in relation to structural strength, adequate egress facilities, sanitary equipment, light and ventilation, and fire safety. Building permits are required when construction or alteration of a structure are made to support the cultivation of marihuana.

The Michigan Zoning Enabling Act, MCL 125.310 1, *et seq.* (MZEA), provides the Township with statutory authority to regulate land use within the Township through its Zoning Ordinance. The Michigan Supreme Court has confirmed the Township's ability to geographically restrict caregiver marihuana cultivation to a particular zoning district and to require zoning permits and permit fees for the use of buildings and structures within its jurisdiction.

This article is intended:

a. To permit those persons in need of marihuana for medicinal purposes allowed under the MMMA to be afforded a reasonable opportunity to be treated, and for those persons who are permitted to furnish medical marihuana, to be afforded a reasonable opportunity to furnish it within the limitations of the MMMA and the MZEA, and the geographical restrictions imposed by the Zoning Ordinance.

b. To protected and preserve the public health, safety, and welfare of the Township, the quality of life and stability of property values, including but not limited to, the value of residential districts. The purpose is also to curtail problems associated with insufficient or improper electrical supplies, problems with ventilation leading to mold, offensive odors, other health hazards and/or other hazards that are associated with the cultivation of marihuana in structures, particularly in residential settings.

c. This article is also intended to recognize the rights of individuals 21 years of age or older to use, possess, store, consume, process or cultivate marihuana (referred to collectively as the "use of recreational marihuana") in their residence in accordance with the Michigan Regulation and Taxation of Marihuana Act (MRTMA), MCL 333.27952, *et seq,* as amended.

d. To acknowledge the recreational use of marihuana as permitted in the Michigan Regulation and Taxation of Marihuana Act (MRTMA), MCL 333.27952, *et seq,* as amended.

e. To again confirm the Township's decision not to permit medical marihuana facilities as defined in the Medical Marihuana Facilities Licensing Act, MCL 333.27101 (MMFLA).

(2) The acquisition, possession, cultivation, use, delivery, or distribution of marihuana to treat or alleviate a debilitating medical condition is permitted as a home occupation in the RF, RE, LA, R-1, R-2, R-2A, and R-3 Districts in compliance with the MMMA and the following:

a. *Medical marihuana for registered qualifying patients or the use of recreational marihuana by an individual 21 years or older.* Registered qualifying patients may use, possess, cultivate and store medical marihuana as provided in the MMMA, as amended, and individuals 21 years or older may use, possess, cultivate, and store marihuana as provided in the MRTMA, and as further regulated herein.

1. A registered qualifying patient (medical marihuana) and individuals 21 years or older (recreational marihuana):

i. May use, possess, cultivate, and store marihuana in their principal residence within the Township, in which they reside on a full-time basis, for personal use only, and shall comply at all times and in all circumstances with the MMMA, the MRTMA, as applicable, and the general rules of the Michigan Community Health or the Michigan Department of Licensing and Regulatory Affairs, as they may be amended from time to time.

ii. May only cultivate marihuana for him/herself in compliance with the MMMA and the MRTMA, as applicable, on property zoned RF, RE, LA, R-1, R-2, R-2A, or R-3, in an enclosed locked facility, inaccessible on all sides and equipped with locks or other security devices that permit access only by the registered qualifying patient and the individual 21 years or older residing in the home.

iii. All necessary building, electrical, plumbing, and mechanical permits shall be obtained for all alterations of any portion of the structure in support of or in association with the cultivation of marihuana.

iv. The separation of plant resin from a marihuana plant by butane extraction or any other method that utilizes a substance with a flash point below 100 degrees Farenheit, in any public place, a motor vehicle, inside a residential structure, or the curtilage of a residential structure is prohibited.

v. If a room with windows is utilized as a marihuana cultivation location, any lighting methods that exceed usual residenti levels between the hours of 11:00 o.m. and 6:00 a.m. shall employ shielding methods, without alteration to the exterior of the residence, to prevent ambient light spillage that causes or creates a distraction or nuisance to adjacent residential properties.

vi. If the registered qualifying patient, or individual 21 years or older, is not the owner of the premises but resides in the home on a full-time basis, then written and notarized consent must be obtained from the property owner to ensure the owner's knowledge of the use of the premises as permitted under this section, and the registered qualifying patient and individual 21 years or older shall maintain written proof that the use of the property under this section is approved by the property owner. The premises in this subparagraph shall be the principal residence of the registered qualifying patient or the individual 21 years or older.

vii. No person other than the registered qualifying patient or individual 21 years or older residing in the home shall be engaged or involved in the growing process or handling of marihuana.

viii. Use of the registered patient's residential structure for medical marihuana or an individual 21 years or older's residential structure for recreational marihuana shall be clearly incidental or subordinate to its use for residential purposes. Any modifications to the dwellling unit for the purpose of cultivating medical or recreational marihuana shall comply with all applicable building, electrical, mechanical and fire safety code requirements, including all requisite permit applications and related inspections.

ix. No equipment or process shall be used in growing, processing, or handling medical or recreational marihuana which creates noise, vibration, glare, light, fumes, odor, or electrical interference detectable to the normal senses at or beyond the property line of the registered patient's or individual over the age of 21 residential property. In case of electrical interference, no equipment or process shall be used that creates visual or audible interference with any radio, television, or similar receiver off the premises or causes fluctuation of line voltage off the premises.

x. The registered qualifying patient, individuals over the age of 21, and the owners of the property which marihuana for personal or medical use is present are responsible jointly and severally for compliance with this section.

b. *Registered primary caregiver.* A registered primary primary caregiver, operating in compliance with the MMMA, may be permitted as a home occupation in the RF, RE, LA, R-1, R-2, R-2A, and R-3 Districts, only in accordance with the following standards and requirements:

1. Cultivation or other medical use of marihuana as a medical marihuana home occupation is limited to a single-family, detached dwellings that are the registered primary caregiver's residence. It is the specific intention of this article that a registered primary caregiver must reside in the dwelling unit on a full-time basis in order to qualify as a home occupation and to ensure compliance with these standards and requirements.
2. A registered primary caregiver operating a medical marihuana home occupation must not be located within 1,000 feet of any school, childcare facility, community center, youth center, playground, public library, housing facility owned by a public housing authority, and place of worship as measured from the outer most boundaries of the lot or parcel on which the medical marihuana home occupation and restricted facility is located.
3. The medical marihuana home occupatoin shall not be located within 500 feet of another registered caregiver operating a medical marihuana home occupation.
4. Not more than one primary caregiver within a single dwelling unit shall be permitted to serve registered qualifying patients.
5. The use of the dwelling unit for medical marihuana home occupation shall be clearly incidental and subordinate to its use for residential purposes by its occupants, and not more than twenty-five (25%) of the square footage of the residence, including basement and garage area, shall be used for the purposes of the home occupation. The medical marihuana home occupation shall be carried out completely within the confines of such dwelling. No accessory building, detached garage, pole barn, or similar structure shall be used in the medical marihuana home occupation.
6. Except for lighting, heating, watering, drying, or other equipment,or fertilizers, herbicides, or other chemicals directly related to the medical use of marihuana, no other materials or equipment not generally associated with normal ownership, use, and maintenance of the dwelling shall be permitted.
7. A qualifying patient shall not smoked or consume marihuana at the dwelling of the primary caregiver.
8. If marihuana is grown or located in a room with windows, all interior lighting shall be shielded to prevent ambient light from creating a distraction for adjacent properties.
9. If the primary caregiver is not the owner of record of the dwelling in which a registered primary caregiver of medical marihuana is functioning as a medical marihuana home occupation, the primary caregiver must gain written and notarized consent from the property owner to use the dwelling for the medical marihuana home occupation. At any time, the Township may request proof that the primary caregiver has written consent from the property owner of record to use the dwelling for a medical marihuana home occupation, as well as proof that the primary caregiver resides in the dwelling unit on a full-time basis.
10. To ensure compliance with all applicable requirements and laws, the portion of the structure, such as a cultivation room, where energy use and heating requirements exceed typical residential limits and chemical storage occurs, is subject to inspection and approval by the building official, fire marshall, or other authorized Township officials.
11. The property, dwelling unit, and all enclosed lot facilities shall be available for inspection upon request by the

building official, fire marshal, or other authorized officials.

12. The registered primary caregiver is responsible for utilizing an enclosed, locked facility compliant with the MMMA for cultivating, growing, manufacturing, processing, and storing marihuana for medical use only. The enclosed, locked facility utilized by the primary registered caregiver shall provide separation by fully enclosed walls, or fences, or for plants that are grown on behalf of each registered qualifying patient, on whose behalf the registered primary caregiver is furnishing marihuana for medical use, so it is accessible only to the primary caregiver and registered patient. The processing and storing of medical marihuana is permitted only by registered primary caregivers and registered qualifying patients.
13. The registered primary caregiver may grow up to the maximum of seventy-two (72) plants, but no more than twelve (12) plants for each individual registered qualifying patient as set forth in the MMMA.
14. The registered primary caregiver is responsible for providing the security necessary to ensure the growing marihuana and usable product are accessible for use only by the registered qualifying patients, who are registered to the registered primary caregiver, and must fully comply with the provisions of the MMMA.
15. A certificate of occupancy is required and must be obtained from the Township before the primary caregiver established the home occupation or provides services to a registered qualifying patient.
16. The consumption, transfer, or use of marihuana in public, or place open to the public, is prohibited.

(3) It is unlawful to establish or operate a for-profit or non-profit marihuana dispensary, collective, or cooperative within the Township, even if such use is intended for the medical use of marihuana.

(4) Medical marihuana provisioning centers, safety compliance facilities, dispensaries, cooperatives, marihuana establishments and any other operation or facility similar in nature are specifically prohibited within the Township.

(b) Home occupations other than medical marihuana home occupations and recreational use.

Home occupations other than Medical Marihuana Home Occupations and Recreational Use that are clearly incidental to the principal residential use are permitted in any residential district. The following conditions for home occupations shall be met:

(1) The home occupation shall utilize no more than twenty-five percent (25%) of the total floor area of any one (1) story of the residential structure used for such home occupation.

(2) The home occupation shall involve no employees, other than members of the immediate family residing on the premises.

(3) All home occupation activities shall be conducted indoors, except gardening.

(4) No structural alterations or additions which will alter the residential character of the structure shall be permitted to accommodate a home occupation.

(5) Only customary domestic or household equipment, or equipment judged by the Zoning Administrator or designee not to be injurious or a nuisance to the surrounding neighborhood, shall be permitted.

(6) There shall be no external evidence of such occupation, except a small announcement sign not exceeding two (2) square feet and conforming to provisions of Article IX of this chapter, pertaining to signs, may be permitted.

(7) No unrelated commodity shall be sold on the premises in connection with a home occupation.

(8) No home occupation shall be permitted which is injurious to the general character of the residential district and which creates a congested or otherwise hazardous traffic or parking condition.

Sec. 38-195. Livestock and farm animals.

The raising or keeping of animals which are normally part of the livestock maintained on a farm is prohibited, except in the RE and the RF zoning districts. Such restriction shall not apply to the raising or keeping of horses, which is regulated under Sections 38-135(2)a.4., 38-135(5)b.5 and 38-196(18), or the raising and keeping of domesticated household pets.

ATTACHMENT 4

• Section 5.09 *Home Occupations*.

Home occupations that are clearly incidental and secondary to the principal residential *use* are permitted in specific zoning *districts*; however, the following conditions shall apply:

(a) The total *floor area* utilized by the *home occupation* shall not exceed an area defined as not more than twenty-five (25) percent of the total *floor area* of any one (1) *story* of the residential premises so used.

(b) The *home occupation* shall involve no employees on the premises, other than members of the immediate *family* residing on the premises.

(c) All *home occupation* activities shall be conducted indoors, except gardening.

(d) There shall be no outside display of any kind, or other external or visible evidence of the conduct of a *home occupation*. *Signs* advertising a *home occupation* are prohibited.

(e) There shall be no vehicular traffic permitted for the *home occupation*, other than that which is normally generated for a *one-family dwelling* unit in a residential area, both as to volume and type of vehicles.

(f) No *home occupation* shall be permitted which is injurious or a nuisance to the general character of the residential *district* or which creates a congested or otherwise hazardous traffic or parking condition.

(g) Any *uses* inconsistent with the *home occupation* provisions of this Zoning Ordinance shall be permitted to continue, but only until there is any change in the ownership of the land so used from and after the effective date of this section.

(h) Any *uses* inconsistent with the *home occupation* provisions of this Zoning Ordinance shall have one (1) year from and after the effective date hereof to cease and desist or to comply with this section.

ATTACHMENT 5

nuisance due to noise, vibration, glare, fumes, odor, and do not create electrical interference.

9. Road side stands, or other small scale sales of site originating produce or firewood, except those activities that are clearly incidental.

10. Gunsmithing, exclusive of the manufacturing of ammunition and sale of firearms.

11. Personal services, such as hairdresser, licensed massage therapist, and tax preparation.

12. Other substantially similar home occupations as determined by the Planning Commission Subcommittee or Planning Commission.

An applicant may request approval to engage in a home occupation not specifically provided for above subject to Section 21.14.D below:

B. Required Standards. Home occupations shall be permitted following a determination by the Planning Commission that the proposed occupation complies with all of the following standards.

1. Dwelling Appearance. There shall be no visible change to the outside appearance of the dwelling.

2. Traffic Impacts. Traffic, parking, sewage, trash or garbage storage and removal, and water use shall not be noticeably different from impacts associated with a typical home in the neighborhood.

3. General Nuisance Factors. The use shall not generate noise, vibration, glare, fumes, toxic substance, odors, or electrical interference at levels greater than normally associated with a single-family home.

4. Storage. Outside storage or display of products related to the home occupation is prohibited.

5. Signs. Signs related to a home occupation may be permitted at the discretion of the Planning Commission or Planning Commission subcommittee after review.

6. Nuisance Prohibited. The home occupation shall not become a nuisance in any manner including but not limited to items 2 and 3 above.

7. Outside Employees Prohibited. Only a resident of the dwelling may be employed or involved in the home occupation. No person outside of the residence shall participate in the home occupation.

8. **Home Occupation Space Limits.** A home occupation shall not occupy more than ten (10) percent of the usable floor area of the dwelling. Attached garages, detached garages and other detached accessory buildings may be utilized for storage, assembly/construction, or general exercise of the craft, hobby, or business the home occupation is based upon, however such uses shall not occupy the entire structure and shall be an accessory or supplemental use of the structure and shall not be used as the primary functioning business location for home occupations.

9. **Time Limits** Visits by patrons and other activities exclusive of deliveries shall occur only between 8:00 a.m. and 8:00 p.m.

C. **Prohibited Home Occupations.** The following are prohibited home occupations:

1. Private clubs.

2. Repair shops which may create a nuisance due to noise, vibration, glare, fumes, odors or electrical interference.

3. Restaurants.

4. Stables or kennels as defined in Article 2.

5. Tourist homes except Bed and Breakfast operations permitted in the FR Farming Residential and RE Rural Estate Districts.

6. Repair, maintenance, painting and storage of automobiles, machinery, trucks, boats, recreational vehicles and similar items.

D. **Special Land Uses.** Any proposed home occupation that is neither specifically permitted above, nor specifically prohibited above, shall be considered a Special Land Use and be granted or denied upon consideration of the "Required Conditions" contained in Section 21.14.B above and the standards specified in Article 22.

E. **Owner Occupation.** Home occupation permits shall be limited to the applicant who legally resides in the residence.

F. **Business Address.** The use of a home address as a business address for the sole purpose of meeting state or federal licensing requirements, with no business activity conducted at the home, is not considered to be a home occupation and is exempt from the provisions of this section.

ATTACHMENT 6

STATE OF MICHIGAN
IN THE 44th CIRCUIT COURT FOR THE COUNTY OF LIVINGSTON

HOWELL TOWNSHIP,

Plaintiff/Appellant,

v

SHANE RAY FAGAN,

Defendant/Appellee.
_____/

Circuit Court Case No. 25-398-AV

District Court Case No. HOMV0158 ON

HON. L. SUZANNE GEDDIS

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OPINION AND ORDER REVERSING IN-PART THE DISTRICT COURT'S RULING

At a session of said Court held in the Courthouse,
City of Howell, County of Livingston,
State of Michigan, on the __ day of _____, 2025.

PRESENT: HONORABLE SUZANNE GEDDIS
CIRCUIT COURT JUDGE

This matter came before the Court on Howell Township's claim of appeal filed on April 15, 2025, arising from the District Court's oral ruling and judgment issued on March 26, 2025, finding Defendant Shane Fagan responsible for violating the Howell Township Zoning Ordinance. Having now reviewed and considered all filings and otherwise being fully advised in the premises,

and for the reasons stated on the record, the Court issues this Opinion and Order Reversing In-Part the District Court's Ruling:

IT IS HEREBY ORDERED:

1. The District Court erred as a matter of law in determining that Defendant's commercial speed shop operation constituted a permissible "home occupation" under Section 2.02 of the Howell Township Zoning Ordinance. The District Court's legal conclusion is **REVERSED**, and this Court holds that:

    a. Speed shops are not uses "customarily conducted entirely within the dwelling" as required by Section 2.02, as they are industrial operations not customarily conducted in residential living quarters and definitionally excluded from dwellings; and

    The District Court's factual finding that the operation "did cause unreasonable noise that did affect the welfare of the neighbors" definitively disqualifies the operation under Section 2.02's explicit prohibition on uses that "endanger the health, safety, and welfare of any other persons residing in that area by reasons of noise."

2. The District Court erred as a matter of law in determining that Defendant's 504-square-foot garage operation did not violate Section 14.19(B)'s floor area limitation for accessory structures. The District Court's legal conclusion is **REVERSED**, and this Court holds that Defendant's accessory structure mathematically constitutes 35% of his 1,440-square-foot principal structure's gross floor area, which plainly exceeds the strict 25% limitation for accessory structures used for home occupations.

3. The District Court erred as a matter of law in determining that Section 18.03's off-street loading requirements do not apply to "home occupations." The District Court's legal conclusion is **REVERSED**, and this Court holds that Section 18.03's requirements apply to "home occupations" that "customarily receive or distribute material or merchandise" by vehicle, as the ordinance exempts only "dwelling unit structures" used for residential purposes, not commercial operations conducted within residential areas.
4. All other aspects of the District Court's judgment shall remain unchanged.

IT IS SO ORDERED.

THIS IS A FINAL ORDER AND DOES NOT CLOSE THE CASE.

Dated: _____

_____
Hon. L. Suzanne Geddis

Order Prepared By:
David Szymanski (P86525)
Attorney for Plaintiff
Fahey Schultz Burzych Rhodes
4151 Okemos Road
Okemos, MI 48864
(517)381-0100

9A

REVENUE AND EXPENDITURE REPORT FOR HOWELL TOWNSHIP					
BALANCE AS OF 6/30/2025					
% FISCAL YEAR COMPLETED : 100.00					
		2024-2025	BALANCE	% BDGT	
GL NUMBER	DESCRIPTION	BUDGET	06/30/2025	USED	COMMENTS
FUND: 101 GENERAL FUND					
REVENUES					
101-000-402.000	GEN FUND PROPERTY TAXES	423,000.00	426,862.02	100.91	
101-000-403.000	GEN FUND ACT 7 TAXES	40,000.00	43,364.75	108.41	**Final Year**
101-000-420.000	GEN FUND DELINQ PERSONAL TAXES	2,000.00	8,520.30	426.02	
101-000-452.000	GEN FUND RIGHT OF WAY FEES	5,000.00	15,835.62	316.71	
101-000-476.000	GEN FUND LICENSE & PERMIT FEES	12,000.00	11,785.00	98.21	
101-000-476.001	GEN FUND CABLE TV FRANCHISE FEES	77,500.00	61,851.93	79.81	**Declining Yr over Yr**
101-000-476.002	GEN FUND TRAILER FEES	1,500.00	1,966.00	131.07	
101-000-476.003	GEN FUND DOG LICENSE FEES	50.00	57.00	114.00	
101-000-573.000	GEN FUND LOCAL COMMUNITY SHARING	100,000.00	102,723.74	102.72	
101-000-574.000	GEN FUND STATE REVENUE SHARING	865,000.00	850,949.00	98.38	
101-000-607.000	GEN FUND COLLECTION FEE/SCHOOLS INCOME	10,500.00	10,752.00	102.40	
101-000-607.001	GEN FUND ADMIN FEES	148,000.00	160,206.93	108.25	
101-000-608.000	GEN FUND ZONING FEES INCOME	17,500.00	26,650.00	152.29	
101-000-609.000	GEN FUND ZBA FEES INCOME	4,000.00	1,600.00	40.00	
101-000-610.000	GEN FUND LAND DIVISION FEES INCOME	2,500.00	1,750.00	70.00	
101-000-614.000	GEN FUND PRE-CONFERENCE ZONING INCOME	500.00	492.50	98.50	
101-000-641.000	GEN FUND GRAVE OPENING FEES	1,000.00	0.00	0.00	
101-000-642.000	CEMETERY LOTS FEES	1,000.00	600.00	60.00	
101-000-652.000	GEN FUND PARKING VIOLATION FEES	100.00	0.00	0.00	
101-000-657.000	GEN FUND MUNICIPAL CIVIL INFRACTION FEE	100.00	207.90	207.90	
101-000-665.000	GEN FUND INTEREST INCOME	30,000.00	51,212.99	170.71	**CD Interest**
101-000-675.000	GEN FUND OTHER REVENUE	250.00	1,729.85	691.94	
TOTAL REVENUES		1,741,500.00	1,779,117.53	102.16	
EXPENDITURES					
Department: 101 TOWNSHIP BOARD					
101-101-703.000	TWP BOARD SALARY	28,115.00	24,668.16	87.74	
101-101-704.000	TOWNSHIP BOARD PER DIEM EXPENSE	200.00	0.00	0.00	
101-101-705.000	AFFILIATE BOARD PER DIEM EXPENSE	2,400.00	1,890.00	78.75	
101-101-900.000	TWP BOARD PRINT & PUBL EXPENSE	2,500.00	1,685.65	67.43	
Total Dept 101 - TOWNSHIP BOARD		33,215.00	28,243.81	85.03	
Department: 171 SUPERVISOR					
101-171-703.000	SUPERVISOR SALARY	37,550.00	37,546.60	99.99	
101-171-703.001	SUPERVISOR DEPUTY WAGES	16,200.00	16,096.96	99.36	
Total Dept 171 - SUPERVISOR		53,750.00	53,643.56	99.80	
Department: 215 CLERK					
101-215-703.000	CLERK SALARY	37,550.00	37,466.60	99.78	
101-215-703.001	CLERK DEPUTY WAGES	30,605.00	31,959.43	104.43	**Budget Amendment #1**
101-215-703.004	CLERK ACCOUNTING SALARY	51,390.00	51,151.45	99.54	
101-215-720.000	CLERK EDUCATION EXPENSE	3,000.00	2,821.00	94.03	
101-215-860.000	CLERK MILEAGE & EXPENSES	500.00	361.78	72.36	
101-215-865.000	CLERK CONFERENCE EXPENSE	130.00	0.00	0.00	
101-215-957.000	CLERK DUES & SUBSCRIPTION EXPENSE	500.00	375.00	75.00	
Total Dept 215 - CLERK		123,675.00	124,135.26	100.37	
Department: 247 BOARD OF REVIEW					
101-247-703.000	BOARD OF REVIEW SALARY	3,000.00	2,880.00	96.00	
101-247-720.000	BOARD OF REVIEW EDUCATION EXPENSE	500.00	0.00	0.00	
101-247-900.000	BOARD OF REVIEW PRINTING & PUB EXP	700.00	384.40	54.91	
101-247-964.000	BOARD OF REVIEW REFUNDS & CHARGEBACKS	2,000.00	84.90	4.25	
Total Dept 247 - BOARD OF REVIEW		6,200.00	3,349.30	54.02	
Department: 253 TREASURER					
101-253-703.000	TREASURER SALARY	37,550.00	37,546.60	99.99	

GL NUMBER	DESCRIPTION	2024-2025 BUDGET	BALANCE 06/30/2025	% BDGT USED	COMMENTS
101-253-703.001	TREASURER DEPUTY WAGES	52,206.00	47,810.59	91.58	
101-253-720.000	TREASURER EDUCATION EXPENSE	1,150.00	1,117.99	97.22	
101-253-726.001	TREASURER POSTAGE	8,000.00	6,969.04	87.11	
101-253-801.001	TREASURER LEGAL EXPENSE	9,000.00	689.00	7.66	
101-253-860.000	TREASURER MILEAGE & EXPENSES	1,500.00	1,158.97	77.26	
101-253-865.000	TREASURER CONFERENCE EXPENSE	150.00	0.00	0.00	
101-253-900.000	TREASURER PRINT & PUBL EXPENSE	130.00	21.61	16.62	
101-253-957.000	TREASURER DUES & SUBSCRIPTION EXPENSE	100.00	99.00	99.00	
Total Dept 253 - TREASURER		109,786.00	95,412.80	86.91	
Department: 257 ASSESSING					
101-257-703.000	ASSESSING ASSESSOR WAGES	84,303.00	83,775.56	99.37	
101-257-703.001	ASSESSING CONTRACT LABOR	3,000.00	0.00	0.00	
101-257-703.004	ASSESSING DEPUTY WAGES	50,230.00	50,163.27	99.87	
101-257-720.000	ASSESSING EDUCATION EXPENSE	1,000.00	391.51	39.15	
101-257-726.000	ASSESSING POSTAGE EXPENSE	4,500.00	3,150.74	70.02	
101-257-727.000	ASSESSING SUPPLIES EXPENSE	19,300.00	19,176.37	99.36	**Annual Imagery**
101-257-801.000	ASSESSING LEGAL EXPENSE	1,000.00	0.00	0.00	
101-257-860.000	ASSESSING MILEAGE & EXPENSES	1,000.00	448.96	44.90	
101-257-865.000	ASSESSING CONFERENCE EXPENSE	500.00	0.00	0.00	
101-257-957.000	ASSESSING DUES & SUBSCRIPTION EXPENSE	700.00	342.38	48.91	
Total Dept 257 - ASSESSING		165,533.00	157,448.79	95.12	
Department: 262 ELECTIONS					
101-262-703.000	ELECTION WORKERS WAGES	41,700.00	7,681.71	18.42	
101-262-707.000	ELECTION CLERK WAGES	30,605.00	24,921.89	81.43	
101-262-720.000	ELECTION EDUCATION EXPENSE	1,000.00	0.00	0.00	
101-262-726.000	ELECTION POSTAGE EXPENSE	6,000.00	0.00	0.00	
101-262-727.000	ELECTION SUPPLIES EXPENSE	8,000.00	2,717.65	33.97	
101-262-860.000	ELECTION MILEAGE & EXPENSES	2,500.00	303.43	12.14	
101-262-900.000	ELECTION PRINTING & PUBL EXPENSE	1,000.00	15.74	1.57	
101-262-930.000	ELECTION EQUIP REPAIR EXPENSE	15,000.00	1,476.01	9.84	
Total Dept 262 - ELECTIONS		105,805.00	37,116.43	35.08	
Department: 265 TOWNSHIP HALL					
101-265-707.000	TWP HALL RECEPTIONIST WAGES	50,000.00	44,368.86	88.74	
101-265-708.000	TWP HALL UTILITY DIRECTOR WAGES	22,000.00	18,951.52	86.14	
101-265-720.000	TWP HALL EDUCATION EXPENSE	1,000.00	430.00	43.00	
101-265-721.000	TWP HALL LIFE INSURANCE EXPENSE	2,800.00	2,472.90	88.32	
101-265-721.001	TWP HALL HEALTH INSURANCE EXPENSE	50,000.00	47,264.35	94.53	
101-265-722.000	TWP HALL RETIREMENT EXPENSE	89,000.00	88,267.57	99.18	
101-265-725.000	TWP HALL FICA/MEDICARE EXPENSE	46,000.00	45,793.59	99.55	
101-265-726.000	TWP HALL POSTAGE EXPENSE	2,300.00	543.36	23.62	
101-265-727.000	TWP HALL KITCHEN/BATH SUPPLIES EXPENSE	3,000.00	992.62	33.09	
101-265-727.001	TWP HALL OFFICE SUPPLIES EXPENSE	10,000.00	6,762.76	67.63	
101-265-728.000	TWP HALL COMPUTER SUPPORT EXPENSE	40,000.00	34,197.62	85.49	
101-265-728.001	TWP HALL IT SUPPORT EXPENSE	20,000.00	3,113.00	15.57	
101-265-775.000	TWP HALL OFFICE CLEANING EXPENSE	6,000.00	5,208.87	86.81	
101-265-776.000	TWP HALL SEPTIC FIELD EXPENSE	1,000.00	0.00	0.00	
101-265-801.000	TWP HALL GROUNDS CONTRACTED SVCS EXP	500.00	0.00	0.00	
101-265-801.001	TWP HALL LEGAL EXPENSE	5,000.00	2,173.50	43.47	
101-265-801.009	TWP HALL FINANCIAL AUDIT	13,500.00	13,350.00	98.89	
101-265-822.000	TWP HALL INSURANCE & BOND EXPENSE	18,500.00	18,346.00	99.17	
101-265-850.000	TWP HALL TELEPHONE EXPENSE	6,000.00	5,255.51	87.59	
101-265-851.000	TWP HALL WEB SITE EXPENSE	7,500.00	5,933.75	79.12	
101-265-860.000	TWP HALL MILEAGE & EXPENSES	200.00	0.00	0.00	
101-265-900.000	TWP HALL PRINT & PUBL EXPENSE	200.00	0.00	0.00	
101-265-920.000	TWP HALL ELECTRICITY EXPENSE	7,500.00	6,082.01	81.09	
101-265-922.000	TWP HALL NATURAL GAS EXPENSE	6,500.00	5,073.56	78.05	
101-265-930.000	TWP HALL GROUNDS EQUIP REPAIR EXPENSE	10,000.00	3,771.84	37.72	
101-265-930.001	TWP HALL OFFICE EQUIPMENT & REPAIR	6,000.00	2,375.55	39.59	

GL NUMBER	DESCRIPTION	2024-2025 BUDGET	BALANCE 06/30/2025	% BDGT USED	COMMENTS
101-265-931.000	TWP HALL GROUNDS CARE EXPENSE	8,000.00	4,075.00	50.94	
101-265-932.000	TWP HALL SNOW REMOVAL EXPENSE	10,000.00	0.00	0.00	
101-265-957.000	TWP HALL DUES & SUBSCRIPTION EXPENSE	8,000.00	7,537.54	94.22	
Total Dept 265 - TOWNSHIP HALL		450,500.00	372,341.28	82.65	
Department: 268 TOWNSHIP AT LARGE					
101-268-801.001	TWP AT LARGE LEGAL EXPENSE	215,000.00	212,036.59	98.62	**See Breakdown**
101-268-882.000	TWP AT LARGE SPRING CLEAN UP EXPENSE	5,000.00	4,514.99	90.30	**Fall & Spring**
101-268-883.000	TWP AT LARGE ROAD SIDE PICKUP EXPENSE	1,200.00	45.00	3.75	
101-268-920.000	TWP AT LARGE STREETLIGHT EXPENSE	9,500.00	8,703.78	91.62	
101-268-974.000	TWP AT LARGE DRAIN EXPENSE	55,000.00	48,203.86	87.64	
101-268-977.000	TWP AT LARGE CAPITAL OUTLAY EXPENSE	60,000.00	13,489.00	22.48	**Mics & Speakers**
Total Dept 268 - TOWNSHIP AT LARGE		345,700.00	286,993.22	83.02	
Department: 276 CEMETERY					
101-276-931.000	CEMETERY GROUNDS CARE & MAINT EXPENSE	7,500.00	5,850.00	78.00	
Total Dept 276 - CEMETERY		7,500.00	5,850.00	78.00	
Department: 447 ENGINEERING					
101-447-801.000	ENGINEERING CONTRACTED SVCS EXPENSE	25,000.00	23,282.75	93.13	
Total Dept 447 - ENGINEERING		25,000.00	23,282.75	93.13	
Department: 701 PLANNING					
101-701-703.000	PLANNING COMMISSION WAGES	7,000.00	6,240.00	89.14	
101-701-720.000	PLANNING EDUCATION EXPENSE	2,000.00	1,585.00	79.25	
101-701-726.000	PLANNING POSTAGE EXPENSE	1,000.00	230.79	23.08	
101-701-801.000	PLANNING CONTRACTED PLANNER EXPENSE	20,000.00	25,975.02	129.88	**Budget Amendment #2**
101-701-801.001	PLANNING LEGAL EXPENSE	2,000.00	370.50	18.53	
101-701-900.000	PLANNING PRINTING & PUBL EXPENSE	2,000.00	1,967.34	98.37	
101-701-957.000	PLANNING DUES & SUBSCRIPTION EXPENSE	1,000.00	585.00	58.50	
Total Dept 701 - PLANNING		35,000.00	36,953.65	105.58	
Department: 702 ZONING					
101-702-703.000	ZONING ADMINISTRATOR WAGES	56,280.00	56,134.29	99.74	
101-702-703.002	ZONING DEPUTY WAGES	23,520.00	20,794.50	88.41	
101-702-703.005	ZONING CODE ENFORCEMENT SERVICE EXPENSE	24,000.00	2,520.00	10.50	
101-702-860.000	ZONING MILEAGE & EXPENSES	2,500.00	2,277.67	91.11	
101-702-900.000	ZONING PRINTING & PUBL EXPENSE	400.00	72.92	18.23	
Total Dept 702 - ZONING		106,700.00	81,799.38	76.66	
Department: 703 ZONING BOARD OF APPEA					
101-703-703.000	BOARD OF APPEALS WAGES	4,320.00	1,360.00	31.48	
101-703-720.000	BOARD OF APPEALS EDUCATION EXPENSE	1,000.00	700.00	70.00	
101-703-900.000	BOARD OF APPEALS PRINTING & PUBL EXPENSE	1,000.00	638.02	63.80	
Total Dept 703 - ZONING BOARD OF APPE		6,320.00	2,698.02	42.69	
Department: 966 TRANSFER OUT					
101-966-999.000	GEN FUND TRANSFER OUT-PARKS & REC	180,000.00	180,000.00	100.00	
Total Dept 966 - TRANSFER OUT		180,000.00	180,000.00	100.00	
TOTAL EXPENDITURES		1,754,684.00	1,489,268.25	84.87	
TOTAL REVENUES		1,741,500.00	1,779,117.53	102.16	
TOTAL EXPENDITURES		1,754,684.00	1,489,268.25	84.87	
NET OF REVENUES & EXPENDITURES:		(13,184.00)	289,849.28		

GL NUMBER	DESCRIPTION	2024-2025 BUDGET	BALANCE 06/30/2025	% BDGT USED	COMMENTS
Fund: 204 ROAD FUND					
REVENUES					
Department: 000 OTHER					
204-000-402.000	ROAD FUND PROPERTY TAX INCOME	450,000.00	460,230.97	102.27	
204-000-665.000	ROAD FUND INTEREST INCOME	5,000.00	6,555.73	131.11	
TOTAL REVENUES		455,000.00	466,786.70	102.59	
EXPENDITURES					
204-000-801.000	ROAD IMPROVEMENT EXPENSE	369,000.00	300,197.51	81.35	**Layton & Bowen**
204-000-802.000	ROAD CHLORIDE EXPENSE	85,000.00	36,701.40	43.18	
Total Dept 000 - OTHER		454,000.00	336,898.91	74.21	
Department: 547 CHARGEBACKS					
204-547-978.000	ROAD FUND CHARGEBACK EXPENSE	1,000.00	0.00	0.00	
Total Dept 547 - CHARGEBACKS		1,000.00	0.00	0.00	
TOTAL EXPENDITURES		455,000.00	336,898.91	74.04	
TOTAL REVENUES		455,000.00	466,786.70	102.59	
TOTAL EXPENDITURES		455,000.00	336,898.91	74.04	
NET OF REVENUES & EXPENDITURES:		0.00	129,887.79		
Fund: 208 PARK/REC FUND					
REVENUES					
Department: 000 OTHER					
208-000-665.000	REC FUND INTEREST INCOME	3,000.00	26,918.61	897.29	
208-000-699.000	REC FUND OPERATING TRANSFER IN	180,000.00	180,000.00	100.00	
Total Dept 000 - OTHER		183,000.00	206,918.61	113.07	
TOTAL REVENUES		183,000.00	206,918.61	113.07	
EXPENDITURES					
208-000-801.000	REC FUND CONTRACTED SERVICES EXPENSE	130,000.00	78,561.68	60.43	**ASTI Study I & II**
Total Dept 000 - OTHER		130,000.00	78,561.68	60.43	**$43K Total**
TOTAL EXPENDITURES		130,000.00	78,561.68	60.43	
TOTAL REVENUES		183,000.00	206,918.61	113.07	
TOTAL EXPENDITURES		130,000.00	78,561.68	60.43	
NET OF REVENUES & EXPENDITURES:		53,000.00	128,356.93		

GL NUMBER	DESCRIPTION	2024-2025 BUDGET	BALANCE 06/30/2025	% BDGT USED	COMMENTS
Fund: 592 SWR/WTR					
REVENUES					
592-000-663.011	DEPOSITS FOR LAND SALE #11	0.00	118,240.00	100.00	**Bowen Road**
Total Dept 000 - OTHER		0.00	118,240.00	100.00	
Department: 536 SEWER/WATER					
592-536-665.000	SEWER/WATER INTEREST INCOME	10,000.00	26,190.04	261.90	
592-536-665.007	SPEC ASSESS INTEREST INCOME-SEWER #7	844.00	829.10	98.23	
592-536-665.008	SPEC ASSESS INTEREST INCOME-SEWER 8	6,555.00	6,521.34	99.49	**Final Year**
592-536-665.009	SPEC ASSESS INTEREST INCOME-WATER 8	3,048.00	3,030.31	99.42	**Final Year**
592-536-665.011	SPEC ASSESS INTEREST INCOME-SEWER 11	9,015.00	9,015.46	100.01	
592-536-665.012	SPEC ASSESS INTEREST INCOME-WATER 11	2,628.00	2,628.71	100.03	
592-536-665.014	SPEC ASSESS INTEREST INCOME-SEWER CONNEC	87.00	87.50	100.57	
592-536-665.015	SPEC ASSESS INTEREST INCOME-WATER CONNEC	87.00	87.50	100.57	
592-536-665.020	SEWER FARM LAND RENTAL INCOME	12,500.00	24,325.00	194.60	
592-536-671.000	SEWER CONNECTION FEE INCOME	0.00	226,375.96	100.00	**Burkhart Ridge**
592-536-671.001	WATER CONNECTION FEE INCOME	0.00	215,819.97	100.00	**Burkhart Ridge**
Total Dept 536 - SEWER/WATER		44,764.00	514,910.89	1,150.28	
Department: 537 CHARGES FOR SERVICES					
592-537-477.000	UTILITY BILLING SEWER USER FEES INCOME	950,000.00	935,679.58	98.49	
592-537-477.002	UTILITY BILLING WATER USER FEES INCOME	1,150,000.00	1,048,239.78	91.15	
592-537-694.000	UTILITY BILLING PENALTY SEWER USER	15,000.00	23,564.55	157.10	
592-537-694.002	UTILITY BILLING PENALTY & INT SEWER INC	15,000.00	24,908.63	166.06	
Total Dept 537 - CHARGES FOR SERVICES		2,130,000.00	2,032,392.54	95.42	
TOTAL REVENUES		2,174,764.00	2,665,543.43	122.57	
EXPENDITURES					
Department: 536 SEWER/WATER					
592-536-775.000	SEWER FUND REPAIR & IMPROVE EXPENSE	15,000.00	0.00	0.00	
592-536-801.001	SEWER/WATER LAWSUIT SETTLEMENT EXPENSE	390,878.00	390,878.00	100.00	**Burkhart Ridge**
592-536-801.002	SEWER FUND AUDITS/STUDIES EXPENSE	10,000.00	1,800.00	18.00	
592-536-972.000	SEWER/WATER CAPITAL OUTLAY EXPENSE	400,000.00	307,822.89	76.96	**Clarifier Project**
Total Dept 536 - SEWER/WATER		815,878.00	700,500.89	85.86	
Department: 537 CHARGES FOR SERVICES					
592-537-726.000	UTILITY BILLING POSTAGE EXPENSE	4,500.00	3,843.65	85.41	
592-537-728.000	UTILITY BILLING SOFTWARE SUPPORT EXPENSE	1,000.00	1,000.00	100.00	
592-537-801.001	UTILITY BILLING LEGAL EXPENSE	1,000.00	0.00	0.00	
592-537-803.000	UTILITY BILLING WATER EXPENSE	800,000.00	676,322.25	84.54	
Total Dept 537 - CHARGES FOR SERVICES		806,500.00	681,165.90	84.46	
Department: 538 WWTP					
592-538-729.000	WWTP CHEMICALS EXPENSE	40,000.00	36,099.98	90.25	
592-538-801.000	WWTP CONTRACTED SERVICES EXPENSE	365,000.00	343,828.28	94.20	
592-538-801.001	WWTP VACTOR TRUCK EXPENSE	30,000.00	29,184.88	97.28	
592-538-801.002	WWTP STATION CLEANING EXPENSE	5,000.00	1,598.53	31.97	
592-538-801.003	WWTP MANHOLE CLEANING EXPENSE	5,000.00	458.92	9.18	
592-538-801.004	WWTP SEWER LINE CLEANING EXPENSE	5,000.00	0.00	0.00	
592-538-801.005	WWTP LABORATORY FEES EXPENSE	12,500.00	10,770.86	86.17	
592-538-801.006	WWTP GIS FEES EXPENSE	5,000.00	1,650.00	33.00	
592-538-822.000	WWTP INSURANCE & BOND EXPENSE	20,000.00	19,953.00	99.77	
592-538-850.000	WWTP TELEPHONE EXPENSE	4,500.00	2,917.40	64.83	
592-538-851.000	WWTP SCADA MONITORING EXPENSE	8,500.00	3,450.00	40.59	
592-538-920.000	WWTP ELECTRICITY EXPENSE	115,000.00	112,327.85	97.68	**Blower - Biolac**
592-538-922.000	WWTP NATURAL GAS EXPENSE	5,000.00	3,092.79	61.86	
592-538-930.000	WWTP PLANT EQUIPMENT REPAIR EXPENSE	35,000.00	21,440.99	61.26	
592-538-930.001	WWTP COLLECTION SYSTEM REPAIR EXPENSE	35,000.00	17,107.25	48.88	
592-538-956.000	WWTP MISCELLANEOUS EXPENSE	13,000.00	12,267.69	94.37	

GL NUMBER	DESCRIPTION	2024-2025 BUDGET	BALANCE 06/30/2025	% BDGT USED	COMMENTS
592-538-962.000	WWTP MISS DIG FEES EXPENSE	3,500.00	978.62	27.96	
592-538-966.000	WWTP STATE OF MICHIGAN EXPENSE	3,500.00	1,950.00	55.71	
592-538-969.001	WWTP BIOSOLIDS REMOVAL EXPENSE	35,000.00	33,507.00	95.73	
Total Dept 538 - WWTP		745,500.00	652,584.04	87.54	
TOTAL EXPENDITURES		2,367,878.00	2,034,250.83	85.91	
TOTAL REVENUES		2,174,764.00	2,665,543.43	122.57	
TOTAL EXPENDITURES		2,367,878.00	2,034,250.83	85.91	
NET OF REVENUES & EXPENDITURES:		(193,114.00)	631,292.60		
TOTAL REVENUES - ALL FUNDS		4,598,061.00	5,268,306.37	114.58	
TOTAL EXPENDITURES - ALL FUNDS		4,817,562.00	4,088,594.19	84.87	
NET OF REVENUES & EXPENDITURES:		(219,501.00)	1,179,712.18		
BUDGET AMENDMENT #1		**2024-2025 BUDGET**	**BALANCE 06/30/2025**	**% BDGT USED**	
101-215-703.001	**CLERK DEPUTY WAGES**	**30,605.00**	**31,959.43**	**104.43**	**OVER BUDGET**
101-262-707.000	**ELECTION CLERK WAGES**	**30,605.00**	**24,921.89**	**81.43**	**UNDER BUDGET**
***Increase CLERK DEPUTY WAGES FROM $30,605 TO $32,105 AND DECREASE ELECTION CLERK WAGES FROM $30,605 TO $19,105.**					
TO ACCOUNT FOR ACTUAL WORKLOAD.					
BUDGET AMENDMENT #2		**2024-2025 BUDGET**	**BALANCE 06/30/2025**	**% BDGT USED**	
101-701-801.000	**PLANNING CONTRACTED PLANNER EXPENSE**	**20,000.00**	**25,975.02**	**129.88**	**OVER BUDGET**
***Increase PLANNING CONTRACTED PLANNER EXPENSE FROM $20,000 TO $26,000 TO ACCOUNT FOR RETAINER AGREEMENT.**					

FISCAL YTD LEGAL FEES

OAKLAND TACTICAL

09/09/2024	$ 4,935.00
10/03/2024	11,458.00
11/05/2024	15,606.50
12/04/2024	2,937.00
TOTAL	**$34,936.50**

BURKHART ROAD ASSOCIATES

08/15/2024	$ 55.00
09/09/2024	1,108.50
10/03/2024	275.00
11/05/2024	1,083.00
12/04/2024	598.50
12/04/2024	3,083.00
01/08/2025	3,676.50
02/11/2025	275.00
04/01/2025	137.50
05/01/2025	852.50
06/04/2025	797.50
TOTAL	**$11,942.00**

HOWELL-MASON LITIGATION/LLC

08/15/2024	$ 14,696.66
08/15/2024	831.50
09/09/2024	12,551.95
09/09/2024	832.50
10/03/2024	784.00
10/03/2024	2,363.50
11/05/2024	1,635.50
11/05/2024	4,081.50
12/04/2024	5,826.00
12/04/2024	5,689.50
01/08/2025	429.00
01/08/2025	256.50
02/11/2025	20,006.00
02/11/2025	408.00
04/01/2025	348.00
05/01/2025	72.00
06/04/2025	18,126.16
06/30/2025	384.00
TOTAL	**$89,322.27**

	WELLHEAD PROTECTION	ADU ORDINANCE	FAGAN VIOLATION
8/15/2024	$0.00	$0.00	0.00
09/09/2024	0.00	0.00	0.00
11/05/2024	6,523.50	0.00	57.00
12/04/2024	3,187.00	6,353.50	24.00
01/08/2025	15,573.00	1,032.50	228.00
2/11/2025	2,154.00	0.00	8,421.50
3/3/2025	85.50	0.00	7,615.50
4/1/2025	0.00	0.00	2,345.00
5/1/2025	0.00	0.00	0.00
6/2/2025	0.00	0.00	6,939.30
6/30/2025	0.00	0.00	2,430.02
TOTAL	**$27,523.00**	**$7,386.00**	**$28,060.32**

Cash Flow Using Budgeted Revenue

Sewer & Water Fund Cash Flow

	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
Beg. Cash Balance	$2,102,396	$2,203,400	$2,046,682	$2,266,000	$1,851,852	$2,062,703	$2,248,508	$2,365,519	$2,418,084	$2,676,182	$2,825,862	$2,413,696
Proj/Actual Net Rev												
592 Sewer/Water	$101,004	($156,717)	$219,318	($414,148)	$210,851	$185,805	$117,011	$52,565	$258,098	$149,680	($412,165)	$180,349
Total Revenue	$101,004	($156,717)	$219,318	($414,148)	$210,851	$185,805	$117,011	$52,565	$258,098	$149,680	($412,165)	$180,349
General Fund Payback												$633,321
Total Payments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$633,321
Ending Cash Balance	$2,203,400	$2,046,682	$2,266,000	$1,851,852	$2,062,703	$2,248,508	$2,365,519	$2,418,084	$2,676,182	$2,825,862	$2,413,696	$1,960,724
CD Bal $300,000												

General Fund Cash Flow

	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
Beginning Balance	$4,406,309	$4,385,976	$3,103,071	$3,278,884	$3,605,034	$3,658,470	$3,590,754	$3,703,705	$3,813,486	$3,808,030	$3,729,837	$3,885,035
Proj/Actual Net Rev	($20,332)	($1,282,906)	$175,813	$326,150	$53,436	($67,716)	$112,951	$109,781	($5,456)	($78,193)	$155,198	$562,552
Ending Cash Balance	$4,385,976	$3,103,071	$3,278,884	$3,605,034	$3,658,470	$3,590,754	$3,703,705	$3,813,486	$3,808,030	$3,729,837	$3,885,035	$4,447,587
CD Bal $2,600,000												

Road Fund Cash Flow

	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
Beginning Balance	$688,969	$660,969	$645,626	$519,629	$329,224	$329,450	$351,294	$641,315	$758,550	$766,864	$767,535	$789,335
Proj/Actual Net Rev	($28,001)	($15,343)	($125,996)	($190,405)	$226	$21,844	$290,022	$117,234	$8,315	$670	$21,800	$4,276
Ending Cash Balance	$660,969	$645,626	$519,629	$329,224	$329,450	$351,294	$641,315	$758,550	$766,864	$767,535	$789,335	$793,610
CD Bal $100,000												

Parks & Rec Fund Cash Flow

	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
Beginning Balance	$390,469	$359,745	$1,559,504	$1,559,871	$1,529,109	$1,527,286	$1,528,814	$1,708,684	$1,719,473	$1,720,090	$1,723,428	$1,725,066
Proj/Actual Net Rev	($30,724)	$1,199,759	$366	($30,762)	($1,822)	$1,528	$179,870	$10,788	$618	$3,337	$1,638	($5,326)
Ending Cash Balance	$359,745	$1,559,504	$1,559,871	$1,529,109	$1,527,286	$1,528,814	$1,708,684	$1,719,473	$1,720,090	$1,723,428	$1,725,066	$1,719,740
CD Bal $1,200,000												

GENERAL FUND PAYBACK					
	7/1/2024	7/1/2025	7/1/2026	7/1/2027	7/1/2028
DUE TO GENERAL FUND	$2,010,577	$1,377,255	$977,255	$507,255	$107,255
PROPERTY SALES	($118,240)				
SPECIAL ASSESSMENT	($291,083)	($100,000)	($70,000)		
YEAR END TRANSFER	($223,999)	($300,000)	($400,000)	($400,000)	($107,255)
TOTAL DUE GF @ YEAR END	$1,377,255	$977,255	$507,255	$107,255	$0

Special Assessment 2024 Winter	$278,692.71
Special Assessment Payoffs July - Nov	$789.96
Special Assessment Payoffs Mar - June	$11,599.84
	$291,082.51

PROJECTED

Water Fees Collected	$1,049,653.52
Water Expense	$676,322.00
	$373,331.52
Transfer 60%	**$223,998.91**
Total Transfer	**$633,321.42**

Properties Left to Sell	**Sale Price**	**Special Assess**	
Marr Rd - 73.58 Acres	$1,344,718.00	$979,625.00	
Tooley Rd - 22.83 Acres	$415,140.00	$442,775.00	
Totals	$1,759,858.00	$1,422,400.00	**$3,182,258.00**

9B

August 6, 2025

Dear Township Board:

In 2019, a three-flight contract was approved with EagleView. They provided oblique aerial imagery to Howell Township in 2020, 2022, & 2024. EagleView was chosen previously because they offered the most affordable option and allowed us to pay for one flight over a two-year period. This same agreement is still being offered. All of the original benefits listed on the second page still apply. In addition to those the Township and more importantly the Assessing Department was fortunate to have the imagery when the decision to move to BS&A Cloud was made. We would have had no maps at all without Eagleview as the original GIS no longer worked with the Cloud version of BS&A. Oblique Imagery pays for itself. Without it, Howell Township would be forced to hire a field appraiser. Utilizing EagleView in the Assessing Department is equivalent to paying a field appraiser less than $8 an hour. It is not legal to pay that hourly wage anymore. The imagery can be used by all departments in the Township. It will be available to all Howell Township residents starting with the 2026 flight.

I started with the Township in July of 2012. I became the Assessor of Record in June of 2016. Under my guidance, the Assessment Roll has grown over 80% since 2017. Bringing the imagery to Howell Township is the single best thing I have accomplished in my time here. I was the first Livingston County Assessor to utilize oblique aerial imagery. Other Townships have followed in our footsteps since and now even Livingston County is taking notice. This is a classic example of working smarter, not harder.

In closing, I ask for your approval of the first EagleView quote. The 1inch imagery is far superior to the 3inch imagery. If approved this expense will start with the 2026-2027 fiscal year. As in the past, the imagery is paid for annually in July.

Thank you for your consideration,

Brent Kilpela
Howell Township Assessor

WHY OBLIQUE IMAGERY?

Many of you are familiar with our County GIS, Google Earth or other forms of orthogonal imagery. This is top down or “roof top” imagery that is a single user view. Oblique imagery takes it a step beyond and allows users to view sides of an object. For our purposes this would be all four side views of all structures. Listed below are points of emphasis on why this technology is the future of Assessing fieldwork.

- The State Tax Commission recognizes this as an acceptable form of identifying, listing and valuing property. ***(City of Detroit and Grand Rapids used imagery for entire reappraisal)***
- Effective and efficient way to review properties. The State recommends 20% of the township gets reviewed each year. This imagery helps meet or exceed that recommendation. ***(We review 50% of twp each year)***
- Imagery has change detection technology. This technology will identify changes in property to help maintain accurate assessing records. ***(Second flight image overlaid on the first flight showing changes)***
- All Howell Township departments and residents will have access to the imagery.
- Can be utilized at the Board of Review and used in tax appeals.
- Safe nonintrusive way to review properties. In the past there has been more resistance and hostility during field visits.
- Using imagery is not weather dependent. The fieldwork season can be extended as weather is not a factor.
- Cost effective way to meet the needs of the Township. Costs are more controlled than hiring an employee. The software can be shared among all departments whereas an employee cannot without increasing costs.

These are some of the advantages to making the investment in Oblique Imagery. In summary this method meets the township needs far better than adding staff. The cost is fixed, the productivity is greater, a much safer alternative, and can be shared across all departments and now residents.

Budget Proposal

Proposal for: Howell Township MI
Project Name: MIHowell25 - EV Cloud 1in wCF
Quote Number: Q-62349
Contract Term: 6 Year(s)
Number of Projects: 3

EagleView Rep: Alex Rodd
Phone Number: (419) 680-4073
Email: alex.rodd@eagleview.com
Expiration Date: 7/16/2025

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Quote Summary
Quote Total: USD $ 161250.00
Annual Total : USD $ 26875.00

Project 1 (2026 Spring)

Quantity	Product Name	Description
1	Eagleview Cloud - Software - Plus	Provides an unlimited number of authorized users the ability to login and access the EagleView Cloud software and analytics via the web-based EagleView Cloud platform. This software provides a robust compliment of tools for engaging with imagery as well as additional project and collaboration tools, and access to mobile application. Requires the purchase of an EagleView - Imagery entitlement.
1	EagleView Cloud - Authorized Subdivisions	Extends the ability for a contracting county or non-state consortium of counties the ability to authorize access to their EagleView Cloud organization to any political unit or subdivision located totally or substantially within their boundary.
1	EagleView Cloud - Comprehensive Integration Bundle	Provides activation of integrations between the EagleView Cloud platform and compatible customer environments (including compatible CAMA providers, 911/PSAP, Cityworks, and ESRI/ GIS) and via the Integrated Web Application.
1	EagleView Cloud - Early Access	Provides entitlement to imagery from counties neighboring the imagery AOI as part of EagleView Cloud. Also provides entitlement to Early Access to refreshed imagery captures which allows authorized users to use new imagery immediately following its preliminary processing and quality control checks and prior to its final processing. Early Access imagery will become available incrementally as it is processed, and it will remain available until final, fully processed imagery is made available through other means.
1	EagleView Cloud - Disaster Response Program	Includes access to the EagleView Disaster Response Program which offers flights after an emergency or disaster. Refer to the attached detailed description of the Disaster Response Program.

This quote is non-binding, creates no legal rights, duties or obligations, expressed or implied, on either party, and shall become binding only in the event that Pictometry and Customer enter into a definitive agreement incorporating it. The pricing quoted above does not reflect applicable taxes, which will be reflected in any resulting definitive agreement with Customer. This quote is valid until the date shown above, after which it expires. All Discounts are approximate.

Quantity	Product Name	Description
4	EagleView Cloud - Capture History	Includes access to historical ortho and oblique frame imagery from the EagleView archive. Quantity represents the number of calendar years of archive imagery available in EagleView Cloud.
4,000	EagleView Cloud - ChangeFinder	Building outlines are created from the orthomosaic tiles of a specified newer Pictometry imagery source and classified relative to a specified, older imagery source. EagleView delivers digital building outlines from the newer imagery source and their classification attributes in shapefile and geodatabase formats. Coverage includes only locations specified in a single, customer-provided digital parcel shapefile. Parcels in the specified locations must be generally contiguous. All Pictometry imagery to be used must be licensed or owned by the customer. AccuPLUS or aerotriangulated orthomosaic tiles are used if licensed. Final invoiced amount will be adjusted for the actual quantity of records in the parcel file used for production. Use of older non-Pictometry-sourced imagery requires acceptance in advance.
43	EagleView Cloud - Imagery - 1in	Provides entitlement to the EagleView Platform, a secure hosted infrastructure and access to EagleView enabled workflow, analytics, and high-resolution imagery to dramatically improve efficiency for government agencies. Includes regular refreshes of ortho and oblique imagery at the GSD and frequency specified. Target capture season subject to weather and airspace permissions. Services term commences on date of activation.
1	EagleView Cloud - Physical Delivery - Orthomosaic - 1in	Provides an offline copy of the orthomosaic tiles and mosaics at the GSD specified in the EagleView Cloud once per refresh. Files to be provided in industry standard formats selectable by the customer with delivery made via online download or physically via a hard drive media.

Project 2 (2028 Spring)

Quantity	Product Name	Description
1	Eagleview Cloud - Software - Plus	Provides an unlimited number of authorized users the ability to login and access the EagleView Cloud software and analytics via the web-based EagleView Cloud platform. This software provides a robust compliment of tools for engaging with imagery as well as additional project and collaboration tools, and access to mobile application. Requires the purchase of an EagleView - Imagery entitlement.
1	EagleView Cloud - Authorized Subdivisions	Extends the ability for a contracting county or non-state consortium of counties the ability to authorize access to their EagleView Cloud organization to any political unit or subdivision located totally or substantially within their boundary.
1	EagleView Cloud - Comprehensive Integration Bundle	Provides activation of integrations between the EagleView Cloud platform and compatible customer environments (including compatible CAMA providers, 911/PSAP, Cityworks, and ESRI/ GIS) and via the Integrated Web Application.

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Quantity	Product Name	Description
1	EagleView Cloud - Early Access	Provides entitlement to imagery from counties neighboring the imagery AOI as part of EagleView Cloud. Also provides entitlement to Early Access to refreshed imagery captures which allows authorized users to use new imagery immediately following its preliminary processing and quality control checks and prior to its final processing. Early Access imagery will become available incrementally as it is processed, and it will remain available until final, fully processed imagery is made available through other means.
1	EagleView Cloud - Disaster Response Program	Includes access to the EagleView Disaster Response Program which offers flights after an emergency or disaster. Refer to the attached detailed description of the Disaster Response Program.
4	EagleView Cloud - Capture History	Includes access to historical ortho and oblique frame imagery from the EagleView archive. Quantity represents the number of calendar years of archive imagery available in EagleView Cloud.
4,000	EagleView Cloud - ChangeFinder	Building outlines are created from the orthomosaic tiles of a specified newer Pictometry imagery source and classified relative to a specified, older imagery source. EagleView delivers digital building outlines from the newer imagery source and their classification attributes in shapefile and geodatabase formats. Coverage includes only locations specified in a single, customer-provided digital parcel shapefile. Parcels in the specified locations must be generally contiguous. All Pictometry imagery to be used must be licensed or owned by the customer. AccuPLUS or aerotriangulated orthomosaic tiles are used if licensed. Final invoiced amount will be adjusted for the actual quantity of records in the parcel file used for production. Use of older non-Pictometry-sourced imagery requires acceptance in advance.
43	EagleView Cloud - Imagery - 1in	Provides entitlement to the EagleView Platform, a secure hosted infrastructure and access to EagleView enabled workflow, analytics, and high-resolution imagery to dramatically improve efficiency for government agencies. Includes regular refreshes of ortho and oblique imagery at the GSD and frequency specified. Target capture season subject to weather and airspace permissions. Services term commences on date of activation.
1	EagleView Cloud - Physical Delivery - Orthomosaic - 1in	Provides an offline copy of the orthomosaic tiles and mosaics at the GSD specified in the EagleView Cloud once per refresh. Files to be provided in industry standard formats selectable by the customer with delivery made via online download or physically via a hard drive media.

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Project 3 (2030 Spring)

Quantity	Product Name	Description
1	Eagleview Cloud - Software - Plus	Provides an unlimited number of authorized users the ability to login and access the EagleView Cloud software and analytics via the web-based EagleView Cloud platform. This software provides a robust compliment of tools for engaging with imagery as well as additional project and collaboration tools, and access to mobile application. Requires the purchase of an EagleView - Imagery entitlement.
1	EagleView Cloud - Authorized Subdivisions	Extends the ability for a contracting county or non-state consortium of counties the ability to authorize access to their EagleView Cloud organization to any political unit or subdivision located totally or substantially within their boundary.
1	EagleView Cloud - Comprehensive Integration Bundle	Provides activation of integrations between the EagleView Cloud platform and compatible customer environments (including compatible CAMA providers, 911/PSAP, Cityworks, and ESRI/ GIS) and via the Integrated Web Application.
1	EagleView Cloud - Early Access	Provides entitlement to imagery from counties neighboring the imagery AOI as part of EagleView Cloud. Also provides entitlement to Early Access to refreshed imagery captures which allows authorized users to use new imagery immediately following its preliminary processing and quality control checks and prior to its final processing. Early Access imagery will become available incrementally as it is processed, and it will remain available until final, fully processed imagery is made available through other means.
1	EagleView Cloud - Disaster Response Program	Includes access to the EagleView Disaster Response Program which offers flights after an emergency or disaster. Refer to the attached detailed description of the Disaster Response Program.
4	EagleView Cloud - Capture History	Includes access to historical ortho and oblique frame imagery from the EagleView archive. Quantity represents the number of calendar years of archive imagery available in EagleView Cloud.
4,000	EagleView Cloud - ChangeFinder	Building outlines are created from the orthomosaic tiles of a specified newer Pictometry imagery source and classified relative to a specified, older imagery source. EagleView delivers digital building outlines from the newer imagery source and their classification attributes in shapefile and geodatabase formats. Coverage includes only locations specified in a single, customer-provided digital parcel shapefile. Parcels in the specified locations must be generally contiguous. All Pictometry imagery to be used must be licensed or owned by the customer. AccuPLUS or aerotriangulated orthomosaic tiles are used if licensed. Final invoiced amount will be adjusted for the actual quantity of records in the parcel file used for production. Use of older non-Pictometry-sourced imagery requires acceptance in advance.

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Quantity	Product Name	Description
43	EagleView Cloud - Imagery - 1in	Provides entitlement to the EagleView Platform, a secure hosted infrastructure and access to EagleView enabled workflow, analytics, and high-resolution imagery to dramatically improve efficiency for government agencies. Includes regular refreshes of ortho and oblique imagery at the GSD and frequency specified. Target capture season subject to weather and airspace permissions. Services term commences on date of activation.
1	EagleView Cloud - Physical Delivery - Orthomosaic - 1in	Provides an offline copy of the orthomosaic tiles and mosaics at the GSD specified in the EagleView Cloud once per refresh. Files to be provided in industry standard formats selectable by the customer with delivery made via online download or physically via a hard drive media.

TOTAL: USD 161,250.00

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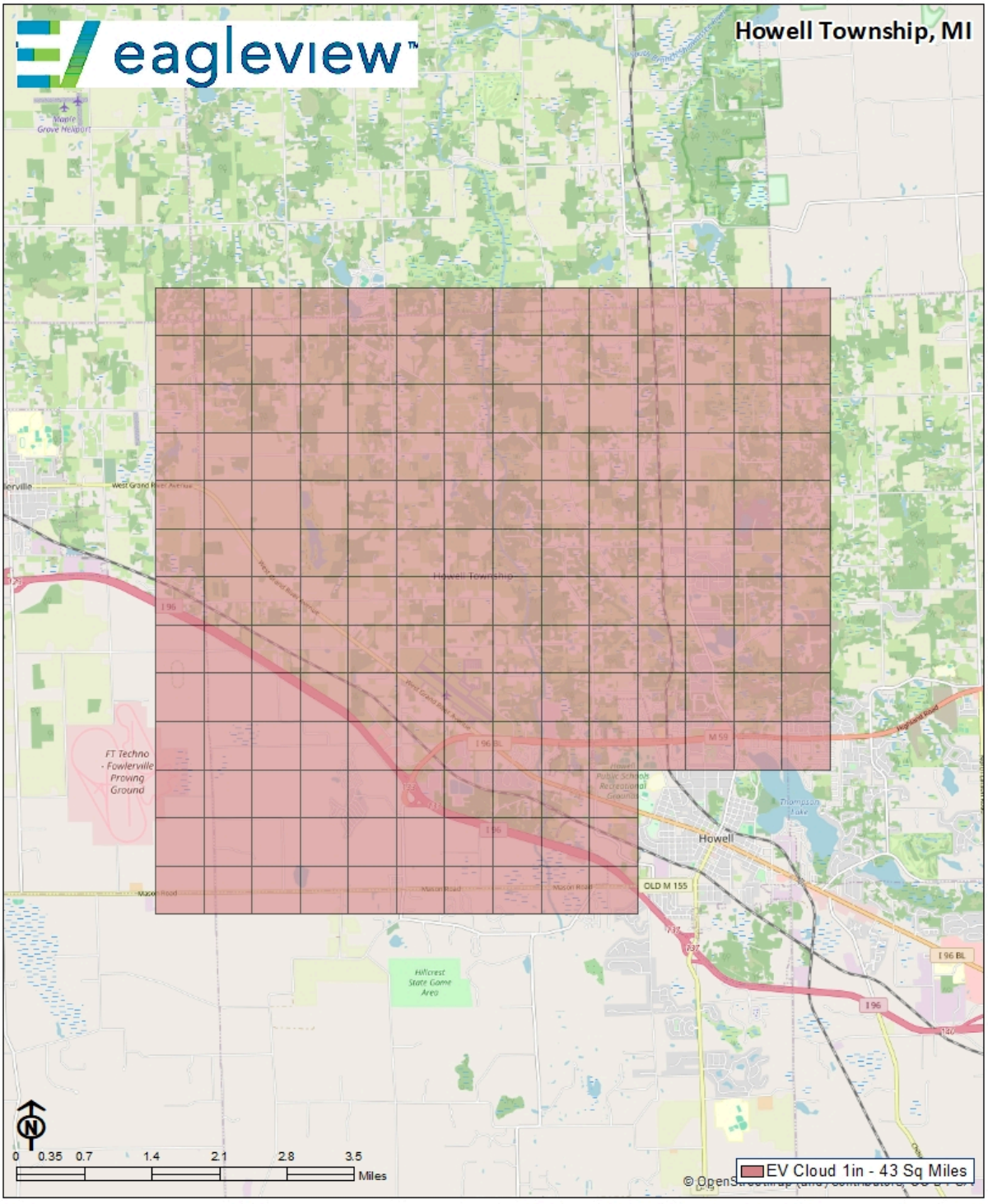

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Budget Proposal

Proposal for: Howell Township MI
Project Name: MIHowell25 - EV Cloud 3in wCF
Quote Number: Q-62346
Contract Term: 6 Year(s)
Number of Projects: 3

EagleView Rep: Alex Rodd
Phone Number: (419) 680-4073
Email: alex.rodd@eagleview.com
Expiration Date: 7/16/2025

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Quote Summary
Quote Total: USD $ 134160.00
Annual Total : USD $ 22360.00

Project 1 (2026 Spring)

Quantity	Product Name	Description
43	EagleView Cloud - Imagery - 3in	Provides entitlement to the EagleView Platform, a secure hosted infrastructure and access to EagleView enabled workflow, analytics, and high-resolution imagery to dramatically improve efficiency for government agencies. Includes regular refreshes of ortho and oblique imagery at the GSD and frequency specified. Target capture season subject to weather and airspace permissions. Services term commences on date of activation.
1	EagleView Cloud - Physical Delivery - Orthomosaic - 3in	Provides an offline copy of the orthomosaic tiles and mosaics at the GSD specified in the EagleView Cloud once per refresh. Files to be provided in industry standard formats selectable by the customer with delivery made via online download or physically via a hard drive media.
1	Eagleview Cloud - Software - Plus	Provides an unlimited number of authorized users the ability to login and access the EagleView Cloud software and analytics via the web-based EagleView Cloud platform. This software provides a robust compliment of tools for engaging with imagery as well as additional project and collaboration tools, and access to mobile application. Requires the purchase of an EagleView - Imagery entitlement.
1	EagleView Cloud - Authorized Subdivisions	Extends the ability for a contracting county or non-state consortium of counties the ability to authorize access to their EagleView Cloud organization to any political unit or subdivision located totally or substantially within their boundary.
1	EagleView Cloud - Comprehensive Integration Bundle	Provides activation of integrations between the EagleView Cloud platform and compatible customer environments (including compatible CAMA providers, 911/PSAP, Cityworks, and ESRI/ GIS) and via the Integrated Web Application.

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Quantity	Product Name	Description
1	EagleView Cloud - Early Access	Provides entitlement to imagery from counties neighboring the imagery AOI as part of EagleView Cloud. Also provides entitlement to Early Access to refreshed imagery captures which allows authorized users to use new imagery immediately following its preliminary processing and quality control checks and prior to its final processing. Early Access imagery will become available incrementally as it is processed, and it will remain available until final, fully processed imagery is made available through other means.
1	EagleView Cloud - Disaster Response Program	Includes access to the EagleView Disaster Response Program which offers flights after an emergency or disaster. Refer to the attached detailed description of the Disaster Response Program.
4	EagleView Cloud - Capture History	Includes access to historical ortho and oblique frame imagery from the EagleView archive. Quantity represents the number of calendar years of archive imagery available in EagleView Cloud.
4,000	EagleView Cloud - ChangeFinder	Building outlines are created from the orthomosaic tiles of a specified newer Pictometry imagery source and classified relative to a specified, older imagery source. EagleView delivers digital building outlines from the newer imagery source and their classification attributes in shapefile and geodatabase formats. Coverage includes only locations specified in a single, customer-provided digital parcel shapefile. Parcels in the specified locations must be generally contiguous. All Pictometry imagery to be used must be licensed or owned by the customer. AccuPLUS or aerotriangulated orthomosaic tiles are used if licensed. Final invoiced amount will be adjusted for the actual quantity of records in the parcel file used for production. Use of older non-Pictometry-sourced imagery requires acceptance in advance.

Project 2 (2028 Spring)

Quantity	Product Name	Description
43	EagleView Cloud - Imagery - 3in	Provides entitlement to the EagleView Platform, a secure hosted infrastructure and access to EagleView enabled workflow, analytics, and high-resolution imagery to dramatically improve efficiency for government agencies. Includes regular refreshes of ortho and oblique imagery at the GSD and frequency specified. Target capture season subject to weather and airspace permissions. Services term commences on date of activation.
1	EagleView Cloud - Physical Delivery - Orthomosaic - 3in	Provides an offline copy of the orthomosaic tiles and mosaics at the GSD specified in the EagleView Cloud once per refresh. Files to be provided in industry standard formats selectable by the customer with delivery made via online download or physically via a hard drive media.

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Quantity	Product Name	Description
1	Eagleview Cloud - Software - Plus	Provides an unlimited number of authorized users the ability to login and access the EagleView Cloud software and analytics via the web-based EagleView Cloud platform. This software provides a robust compliment of tools for engaging with imagery as well as additional project and collaboration tools, and access to mobile application. Requires the purchase of an EagleView - Imagery entitlement.
1	EagleView Cloud - Authorized Subdivisions	Extends the ability for a contracting county or non-state consortium of counties the ability to authorize access to their EagleView Cloud organization to any political unit or subdivision located totally or substantially within their boundary.
1	EagleView Cloud - Comprehensive Integration Bundle	Provides activation of integrations between the EagleView Cloud platform and compatible customer environments (including compatible CAMA providers, 911/PSAP, Cityworks, and ESRI/ GIS) and via the Integrated Web Application.
1	EagleView Cloud - Early Access	Provides entitlement to imagery from counties neighboring the imagery AOI as part of EagleView Cloud. Also provides entitlement to Early Access to refreshed imagery captures which allows authorized users to use new imagery immediately following its preliminary processing and quality control checks and prior to its final processing. Early Access imagery will become available incrementally as it is processed, and it will remain available until final, fully processed imagery is made available through other means.
1	EagleView Cloud - Disaster Response Program	Includes access to the EagleView Disaster Response Program which offers flights after an emergency or disaster. Refer to the attached detailed description of the Disaster Response Program.
4	EagleView Cloud - Capture History	Includes access to historical ortho and oblique frame imagery from the EagleView archive. Quantity represents the number of calendar years of archive imagery available in EagleView Cloud.
4,000	EagleView Cloud - ChangeFinder	Building outlines are created from the orthomosaic tiles of a specified newer Pictometry imagery source and classified relative to a specified, older imagery source. EagleView delivers digital building outlines from the newer imagery source and their classification attributes in shapefile and geodatabase formats. Coverage includes only locations specified in a single, customer-provided digital parcel shapefile. Parcels in the specified locations must be generally contiguous. All Pictometry imagery to be used must be licensed or owned by the customer. AccuPLUS or aerotriangulated orthomosaic tiles are used if licensed. Final invoiced amount will be adjusted for the actual quantity of records in the parcel file used for production. Use of older non-Pictometry-sourced imagery requires acceptance in advance.

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Project 3 (2030 Spring)

Quantity	Product Name	Description
43	EagleView Cloud - Imagery - 3in	Provides entitlement to the EagleView Platform, a secure hosted infrastructure and access to EagleView enabled workflow, analytics, and high-resolution imagery to dramatically improve efficiency for government agencies. Includes regular refreshes of ortho and oblique imagery at the GSD and frequency specified. Target capture season subject to weather and airspace permissions. Services term commences on date of activation.
1	EagleView Cloud - Physical Delivery - Orthomosaic - 3in	Provides an offline copy of the orthomosaic tiles and mosaics at the GSD specified in the EagleView Cloud once per refresh. Files to be provided in industry standard formats selectable by the customer with delivery made via online download or physically via a hard drive media.
1	Eagleview Cloud - Software - Plus	Provides an unlimited number of authorized users the ability to login and access the EagleView Cloud software and analytics via the web-based EagleView Cloud platform. This software provides a robust compliment of tools for engaging with imagery as well as additional project and collaboration tools, and access to mobile application. Requires the purchase of an EagleView - Imagery entitlement.
1	EagleView Cloud - Authorized Subdivisions	Extends the ability for a contracting county or non-state consortium of counties the ability to authorize access to their EagleView Cloud organization to any political unit or subdivision located totally or substantially within their boundary.
1	EagleView Cloud - Comprehensive Integration Bundle	Provides activation of integrations between the EagleView Cloud platform and compatible customer environments (including compatible CAMA providers, 911/PSAP, Cityworks, and ESRI/ GIS) and via the Integrated Web Application.
1	EagleView Cloud - Early Access	Provides entitlement to imagery from counties neighboring the imagery AOI as part of EagleView Cloud. Also provides entitlement to Early Access to refreshed imagery captures which allows authorized users to use new imagery immediately following its preliminary processing and quality control checks and prior to its final processing. Early Access imagery will become available incrementally as it is processed, and it will remain available until final, fully processed imagery is made available through other means.
1	EagleView Cloud - Disaster Response Program	Includes access to the EagleView Disaster Response Program which offers flights after an emergency or disaster. Refer to the attached detailed description of the Disaster Response Program.
4	EagleView Cloud - Capture History	Includes access to historical ortho and oblique frame imagery from the EagleView archive. Quantity represents the number of calendar years of archive imagery available in EagleView Cloud.

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Quantity	Product Name	Description
4,000	EagleView Cloud - ChangeFinder	Building outlines are created from the orthomosaic tiles of a specified newer Pictometry imagery source and classified relative to a specified, older imagery source. EagleView delivers digital building outlines from the newer imagery source and their classification attributes in shapefile and geodatabase formats. Coverage includes only locations specified in a single, customer-provided digital parcel shapefile. Parcels in the specified locations must be generally contiguous. All Pictometry imagery to be used must be licensed or owned by the customer. AccuPLUS or aerotriangulated orthomosaic tiles are used if licensed. Final invoiced amount will be adjusted for the actual quantity of records in the parcel file used for production. Use of older non-Pictometry-sourced imagery requires acceptance in advance.

TOTAL: USD 134,160.00

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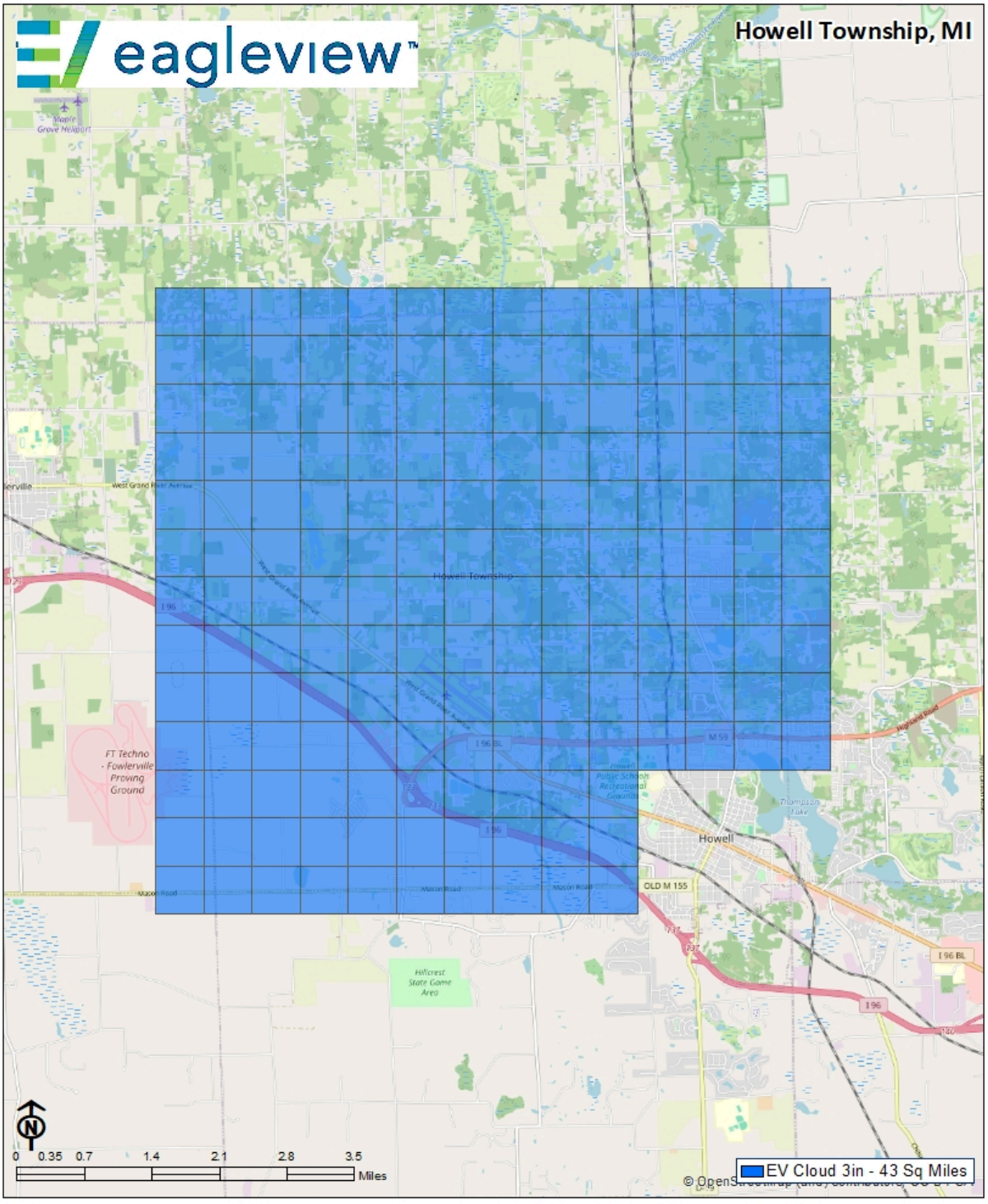

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11B

HOWELL TOWNSHIP

1Q25	
G2G CLOUD SOLUTIONS	
Transaction Amount	$2,170.73
Enhanced Access Fees	$73.61
Net Enhanced Access Fees	$45.64
G2G CLOUD SOLUTIONS Share Back Amount	$22.84

1Q25	
1Q25 Total Quarterly Share Back Amount	$22.84

1Q25	Product Name	Payment Type	Quantity	Transaction Amount	Enhanced Access Fees
	DLQ PERSONAL PROPERTY - OTC	CREDIT CARD	2	$1,116.42	$33.36
	DOG LICENSES - OTC	CREDIT CARD	2	$35.00	$5.00
	GENERAL - OTC	CREDIT CARD	2	$260.00	$10.75
	HOWELL TWP-MHOG	CREDIT CARD	1	$34.00	$2.50
	SUMMER TAX - OTC	CREDIT CARD	1	$725.31	$22.00
	TOTAL		**8**	**$2,170.73**	**$73.61**

2Q25	
G2G CLOUD SOLUTIONS	
Transaction Amount	$3,508.53
Enhanced Access Fees	$119.50
Net Enhanced Access Fees	$74.09
G2G CLOUD SOLUTIONS Share Back Amount	$37.06

2Q25	
2Q25 Total Quarterly Share Back Amount	$37.06

2Q25	Product Name	Payment Type	Quantity	Transaction Amount	Enhanced Access Fees
	DLQ PERSONAL PROPERTY - OTC	CREDIT CARD	1	$50.00	$4.00
	DOG LICENSES - OTC	CREDIT CARD	4	$125.00	$11.50
	GENERAL - OTC	CREDIT CARD	3	$164.24	$10.50
	SUMMER TAX - OTC	CREDIT CARD	1	$279.78	$7.93
	WINTER TAX - OTC	CREDIT CARD	5	$2,889.51	$85.57
	TOTAL		**14**	**$3,508.53**	**$119.50**

3Q25	
G2G CLOUD SOLUTIONS	
Transaction Amount	$2,011.76
Enhanced Access Fees	$82.00
Net Enhanced Access Fees	$50.85
G2G CLOUD SOLUTIONS Share Back Amount	$25.44

3Q25	
3Q25 Total Quarterly Share Back Amount	$25.44

3Q25	Product Name	Payment Type	Quantity	Transaction Amount	Enhanced Access Fees
	DLQ PERSONAL PROPERTY - OTC	CREDIT CARD	1	$16.52	$2.50
	DOG LICENSES - OTC	CREDIT CARD	2	$35.00	$5.00
	GENERAL - OTC	CREDIT CARD	10	$1,114.24	$49.75
	HOWELL TWP-MHOG	CREDIT CARD	1	$846.00	$24.75
	TOTAL		**14**	**$2,011.76**	**$82.00**

YTD				$7,691.02	$275.11

G2G CLOUD SOLUTIONS Share Back Total	$85.34
FY2025 Total Year To Date Share Back Amount	$85.34

11D

Monthly Permit List

Commercial Land Use

Permit #	Applicant	Address	Fee Total	Const. Value
P25-143	REGAL RIGGING & DEMILITION LLC	3399 COUNTY AIRPORT DR	$150.00	$0.00
	Work Description: Demolition of 3480 W. Grand River			
P25-134	JEREMY BEARD	2770 FISHER RD	$250.00	$0.00
	Work Description: Building a berm			
P25-149	ROW CROP, LLC	MARR- VACANT	$250.00	$0.00
	Work Description: Two temporary driveways into the parcel. One on Marr and one on Fleming.			

Total Permits For Type: 3
Total Fees For Type: $650.00
Total Const. Value For Type: $0.00

Residential Land Use

Permit #	Applicant	Address	Fee Total	Const. Value
P25-146	Cale Gillett	3700 N BURKHART	$75.00	$0.00
	Work Description: New Home Construction			
P25-140	LAHO BRANDON AND CINDY	5675 BYRON RD	$75.00	$0.00
	Work Description: 16' X 18' two story addition, second floor is unfinished attic space			
P25-138	SUPERIOR CUSTOM HOMES	1044 ELLINGTON DR	$50.00	$0.00
	Work Description: 10' x 16' treated wood deck on front of home			
P25-164	FOUNDATION SYSTEM OF MICHIGAN	5600 W GRAND RIVER RD	$10.00	$0.00
	Work Description: 1943 ft. Crawl Seal (5580 W. Grand River is house address)			
P25-133	WEATHER GARD WINDOWS	727 JOHN WARD DR	$10.00	$0.00
	Work Description: Install six same size vinyl replacement windows			
P25-147	STRAWBERRY SOLAR	5974 LAYTON RD	$75.00	$0.00
	Work Description: Installing a ground mount solar panel system, 14 panels			
P25-135	Trademark Building Company	1500 E MARR	$75.00	$0.00
	Work Description: New construction single family home with decks			
P25-139	PREMIUM ROOFING LLC.	900 W MARR RD	$10.00	$0.00
	Work Description: Tear off and reroof house and attached garage with no structural changes			
P25-137	LAVALLEY RICHARD AND JESSICA	4111 MARWOOD DR	$50.00	$0.00
	Work Description: Wood panel fence 6 FT high, Approx. 16ft out and 96ft down			
P25-132	SCOTT TERRY F & ANN C	5525 OAK GROVE RD	$10.00	$0.00
	Work Description: Reside part of existing out building			

P25-142	Michael Chosid	4412 RAMSBURY DR	$0.00	$0.00
Work Description:	New Mobile Home Installation			
P25-141	Michael Chosid	4430 RAMSBURY DR	$0.00	$0.00
Work Description:	New Mobile Home Installation			
P25-136	Matthew Smith	5480 SPRING CREEK DR	$10.00	$0.00
Work Description:	Roof replacement			
P25-148	SGI Heating and Cooling	3312 WARNER RD	$10.00	$0.00
Work Description:	Generator Installation. To be placed on a pre-fab pad			
P25-145	Michael Chosid	1032 WELLESLY DR	$0.00	$0.00
Work Description:	New Mobile Home Installation			
P25-144	Michael Chosid	1036 WELLESLY DR	$0.00	$0.00
Work Description:	New Mobile Home Installation			
P25-131	JCH BUILDERS	1555 WOODHAVEN RD	$75.00	$0.00
Work Description:	New 2445 SF single family home			

Total Permits For Type: 17
Total Fees For Type: $535.00
Total Const. Value For Type: $0.00

Sewer Connection

Permit #	Applicant	Address	Fee Total	Const. Value
PWS25-081	DCM INVESTMENTS LLC	3580 W GRAND RIVER	$5000.00	$0.00
Work Description:	Sewer connection			
PWS25-085	Michael Chosid	4412 RAMSBURY DR	$2083.33	$0.00
Work Description:	Sewer Connection			
PWS25-082	Michael Chosid	4430 RAMSBURY DR	$2083.33	$0.00
Work Description:	Sewer connection			
PWS25-089	Michael Chosid	1032 WELLESLY DR	$2083.33	$0.00
Work Description:	Sewer Connection			
PWS25-086	Michael Chosid	1036 WELLESLY DR	$2083.33	$0.00
Work Description:	Sewer Connection			

Total Permits For Type: 5
Total Fees For Type: $13333.32
Total Const. Value For Type: $0.00

Water Connection

Permit #	Applicant	Address	Fee Total	Const. Value
PWS25-084	Michael Chosid	4412 RAMSBURY DR	$2083.33	$0.00
Work Description:	Water Connection			
PWS25-083	Michael Chosid	4430 RAMSBURY DR	$2083.33	$0.00
Work Description:	Water connection			

PWS25-088	Michael Chosid	1032 WELLESLY DR	$2083.33	$0.00
	Work Description: Water Connection			
PWS25-087	Michael Chosid	1036 WELLESLY DR	$2083.33	$0.00
	Work Description: Water Connection			

Total Permits For Type:	4
Total Fees For Type:	$8333.32
Total Const. Value For Type:	$0.00

Grand Total Fees:	$22,851.64
Grand Total Permits:	29.00

Code Enforcement List

08/04/2025

Address	Owners Name	Parcel Number	Date Filed	Origin	Status
222 BAIN DR	OTREMBA EMILY AND	4706-14-401-039	07/22/2025		OPEN - COMPLANT RECEIVE

Complaint

Running a business out of the home, business trucks, business equipment in yard, renting a dump trailer, storing building supplies, camper in the front yard, tractor on less than 2 acres.

Comments

7.22.25 - Owner stopped into Twp RE camper in his driveway, waiting on a part to fix the camper and then it will be stored off site again. Part should be in by August 4
7.22.25 - Unofficial email complaint received, additional email with information received
7.23.25 - Email from C received with additional information
7.23.25 - Emails from neighbor received
7.25.25 - Emails from C received with additional information
7.25.25 - Email from neighbor received
7.29.25 - Official complaint received
7.29.25 - Owner stopped in about another matter, spoke to owner about items in complaint
7.30.25 - Emails from neighbor received
8.4.25 - Site visit completed, photos attached.

Address	Owners Name	Parcel Number	Date Filed	Origin	Status
5495 OAK GROVE RD	LORENZ ROBERT & TR	4706-02-401-001	05/01/2025	ANONYMOUS	OPEN - COMPLANT RECEIVE

Complaint

Blighted property and Nuisance . Property is in a condition and disrepair. Accumulation of filth, garbage, dismantled cars, auto parts, vegetation overgrowth, decayed trees, junk, animal excrement and vermin.

Comments

5.1.25 - Received complaint
5.7.25 - Site visit completed, photos attached, letter sent to owners
6.16.25 - Site visit completed, no apparent clean up efforts underway, photos attached, letter sent to owners
7.21.25 - Site visit completed, no apparent change to site.
8.4.25 - Site visit completed, no one was home, violation still present, issued MCI Notice of Violation Ticket #0207.

Code Enforcement List

08/04/2025

Address	Owners Name	Parcel Number	Date Filed	Origin	Status
2900 BREWER RD	LECHEVALIER KAYED	4706-22-200-014	02/13/2025	PUBLIC - EMAIL	OPEN - COMPLANT RECEIVE

Complaint

Broken down vehicle in front yard, farm tractor on a lot under 2 acres.

Comments

2.13.25 - Received complaint
2.14.25 - Spoke to homeowner about violations
2.19.25 - Letter sent to homeowner
2.19.25 - Homeowner provided proof of registration and insurance
2.25.25 - Spoke to homeowner and Twp. Planner RE parking
3.31.25 - Site visit completed, violations still present. Waiting on letter from Twp. Planner.

Code Enforcement List

08/04/2025

Address	Owners Name	Parcel Number	Date Filed	Origin	Status
3408 CHERYL DR	MELTON HAROLD D &	4706-14-401-029	02/10/2025	PUBLIC - EMAIL	OPEN - COMPLANT RECEIVE

Complaint

Has 3 junk cars, junk boat, junk camper, and at least 80 yards of debris scattered in his backyard.

Comments

2.10.25 - Complaint received.
2.11.25 - Site visit completed.
2.12.25 - Letter sent to owner.
2.18.25 - Owner came into the Township and discussed the violations. The owner has agreed to a schedule to remediate the violations.
3.31.25 - Site visit completed, no visible change.
4.30.25 - Site visit completed, one vehicle no longer on site
5.15.25 - Spoke to homeowner, is requesting extension until July 1st to get the property in compliance. Letter sent to owner RE agreement
6.16.25 - Site visit completed, photos attached.
6.16.25 - Contacted owner for update, boat has been removed from the property, working on dismantling and scrapping the camper, will be removing the Cadillac, and the truck or proving that it is in active service.
7.1.25 - Site visit completed, one car, one truck, and the camper are still on site. Spoke to homeowner, request to extend the deadline was denied, spoke about steps moving forward and expectations on getting the issues remediated.
7.2.25 - Issued ticket #0206. If property is in compliance by July 31st Twp will waive this ticket.
7.21.25 - Site visit completed, photos attached.
7.24.25 - Spoke to owner, camper has been removed from the site. Truck will be going to family member, Cadillac is for sale. Agreed that if the truck was gone by the 31st would be willing to allow a reasonable amount of time to try and sell the Cadillac. Will check after the 31st on status of the truck.
7.31.25 - Spoke to owners, confirmed prior conversation
8.4.25 - Spoke to owner, confirmed prior conversation
8.4.25 - Site visit completed, owner invited us to verify that items had been taken care of as agreed to. Photos attached of truck in the barn and camper has been removed.

Code Enforcement List

08/04/2025

Address	Owners Name	Parcel Number	Date Filed	Origin	Status
5704 CRANDALL RD	JEWETT RICHARD L &	4706-05-200-004	11/25/2024	PUBLIC - EMAIL	OPEN - COMPLANT RECEIVE

Complaint

A person is living in an RV in the back of the property against Township Ordinance.

Comments

12.10.24 - Site visit completed. RV is located in the back of the property. Letter sent to owner.
1.27.25 - Site visit completed. No visible change. Letter sent to owner.
2.11.25 - Requested additional information from complainant
3.10.25 - January letter returned unclaimed.
3.11.25 - December letter returned unclaimed.
3.31.25 - Site visit completed. New letter mailed out.
4.7.25 - Copy of letter given to homeowner. Spoke to homeowner - admitted that someone is living in the RV. Follow up letter sent to owner.
4.14.25 - Spoke to homeowner on the phone. Spoke to Jake at LCHD on the phone, they received a complaint about sewage being discharged onto the ground from one of the RVs. Spoke to person staying in the RV (Wes Gray) on the phone. Jake from LCHD and I made a visit to the site, spoke to Wes. Wes understands that he cannot live in an RV on the property. We agreed to 30 days to remove his things from the site.
4.30.25 - Site visit completed, Wes appears to be working on getting his things removed.
5.14.25 - Spoke to the homeowner, Wes moved some things but has started building a new trailer. Owner will call the Sheriff's Department to understand her options to get Wes removed from her property.
5.19.25 - Spoke to Wes, he has removed a lot of stuff but would like until June 1, 2025 to remove the rest of his stuff. He will provide receipts for the dumpster that he used. Twp will make a site visit and confirm that progress has been made. If progress has been made then we are willing to extend deadline to June 1.
5.19.25 - Site visit completed, some clean up has taken place, photos attached. Spoke to homeowner, admits a lot of work has been done and has no issue with Wes's request to extend deadline to June 1. Letter sent to owner to confirm same.
06-02-25- MH- Spoke with Wes and he doesn't have any where to go, fractured his hand and hurt his back moving stuff off the property. He is still trying to move stuff off the property. Jonathan is out of the office so I let him know he would be contacted when he returns.
6.12.25 - Spoke to Wes, said he has hurt his hand but still intends to remove his things from the property. We agreed to an extension to July 31st for all things to be removed from the property, no further extensions will be granted for any reason. Will prepare letter to owners RE same.
6.16.25 - Site visit completed, some changes have been made, photos attached.
7.21.25 - Site visit completed, photos attached.
8.4.25 - Site visit completed, Wes has not removed his belongings from the property, still living in the RV. Spoke to owner. Personally issued MCI Citation ticket #0162 to Denise Stach. Personally issued MCI Citation ticket #0163 to Wes Gray.

Code Enforcement List

08/04/2025

Address	Owners Name	Parcel Number	Date Filed	Origin	Status
4141 W GRAND RIVER A	TONON CHIARINA S	4706-20-400-012	09/24/2024		OPEN - COMPLANT RECEIVE

Complaint

House is neglected, building unsafe, junk in yard.

Comments

9.24.24 - Contacted Livingston County Building Department RE performing dangerous building inspection.
10.3.24 - Received LCBD determination letter. Contacted Spicer RE Dangerous Buildings Hearing Officer availability. Spicer does not currently have availability to perform these duties.
10.17.24 - Letter sent to owner.
12.19.24 - No response received. Second letter sent to owner with tracking.
1.9.25 - Spoke to owner, is getting quotes from companies to demolish the structures. Provided contact information to Township and will stay in touch with progress reports.
1.27.25 - Violation still present.
3.31.25 - Site visit completed, violation still present, no visible change
4.30.25 - Site visit completed, violation still present, no visible change, will reach out to owners
5.7.25 - Left message for owner
5.9.25 - Received voicemail from owner, they are currently working through asbestos testing, getting the site taken care of in 4-6 weeks
5.14.25 - Spoke to the company that will be performing the demolition and discussed the permitting process
6.16.25 - Site visit completed, no change

Code Enforcement List

08/04/2025

Address	Owners Name	Parcel Number	Date Filed	Origin	Status
3265 W GRAND RIVER A	AMERICAN LEGION P	4706-28-200-010	05/21/2024		OPEN - COMPLANT RECEIVE

Complaint

Starting to add more parking on adjacent lot owned by MDOT without permits.

Comments

4.25.24 - Received call regarding work being done by American Legion. Site visit, verified work was underway. Contacted MDOT RE approval.
5.21.24 - Site visit completed, violation still present. Sent letter to American Legion.
6.18.24 - Site visit. More work has been completed including installing gravel in excavated area and a tent and fencing has been erected next to gravel area on MDOT property. Letter sent to American Legion.
8.1.24 - Site visit completed. Tent and fencing have been removed, large pile of dirt has been removed, additional gravel parking area still on MDOT property.
9.4.24 - Site visit completed. Violation still present. Posted Notice of Violation Ticket to front door, mailed a copy of the violation. Ticket #: 0202
9.4.24 - Phone conversation with Commander Laura Goldthwait. Requested letter explaining the violation and steps moving forward. Mailed to Legion, emailed to Laura, attached.
9.12.24 - Received correspondence from Legion's attorney denying all responsibility. Documents provided to Township's attorney. Township's attorney has contacted Legion's attorney.
10.8.24 - Site visit completed. Photos of Legion using the additional parking attached.
12.10.24 - Site visit completed. Christmas trees located in additional parking area and land east of building. Letter sent regarding temporary uses requiring permits.
1.27.25 - No change to property
3.31.25 - No change to property
4.30.25 - No change to property
6.16.25 - Site visit completed, photos attached, tent and fencing have been installed by the Legion on MDOT Property, no change to the additional parking area

Code Enforcement List

08/04/2025

Address	Owners Name	Parcel Number	Date Filed	Origin	Status
3590 W GRAND RIVER	HASLOCK PROPERTIE	4706-28-100-024	05/06/2024		OPEN - FIRST LETTER SENT

Complaint

Zoning Violations:Outdoor storage without screening, setback issues, parking not hard surfaced, no sign permit.

Comments

5.13.24 - Violation letter to Occupant returned.
5.20.24 - Received phone call from owner. Will be preparing a site plan to take before the Planning Commission for approval.
6.20.24 - Received phone call from owner, discussed site plan requirements.
9.4.24 - Sent letter to owner RE site plan progress.
9.12.24 - Spoke to owner, Engineer has site plans almost complete. Will submit for review in the near future.
2.27.25 - Spoke to owner, Engineer will be submitting plans in the next week or two.
3.31.25 - Site visit completed, violations still present
4.30.25 - Site visit completed, violations still present
5.1.25 - Property owner turned in site plan. Currently considering if they would like to schedule a pre-conference prior to formally submitting the site plan.
6.9.25 - Spoke to the owner about next steps to move the site plan forward, owner is considering pairing down what has been proposed.
6.16.25 - Site visit completed, photos attached.
7.21.25 - Site visit completed, photos attached.

5057 WARNER RD	HARTER EDWARD H	4706-19-200-005	03/14/2022	PUBLIC/ EMAIL	OPEN - SECOND LETTER SEN

Complaint

LARGE AMOUNT OF JUNK AND LITTER IN THE YARD.

Comments

4.17.2023 THERE IS MORE JUNK NOW THEN THERE WAS LAST MARCH OF 2022 OR JANUARY OF 2023.
5.25.2023 I SPOKE WITH MR. HARTER HE IS STARTING TO CLEAN THE SITE UP, HE SAID THAT IT WILL TAKE SOME TIME TO GET IT ALL CLEANED UP. I WILL BEE CHECKING ON HIS PROGRESS EVERY FEW WEEKS TO MAKE SURE HE IS MAKING PROGRESS.
6.29.2023 SOME PROGRESS HAS BEEN MADE. WILL CHECK BACK IN A COUPLE OF WEEKS.
1.9.2024 did a site vist there has been no progress made on the clean up.
1.11.2024 Finial letter sent.

3.20.24 - Site visit. No remediation of issues has taken place. Photos attached.

3.25.24 Spoke to owner. Owner is working on cleaning up the property, has dumpsters being delivered, scrap is in piles and ready to be taken to the scrap yard. Has requested 3 months to get the property cleaned up. Letter sent in confirmation of agreement. Scheduled visit for June 25th.

4.23.24 - Site visit. Violation still present. Scheduled reinspection.
5.20.24 - Site visit. Work has been started. Violation still present. Scheduled reinspection.

Code Enforcement List

08/04/2025

Address	Owners Name	Parcel Number	Date Filed	Origin	Status

6.18.24 - Site visit. Violation still present, no evidence of continued clean up activity. Will reinspect on June 25th as agreed.
6.25.24 - Site visit. Minimal changes to site, violation still present. Letter sent to owner.
8.1.24 - Site visit completed. Owner still working on clean-up.
9.4.24 - Site visit completed, spoke to homeowner. Owner claims to have back of property nearly complete. Dumpster to be arriving next week, neighbors helping to remove scrap in the next few days.
10.8.24 - Site visit completed. No evidence of activity. Final violation letter sent to owner.
11.6.24 - Site visit completed. No evidence of activity. Will check property on 11.14.24 per letter.
11.14.24 - Site visit completed. No evidence of activity. Ticket number 0204 issued. Ticket mailed to homeowner 11.18.24.
12.4.24 - Spoke to homeowner. He will be completing a clean-up schedule and providing it to the Township. If the schedule is followed and clean-up of property is achieved ticket will be waived.
12.10.24 - Schedule has not been provided to Township. Site visit completed, no change.
1.27.25 - Site visit completed, no change. Schedule has not been provided to Township. Final violation letter sent to owner.
2.3.25 - Received phone call from owner's wife, owner is currently in jail. By February 24th they will contact the Township to discuss deadlines for removing the junk from the site. Letter sent to owner to confirm same.
2.24.25 - Spoke to owner's wife.
2.28.25 - Spoke to owner's wife, came to agreement on clean up schedule. Letter on agreement sent to owner.
3.17.25 - 2.28 letter returned. Mailed out letter again.
3.21.25 - Homeowner left message stating that all scrap metal has been removed, two vehicles will be removed this week. We may stop by any time to see the progress.
3.31.25 - Site visit completed, violation still present
4.30.25 - Site visit completed, violation still present. May 4th is the clean-up deadline, will make site visit Monday May 5th to check status.
5.7.25 - Site visit completed, violation still present. Posted ticket #0159 to the structure, filed ticket with the District Court and requested an informal hearing, mailed copy of ticket to owner.
5.19.25 - Received information from District Court setting formal hearing date. Contacted the court to switch to an informal hearing as originally requested.
6.10.25 - Called Court RE informal hearing date, Court's system indicated that the ticket had been paid and closed.
6.16.25 - Site visit completed, no apparent change, photos attached. Ticket filed with Court - requested informal hearing, ticket posted to structure and mailed to owner.
7.16.25 - Magistrate refused to hear the case, claimed he did not have the authority for injunctive relief, ticket dismissed.
7.21.25 - Site visit completed, no apparent change, photos attached. Ticket 0161 filed with the Court requesting formal hearing. Ticket posted to structure and mailed to owner.
7.29.25 - Formal Court hearing scheduled.

Records: 9

Population: All Records

11E

Monthly Activity Report for July 2025 – Assessing Dept/Brent Kilpela

MTT UPDATE:

Howell 70 West 36 Equities LLC, Howell Equities LLC, Howell Patricia Lane Equities LLC, et al v Howell Township: This property tax appeal is with the new ownership of the Outlet Mall. Answer to appeal was filed in May. Prehearing General Call is scheduled for May 01, 2026.

Chestnut Woods LLC v Howell Township: Answer to petition filed on July 30, 2025. Waiting for Michigan Tax Tribunal schedule.

Chestnut Crossing LLC v Howell Township: Answer to petition filed on July 30, 2025. Waiting for Michigan Tax Tribunal schedule.

SMALL CLAIMS TRIBUNAL:

No Open Appeals

ASSESSING OFFICE:

ASSESSOR: The Assessing department is continuing to push itself away from paper and convert over to digital files. With BS&A Cloud there is no storage space issue, so we are in the process of moving all the old archives to digital files in BS&A. This includes all previous Land Divisions, Personal Property Statements, and field work files. This seems like the appropriate time to do this as the Assessing office will be left with half the office space, after the renovation is finished. July Board of Review was held on July 22nd. There were seven petitions for the three-member board to render decisions on.

OTHER: Attended the July Wastewater Treatment Plant meeting. Prepared year-end financial reports for the township board meeting. Assisted in ironing out the issues with implementing the BS&A credit card processor.

11H

DRAFT

HOWELL TOWNSHIP PLANNING COMMISSION
REGULAR MEETING MINUTES
3525 Byron Road Howell, MI 48855
July 22, 2025
6:30 P.M.

MEMBERS PRESENT:		**MEMBERS ABSENT:**	
Wayne Williams	Chair		
Robert Spaulding	Vice Chair		
Mike Newstead	Secretary		
Tim Boal	Board Representative		
Chuck Frantjeskos	Commissioner		
		Matt Stanley	Commissioner
Sharon Lollio	Commissioner		

ALSO IN ATTENDANCE:
Township planner Grayson Moore and Zoning Administrator Jonathan Hohenstein

Chairman Williams called the meeting to order at 6:30 pm. The roll was called. Chairman Williams requested members rise for the Pledge of Allegiance.

APPROVAL OF THE AGENDA:
Motion by Boal, **Second** by Spaulding, **"Motion to approve the agenda with the modification to number 12 to switch 12A and 12B."** Motion carried.

APPROVAL OF THE MEETING MINUTES:
June 24, 2025
Motion by Spaulding, **Second** by Boal, **"Approval."** Motion carried.

CALL TO THE PUBLIC
None

ZONING BOARD OF APPEALS REPORT:
None

TOWNSHIP BOARD REPORT:
Draft minutes are included in the packet; Board Representative Boal gave an update. Architect's proposal for oversight of the Township Hall renovation was accepted and the decision for the Community Center on Tooley Rd. was tabled. A digital mapping software program was approved to be used for the cemeteries. REU reduction that was requested by Wrangler's Saloon was approved. Discussion of the letter of intent to purchase the property on the corner of Marr and Oak Grove Road was tabled until next month and an overview/discussion on how Tax Increment Financing (TIF) works. The proposal from Carlisle Wortman for the Park Master Plan was approved.

ORDINANCE VIOLATION REPORT:
Report in packet. Board Representative Boal questioned if there were any applicants for the Ordinance Enforcement Officer position that is posted and Commissioner Frantjeskos questioned if the applicant should live outside the Township.

SCHEDULED PUBLIC HEARINGS:

Portable Storage Container and Cargo Container Ordinance: **Motion** by Boal, **Second** by Newstead, "**To open the public hearing."** Motion carried. **Motion** by Newstead, **Second** by Frantjeskos, "**To close the public hearing."** Motion carried. Township Planner Moore gave an update on changes to the Cargo Container Ordinance and answered questions. Board Representative Boal questioned if in the Industrial Flex Zone shipping companies using cargo containers are not subjected to limitations on the number of containers on their site. Vice chair Spaulding questioned the height restrictions for screening of the cargo containers. Commissioner Frantjeskos questioned if detached structures should be 5 or 10 feet from a main structure as both are mentioned. Discussion followed. **Motion** by Frantjeskos, **Second** by Spaulding, **"To postpone any action on the proposed Text Amendment until the text is edited."** Motion carried.

OTHER MATTERS TO BE REVIEWED BY THE PLANNING COMMISSION:

None

BUSINESS ITEMS:

A. Old Business:
   1. Renewable Energy Ordinance- Board Representative Boal would like Township resident John Mills to speak to the Planning Commission regarding his knowledge of community solar panels. Vice Chairman Spaulding questioned if anyone has approached the Township to place a Mega Solar Farm. Zoning Administrator Hohenstein spoke on the current Solar Ordinance section 16.19 and the proposed Overlay District. Commissioner Lollio spoke on her concerns about not having a Solar Farm Ordinance with guarantees and surety bonds that address returning property back to its original state once the panels are removed. Board Representative Boal questioned if the Township has any areas that are over 1,800 acres that would be available for an Overlay District. Discussion followed and Planner Moore answered questions.

B. New Business:
   1. Mitch Harris Building Co., PC2025-13, Parcel # 4706-27-300-030, Final Site Plan Review. Township Planner Moore gave an update on changes that were made to the site plan and answered questions. Some of these changes are: back patio areas have been removed to comply with setbacks, landscaping plan that shows Dwarf Fountain Grass does not meet the shrub requirement, and minimum plant sizes should be noted on the plan. Vice Chair Spaulding would like an agreement with the River Downs Homeowners Association that Mitch Harris Development would have permission to have access to their detention pond and address the concerns from the Drain Commissioner. Applicants Colbie and Mitch Harris spoke regarding the detention ponds, the runoff from the buildings and their landscaping plan. Board Representative Boal would like to see shrubs for screening only where they are developing along Grand River and questioned the Dwarf Fountain Grass vs shrub requirement. Commissioner Lollio questioned if the ordinance requires buildings to be screened from Grand River Ave. Discussion followed. **Motion** by Boal, **Second** by Newstead with a friendly amendment, **"To conditionally approve final site plan for parcel # 4706-27-300-030, with the satisfaction of the Drain Commissioner that the drainage concerns have been adequately addressed also with the reduction of 20 Arborvitae trees along the Grand River side and addition of evergreen shrubs instead of the dwarf grass along the Edgebrook side."** Motion carried.

CALL TO THE PUBLIC:
None

Renewable Energy Ordinance:
Motion by Newstead, **Second** by Lollio, **"To postpone action on the proposed Text Amendment so that the following items can be addressed: Invite John Mills to speak and allow Grayson to make any changes or additions that were discussed at the July 22, 2025 Planning Commission meeting."** Motion carried.

Motion by Spaulding, **Second** by Newstead, **"To excuse Commissioner Stanley from today's meeting."** Motion carried.

ADJOURNMENT:
Motion by Boal, **Second** by Newstead, **"To adjourn."** Motion carried. The meeting was adjourned at 8:30 P.M.

_____ _____
Date Mike Newstead
Planning Commission Secretary

_____
Marnie Hebert
Recording Secretary

11J

Howell Township Monthly Wastewater Operations Report

Emptied South Clarifier

July 2025

Howell Township Wastewater System Operations Report
July 2025

Table of Contents

Section 1

Plant Operation

Howell Township Plant Operations

Summary for June Activities:

Wastewater Treatment: The Wastewater Treatment Plant (WWTP) processed a total of **11.25 million gallons (MG)** of wastewater in June with no permit violations. (*Attachments 1.2-1.5*)

Preventative Maintenance: All scheduled monthly preventative maintenance tasks were completed as planned. These tasks are critical to maintaining the efficient and reliable operation of the WWTP.

WWTP Projects: The lighting project and the door replacement project have both commenced. While neither project is complete, progress has been steady, and we are pleased with the results thus far (*Attachment 1.7 & 1.8*).

Clarifier: The South Clarifier was taken out of service for mechanical inspection. Initial findings showed no major issues. It appears the unit requires gear drive oil replacement and installation of a new skimmer. **(***Attachment 1.9***)**

Influent Channel: Staff completed the annual cleaning of grit from the influent channel to support proper operation of the fine screen system.

RAS Pump Start-Up: Following ongoing issues with the RAS pump, discussions with our engineer suggest the problem may lie in the shaft coupling or bearings. We have scheduled Seepex to inspect the pump on July 22.

Process Summary:

- EQ Tank
  - Operating North Tank
  - 5 broken gate valves
- Influent Sampler:
  - Normal Operation
- Headworks:
  - Normal Operation
- FeCl2 Chemical Room
  - Normal Operation
- Aeration Basin:
  - Normal Operation
- Junction Chamber:
  - Normal Operation
- RAS Building & Clarifier:
  - South Clarifier out of service for inspection
- Sand Filters:
  - Normal Operation
- Post Aeration:
  - Normal Operation
- UV System:
  - Quote for Replacement Unit ($19,775.00)
- Recycle Pump Station:
  - Normal Operation

Howell Township WWTP

Plant Performance	Jun-25
HT WWTP Flows	
TOTAL MONTHLY EFF (MG)	9.74
TOTAL MONTHLY INF (MG)	11.25
Final Effluent Monitoring	
INF pH	6.96
EFF pH	7.00
INF NH3-mg/L	35.91
EFF NH3-mg/L	0.20
INF PO4-mg/L	7.06
EFF PO4-mg/L	0.48
INF TSS-mg/L	265.82
EFF TSS-mg/L	4.28
INF CBOD-mg/L	182.95
EFF CBOD-mg/L	0.98
AVG.% NH3-N REMOVAL	99.46%
AVG.% TOTAL P REMOVAL	93.26%
AVG.% TSS REMOVAL	98.39%
AVG.% CBOD REMOVAL	99.46%
AVG.% OVERALL REMOVAL RATE	97.64%
Chemical Used	
Ferric Gallons	1,466
Utilities	
Gas	31
Power KWH	53,600
Water Gallons	5,902
Sludge Processing	
Gallons Wasted	306,677
Gallons Hauled	
Weather Summary	
TOTAL PRECIPITATION	3.54
AVG DAILY PRECIPITATION	0.44
MAX DAILY	1.10

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY:

DAILY DISCHARGE MONITORING REPORT

PERMITTEE NAME:	**Howell Township WWTP**
MAILING ADDRESS:	3525 Byron Road
	Howell, MI 48855
FACILITY:	Howell Township WWTP
LOCATION:	1222 Packard Drive

Permit NO. MI0055727

Violations

NO.	Parameter	Limit

PARAMETER	FLOW	SUSPENDED SOLIDS				CBOD$_5$			AMMONIA NITROGEN			TOTAL PHOSPHORUS		TOTAL MERCURY						Chloride	Sulfate	FECAL COLIFORM		pH MIN	pH MAX	D.O.
Dates	MGD	7 DAY AVG				<1.0	7 DAY	daily max	<0.01	7 DAY	daily max		<0.1									7 DAY	0=1	6.5	9.0	Daily MIN
		mg/l	lbs/day	mg/l	lbs/day	mg/l	lbs/day	lbs/day	mg/l	lbs/avg	lbs/day	mg/l	lbs/day	ng/L	lbs/day	ng/L	ng/L	ng/L	ng/L	mg/L	mg/L	GEO MEAN	daily MAX	SU	SU	mg/l
Sunday, June 1, 2025	0.2933			4.4	11	1.1		2.8	0.03		0.1	0.40	1.0	*g	*g	*g	*g	*g	*g					7.08	7.08	9.6
Monday, June 2, 2025	0.2941			2.8	7	0.7		1.7	0.03		0.1	0.35	0.9										10	6.97	6.97	9.5
Tuesday, June 3, 2025	0.3043			4.4	11	0.9		2.2	0.06		0.2	0.76	1.9										7	6.93	6.93	9.3
Wednesday, June 4, 2025	0.3155			4.8	13	1.0		2.6	0.14		0.4	0.59	1.5										35	7.19	7.19	9.0
Thursday, June 5, 2025	0.4503			4.0	15	1.0		3.8	0.07		0.3	0.55	2.1										46	6.73	6.73	8.9
Friday, June 6, 2025	0.3545																						10	6.90	6.90	9.1
Saturday, June 7, 2025	0.3217	4.1	11				2.6			0.2														7.27	7.27	9.2
Sunday, June 8, 2025	0.3109	4.3	12	5.4	14	0.9	2.5	2.3	0.05	0.2	0.1	0.47	1.2									16		7.00	7.00	9.1
Monday, June 9, 2025	0.3240	4.9	14	5.8	16	1.1	2.8	2.9	0.05	0.2	0.1	0.55	1.5									16		6.91	6.91	9.0
Tuesday, June 10, 2025	0.3023	4.3	12	1.4	4	1.0	2.9	2.6	0.04	0.2	0.1	0.68	1.7									23	58	7.06	7.06	9.1
Wednesday, June 11, 2025	0.3016	4.2	12	4.4	11	1.0	2.8	2.4	0.07	0.2	0.2	0.62	1.6									32	35	7.04	7.04	9.1
Thursday, June 12, 2025	0.2963	4.3	11	4.4	11	0.8	2.4	1.9	0.09	0.2	0.2	0.39	1.0							200	31	32	37	7.11	7.11	9.1
Friday, June 13, 2025	0.2644	4.3	11				2.4			0.2												31	38	6.82	6.82	9.0
Saturday, June 14, 2025	0.2924	4.3	11				2.4			0.2												30	8	6.83	6.83	9.0
Sunday, June 15, 2025	0.2913	4.1	10	4.6	11	0.6	2.2	1.3	0.03	0.1	0.1	0.38	0.9									30		6.80	6.80	9.1
Monday, June 16, 2025	0.3118	3.5	9	2.8	7	0.8	2.1	2.2	0.04	0.1	0.1	0.37	0.9									30		6.81	6.81	9.1
Tuesday, June 17, 2025	0.2914	3.8	9	2.8	7	0.6	1.9	1.5	0.23	0.2	0.6	0.31	0.8									15	2	6.81	6.81	9.1
Wednesday, June 18, 2025	0.4367	3.8	11	4.6	17	1.0	2.1	3.8	0.43	0.5	1.6	0.48	1.8									7	1	6.77	6.77	8.9
Thursday, June 19, 2025	0.4635	3.6	11	3.2	12	0.7	2.3	2.5	0.17	0.6	0.6	0.36	1.4									7	23	6.82	6.82	8.8
Friday, June 20, 2025	0.3388	3.6	11				2.3			0.6												7	62	6.85	6.85	8.6
Saturday, June 21, 2025	0.3367	3.6	11				2.3			0.6												6	4	7.20	7.20	9.0
Sunday, June 22, 2025	0.3167	3.6	11	4.8	13	2.7	3.4	7.1	0.44	0.8	1.2	0.43	1.1									6		7.18	7.18	8.9
Monday, June 23, 2025	0.3263	4.0	12	4.8	13	1.3	3.7	3.4	0.08	0.8	0.2	0.40	1.1									6		7.12	7.12	8.6
Tuesday, June 24, 2025	0.3175	4.4	13	4.4	12	0.6	3.7	1.7	0.04	0.7	0.1	0.40	1.1									12	51	7.15	7.15	8.6
Wednesday, June 25, 2025	0.3187	4.4	12	4.6	12	1.0	3.5	2.7	0.07	0.5	0.2	0.45	1.2									26	40	7.24	7.24	8.4
Thursday, June 26, 2025	0.3254	4.9	13	5.8	16	1.1	3.6	3.0	0.07	0.4	0.2	0.69	1.9									30	52	6.94	6.94	8.5
Friday, June 27, 2025	0.3234	4.9	13				3.6			0.4												39	200	6.90	6.90	8.4
Saturday, June 28, 2025	0.3024	4.9	13				3.6			0.4												76	120	7.22	7.22	8.4
Sunday, June 29, 2025	0.2980	5.0	13	5.2	13	0.9	2.6	2.3	1.83	1.1	4.5	0.43	1.1									76		6.90	6.90	8.4
Monday, June 30, 2025	0.3145	5.0	13	4.8	13	0.8	2.4	2.2	0.24	1.1	0.6	0.42	1.1									76		7.05	7.05	8.3
Tuesday, July 1, 2025		5.1	13				2.6			1.4												101	210	7.17	7.17	8.0
																						127				

PARAMETER	FLOW	SUSPENDED SOLIDS				CBOD$_5$			AMMONIA NITROGEN	AVG	0.48	0.92 PHOSPHORUS		TOTAL MERCURY								FECAL COLIFORM		pH MIN	pH MAX	D.O.

Name/Title of Principal Executive Officer Or Authorized Agent

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information i

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Deputy Director: *James Aulette*

When completed mail this report to: IPCS Data Entry, MDEQ, WB, P.O. Box 30273, Lansing MI, 48909-7773.

FROM 6/1/2025

TO 6/30/2025

Process Data Report

DATE	Process Testing					Ferric		Clarifier Sludge Blanket		Wastings	RAS	Sludge Tanks			UTILITIES			Generator
	PO4 COMP	NH3 COMP	D.O.	Mixed Liquor	Settling	Daily Inches	Gallons	ft	ft	GPD	GPD	1	2	3	GAS METER	KWH * 160	WATER	Hours
Sunday, June 1, 2025	1.04		9.59		0	7	53	0.3	0.8	5,999		4.50	3.75	3.75	346	31783	1480603	
Monday, June 2, 2025	0.92		9.45	4770	0	7	57	0.3	0.8	5,971		4.50	3.75	3.75	347	31799	1480605	
Tuesday, June 3, 2025	2.20		9.25		0	2	16	0.3	0.5	8,517		4.50	3.75	3.75	348	31813	1480605	
Wednesday, June 4, 2025	1.64	0.25	8.95		0	8	65	0.3	0.3	5,979		4.50	3.75	3.75	352	31826	1480605	
Thursday, June 5, 2025	1.55	0.25	8.93		0	7	57	0.3	0.3	17,047		4.50	3.75	3.75	355	31837	1480605	
Friday, June 6, 2025	1.03		9.12	4510		8	65	0.3	0.5	11,091		4.50	3.75	3.75	357	31842	1480606	
Saturday, June 7, 2025	1.50		9.16			8	65	0.3	0.8	11,035		4.50	3.50	3.50	357	31871	1481583	
Sunday, June 8, 2025	1.45		9.08		0	6	49	0.3	0.8			4.50	3.50	3.50	358	31883	1482664	
Monday, June 9, 2025	1.45		9.02	4820	0	6	49	0.8	0.3	5,946		4.50	3.50	3.50	360	31902	1484818	
Tuesday, June 10, 2025	1.87		9.13		0	7	57	0.3	0.3	16,821		4.50	3.50	3.50	362	31915	1484821	
Wednesday, June 11, 2025	1.83		9.11		0	8	65	0.3	0.3	10,949		4.50	3.25	3.25	362	31928	1485728	
Thursday, June 12, 2025	0.82		9.11		0	7	57	0.3	0.3			4.50	3.25	3.25	362	31943	1485730	
Friday, June 13, 2025	0.90		9.03	5080		6	49	0.5	0.5	16,769		4.50	3.75	3.75	362	31965	1486123	
Saturday, June 14, 2025	0.95		9.00			6	49	0.5	0.5	10,966		4.50	3.75	3.75	362	31980	1486123	
Sunday, June 15, 2025	1.14		9.10		0	6	49	0.5	0.5	10,987		4.50	3.75	3.75	362	31996	1486221	
Monday, June 16, 2025	0.90		9.05	5180	0	6	49	0.5	0.5	10,922		4.50	3.75	3.75	362	32008	1486222	
Tuesday, June 17, 2025	0.96		8.92		0	6	49	1.0	0.5	5,867		4.50	3.75	3.75	363	32020	1486222	
Wednesday, June 18, 2025	1.29		8.84		0	5	41	0.5	0.5	5,832		4.50	3.75	3.75	363	32032	1486223	
Thursday, June 19, 2025	1.07		8.63	5170	0	5	41	1.5	0.5	5,750		4.50	3.75	3.75	363	32039	1486223	
Friday, June 20, 2025	1.01		8.98			5	41	1.0	0.5	17,568		4.50	4.50	3.75	363	32050	1486224	
Saturday, June 21, 2025	1.00		8.93			8	65	0.8	0.8	11,040		4.50	4.50	3.75	364	32056	1486224	
Sunday, June 22, 2025	1.21		8.57		0	5	41	1.3	1.3	10,974		4.50	4.50	3.75	368	32068	1486225	
Monday, June 23, 2025	1.11	0.25	8.58	4670	0	5	41	0.5	1.0	10,967		4.50	4.50	3.75	372	32078	1486226	
Tuesday, June 24, 2025	1.17		8.37		0	6	49	0.5	1.0	22,216		4.50	4.50	3.75	375	32088	1486502	
Wednesday, June 25, 2025	1.30		8.50		0	6	49	0.3	0.5	11,151		4.50	4.50	3.75	377	32091	1486502	
Thursday, June 26, 2025	1.84		8.41		0	2	16	0.5	0.5	11,101		4.50	4.50	3.75	377	32100	1486503	
Friday, June 27, 2025	1.50		8.43	5100		5	41	0.5	0.5	12,056		4.50	4.50	3.75	377	32109	1486504	
Saturday, June 28, 2025	1.30	0.25	8.38			7	57	0.8	0.8	11,064		4.50	4.50	3.75	377	32118	1486505	
Sunday, June 29, 2025	1.28	2.00	8.32		2	6	49	0.8	0.8	11,076		4.50	4.50	3.50	377	32126	1486505	
Monday, June 30, 2025	1.14	0.24	8.02	4820	0	5.5	45	0.3	0.3	11,016		4.50	3.75	3.50	378	32135	1487714	
Tuesday, July 1, 2025															378	32144	1488224	
AVG	1.28	0.54	8.87	4902	0	6.03	49		1	10,953					31	53600	5902	
Total						181	1,466		17	306,677								

Monthly Influent Report

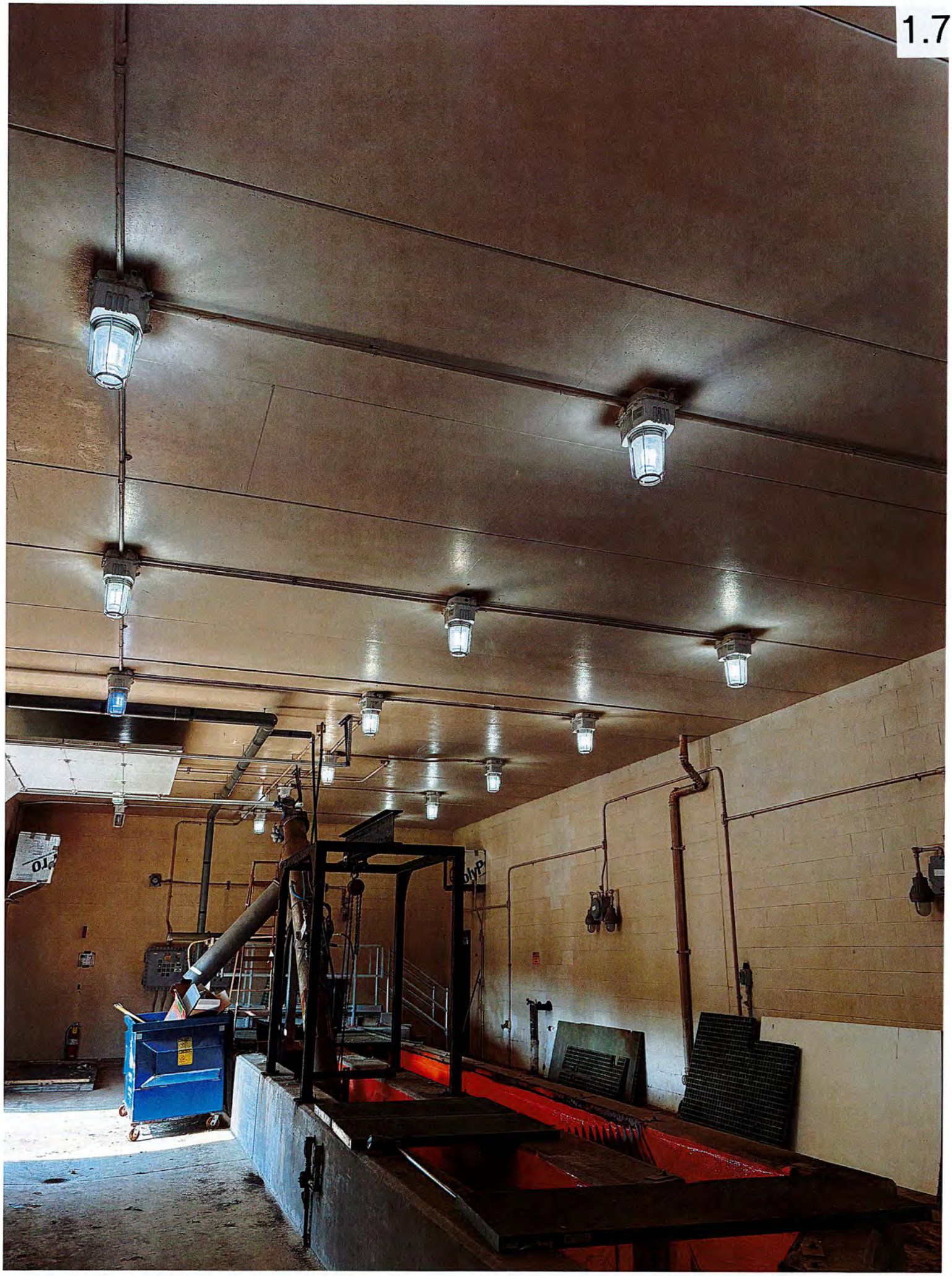
	WEATHER			RAW SEWAGE QUALITY								
	TEMP	PRECIP	Meter Total	TEMP	pH	$cBOD_5$		Sus. Solids		TOTAL - P		NH_3 - N	
	AIR TEMP F°	Inches	INF MGD	C°	SU	mg/l	LBS	mg/l	LBS	mg/l	LBS	mg/l	LBS
Sunday, June 1, 2025	50		0.345951	14.0	7.2	207	597	212	612	6.1	17.5	38.7	111.7
Monday, June 2, 2025	62		0.348825	14.8	7.1	187	544	192	559	6.3	18.2	38.8	112.9
Tuesday, June 3, 2025	67		0.347952	18.7	7.2	155	450	264	766	8.4	24.4	36.2	105.0
Wednesday, June 4, 2025	78		0.353667	16.1	7.0	167	493	204	602	6.3	18.6	33.4	98.5
Thursday, June 5, 2025	58	1.10	0.486422	15.3	7.1	168	682	204	828	5.4	21.9	34.7	140.8
Friday, June 6, 2025	62	0.20	0.399520	15.7	7.0								
Saturday, June 7, 2025	70		0.360117	16.1	7.1								
Sunday, June 8, 2025	68	0.10	0.344273	16.3	7.0	115	330	208	597	4.9	14.1	35.9	103.1
Monday, June 9, 2025	62	0.20	0.379452	15.7	7.1	224	709	304	962	8.6	27.3	37.2	117.7
Tuesday, June 10, 2025	60	0.07	0.351052	16.1	7.0	207	606	312	913	9.1	26.7	38.1	111.5
Wednesday, June 11, 2025	68		0.378064	15.6	7.0	126	397	276	870	6.5	20.5	38.1	120.1
Thursday, June 12, 2025	61		0.334757	15.9	7.0	201	561	508	1418	7.6	21.2	37.6	105.0
Friday, June 13, 2025	58		0.336334	16.4	7.1								
Saturday, June 14, 2025	69		0.345185	16.0	7.0								
Sunday, June 15, 2025	71		0.341527	17.5	6.9	219	624	472	1344	6.3	17.9	37.2	106.0
Monday, June 16, 2025	61		0.347294	16.6	6.9	183	530	344	996	6.1	17.7	39.6	114.7
Tuesday, June 17, 2025	69		0.344044	17.4	6.9	171	491	172	494	7.0	20.1	40.1	115.1
Wednesday, June 18, 2025	73	0.05	0.452693	17.6	6.9	204	770	148	559	6.8	25.8	32.4	122.3
Thursday, June 19, 2025	59	1.02	0.492256	16.4	6.9	168	690	388	1593	8.8	36.1	31.4	128.9
Friday, June 20, 2025	60		0.415399	15.9	6.9								
Saturday, June 21, 2025	66		0.384031	16.1	6.9								
Sunday, June 22, 2025	91		0.373353	16.9	6.9	195	607	148	461	5.4	16.9	31.1	96.8
Monday, June 23, 2025	79		0.389692	16.9	6.9	177	575	244	793	6.3	20.3	33.9	110.2
Tuesday, June 24, 2025	82		0.383409	18.9	6.9	153	489	188	601	11.1	35.5	37.4	119.6
Wednesday, June 25, 2025	76	0.80	0.374154	18.9	6.8	184	574	188	587	8.1	25.2	35.7	111.4
Thursday, June 26, 2025	75		0.386223	19.3	6.7	254	818	328	1057	7.3	23.5	35.5	114.3
Friday, June 27, 2025	74		0.375621	18.5	6.6								
Saturday, June 28, 2025	76		0.355595	19.1	6.8								
Sunday, June 29, 2025	80		0.364044	21.8	6.9	211	641	324	984	7.1	21.6	32.4	98.4
Monday, June 30, 2025	78		0.357856	18.8	6.9	149	445	220	657	5.9	17.5	34.7	103.6
Tuesday, July 1, 2025													
TL		3.54	11.25										
AVG	68.77	0.44	0.37	17.0	6.96	183.0	573.7	265.8	829.6	7.1	22.2	35.9	112.2

BRIGHTON ANALYTICAL - Howell WWTP

SAMPLE DAY	Chloride mg/L	Sulfate mg/L	*FINAL EFF =* 0.5 FINAL EFF MERCURY (ng/L)	*UNCORR* 0.5 GRAB: UNCORR MERCURY (ng/L)	*FIELD BLANK* 0.2 FIELD BLANK MERCURY (ng/L)	0.2 METH BLANK MERCURY (ng/L)
06/01/25			*g	*g	*g	*g
06/02/25						
06/03/25						
06/04/25						
06/05/25						
06/06/25						
06/07/25						
06/08/25						
06/09/25						
06/10/25						
06/11/25						
06/12/25	200	31				
06/13/25						
06/14/25						
06/15/25						
06/16/25						
06/17/25						
06/18/25						
06/19/25						
06/20/25						
06/21/25						
06/22/25						
06/23/25						
06/24/25						
06/25/25						
06/26/25						
06/27/25						
06/28/25						
06/29/25						
06/30/25						
07/01/25						

*g Not Required this Reporting Period


1.6



1.7


1.8


YIT

1.9

Greg Tatara

To: Jen Wagner
Subject: RE: Seepex Info

Greg Tatara
Utility Director
MHOG Sewer and Water Utilities
greg@mhog.org
Direct: 810-224-5837

From: Jen Wagner <jenw@hamlettenvironmental.com>
Sent: Thursday, July 10, 2025 9:59 AM
To: Greg Tatara <greg@mhog.org>
Cc: Jim Aulette <jima@mhog.org>
Subject: RE: Seepex Info

Hi Greg,
Thanks again for the time yesterday. As we discussed, I just wanted to make sure that Tetra Tech was aware of the pressure readings that Robin had taken. It consistently read 4.5-5psi (10.395ft-11.55ft) and were taken on the header, before it reduces to 4" size, and before the 90s and piping into the suction of the pumps. That is a big difference between the calculated available head and the actual head in that line. I am not implying that these numbers are supposed to match but the calculations imply that we should have a lot more pressure there than what we are actually seeing.

I am working with Seepex to have someone come into town as well so that we can rule out all possibilities, including inspecting the pump and components. I needed to order a new tool to assist with our troubleshooting as well, so I am waiting on that. Once I have a date pinned down, I will check back in with you gents to see if it works for you. I plan to be onsite as well.

At the end of the day, we want this pump to be performing acceptably and for the long term. I really appreciate you getting involved as well as having Tetra Tech put their eyes on things. As you state below, there isn't a glaring reason on paper that things should not be working as intended. I think with all of us working together, we'll get it figured out!

Thanks again,

Jennifer Wagner
Hamlett Environmental Tech. Co.
517-294-7512

From: Greg Tatara <greg@mhog.org>
Sent: Wednesday, July 9, 2025 10:17 AM
To: Jen Wagner <jenw@hamlettenvironmental.com>
Cc: Jim Aulette <jima@mhog.org>
Subject: RE: Seepex Info

Hi Jen,

So we had Tetra Tech run the calculations on the pump suction. Per their calcs, which I have attached, the next NPSHa is 43.39', so it is significantly higher required NPSH of 5ft. We did account for the 4-inch pipe and even at the proposed pump rates, our loss is just not great enough to cause that problem.

Looking at the trouble shooting guide in the O&M Manual, the problems associated with the pump being loud are:

1) Suction Pump or Shaft Leaking – We know this is not the problem
2) Suction Head to Great – I think the attached calc shows this is not the problem
3) Coupling – Possibility Shaft Coupling is Out of Alignment
4) Rotation Speed too High – I don't think this is problem, as we start the VFD at 50%
5) Joint Play Too Large – Possibility
6) Joint Parts Worn – I don't think this is the problem, its new
7) Bearings in Pump Drive Housing or Drive Unit Defective – Possiblity since it has been loud all along

So, even our engineers felt the problem likely resides in the shaft coupling, bearings, or having the stator being too tight. So, since the math appears to show we have enough suction head, what can be done to check the bearings and shaft coupling on the pump. We really think its that as it starts banging as soon as it is turned on. I guess see if Seepex agrees with Tetra Techs calcs and lets see if we can get someone here that knows how to check some of the other items on the pump.

Thanks.

Greg Tatara
Utility Director
MHOG Sewer and Water Utilities
greg@mhog.org
Direct: 810-224-5837

From: Jen Wagner <jenw@hamlettenvironmental.com>
Sent: Tuesday, July 1, 2025 8:34 AM
To: Greg Tatara <greg@mhog.org>
Subject: RE: Seepex Info

Hi Greg,
Just checking in. I spoke with Seepex and the bare minimum NPSHr is 5ft. That is a bit different (lower) than what we show on the data sheet, so I wanted to share that as well.

Is there anything else I can help with?

Thank you,

Jennifer Wagner
Hamlett Environmental Tech. Co.
517-294-7512

From: Jen Wagner
Sent: Tuesday, June 24, 2025 5:33 PM
To: Greg Tatara <greg@mhog.org>
Subject: Seepex Info

Hi Greg,
Thanks for the call earlier. Attached is the cut sheet and curve.

Please let me know if you have any questions. I am happy to assist in any way!

Sincerely,

Jennifer Wagner
Hamlett Environmental Tech. Co.
Cell 517-294-7512

Hamlett Environmental
Technologies

Refer to technical data (chapter 3.) for application range of the pump.

Malfunction										Causes	Rectification
Pump is not sucking	Pump pumping unevenly	Conveying capacity is not achieved	Pressure head is not reached	Pump does not start up	Pump seized / pump does not pump	Pump is loud when running	Motor gets too hot	Premature stator wear	Shaft seal is leaky		
				X			X		X	Static friction between stator/rotor too great.	Apply lubricant (liquid soap) between stator and rotor.
X										Incorrect direction of rotation.	Check direction of rotation and swap over motor connections if necessary.
X	X	X			X	X				Suction pipe or shaft seal leaking.	Eliminate leaks.
X	X	X				X				Suction head too great.	Check the suction head, if necessary increase pipe cross section on suction pipe and use a larger filter, open suction-side valve fully.
X	X	X								Viscosity of conveying product too great.	Check/adapt (data sheet).
		X		X			X			Pump rotation speed incorrect.	Correct rotation speed (data sheet).
	X	X									Avoid air bubbles in the conveying product.
		X		X	X		X	X		Pressure head too great.	Check pressure head with pressure gauge, reduce pressure head by using larger pressure pipe crossed section or shortening the pressure pipe.
X	X	X			X			X		Pump running partially/ completely dry.	Check there is adequate conveying product available on the suction side. Dry running protection DRP.
						X	X			Check coupling.	If necessary, move pump in relation to drive, check wear on coupling gear, re-adjust coupling if necessary.
X		X								Rotation speed too low.	Increase rotation speed for low-viscosity media/large suction volume.

Malfunction										Causes	Rectification
Pump is not sucking	Pump pumping unevenly	Conveying capacity is not achieved	Pressure head is not reached	Pump does not start up	Pump seized / pump does not pump	Pump is loud when running	Motor gets too hot	Premature stator wear	Shaft seal is leaky		
X	X					X				Rotation speed too high.	Reduce rotation speed for high-viscosity media, risk of cavitation.
						X				Joint play too large.	Check mounting of coupling rod bushing.
X		X		X	X			X		Foreign objects in pump.	Dismantle pump, remove foreign bodies, replace defective parts.
X		X	X		X					Stator/rotor worn.	Dismantle pump and renew defective parts.
X		X			X	X				Joint parts worn.	Renew joint parts, use seepex pin joint grease.
X		X			X			X		Suction pipe blocked.	Clean the suction pipe.
X				X	X		X	X		Temperature of pumping liquid too high.	Check temperature, use an undersize rotor.
X		X		X			X		X	Gland packing too firm/ worn.	Loosen packing gland or tighten. Renew unusable packing rings.
X				X	X			X		Solid content and/or grain size too great.	Reduce pump speed, install screen with permitted mesh width. Increase liquid proportion.
X				X				X	X	Sedimentation/gumming of solids when pump stationary.	Rinse through and clean the pump immediately.
X				X	X			X	X	Conveying product hardens when the temperature drops below a certain limit.	Heat the pump.
				X	X		X	X		Stator swollen and unable to withstand conveying product.	Select a suitable stator material, use an undersize rotor.
						X			X	Bearings in pump drive housing or drive unit defective.	Renew bearings.
									X	Mechanical seal defective.	Check sliprings and O-rings for wear/resistance, renew if necessary.

Order No.	**P02016670**
Data sheet	**892899**
Version 1	**Item 100**

SEEPEX.
An Ingersoll Rand Business

It's essential to have a minimum overload capability of 150% for at least 60 seconds. (see technical data sheet)

Baseplate

Design	baseplate for block pump, design with side feet
Material	steel, painted
GPU Type Code	B-ST-LS

TSE

Design	standard design, complete - sensor sleeve fitted to the stator of the pump with integrated temperature sensor - connection head (IP55) - separate TSE control device suitable for mounting inside a control panel
Voltage	110-115 V / 50-60 Hz
Temperature coefficient	NTC
Material sensor sleeve	1.4404 / AISI 316L
Material connection head	aluminium

Documentation

Dimensional drawing	262-D18/0700-S-732A4
Sectional drawing	062-062D1
Mechanical seal drawing	262-0GA/0350-0-084A4
Operation Manual	1 x Print English (US)

Elevation clarifier Max : 962.5
Min : 962.58

Pump elevation 951.70

$NPSHa = h_a - h_{vpa} + h_{st} - h_f$

$h_{st} = 962.5 - 951.70 = 10.8'$

$h_f = 2.14'$ (1.57'?) → HL in 4" pipe

(absolute pressure) $h_a = 33.9'$ (confirm) not the problem!

(Vapor Pressure) $h_{vpa} = 0.83'$ @ 70° (confirm)

$= 33.9' - 0.83' + 10.8' - 2.14'$

$NPSHa = 43.39'$

$NPSHr = 5'$ (from seepex)

PART I

Section A. Limitations and Monitoring Requirements

In order to demonstrate compliance with EPA Method 1631E and EPA Method 1669, the permittee shall report, on the daily sheet, the analytical results of all field blanks and field duplicates collected in conjunction with each sampling event, as well as laboratory method blanks when used for blank correction. The permittee shall collect at least one (1) field blank and at least one (1) field duplicate per sampling event. If more than ten (10) samples are collected during a sampling event, the permittee shall collect at least one (1) additional field blank AND field duplicate for every ten (10) samples collected. Only field blanks or laboratory method blanks may be used to calculate a concentration lower than the actual sample analytical results (i.e., a blank correction). Only one (1) blank (field OR laboratory method) may be used for blank correction of a given sample result, and only if the blank meets the quality control acceptance criteria. If blank correction is not performed on a given sample analytical result, the permittee shall report under 'Total Mercury – Corrected' the same value reported under 'Total Mercury – Uncorrected.' The field duplicate is for quality control purposes only; its analytical result shall not be averaged with the sample result.

2. Facility Operation and Maintenance

The permittee shall comply with the inspection, operation and maintenance program requirements specified below. An alternate facility operations program may be approved by the Department.

a. Lagoon Inspection

The permittee shall inspect the lagoon facilities three (3) times weekly year-round unless otherwise authorized by the Department. These inspections shall include:

1) the lagoon dikes for vegetative growth, erosion, slumping, animal burrowing or breakthrough, and condition of lagoon liner;

2) the lagoon for growth of aquatic plants, offensive odors, insect infestations, scum, floating sludge, and septic conditions;

3) the depth of the water in each cell and the freeboard;

4) the control structures and pump stations to ensure that valves, gates and alarms are set correctly and properly functioning;

5) the lagoon security fence and warning signs; and

The permittee shall initiate steps to correct any condition that is not in accordance with the facility maintenance program outlined in Part I.A.2.b. of this permit. A record of the inspections shall be maintained by the permittee for a period of three (3) years.

b. Facility Maintenance

The permittee shall implement a Facility Maintenance Program that incorporates the following management practices unless otherwise authorized by the Department.

1) Vegetation shall be maintained at a height not more than six (6) inches above the ground on lagoon dikes and around the fencing.

2) At all times, the facility shall be maintained to prevent the negative effects of floating material and/or water perimeter emergent rooted aquatic plants on Dissolved Oxygen concentrations, treatment efficiency, nuisance organisms, offensive odors, or other measurable impacts. However, in no case, even without demonstrated impact, shall the floating material and/or water perimeter emergent rooted aquatic plants exceed 40 percent cover.

3) Dike damage due to erosion or animal burrowing shall be corrected immediately and steps taken to prevent occurrences in the future.

Howell Lagoon Vegetation
July 2025

Howell Lagoon Vegetation
July 2025

Howell Lagoon Vegetation
July 2025

Cooper's Turf Management
PO Box 501
Howell, MI 48844-0501
+15175486653
info@coopersturf.com
www.coopersturf.com

Estimate

ADDRESS
MHOG
C/O GENOA TOWNSHIP
ATTN: GREG TATARA
2911 DORR ROAD
BRIGHTON, MI 48116

ESTIMATE 1380
DATE 07/13/2025

DATE	ACTIVITY	DESCRIPTION	QTY	RATE	AMOUNT
	Sales	Howell Township Treatment Plant at Transwest Industrial Park-CAT 305 with forestry mower head for brush and trees up to 2.5" in diameter. Cost is per hour (approximately 36 hours)	36	195.00	7,020.00
	MISC	Transport fee port to port	1	795.00	795.00

This proposal is valid for 7 days. If you would like to sign, please do so below and email back to us. Invoices/Statements will be mailed monthly and are due upon receipt. Payments not received by the next billing cycle are subject to fiance charges of 18% annually (1.5% monthly). We accept credit cards with a 3.5% convenience fee. A fuel surcharge may apply if significant increases in market rates occur.

TOTAL **$7,815.00**

Accepted By

Accepted Date

Section 2

Collection System Operation

Howell Township Pump Stations

Summary for June Activities:

Pump Station Inspections: All pump stations were inspected on a weekly basis throughout the month of June to ensure proper operation and maintenance (*Attachment 2.2*).

Pump Station 79: Kennedy Industries completed the SCADA system installation on June 25th. With a fully functioning alarm system now in place, we have officially assumed operational responsibility for the station. It has been added to our regular weekly inspection schedule. We are continuing to work with Kennedy to fine-tune alarm parameters, but communication with the station is now active and reliable. (*Attachment 2.3*)

HSGM-0587: On July 3rd, staff reported a damaged manhole at a development site on Burkart Road. Upon inspection, it was determined that the manhole required full restoration. Crews cleaned the structure, replaced the riser, and installed a new manhole lid. Before and after photos have been included in this report. (*Attachment 2.4*)

Pump Station Status: The following stations are operating under normal conditions:

- **PS-70:** Normal Operations
- **PS-71:** Normal Operations
- **PS-72:** Normal Operations
- **PS-73:** Normal Operations
- **PS-74:** Normal Operations
- **PS-75:** Normal Operations
- **PS-76:** Normal Operations
- **PS-77:** Normal Operations
- **PS-78:** Normal Operations
- **PS-79:** SCADA System is operational

Pump Station 70
Howell Township
July 2025

Date	Time	Initials	Pump 1	Pump 2	KWH	Generator Hours	Operated Pump 1 in Hand?	Operated Pump 2 in Hand?	Quiet?	Cleaned Floats?	Tested High Level Alarm Float?	Cleaned Transducer?	Wet Well Needs Cleaning?	Grass Needs Mowing?	Heater On?	Blow By?	Ran Generator?	Fuel Level in Generator	Hours #1	Hours #2	HOURS SINCE LAST CHECK IN	# OF DAYS	AVG RUNTIME / DAY PUMP 1	AVG RUNTIME / DAY PUMP 2	KWH Net	Generator Net	Comments
6/3/2024	1:15 PM	wd	6080.0	5788.6	65964	513	NO	NO	YES	YES	NO	NO	NO	YES	NO	NO	YES	FULL	13.6	13.3	148.2	6.2	2.203	2.154	309.0	0.2	
6/10/2024	10:57 AM	sl	6094.8	5803.3	66305	513	NO	NO	YES	YES	NO	NO	NO	YES	NO	NO	YES	FULL	14.8	14.7	165.7	6.9	2.144	2.129	341.0	0.2	
6/17/2024	2:30 PM	wd	6110.3	5818.3	66647	513	NO	NO	YES	YES	NO	NO	NO	YES	NO	NO	YES	FULL	15.5	15.0	171.5	7.1	2.168	2.099	342.0	-0.4	
6/24/2024	9:05 AM	bo	6125.3	5833.2	66970	514	NO	NO	YES	YES	NO	NO	NO	YES	NO	NO	YES	FULL	15.0	14.9	162.6	6.8	2.214	2.199	323.0	0.8	
6/2/2025	8:55 AM	wd	6905.4	6608.9	88492	526	NO	NO	YES	YES	NO		NO	YES	YES	NO	YES	FULL	9.3	10.4	116.6	4.9	1.915	2.141	252.0	0.2	
6/10/2025	9:20 AM	db	6924.6	6628.4	88920	526	NO	NO	YES	YES	NO		NO	YES	YES	NO	YES	FULL	19.2	19.5	192.4	8.0	2.395	2.432	428.0	0.2	
6/16/2025	9:50 AM	bo	6938.4	6642.3	89227		NO	NO	YES	YES	NO		NO	YES	YES	NO	YES	FULL	13.8	13.9	144.5	6.0	2.292	2.309	307.0	-526.3	
6/23/2025	12:30 PM	sl	6955.5	6659.4	89597	527	NO	NO	YES	YES	NO		NO	NO	YES	NO	YES	FULL	17.1	17.1	170.7	7.1	2.405	2.405	370.0	526.7	
6/30/2025	10:00 AM	JM	6971.6	6675.3	89940	527	NO	NO	YES	YES	NO		NO	NO	YES	NO	YES	FULL	16.1	15.9	165.5	6.9	2.335	2.306	343.0	0.1	
7/8/2025	9:50 AM	db	6988.8	6692.5	90317	527	NO	NO	YES	YES	NO		NO	NO	YES	NO	YES	FULL	17.2	17.2	191.8	8.0	2.152	2.152	377.0	0.2	

Pump Station 71
Howell Township
July 2025

Date	Time	Initials	Pump 1	Pump 2	KWH	Operated Pump 1 in Hand?	Operated Pump 2 in Hand?	Quiet?	Cleaned Floats?	Tested High Level Alarm Float?	Cleaned Transducer?	Wet Well Needs Cleaning?	Grass Needs Mowing?	Odor from Carbon Cannister?	Heater On?	Blow By?	Hours #1	Hours #2	HOURS SINCE LAST CHECK IN	# OF DAYS	AVG RUNTIME / DAY PUMP 1	AVG RUNTIME / DAY PUMP 2	KWH Net	Comments
6/3/2024	12:55 PM	wd	5930.2	268.3	75617	NO	NO	YES	YES	NO	NO	YES	NO		NO	NO	4.0	4.1	147.4	6.1	0.651	0.667	236.0	
6/10/2024	11:24 AM	sl	5934.5	272.7	75874	NO	NO	YES	YES	NO	NO	YES	NO		NO	NO	4.3	4.4	166.5	6.9	0.620	0.634	257.0	
6/19/2024	9:10 AM	wd	5940.2	278.4	76208	NO	NO	YES	YES	NO	NO	YES	YES		NO	NO	5.7	5.7	213.8	8.9	0.640	0.640	334.0	
6/24/2024	9:45 AM	bo	5943.5	281.7	76399	NO	NO	YES	YES	NO	NO	YES	YES		NO	NO	3.3	3.3	120.6	5.0	0.657	0.657	191.0	
6/2/2025	9:10 AM	wd	6163.4	514.0	90365	NO	NO	YES	YES	NO		NO	YES		YES	NO	3.2	3.5	116.7	4.9	0.658	0.720	190.0	
6/10/2025	8:55 AM	db	6168.6	519.9	90678	NO	NO	YES	YES	NO		NO	YES		YES	NO	5.2	5.9	191.8	8.0	0.651	0.738	313.0	
6/16/2025	10:20 AM	bo	6172.5	524.2	90906	NO	NO	YES	YES	NO		NO	YES		YES	NO	3.9	4.3	145.4	6.1	0.644	0.710	228.0	
6/23/2025	12:50 PM	sl	6177.2	529.5	91182	NO	NO	YES	YES	NO		NO	YES		NO	NO	4.7	5.3	170.5	7.1	0.662	0.746	276.0	
6/30/2025	10:40 AM	JM	6181.7	534.3	91448	NO	NO	YES	YES	NO		NO	YES		NO	NO	4.5	4.8	165.8	6.9	0.651	0.695	266.0	
7/8/2025	9:35 AM	db	6186.8	539.6	91748	NO	NO	YES	YES	NO		NO	YES		NO	NO	5.1	5.3	190.9	8.0	0.641	0.666	300.0	

Pump Station 72
Howell Township
July 2025

Date	Time	Initials	Pump 1	Pump 2	KWH	Generator Hours	Fuel/Gas Read	Operated Pump 1 in Hand?	Operated Pump 2 in Hand?	Quiet?	Cleaned Floats?	Tested High Level Alarm Float?	Wet Well Needs Cleaning?	Grass Needs Mowing?	Heater On?	Ran Generator?	Blow By?	Hours #1	Hours #2	HOURS SINCE LAST CHECK IN	# OF DAYS	AVG RUNTIME / DAY PUMP 1	AVG RUNTIME / DAY PUMP 2	KWH Net	Generator Net	Fuel/Gas Net	Comments
6/3/2024	1:00 PM	wd	631.3	1562.7	80954	1261	1306	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	0.9	0.9	147.4	6.1	0.147	0.147	146.0	0.5	1.0	
6/10/2024	11:30 AM	sl	632.2	1563.6	81112	1262	1308	NO	NO	YES	YES	NO	YES	NO	NO	NO	NO	0.9	0.9	166.5	6.9	0.130	0.130	158.0	0.5	2.0	
6/19/2024	9:30 AM	wd	633.4	1564.7	81297	1263	1309	NO	NO	YES	YES	NO	YES	YES	NO	NO	NO	1.2	1.1	214.0	8.9	0.135	0.123	185.0	0.7	1.0	
6/24/2024	9:45 AM	bo	634.2	1565.4	81397	1263	1311	NO	NO	YES	YES	NO	YES	YES	NO	NO	NO	0.8	0.7	120.2	5.0	0.160	0.140	100.0	0.5	2.0	
6/2/2025	9:15 AM	wd	681.1	1611.2	94482	1286	1371	NO	NO	YES	YES	NO	NO	YES	YES	NO	NO	0.7	0.7	116.6	4.9	0.144	0.144	144.0	0.0	0.0	
6/10/2025	9:00 AM	db	682.2	1612.2	94666	1286	1373	NO	NO	YES	YES	NO	NO	YES	YES	NO	NO	1.1	1.0	191.8	8.0	0.138	0.125	184.0	0.6	2.0	
6/16/2025	10:15 AM	bo	682.9	1612.9	94800	1286	1373	NO	NO	YES	YES	NO	NO	YES	YES	NO	NO	0.7	0.7	145.3	6.1	0.116	0.116	134.0	0.1	0.0	
6/23/2025	12:55 PM	sl	683.9	1614.0	94943	1287	1375	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	1.0	1.1	170.7	7.1	0.141	0.155	143.0	0.8	2.0	
6/30/2025	10:30 AM	JM	684.9	1614.9	95078	1287	1376	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	1.0	0.9	165.6	6.9	0.145	0.130	135.0	0.1	1.0	
7/8/2025	9:45 AM	db	686.0	1615.9	95234	1288	1378	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	1.1	1.0	191.3	8.0	0.138	0.125	156.0	0.7	2.0	

Pump Station 73
Howell Township
July 2025

Date	Time	Initials	Pump 1	Pump 2	Pump 3	KWH	Generator Hours	Operated Pump 1 in Hand?	Operated Pump 2 in Hand?	Quiet?	Cleaned Floats?	Tested High Level Alarm Float?	Wet Well Needs Cleaning?	Grass Needs Mowing?	Odor from Carbon Cannister?	Heater On?	Ran Generator?	Blow By?	Fuel Level in Generator	Hours #1	Hours #2	Hours #3	HOURS SINCE LAST CHECK IN	# OF DAYS	AVG RUNTIME / DAY PUMP 1	AVG RUNTIME / DAY PUMP 2	AVG RUNTIME / DAY PUMP 3	KWH Net	Generator Net	Comments
6/3/2024	12:50 PM	wd		978.6	641.5	3744	623	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	FULL	0.0	3.9	3.9	62.8	2.6	0.000	1.490	1.490	9.0	0.4	
6/10/2024	11:16 AM	Sl		982.8	645.9	3748	623	NO	NO	YES	YES	NO	YES	YES	NO	NO	NO	NO	FULL	0.0	4.2	4.4	166.4	6.9	0.000	0.606	0.634	4.0	0.4	
6/19/2024	9:30 AM	wd		988.0	651.2	3755	623	NO	NO	YES	YES	NO	YES	YES	NO	NO	NO	NO	FULL	0.0	5.2	5.3	214.2	8.9	0.000	0.583	0.594	7.0	0.4	
6/24/2024	10:00 AM	bo		990.6	654.0	3759	623	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	NO	FULL	0.0	2.6	2.8	120.5	5.0	0.000	0.518	0.558	4.0	0.0	
6/2/2025	9:20 AM	wd		1180.2	848.4	4191	644	NO	NO	YES	YES	NO	NO	YES		NO	NO	NO	75%	0.0	2.5	2.6	116.8	4.9	0.000	0.514	0.534	4.0	0.0	
6/10/2025	8:40 AM	db		1185.1	853.6	4199	645	NO	NO	YES	YES	NO	NO	YES		NO	NO	NO	75%	0.0	4.9	5.2	191.3	8.0	0.000	0.615	0.652	8.0	0.4	
6/16/2025	10:10 AM	bo		1188.3	856.9	4204	645	NO	NO	YES	YES	NO	NO	NO		NO	NO	NO	75%	0.0	3.2	3.3	145.5	6.1	0.000	0.528	0.544	5.0	0.4	
6/23/2025	1:04 PM	sl		1193.8	862.7	4212	646	NO	NO	NO	YES	NO	NO	NO		NO	NO	NO	75%	0.0	5.5	5.8	170.9	7.1	0.000	0.772	0.815	8.0	0.4	
6/30/2025	10:30 AM	JM		1198.1	867.2	4218	646	NO	NO	YES	YES	NO	NO	NO		NO	NO	NO	75%	0.0	4.3	4.5	165.4	6.9	0.000	0.624	0.653	6.0	0.4	
7/8/2025	9:25 AM	db		1202.1	871.2	4224	646	NO	NO	YES	YES	NO	NO	NO		NO	NO	NO	75%	0.0	4.0	4.0	190.9	8.0	0.000	0.503	0.503	6.0	0.4	

Pump Station 74
Howell Township
July 2025

Date	Time	Initials	Pump 1	Pump 2	KWH	Generator Hours	Operated Pump 1 in Hand?	Operated Pump 2 in Hand?	Quiet?	Cleaned Floats?	Tested High Level Alarm Float?	Wet Well Needs Cleaning?	Grass Needs Mowing?	Odor from Carbon Cannister?	Heater On?	Ran Generator?	Blow By?	Fuel Level in Generator	Hours #1	Hours #2	HOURS SINCE LAST CHECK IN	# OF DAYS	AVG RUNTIME / DAY PUMP 1	AVG RUNTIME / DAY PUMP 2	KWH Net	Generator Net	Comments
6/3/2024	12:35 PM	wd	132.5	147.8	314.0	2356	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	75%	1.3	1.2	146.8	6.1	0.213	0.196	4.0	0.9	
6/10/2024	10:46 AM	sl	133.9	149.2	317.0	2357	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	NO	75%	1.4	1.4	166.2	6.9	0.202	0.202	3.0	0.8	
6/19/2024	10:15 AM	wd	135.5	150.8	322.0	2357	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	NO	75%	1.6	1.6	215.5	9.0	0.178	0.178	5.0	0.8	
6/24/2024	10:20 AM	bo	136.4	151.6	324.0	2358	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	NO	75%	0.9	0.8	120.1	5.0	0.180	0.160	2.0	0.8	
6/2/2025	9:30 AM	wd	204.8	220.0	547.0	2429	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	NO	50%	0.9	1.0	118.8	4.9	0.182	0.202	3.0	0.0	
6/9/2025	2:35 PM	sl	206.6	221.7	551.0	2430	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	50%	1.8	1.7	173.1	7.2	0.250	0.236	4.0	0.6	
6/16/2025	9:25 AM	bo	207.9	223.0	555.0	2430	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	50%	1.3	1.3	162.8	6.8	0.192	0.192	4.0	0.7	
6/23/2025	1:15 PM	sl	210.8	225.9	560.0	2431	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	NO	50%	2.9	2.9	171.8	7.2	0.405	0.405	5.0	1.0	
6/30/2025	9:50 AM	JM	212.9	227.8	564.0	2432	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	NO	50%	2.1	1.9	164.6	6.9	0.306	0.277	4.0	0.6	
7/8/2025	9:15 AM	db	214.7	229.5	568.0	2433	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	50%	1.8	1.7	191.4	8.0	0.226	0.213	4.0	0.7	

Pump Station 75
Howell Township
July 2025

Date	Time	Initials	Pump 1	Pump 2	KWH	Generator Hours	Fuel/Gas Read	Operated Pump 1 in Hand?	Operated Pump 2 in Hand?	Quiet?	Cleaned Floats?	Tested High Level Alarm Float?	Wet Well Needs Cleaning?	Grass Needs Mowing?	Heater On?	Ran Generator?	Blow By?	Hours #1	Hours #2	HOURS SINCE LAST CHECK IN	# OF DAYS	AVG RUNTIME / DAY PUMP 1	AVG RUNTIME / DAY PUMP 2	KWH Net	Generator Net	Fuel/Gas Net	Comments
6/3/2024	12:15 PM	wd	892.6	2671.7	2942	891	4123	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	3.4	3.3	145.7	6.1	0.560	0.544	6.0	0.3	2.0	
6/10/2024	10:33 AM	sl	896.5	2675.4	2949	891	4126	NO	NO	YES	YES	NO	NO	NO	YES	NO	NO	3.9	3.7	166.3	6.9	0.563	0.534	7.0	0.4	3.0	
6/19/2024	10:45 AM	wd	901.4	2680.1	2957	892	4131	NO	NO	YES	YES	NO	NO	NO	YES	NO	NO	4.9	4.7	216.2	9.0	0.544	0.522	8.0	0.8	5.0	
6/24/2024	10:45 AM	bo	904.3	2682.9	2962	892	4131	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	2.9	2.8	120.0	5.0	0.580	0.560	5.0	0.0	0.0	
6/2/2025	10:05 AM	wd	1127.4	2896.5	3374	913	4269	NO	NO	YES	YES	NO	NO	YES	YES	NO	NO	3.4	3.3	119.4	5.0	0.683	0.663	6.0	0.0	0.0	
6/9/2025	2:15 PM	sl	1132.5	2901.6	3382	914	4271	NO	NO	YES	YES	NO	NO	NO	YES	NO	NO	5.1	5.1	172.2	7.2	0.711	0.711	8.0	0.4	2.0	
6/16/2025	9:00 AM	bo	1137.0	2905.9	3389	914	4274	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	4.5	4.3	162.8	6.8	0.664	0.634	7.0	0.4	3.0	
6/23/2025	2:01 PM	sl	1142.4	2911.0	3397	915	4278	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	5.4	5.1	173.0	7.2	0.749	0.707	8.0	0.6	4.0	
6/30/2025	9:30 AM	JM	1147.1	2915.5	3404	916	4287	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	4.7	4.5	163.5	6.8	0.690	0.661	7.0	1.5	9.0	
7/8/2025	8:55 AM	db	1152.4	2920.5	3412	922	4323	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	5.3	5.0	191.4	8.0	0.665	0.627	8.0	5.5	36.0	

Pump Station 76
Howell Township
July 2025

Date	Time	Initials	Pump 1	Pump 2	KWH	Generator Hours	Operated Pump 1 in Hand?	Operated Pump 2 in Hand?	Quiet?	Cleaned Floats?	Tested High Level Alarm Float?	Wet Well Needs Cleaning?	Grass Needs Mowing?	Heater On?	Ran Generator?	Blow By?	Fuel Level in Generator	Hours #1	Hours #2	HOURS SINCE LAST CHECK IN	# OF DAYS	AVG RUNTIME / DAY PUMP 1	AVG RUNTIME / DAY PUMP 2	KWH Net	Generator Net	Comments
6/3/2024	12:05 PM	wd	3311.1	2672.8	6354	596	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	FULL	4.2	4.6	146.0	6.1	0.690	0.756	170.0	0.3	
6/10/2024	10:25 AM	sl	3315.9	2677.6	6542	597	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	FULL	4.8	4.8	166.3	6.9	0.693	0.693	188.0	0.3	
6/19/2024	10:30 AM	wd	3322.2	2684.1	6773	597	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	FULL	6.3	6.5	216.1	9.0	0.700	0.722	231.0	0.7	
6/24/2024	10:35 AM	bo	3325.7	2687.9	6894	597	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	FULL	3.5	3.8	120.1	5.0	0.700	0.759	121.0	0.0	
6/2/2025	9:50 AM	wd	3572.0	2938.5	19763	616	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	50%	3.5	3.5	119.3	5.0	0.704	0.704	153.0	0.0	
6/9/2025	2:01 PM	sl	3577.8	2943.3	19962	616	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	FULL	5.8	4.8	172.2	7.2	0.808	0.669	199.0	0.3	
6/16/2025	8:55 AM	bo	3582.5	2947.7	20142		NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	FULL	4.7	4.4	162.9	6.8	0.692	0.648	180.0	-616.1	
6/23/2025	1:35 PM	sl	3588.1	2952.9	20317		NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	FULL	5.6	5.2	172.7	7.2	0.778	0.723	175.0	0.0	
6/30/2025	9:20 AM	JM	3593.0	2957.5	20472	618	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	FULL	4.9	4.6	163.8	6.8	0.718	0.674	155.0	617.5	
7/8/2025	8:50 AM	db	3598.7	2962.7	20660	618	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	FULL	5.7	5.2	191.5	8.0	0.714	0.652	188.0	0.4	

Pump Station 77
Howell Township
July 2025

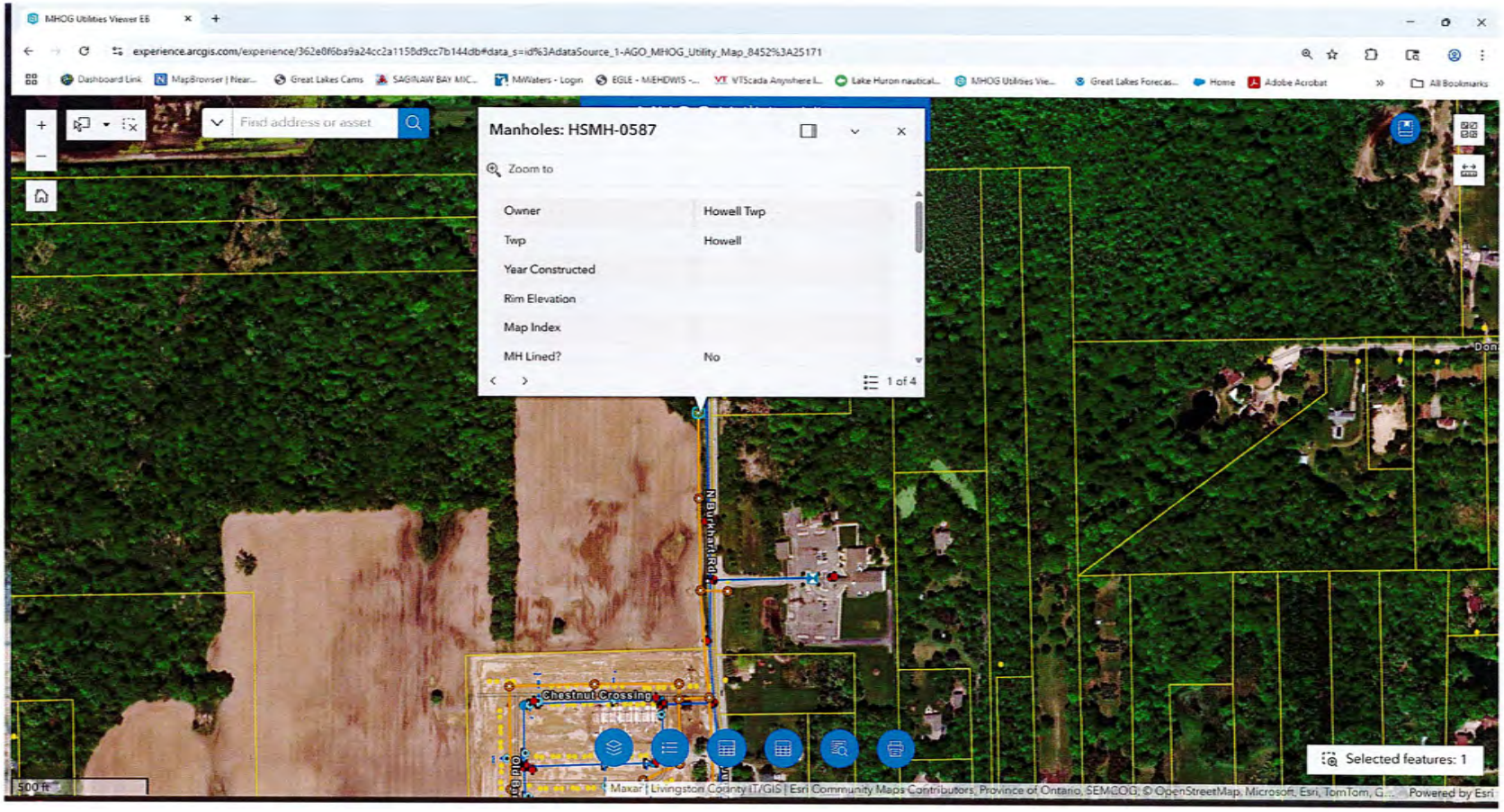
Date	Time	Initials	Pump 1	Pump 2	KWH	Operated Pump 1 in Hand?	Operated Pump 2 in Hand?	Quiet?	Cleaned Floats?	Tested High Level Alarm Float?	Wet Well Needs Cleaning?	Grass Needs Mowing?	Heater On?	Blow By?	Hours #1	Hours #2	HOURS SINCE LAST CHECK IN	# OF DAYS	AVG RUNTIME / DAY PUMP 1	AVG RUNTIME / DAY PUMP 2	KWH Net	Comments
6/3/2024	12:00 PM	wd	386.6	542.5	20220	NO	NO	YES	NO	NO	NO	NO	NO	NO	0.3	0.3	145.3	6.1	0.050	0.050	32.0	
6/10/2024	11:47 AM	sl	386.8	542.7	20256	NO	NO	YES	NO	YES	NO	NO	NO	NO	0.2	0.2	167.8	7.0	0.029	0.029	36.0	
6/19/2024	11:00 AM	wd	387.2	543.1	20304	NO	NO	YES	NO	NO	NO	YES	NO	NO	0.4	0.4	215.2	9.0	0.045	0.045	48.0	
6/24/2024	11:00 AM	bo	387.5	543.3	20331	NO	NO	YES	NO	NO	NO	YES	NO	NO	0.3	0.2	120.0	5.0	0.060	0.040	27.0	
6/2/2025	10:15 AM	wd	409.6	556.6	23021	NO	NO	YES	YES	NO	NO	NO	YES	NO	0.2	0.2	-26182.6	-1090.9	0.000	0.000	24.0	
6/9/2025	1:50 PM	sl	409.9	556.9	23054	NO	NO	YES	YES	NO	NO	NO	YES	NO	0.3	0.3	171.6	7.1	0.042	0.042	33.0	
6/16/2025	8:45 AM	bo	410.2	557.2	23085	NO	NO	YES	YES	NO	NO	NO	NO	NO	0.3	0.3	162.9	6.8	0.044	0.044	31.0	
6/23/2025	1:51 PM	sl	410.5	557.4	23123	NO	NO	YES	YES	NO	NO	NO	NO	NO	0.3	0.2	173.1	7.2	0.042	0.028	38.0	
6/30/2025	9:10 AM	JM	410.8	557.7	23161	NO	NO	YES	YES	NO	NO	NO	NO	NO	0.3	0.3	163.3	6.8	0.044	0.044	38.0	
7/8/2025	8:40 AM	db	411.1	558.0	23204	NO	NO	YES	YES	NO	NO	NO	NO	NO	0.3	0.3	191.5	8.0	0.038	0.038	43.0	

Pump Station 78
Howell Township
July 2025

Date	Time	Initials	Pump 1	Pump 2	KWH	Operated Pump 1 in Hand?	Operated Pump 2 in Hand?	Quiet?	Cleaned Floats?	Tested High Level Alarm Float?	Wet Well Needs Cleaning?	Grass Needs Mowing?	Heater On?	Blow By?	Hours #1	Hours #2	HOURS SINCE LAST CHECK IN	# OF DAYS	AVG RUNTIME / DAY PUMP 1	AVG RUNTIME / DAY PUMP 2	KWH Net	Comments
6/3/2024	1:35 PM	wd	1724.0	1854.9	14700	NO	NO	YES	YES	NO	NO	YES	NO	NO	8.3	8.3	148.8	6.2	1.338	1.338	295.0	
6/10/2024	11:38 AM	sl	1733.5	1864.5	15037	NO	NO	YES	YES	NO	NO	YES	NO	NO	9.5	9.6	166.1	6.9	1.373	1.388	337.0	
6/19/2024	9:00 AM	wd	1745.3	1876.6	15464	NO	NO	YES	YES	NO	NO	YES	NO	NO	11.8	12.1	213.4	8.9	1.327	1.361	427.0	
6/24/2024	8:45 AM	bo	1751.8	1883.4	15704	NO	NO	YES	YES	NO	NO	YES	NO	NO	6.5	6.8	119.8	5.0	1.303	1.363	240.0	
6/2/2025	10:40 AM	wd	2242.7	2376.2	33585	NO	NO	YES	YES	NO	NO	YES	YES	NO	6.9	6.7	117.8	4.9	1.405	1.365	238.0	
6/10/2025	9:50 AM	db	2254.3	2388.1	33992	NO	NO	YES	YES	NO	NO	YES	YES	NO	11.6	11.9	191.2	8.0	1.456	1.494	407.0	
6/16/2025	10:30 AM	bo	2262.6	2396.6	34287	NO	NO	YES	YES	NO	NO	YES	YES	NO	8.3	8.5	144.7	6.0	1.377	1.410	295.0	
6/23/2025	2:40 PM	sl	2273.0	2407.4	34658	NO	NO	YES	YES	NO	NO	NO	NO	NO	10.4	10.8	172.2	7.2	1.450	1.506	371.0	
6/30/2025	10:45 AM	JM	2282.5	2417.2	35001	NO	NO	YES	YES	NO	NO	NO	NO	NO	9.5	9.8	164.1	6.8	1.390	1.433	343.0	
7/8/2025	10:10 AM	db	2292.8	2428.1	35379	NO	NO	YES	YES	NO	NO	NO	NO	NO	10.3	10.9	191.4	8.0	1.291	1.367	378.0	

Pump Station 79
Howell Township
July 2025

Date	Time	Initials	Pump 1	Pump 2	KWH	Generator Hours	Operated Pump 1 in Hand?	Operated Pump 2 in Hand?	Quiet?	Cleaned Floats?	Tested High Level Alarm Float?	Wet Well Needs Cleaning?	Grass Needs Mowing?	Heater On?	Ran Generator?	Blow By?	Fuel Level in Generator	Hours #1	Hours #2	HOURS SINCE LAST CHECK IN	# OF DAYS	AVG RUNTIME / DAY PUMP 1	AVG RUNTIME / DAY PUMP 2	KWH Net	Generator Net	Comments
6/30/2025	9:40 AM	JM	181.5	167.4	3030	18	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	FULL								#VALUE!	
7/8/2025	9:05 AM	db	181.5	167.4	3105	18	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	FULL	0.0	0.0	191.4	8.0	**0.000**	**0.000**	**75.0**	**0.3**	


MHOG Utilities Viewer EB
experience.arcgis.com/experience/362e8f6ba9a24cc2a1158d9cc7b144db#data_s=id%3AdataSource_1-AGO_MHOG_Utility_Map_8452%3A25171
Find address or asset
Manholes: HSMH-0587
Zoom to
Owner
Howell Twp
Twp
Howell
Year Constructed
Rim Elevation
Map Index
MH Lined?
No
1 of 4
N Burkhart Rd
Chestnut Crossing
Selected features: 1
500 ft
Maxar | Livingston County IT/GIS | Esri Community Maps Contributors, Province of Ontario, SEMCOG, © OpenStreetMap, Microsoft, Esri, TomTom, G...
Powered by Esri


IRON WORKS
TARY

GORILLA GRIP
KENNEDY INDUSTRIES


BURIED
SEWER
LINE
SANITARY

PHP

PFEFFER ▪ HANNIFORD ▪ PALKA
Certified Public Accountants

John M. Pfeffer, C.P.A.
Patrick M. Hanniford, C.P.A.
Kenneth J. Palka, C.P.A.
Members:
AICPA Private Practice Companies Section
MACPA

225 E. Grand River - Suite 104
Brighton, Michigan 48116-1575
(810) 229-5550
FAX (810) 229-5578

June 24, 2025

Genoa Charter Township
Attn: Dr. Gregory Tatara, Utilities Director
2911 Dorr Road
Brighton, Michigan 48116

Dear Greg,

As we discussed you have requested our firm to calculate the amounts owed by each water/sewer district to the Genoa DPW fund for Vactor Truck costs shared by all systems. This was done as part of Genoa's quarterly review for the fiscal year ending 3/31/25. These costs were paid by the DPW fund and should be reimbursed to the DPW fund by the water/sewer districts. The costs include charges related to the Vactor Truck. The allocation was done based on actual hours of usage at each water/sewer district.

The following are the amounts owed to the DPW fund by the respective water/sewer districts.

MHOG Water - $7,394

G/O Sewer - $49,666

Lake Edgewood Sewer - $7,690

Oak Pointe Water - $1,775

Oak Pointe Sewer - $14,339

Howell Twp. Sewer - $28,382

Total Costs - $109,246

Please call with any questions.

Sincerely,

Kenneth J. Palka

Comparison To Outside Srvc.

48 hrs Vactor Time

8 Full Days

$4,375 / DAY

Outside Service = $35,000

Genoa Twp - DPW Fund

Vactor Truck Allocation of Costs-based on report of hours used for year ending 3/31/25

12 MONTHS ENDING 3/31/25

DISTRICT	Hours%	12 months (YTD)	AMOUNT TO ALLOCATE
OAK POINTE WATER	1.62%	109,246	$1,775
OAK POINTE SEWER	13.13%	109,246	14,339
MHOG WATER	6.77%	109,246	7,394
LAKE EDGEWOOD SEWER	7.04%	109,246	7,690
GO SEWER	45.47%	109,246	49,666
HOWELL TWP	25.98%	109,246	28,382
	100.00%		$109,246

Costs under Vactor Truck - FOR 12 MONTHS ENDING 3/31/25

#706-700-876	Fuel	$2,093
#706-700-877	Equip/tools	-
#706-700-878	Trans to reserves - sinking fund	100,000
#706-700-879	Repairs	7,153
Total Vactor Truck Costs		$109,246

	Usage for the year as a %	Hours for the Year Ending 3/31/25
OAK POINTE WATER	1.62%	3.00
OAK POINTE SEWER	13.13%	24.25
MHOG WATER	6.77%	12.50
LAKE EDGEWOOD SEWER	7.04%	13.00
GO SEWER	45.47%	84.00
HOWELL TWP	25.98%	48.00
	100.00%	184.75

See Vactor truck log sheet for the year ending 3/31/25

MHOG Utility Department
Vactor Truck Log Sheet

Date	Driver	System							Job Start Time	Job End Time	Total Hrs.	Job Description
		G-O	MHOG	OPS	OPW	LES	HWW	Other				
4/3/24	J. MITCHELL	1							10:00	11:00	1	CLEAN PS 25
4/5/24	J. MITCHELL	2.5							9:00	11:30	2.5	CLEAN PS 36 & 15
4/9/24	B. CZUPRENSKI	2							12:30	2:30	2	CLEAN PS 5
4/10/24	J. MITCHELL	5							9:00	2:00	5	CLEAN PS 44 & 49
4/30/24	D. BRIGHAM	2.5							12:00	2:30	2.5	CLEAN WELLBRIDGE & MANHOLES
5/21/24	D. BRIGHAM						2.5		12:00	2:30	2.5	BREWER ROAD MANHOLE
5/22/24	B. CZUPRENSKI	1.5		1					8:30	11:00	2.5	VAC CARBON @ PS #60 & #13
5/23/24	J. MITCHELL		4						9:00	1:00	4	STATE FARM SANITARY LEAD
5/24/24	J. MITCHELL			2					10:00	12:00	2	CLEAN PS #18/JONNA'S GRINDER
5/29/24	M. IGNATOWSKI		5						9:00	2:00	5	LOCATE & REPAIR D BOX WTV 2438
6/5/24	J. MITCHELL	1					1		9:30	11:30	2	CLEAN WELLBRIDGE, CHASE BANK MANHOLES
6/6/24	B. OTT	2							12:30	2:30	2	JET LINES PS #18, WETWELL PS #18
6/11/24	B. CZUPRENSKI	2					1		12:00	3:00	3	CLEAN PS #73 & #21
6/19/24	B. CZUPRENSKI						1.5		9:30	11:00	1.5	CLEAN 2 TANGER MH FOR LINING
6/20/24	D. BRIGHAM	2							8:30	10:30	2	CLEAN PS #44
6/24/24	M. IGNATOWSKI				3				9:00	12:00	3	OP WTP CLEAN BACKWASH TANK
6/27/24	J. MITCHELL						6		9:00	3:00	6	CLEAN PS #71 & #72/ HT SEWER MAIN
7/2/24	B. OTT			3					9:00	12:00	3	SEWER LINE FIX
7/10/24	W. DANIEL	3							10:00	1:00	3	PS #21 RAIN EVENT
7/11/24	M. IGNATOWSKI		1						11:30	12:30	1	CLEAN VALVE BOX
7/17/24	J. MITCHELL			2.75					12:00	2:45	2.75	CLEAN PS #19. 20, 23
7/19/24	D. BRIGHAM					1.5			12:30	2:00	1.5	CLEAN PS # 39
7/30/24	B. CZUPRENSKI					4			10:00	2:00	4	PAD/PIT VAC FROM L/E WWTP
8/9/24	J. MITCHELL	5.5							8:30	2:00	5.5	GENOA TWP HALL
8/13/24	B. OTT	1							2:00	3:00	1	VACTOR PIT EAST
8/14/24	B. OTT	1		1					8:30	10:30	2	JOANNA'S TANK, WEST VAC PIT
8/15/24	J. MITCHELL	1							10:00	11:00	1	CLEAN PS #24
8/23/24	B. CZUPRENSKI	6							8:30	2:30	6	WELLBRIDGE, PS #11 CARBON, PS #44 & #63
9/5/24	J. MITCHELL			1		1			12:00	2:00	2	CLEAN PS 62 & 18
9/10/24	M. IGNATOWSKI		0.5						9:00	9:30	0.5	CLEAN WALMART VALVE BOXES
9/13/24	M. IGNATOWSKI		2						8:30	10:30	2	1388 LUCY RD SERVICE LEAK
9/17/24	B. OTT	6							8:30	2:30	6	HUGHES RD/GRAND RIVER JETTING
9/18/24	J. MITCHELL	2.5							8:30	11:00	2.5	CLEAN PS 10 & 41
9/19/24	D. BRIGHAM			2					12:00	2:00	2	SUCKED OUT AIR RELEASE
9/25/24	B. CZUPRENSKI					2.5			8:15	10:45	2.5	CLEAN PS #68.#60 CARBON
10/2/24	J. MITCHELL	4							8:00	12:00	4	PS 30 REPAIR
10/3/24	J. MITCHELL	1							1:00	2:00	1	CLEAN MAIN AT PS 8
10/9/24	B. CZUPRENSKI						2		8:00	10:00	2	VAC PS 70 WETWELL

MHOG Utility Department
Vactor Truck Log Sheet

3-31-25

Date	Driver	System							Job Start Time	Job End Time	Total Hrs.	Job Description
		G-O	MHOG	OPS	OPW	LES	HWW	Other				
10/18/24	J. MITCHELL	2.5							8:30	11:00	2.5	VAC PS 18/63/10 CARBON
10/22/24	B. CZUPRENSKI	3							8:30	11:30	3	WELLBRIDGE/PS 44
10/23/24	J. MITCHELL			3					8:00	11:00	3	PS 54
10/24/24	B. CZUPRENSKI						7		8:00	3:00	7	JEET/VAC TANGER OUTLET
10/25/24	J. MITCHELL						1		1:00	2:00	1	CLEAN MH ASAP
11/6/24	J. MITCHELL	1		1					12:00	2:00	2	CLEAN JONNA'S & PS 7
11/7/24	D. BRIGHAM	1.5					1.5		11:00	1:00	3	CLEAN PS 76, 15
11/13/24	J. MITCHELL						2.5		12:00	2:30	2.5	CLEAN HT MHS
11/19/24	W. DANIEL						7		8:30	3:30	7	FISHER ROAD MANHOLES
11/22/24	D. BRIGHAM						7		8:30	3:30	7	CLEAN/JET MH ON GRAND RIVER/BURKHART
11/26/24	B. CZUPRENSKI	2.5							12:30	3:00	2.5	JET/VAC VICTORY LANE OIL
12/4/24	D. BRIGHAM						1.5		12:00	1:30	1.5	CLEANED HOWELL MANHOLES
12/5/24	J. MITCHELL						1.5		1:00	2:30	1.5	CLEANED HT ASAP MH
12/10/24	D. BRIGHAM	5							9:00	2:00	5	CLEAN PS 44 & 49
12/11/24	B. CZUPRENSKI	3							8:30	11:30	3	CLEAN PS 49
12/17/24	J. MITCHELL	3				2			8:30	1:30	5	CLEAN PS 6 & 39
12/18/24	J. MITCHELL	1		2.5					12:00	2:30	2.5	PICK UP LEAVES AT PS 12, 57 & 54
12/25/24	B. CZUPRENSKI			1					8:15	9:15	1	3819 HIGHCREST CAN XMAS NIGHT
1/17/25	B. OTT	1.5					1.5		8:30	11:30	3	PS 18, 19, WELLBRIDGE. + Problem Howell Twp MH
1/22/25	B. CZUPRENSKI			1					11:30	12:30	1	3975 Highcrest Vacuum Can
1/30/25	D. BRIGHAM						1.5		1:00	2:30	1.5	PS 71 CLEAN
2/12/25	J. MITCHELL							1.5	11:00	12:30	1.5	CITY OF HOWELL SPILL
2/25/25	D. BRIGHAM					2			9:00	11:00	2	CLEANED PS 67 & 68
2/25/25	D. BRIGHAM	3.5							11:30	3:00	3.5	CLEANED PS 17, 44 WELLBRIDGE
3/10/25	W. DANIEL			1					3:00	4:00	1	JONNA'S GREASE TRAP
3/14/25	S. LOWE	1					1		8:30	10:30	2	PS 11 & 3 MH HOWELL TWP
3/20/25	J. MITCHELL						1		9:30	10:30	1	BOOZE BARN MH CLEANING
3/21/25	B. CZUPRENSKI	1							12:30	1:30	1	CLEAN MANHOLES
3/26/25	B. CZUPRENSKI	2							12:30	2:30	2	WELLBRIDGE/ASAP MH
3/27/25	W. DANIEL			2					1:00	3:00	2	OAK POINTE MANHOLES
	Totals	84	12.5	24.25	3	13	48	1.5			185.25	
	Percentage	45.34%	6.75%	13.09%	1.62%	7.02%	25.91%	0.81%			100%	

186.25

(1.5)

184.75

1

N/A

PIPELINE MANAGEMENT CO., INC.

Michigan Department of Transportation Prequalified Contractor
Pipeline Inspection, Maintenance, Repair and Rehabilitation

QUOTATION-GC

MHOG - Sewer & Water Authority
Greg Tatara
4288 Norton Rd.
Howell, MI 48843

Date: July 21, 2024
Expiration Date: 30 Days from Submittal Date
Project Name: MHOG- Water Tank Cleaning
Payment Terms: Net 30–1.5% Int. Per Month Thereafter

PIPELINE MANAGEMENT COMPANY, INC. (hereinafter "Subcontractor" or "Pipeline") proposes to perform the work identified in Section 1 below (hereinafter the "Project") for the party identified as the Contractor on the signature page hereof (hereinafter the "Contractor") in accordance with the Project's contract documents, if provided to Subcontractor, or reasonable written direction from an authorized representative of Contractor when no Project contract documents are provided.

Section 1. SCOPE OF WORK/ASSUMPTIONS/PRICING. Upon receipt of this quotation signed by an authorized representative of Contractor, or, in emergency cases only, upon receipt of written authorization to proceed from an authorized representative of Contractor, Subcontractor agrees to provide all labor, materials and equipment necessary, in Subcontractor's sole opinion, to complete the Project as more particularly described below:

For Comparison

No.	Description	Est. Qty./Unit		Unit Price	Extension
1.	Equipment & Crew Daily Rate	4	Days	$8,750.00	$35,000.00
2.	** Disposal Offsite If Needed	5	Loads	$5,500.00	
	Total (Note 3f)				$35,000.00

Not Howell Twp. Quote

Project Specific Notes

1. Price is for 2 vactors w/ operator and 4 laborers to clean lime/debris from the bottom of the tank. We will bring 250' of Kanna-Flex hose per truck for removal of lime/debris in the tank.
2. THIS IS NOT EXCEED $35,000.00.
3. If debris is needed to be hauled offsite; please include $5,500.00 per trip per vactor for disposal.
4. Water will be provided at hydrant on site at no cost to PMC.
5. Any Fee's, Permit or Permissions needed Excluded.

New Tire On Howell Township Generator

Monthly Missdig Log

June-25

Date	Missdig Tickets					Marked					
	Received	Positive Response	Marked	Cleared	Out of System	MHOG	OPW	LE	G/O	OPS	HTS
Sunday, June 01, 2025	2	0	0	0	0	0	0	0	0	0	0
Monday, June 02, 2025	36	67	28	39	0	17	0	0	7	4	0
Tuesday, June 03, 2025	36	32	12	20	0	7	1	0	2	2	0
Wednesday, June 04, 2025	66	73	18	55	0	13	0	0	4	1	0
Thursday, June 05, 2025	38	36	9	27	0	4	0	0	5	0	0
Friday, June 06, 2025	41	33	7	26	0	4	0	0	1	1	1
Saturday, June 07, 2025	2	0	0	0	0	0	0	0	0	0	0
Sunday, June 08, 2025	2	0	0	0	0	0	0	0	0	0	0
Monday, June 09, 2025	43	61	17	44	0	6	4	0	3	4	0
Tuesday, June 10, 2025	59	41	12	29	0	8	2	0	2	0	0
Wednesday, June 11, 2025	25	22	6	16	0	5	0	0	0	1	0
Thursday, June 12, 2025	17	38	11	28	0	8	0	0	2	1	0
Friday, June 13, 2025	36	4	4	0	0	2	0	0	0	0	2
Saturday, June 14, 2025	1	0	0	0	0	0	0	0	0	0	0
Sunday, June 15, 2025	3	0	0	0	0	0	0	0	0	0	0
Monday, June 16, 2025	39	60	22	38	0	13	0	0	6	0	3
Tuesday, June 17, 2025	43	46	8	38	0	7	0	0	1	0	0
Wednesday, June 18, 2025	71	46	7	39	0	7	0	0	0	0	0
Thursday, June 19, 2025	32	67	14	53	0	6	2	0	4	0	2
Friday, June 20, 2025	29	37	9	28	0	5	1	0	2	1	0
Saturday, June 21, 2025	1	0	0	0	0	0	0	0	0	0	0
Sunday, June 22, 2025	0	0	0	0	0	0	0	0	0	0	0
Monday, June 23, 2025	41	41	10	31	0	9	0	0	0	1	0
Tuesday, June 24, 2025	42	30	9	21	0	2	2	0	4	1	0
Wednesday, June 25, 2025	20	37	8	29	0	4	1	0	2	1	0
Thursday, June 26, 2025	44	34	9	25	0	5	0	0	4	0	0
Friday, June 27, 2025	31	46	13	33	0	8	0	0	5	0	0
Saturday, June 28, 2025	0	0	0	0	0	0	0	0	0	0	0
Sunday, June 29, 2025	0	0	0	0	0	0	0	0	0	0	0
Monday, June 30, 2025	41	20	10	10	0	4	1	0	4	1	0
Total	841 Received	871 Positive Response	243 Marked	629 Cleared	0 Out of System	144 MHOG	14 OPW	0 LE	58 G/O	19 OPS	8 HTS
	28	29	8	21	0	Total					243
	Average Per Day					% Marked to Received 29%					

MHOG = MHOG Water System
OPW = Oak Pointe Water System

LE = Lake Edgewood Sewer System
G/O = G/O Sewer System
OPS = Oak Pointe Sewer System
HTS = Howell Township Sewer System

Section 3

Repairs
&
Capital Improvements

Howell Township
New 2025 Improvement Plan Summary
Updated 7/14/25

Active CIP and Significant Repairs In Progress						
No.	**Project Description**	**Contractor**	**Priortity**	**Initial Estimate**	**Actual Cost/Quote**	**Update**
2	Union at Oak Grove SCADA Integration	Kennedy	High	$10,000	$10,000	Substantially complete, Kennedy back out Week July 14 for Punch List Items
1	Aeration Basin Diffuser Repair / Replacement	MHOG	High	$10,000		Finished Repairs, Need to Prepare Order for Replacement Parts
2	Aeration DO Probe Installation	MHOG/UIS	High	$5,000		Using Old from Lake Edgewood to Save Costs
3	Rebuilt UV Unit	UIS	High	$15,000	$19,775	Quote from UIS Attachment 3.4
4	Influent Sampler Shed	MHOG	High	$2,500	< $1,000	Complete
5	Lights in Headworks, Blower Building and RAS Building	K&J Electric	Medium	$7,500	$8,600	In Progress
6	Post Aeration By-pass	D'Angelo	Medium	$15,000		Requires 12-inch and 8-inch Gate Valves
7	South Clarifier Inspection and Repairs	FHC	High	$20,000		In Progresss
8	Bldg Temperature Alarms	UIS	Medium	$5,000		Quote from UIS to integrate into SCADA
9	Exterior HVAC Unit on Headworks	TBD	High	$5,000		Need to find a good contractor
10	Fix Doors on Blower Bldg., RAS Building, and Headworks	Security Lock	High	$10,000	$14,225	In Progress
11	Fix Screens on Admin Building, Reduce Fall Box Elder Bugs	MHOG	Medium	$2,000		Hope to do with internal staff
12	Sand Filter Lift Tubes	MHOG	High	$2,000		May need a welding sub
			Total	**$109,000**	**$52,600**	

HOWELL TOWNSHIP SANITARY
PROJECT SYSTEM EXPANSION SUMMARY
July 2025

PROJECT	Activity Past Month	LOCATION	PROJECT DESCRIPTION	STATUS
Planning / Review				
AGAPE Church	No	S. Latson Road	Car Wash - Connecting to existing sewer lead	
Wranglers	No	S. Latson Road	Drive Thru Restaurant - Connecting to existing sewer lead	Plans Approved. No Sewer Permit needed. Waiting on Pre-con.
Redwood	Yes	Grand River and Dorr Rd.	204 Apartment Units	Water and Wastewater Preliminary Reviews/Study Complete
Howell Business Park	Yes	Austin Court	New Storage Unit Buildings	Water Reviewed
Soapy Bucket	No	Oak Grove and M-59	Car Wash with Pump Station	All approved, pending pre-construction meeting
Airport Equipment Building	Yes	Liv. Co. Airport off Tooley Road	New Hanger Building for Airport Snow Removal Equipment	Sanitary is Private, connecting to water
Construction				
Heritage Square	Yes	Burkhart & Mason Road	176 Single Family Homes	Working on Sanitary Modifcation to reach wetwell, manhole repair by staff
Nexthome Realty	No	Highland Road	Small Office Building	Recently Graded, not tied in yet
3110 Oak Grove Road	Yes	Oak Grove Road, S. Oak Grove Meadows	New Modular Home connecting to sewer and water	Cleaned manhole and televised. Cannot get to main, hit impediment to camera. May need to dig up and repair, likely at tie in to existing

New Home
3110 Oak Grove Road

New Home
3110 Oak Grove Road

Howell Township Generators Cummins Bid 2026-2029
July 2025

PUMP STATION - GENERATORS

	SYSTEM	Address	MAKE	MODEL	GEN SN#	ENGINE	KW	FUEL	Current	Current LB	FS YR 1-3	YR 2 FS/LB	Difference	Difference LB	%
HT WWTP	HT	1222 Packard Dr.	Cummins	4000FCE-821	B000068411	CUMMINS	400	DIESEL	1224.72	2000.32	$ 1,271.48	$ 2,127.20	$ 46.76	$ 126.88	3.82%
70	HT	1034 Austin Court	Kohler	50R02J71	251251	CUMMINS	55	DIESEL	577.14	1149.74	$ 598.09	$ 1,166.68	$ 20.95	$ 16.94	3.63%
72	HT	1009 N Burkhart	Cummins	GGHH-5763460	E060924626	CUMMINS	100	NAT GAS	714.04	1316.64	$ 740.46	$ 1,295.72	$ 26.42	$ (20.92)	3.70%
73	HT	1575 N Burkhart	Cummins	DQDAA-58667826	G070078203	CUMMINS	250	DIESEL	1025.07	1725.67	$ 1,063.93	$ 1,654.89	$ 38.86	$ (70.78)	3.79%
74	HT	2700 Tooley Rd.	Cummins	DSHAA-5859796	E70063414	CUMMINS	150	DIESEL	803.95	1406.55	$ 833.80	$ 1,446.72	$ 29.85	$ 40.17	3.71%
75	HT	2571 Oak Grove Rd.	Cummins	185GFBA	HM06G112529	CUMMINS	185	DIESEL	960.98	1593.58	$ 997.45	$ 1,594.24	$ 36.47	$ 0.66	3.80%
76	HT	388 Oak Grove Rd.	Cummins	DGCA-5764798	F060933259	CUMMINS	50	NAT GAS	577.14	1179.74	$ 598.09	$ 1,166.68	$ 20.95	$ (13.06)	3.63%
79	HT	Molly Lane	Generac					NAT GAS	NA	NA	TBD	TBD			
814	**HT**	TRANSWEST	KOHLER	125ROZJ71	258440	JOHN DEERE	125	DIESEL	801.82	1404.42	$ 831.67	$ 1,444.59	$ 29.85	$ 40.17	3.72%
								Total	$ 5,883.04	$ 10,372.24	$ 6,103.30	$ 10,452.13	$ 220.26	$ 79.89	3.74%

Date	July 7, 2025	**Customer**	Howell Twp. UV Ballast Box	To	Jim Aulette
Description	Howell Twp. WWTP UV Ballast Box Replacement				jima@genoa.org
Quote #	251132				
Estimator	Duane Carr	**Email**	duane.carr@teamuis.com		

Scope of Work	Cost

Refurbish one (1) ballast and lamp UV box with 14 new ballast, 1 cooling fan, 1 thermostat, 1 Harting terminal connector, new termination pins, 1 connector cover, and necessary electrical hardware for all control and connections.

Provide necessary labor to install and test the UV box to prove the operation.

Provide two (2) spare ballasts for future replacement.

NOTE: All lamps and lamp gromets provided by others.

Total: $19,775.00

UIS SCADA Approved by _____ Date July 7, 2025

Please make Purchase Orders/Subcontracts out to: UIS SCADA, Inc. and reference Quote #251132

Client Acceptance when the Client will not be providing a PO or Contract to UIS SCADA, Inc.

Client authorizes Utilities Instrumentation Service, Inc. to proceed with the work and agrees to comply with the attached Terms and Conditions.

Client Acceptance _____

Signature

_____

Name **Title** **Date**

Exclusions and Clarifications

Pricing includes only the items listed above; anything not explicitly listed above is not included in our proposed scope of work.

Our quote is based on straight time during normal hours of 7:00 A.M. to 3:30 P.M., Monday through Friday, unless specified otherwise.

Our price is valid for thirty (30) days, after which time UIS SCADA, Inc. reserves the right to review and modify any and all portions of its proposal.

This proposal contains pricing and other information confidential and proprietary to UIS SCADA, Inc. and disclosure of the contents of this letter and any attachments to persons or organizations outside of this agreement is not authorized without specific written permission from UIS SCADA, Inc.

Team UIS - TERMS AND CONDITIONS

1. Offer. These Terms and Conditions ("Terms") apply to all products and services, including without limitation, computer software program(s) and software as a service ("SaaS Services") provided to Client under an Order Confirmation with Utilities Instrumentation Services, Inc., Utilities Instrumentation Services – Ohio, LLC., UIS SCADA, Inc., and/or UIS Renewable Power, Inc., as applicable ("Team UIS"). These Terms are incorporated into each Order Confirmation issued by Team UIS to a Client of such products or services ("Client"). A confirmation or acknowledgement of an order ("Order Confirmation") will be issued to Client after the Client has submitted an order to Team UIS. The Order Confirmation constitutes Team UIS's offer to the Client identified in the Order Confirmation to sell the products and/or provide the services identified in the Order Confirmation ("Products" and "Services", respectively) and otherwise to enter into the agreement that the Order Confirmation and these Terms describe (the "Agreement"), and the Order Confirmation and these Terms shall be the complete and exclusive statement of such Agreement.

2. Acceptance. A contract is formed when Client accepts the Order Confirmation by written acknowledgement, by accepting the Products and/or Services, or other issued acceptance documents for the Products and/or Services. Acceptance is expressly limited to the Agreement and shall not include any terms and conditions contained in Client's purchase order or similar document. Notwithstanding any contrary provision in Client's purchase order or other acceptance document or similar document, delivery of Products, performance of Services or commencement of Services by Team UIS shall not constitute acceptance of Client's terms and conditions to the extent any such terms or conditions are inconsistent with or in addition to the terms and conditions contained in the Agreement.

Team UIS
2290 Bishop Circle East
Dexter, MI 48130
(734) 424-1200

Utilities Instrumentation Service
UIS SCADA
UIS Renewable Power
Utilities Instrumentation Service-Ohio

Howell Township WWTP Plant Project Funding Request

Howell Township
3525 Byron Road,
Howell, MI 48855

To: Howell Township Board of Trustees

From: Greg Tatara, Utility Director, MHOG Utility Department

Date: July 30, 2025

Subject: Asphalt Driveway Maintenance

For consideration at tonight's Board Meeting is a request for funding of asphalt maintenance of the drive into the wastewater plant. As we looked to necessary maintenance items and improvements to the wastewater plant this year, one of the items we identified was the need to repair and maintain the driveway into the plant. This driveway, to the best of our knowledge, has not received any maintenance such as seal coating or crack filling since it was installed in 2001. I have attached an aerial photograph of the driveway leading into the plant from Packard Drive. The driveway is quite substantial, measuring 0.4-miles from the entrance of Packard Drive to the gates of the actual treatment plant. Within that 0.4-mile stretch, there are some substantial cracks that have developed in the asphalt, which allow unsightly weeds to grow and make it difficult to plow in the winter. In addition, there is an area that is 7 feet by 38 feet that needs to be cut out and replaced. In one of the photographs, I placed my foot adjacent to the crack to provide some scale on the width of these cracks that transect the driveway. The contractor is proposing to saw cut approximately 1-foot sections around the cracks and replace the asphalt in those areas and then crack seal between the new asphalt and the existing.

The asphalt area inside of the plant is also in need of repair and crack sealing; however, due to cost concerns we recommend that the drive be repaired this year and then next year we can obtain a quote to repair and maintain the asphalt within the plant grounds. These repairs should allow the asphalt to remain in good condition for at least another 5 years.

Lastly, we quoted this work with other wastewater plants, water plants, and multiple pump station driveways in our system, so we are confident we have received a fair price for the repairs.

Thank you for your consideration of the repairs to the driveway.

DeBottis Development & Asphalt Maintenance LLC

Proposal/Invoice

2517 Black Eagle Ridge - L'Eagle Pointe
Howell, MI 48843
Phone: 734-323-1698
Fax: 517-546-0815

To: HOWELL TWP WWTP
1222 PACKARD
HOWELL, MI 48843
Contact Name: GREG TATARA

Phone 8106234725	Date 7-24-25
Job Name/ Location	
MHOG	
Total Square Ft	Linear Ft of Crack

WE HEREBY PROPOSE TO FURNISH, IN ACCORDANCE WITH SPECIFICATIONS BELOW OR ATTACHED PAGES, ALL MATERIAL AND LABOR NECESSARY TO COMPLETE THE FOLLOWING:

1. Edge lot, trim back grass, clean and seal cracks as required using hot rubber. Asphalt and cold patch may be used when necessary. Price does not include spider cracks. $ 1404.00

2. The parking lot, road and/or driveway pavement shall be thoroughly cleaned and prepared for sealcoat application. $ 300.00

3. Asphalt repairs: saw cut, remove and replace: CRACKS sq. ft. 567 $ 6650.00
   Infra-red asphalt repair: 7x38 ~~Number of Sets~~ PATCH $ 2375.00
   Replace concrete drive and/or walkways: sq. ft. _____ $ _____

4. Catch Basin/Drain repair or rebuild: Number of Drains _____ $ _____

5. Apply ☐ *One Coat* ☐ *Two Coats* of Black Diamond emulsion sealer. In accordance with manufacturer's specifications, the admixture TARMAX R-100 shall be added. The finish coating will represent a coverage of 50 square feet per gallon. 3 lbs. of silica sand added per gallon of material. $ _____

6. Restripe lot as previously laid out with yellow, white or blue zone/marking paint. $ _____

PAYMENT TO BE MADE UPON COMPLETION OF WORK UNLESS OTHERWISE STATED BELOW.

TOTAL: $ 10,729.00

There shall be a one (1) year guarantee on the material and all workmanship, except that as applied to cracks. The guarantee shall be limited to the replacement of the material and application of same. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Worker's Compensation Insurance.

Authorized Signature:

Note: This propsal may be withdrawn by us if it is not accepted within _____ days

Acceptance of Proposal: The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be as outlined above. Legal fees and court costs incurred in the collection of monies owed according to this contract will be borne by the customer.

Signature: _____

Date _____

Like us on Facebook

Howell Township WWTP Driveway
July 30, 2025

Howell Township WWTP Driveway
July 30, 2025

Howell Township WWTP Driveway
July 30, 2025

Howell Township WWTP Driveway
July 30, 2025

Howell Township WWTP Driveway
July 30, 2025

Howell Township WWTP Driveway
July 30, 2025

11K

HAPRA MEETING JULY 15, 2025

Oceola Township

Machines are on site to start the maintenance barn, so we are requesting that they proceed with starting the Pickel ball courts now, rather than paying to bring back equipment in the spring, which would save costs later on. And they will pour cement at the same time they do the barn. Will finish the markings in spring.

Adaptive Hike @ Filmore Park August 12,2025, wheelchair accessible

Will be putting out for bids for doors and windows for the Bennett Center

Discussion veteran Membership/programs

Cycling Bikes are delivered, Parkinson Program

Marion Township will be adding 4 pickleball courts in the spring

Genoa Township has painted bathrooms

Howell City is seeking someone to oversee Fire and Ice and Scofield Park.

11M

Park and Recreation Steering Committee Meeting Minutes
Date: July 28, 2025
Time: 1:00pm – 2:00pm
Location: Howell Township Hall

Present: Jonathan Hohenstein, Teresa Murrish, Martha Haglund, Tim Church and Chris Nordstrom

The Howell Township Board approved a Park Master Plan agreement with Carlisle and Wortman on July 14, 2025. This meeting was the first step in implementing the newly signed agreement outlined in the work plan. The primary objective of this meeting was to initiate dialogue around background research and site analysis.

Topics of discussion included potential locations and design options for a future recreation center, parking, and walking trail, land topography, existing wetlands, Due Care Plan provided by ASTI Environmental, general recreational uses, community needs, public outreach strategies, outdoor events space (amphitheater) and the overall long-term vision for the property.

Mr. Church stated that the Howell Park and Recreation Authority could utilize an additional indoor facility ranging from 35,000 to 40,000 square feet. This space could be used for a variety of recreational and community activities, including pickleball, an indoor walking track on the first floor, CrossFit, indoor archery range, theater performances, dance studio events, and conference room functions, among others. There is also a demand for outdoor baseball diamonds to meet the growing community.

Mr. Nordstrom noted that he would be conducting an on-site field inspection of the property as part of the analysis. Currently, the property is being used for agricultural purposes (corn production).

Due Care Plan
Conducted Pursuant to Section 20107a
of 1994 PA 451, Part 201, as amended

0 and 2755 Tooley Road
Howell Township, Michigan

Howell Township

July 22, 2025

ASTI ENVIRONMENTAL

ASTI
ENVIRONMENTAL

Conducted Pursuant to Section 20107a of 1994 PA 451, Part 201, as amended

0 and 2755 Tooley Road
Howell Township, Michigan

July 22, 2025

Prepared For:

Howell Township
3525 Byron Road
Howell, MI 48855

Report Prepared By:

ASTI Environmental
10448 Citation Drive, Suite 100
Brighton, Michigan 48116
(810) 225-2800

ASTI Project No. A24-1988.01

Report Prepared by:

Jeremy Efros, EP, CPG
Senior Technical Lead
Due Diligence/ Remediation Group

Report Reviewed by:

Carrie Kempf, EP
Department Manager
Due Diligence/ Remediation Group

ASTI ENVIRONMENTAL

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ASTI ENVIRONMENTAL

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DUE CARE PLAN
0 AND 2755 TOOLEY ROAD
HOWELL TOWNSHIP, MICHIGAN
JULY 22, 2025

1.0 INTRODUCTION

ASTI Environmental (ASTI) was retained by Howell Township to prepare this Due Care Plan (DCP) for the property located at 0 and 2755 Tooley Road in Howell Township, Livingston County, Michigan (Subject Property). The Subject Property is owned by Howell Township and consists of approximately 136 acres of land on two parcels (Parcel IDs: 4706-21-200-19 [2755 Tooley Road] and 4706-22-100-001 [0 Tooley Road]). A Site Location Map is provided as Figure 1. This DCP is based on the results of the following environmental investigations/reports completed by ASTI for the Subject Property:

1. *Phase I Environmental Site Assessment* (ESA), 0 and 2990 Tooley Road, Howell Township, Michigan dated February 5, 2025.
2. *Phase I Environmental Site Assessment* (ESA), 2755 Tooley Road, Howell Township, Michigan dated February 6, 2025.
3. Limited Phase II ESA report, 0, 2755, 2990 Tooley Road & 0 Bowen Road, Howell Township, Michigan dated June 20, 2025

The source of soil contamination at the Subject Property is likely from soil fill from an unknown source on 2755 Tooley Road and the source of contaminated groundwater is also unknown but may have been from biosolids applied to the surface on 0 Tooley Road.

This DCP addresses the Michigan Department of Environment, Great Lakes, and Energy (EGLE) obligations under Section 20107a(1)(a-f) of Part 201 of the Natural Resources and Environmental Protection Act (NREPA) 451 of 1994, as amended (Part 201). Those obligations include the following:

a. Undertake measures as are necessary to prevent exacerbation of the existing contamination.
b. Exercise due care by undertaking response activities necessary to mitigate unacceptable exposure to hazardous substances, mitigate fire and explosion hazards due to hazardous substances, and allow for the intended use of the facility in a manner that protects the public health and safety.

c. Take reasonable precautions against the reasonably foreseeable acts or omissions of a third party and the consequences that foreseeably could result from those acts or omissions.
d. Provide reasonable cooperation, assistance, and access to the persons that are authorized to conduct response activities at the facility, including the cooperation and access necessary for the installation, integrity, operation, and maintenance of any complete or partial response activity at the facility. Nothing in this subdivision shall be interpreted to provide any right of access not expressly authorized by law, including access authorized pursuant to a warrant or a court order, or to preclude access allowed to a voluntary agreement.
e. Comply with any land use or resources use restrictions established or relied on in connection with the response activities at the facility.
f. Not impede the effectiveness or integrity of any land use or resource use restriction employed at the facility in connection with response activities.

2.0 DETAILED CHARACTERISTICS OF SUBJECT PROPERTY USE

The Subject Property is comprised of approximately 136 acres of land that is largely developed for agriculture but contains portions of land that are undeveloped. In addition, the south branch of the Shiawassee River traverses the central-eastern portion of 0 Tooley Road in a north-south orientation. The Subject Property is located on the east and west sides of Tooley Road and 0.16 to 0.25 miles north of Bowen Road in Howell Township, Sections 21 and 22 in Township 3 North and Range 4 East in Michigan. The location of the Subject Property is shown on the Site Location Map provided as Figure 1.

2.1 Subject Property Background

The southeast portion of 2755 Tooley Road contained a small farmhouse, barn, silo, and root cellar comprising a former small farm compound from at least 1907 until 1963. A small, 500-gallon gasoline underground storage tank (UST) used for fueling farm equipment was located adjacent to the farmhouse. Difco Laboratories purchased the property to operate a small diagnostic research laboratory from 1963 until 1988. Several of the former buildings associated with the former farm and laboratory were subsequently razed; however, some dilapidated structures (storage sheds, root cellar, etc.) remain but have not been used since the late 1980s. Difco Laboratory's primary activity was the production of antibiotic-

impregnated paper disks in spring-loaded plastic dispensing cartridges. The remainder of the 2755 Tooley Road portion of the Subject Property has been farmland since at least 1907.

The 0 Tooley Road portion of the Subject Property has primarily been used as farmland since at least 1937. A sewer pump station was constructed near the southern boundary of Parcel 4706-22-100-001 by the late 2000s.

2.2 Current and Proposed Uses of the Subject Property

The Subject Property is used for agricultural purposes. Howell Township intends to develop the Subject Property with walking trails and a future township hall.

2.3 Existing Infrastructure Features

No structures are present at the Subject Property. Potable water, sewerage, and storm water utilities are available to the Subject Property from Howell Township. Electrical services are available to the area of the Subject Property through DTE Energy and natural gas services are available through Consumers Energy.

2.4 Proposed Construction Activities

Howell Township intends to construct a building to be used as a township hall. No plans for the building were finalized at the time of this Due Care Plan.

3.0 Hazardous Substance Information

The following subsections provide a summary of previous environmental investigations, areas of known contamination, an evaluation of exposure pathways, and an evaluation of known or potential exposures at the Subject Property.

3.1 Environmental Investigations

Environmental reports/assessments completed by ASTI on the Subject Property consist of the following:

- *Phase I Environmental Site Assessment*, 160.65-Acre Property, Parcel 4706-22-100-001 and 4706-15-300-002, Howell Township, Michigan, February 5, 2025
- *Phase I Environmental Site Assessment*, 55.27-Acre Property, Parcel 4706-20-200-019, Howell Township, Michigan, February 6, 2025

- Limited Phase II Environmental Site Assessment report, 0,2755, and 2990 Tooley Road & 0 Bowen Road, Howell Township, Michigan, June 20, 2025

Summaries of these investigations are provided in the following subsections.

3.1.1 Phase I Environmental Site Assessments, February 5 and 6, 2025

ASTI conducted Phase I ESAs of the Subject Property and one northern adjoining parcel that were completed on February 5 and February 6, 2025. The Phase I ESAs were conducted in accordance with United States Environmental Protection Agency (US EPA) Standards and Practices for All Appropriate Inquiries (AAI, 40 CFR Part 312) and the *American Society for Testing and Materials* (ASTM) Practice E1527-21.

The Phase I ESAs included (1) a site inspection on December 17, 2024, (2) interviews with knowledgeable site contacts, (3) review of pertinent Michigan Department of Environment, Great Lakes, and Energy (EGLE), Howell Township, and Livingston County records, (4) acquisition and review of a federal and state database search, and (5) review of historical aerial photographs, topographic maps, prior environmental investigations, and city directories.

The following recognized environmental conditions (RECs) were identified with respect to the Subject Property (the RECs listed in this DCP are numbered differently than in the Phase I ESAs for ease of describing the scope of work completed, but the ordering of the RECs matches the Phase I ESAs):

2755 Tooley Road, Parcel ID 4706-21-200-019

REC 1. Environmental investigations by ENKON in 1992 identified arsenic and selenium in soil samples exceeding the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Part 201 Generic Residential Cleanup Criteria (GRCC) in multiple areas, including a septic system leach field, a drainage ditch, and a laboratory waste disposal pit. Additionally, groundwater sample MW-1 contained arsenic and lead exceeding GRCC near a stream that fed a former stormwater pond. While subsequent investigations by SEI in 1994 concluded that these impacts were within background levels or non-leaching, the presence of historical exceedances in soil and groundwater raises concerns regarding residual contamination.

REC 2. SEI identified 20 potential waste disposal pits across six areas of the former lab, with approximately 6,600 cubic yards of impacted soil and waste material excavated and disposed of at a landfill. While confirmatory sampling concluded that volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PNAs), and metal concentrations were below GRCC, the historical disposal of laboratory waste and significant excavation activities present potential subsurface contamination risks that warrant further evaluation.

REC 3. Investigations by Radian in 1999 identified sediment contamination in the stormwater retention pond and the associated drainage ditch. Additionally, groundwater samples MW-2, MW-3, and MW-4 contained lead concentrations (5 to 49 parts per billion [ppb]) exceeding GRCC for drinking water. Follow-up sampling in 2004 confirmed lead exceedances in MW-3, but later low-flow sampling techniques in 2005 did not detect lead. While EGLE acknowledged the possibility that previous detections were anomalies, the historical presence of lead contamination in groundwater and sediment remains a REC due to the potential for residual impact.

REC 4. Biosolids appear to have been applied to the Subject Property as an agricultural nutrient booster. The biosolids were applied by Biotech Agronomics, Inc. and they were sourced from the Pontiac [wastewater treatment plant] WWTP. The obtained biosolids application notification was issued on May 29, 2014. The biosolids were tested for arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, nitrogen, phosphorus, and potassium. The biosolids do not appear to have been tested for PFAS, which is now known to be spread through biosolids from WWTPs.

<u>0 and 2990 Tooley Road, Parcel IDs 4706-22-100-001 and 4706-15-300-002</u>

REC 5. The South Branch Shiawassee River transects the eastern portion of the Subject Property. This segment of the river is part of an 8-mile Super Fund Site caused by polychlorinated biphenyls (PCBs) contamination from historical discharges at the upstream former Cast Forge Company. Sediment samples collected from the Subject Property (T-168 to T-175 on Parcel -002 and T-186 to T-194 on Parcel -001) revealed PCBs concentrations below the Record-of-Decision cleanup threshold of 5 milligrams per kilogram (mg/kg), with the highest detected concentration being 0.692 mg/kg. While current levels meet regulatory

standards, continued monitoring was recommended due to the site's location within the contamination zone. Institutional controls, including land-use restrictions and fish consumption advisories, appear to be in effect for the contaminated zone. Soil disturbance or excavation in the contaminated zone may require regulatory review and adherence to safety protocols.

Additionally, PFAS have been more recently detected at the upstream source, so their presence in the watershed introduces further environmental concern.

REC 6. Biosolids appear to have been applied to the Subject Property as an agricultural nutrient booster. The biosolids were applied by Biotech Agronomics, Inc. and they were sourced from the Pontiac WWTP. The obtained biosolids application notification was issued on May 29, 2014. The biosolids were tested for arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, nitrogen, phosphorus, and potassium. The biosolids do not appear to have been tested for PFAS, which is now known to be spread through biosolids from WWTPs.

REC 7. The Subject Property was initially included in a BEA from 2004 that covered a 207-acre site formerly operated by Difco Lab. The report was revised to a smaller fraction that is approximately 8.6 acres. The Subject Property is not included in the revised area; however, no sampling was conducted on the Subject Property to distinguish or verify its condition.

REC 8. ASTI observed three relatively small dump sites at the edge of the farmland approaching the South Branch Shiawassee River. The location is west of the former farm on Tooley Road, so the area appears to have been a farm dump. Two of the dumps were approximately 30-square-feet in size. Within the dumps and in the immediate area, ASTI observed three deteriorated vehicles and three 55-gallon metal drums. All observed drums were empty, but the drums were old and rusty, so there is potential for a related leak. Approximately 15 smaller containers, ranging in size from less than one quart to over 10 gallons, were observed. Some of the smaller containers appeared to have been related to paint and motor oil storage while others were for food. General rubbish included appliances and other miscellaneous items. Some of the observed items were sunken into the ground, suggesting they had been discarded a long time ago or

intentionally buried. Based on observations, there is potential for a release at the dumps.

3.1.2 *Limited Phase II Environmental Site Assessment report, June 20, 2025*

ASTI conducted a Limited Phase II ESA of the Subject Property and two adjoining sites, one to the north (2990 Tooley Road) and one to the west (0 Bowen Road) on May 8 and 9, 2025. Only the data collected on the Subject Property, apart from an incremental sample that extended onto 2990 Tooley Road, are discussed further in this DCP.

The Limited Phase II ESA was conducted to identify whether environmental impacts had occurred to the Subject Property from the RECs described above.

On May 8 and 9, 2025, ASTI oversaw the completion of nine soil borings (SB-1 through SB-6, MW-7 through MW-9) at the Subject Property. The soil borings were advanced to various depths between 10 and 20 feet below ground surface (bgs) using a direct-push Geoprobe® drill rig. Groundwater was encountered in soil borings SB-3, SB-4, SB-6, MW-7, MW-8, and MW-9. Temporary monitoring wells were installed, and one groundwater sample was collected from each well except the temporary well at SB-6, which did not produce a sufficient volume of groundwater to sample. Additionally, on May 12 and 13, 2025, ASTI collected two incremental samples from two decision units (DUs) using Incremental Sampling Methodology (ISM) within the agricultural fields across the two Subject Property parcels and part of the northern adjoining parcel. On May 13, 2025, ASTI also oversaw the completion of two test trenches for the purpose of investigating potential waste disposal pits created by former Difco Lab operations and collected samples from the bottom of the trenches. A Sample Location Map is provided as Figure 2.

Boring/sample IDs, boring/sample locations, and depths were as follows:

Boring/Sample ID	Boring/Sample Location	Depth of Boring (bgs)
DU-1	53 increments across the agricultural field at 2755 Tooley Road regarding placement of biosolids	1 foot
DU-2	52 increments across the agricultural field at 0 and 2990 Tooley Road regarding placement of biosolids	1 foot
SB-1	Southeast portion of former Difco lab area at 2755 Tooley Road regarding the septic system leach field	20 feet
SB-2	Southern portion of former Difco lab area at 2755 Tooley Road regarding the historical drainage ditch	20 feet

Boring/Sample ID	Boring/Sample Location	Depth of Boring (bgs)
SB-3	Along the southern property boundary south of the former Difco lab area at 2755 Tooley Road along the stormwater detention ditch regarding historical impacts	10 feet
SB-4	East of the former Difco lab area at 2755 Tooley Road adjacent to the stormwater detention pond regarding historical impacts	10 feet
SB-5	North of the former Difco lab area at 2755 Tooley Road regarding historical waste disposal pits	15 feet
SB-6	Southern portion of the agricultural field at 2755 Tooley Road regarding placement of biosolids and historical impacts	20 feet
MW-7	Northern portion of the agricultural field at 2755 Tooley Road regarding placement of biosolids	20 feet
MW-8	Southeast portion of 0 Tooley Road, adjacent to the Shiawassee River regarding upstream historical PCBs and PFAS discharge. This location was as close to the river as ASTI could access due to flooding of the river.	5 feet
MW-9	Southern portion of 0 Tooley Road regarding placement of biosolids	10 feet
Trench-1	Southwest corner of the former Difco lab area at the bottom of the trench regarding waste disposal pits	5 feet
Trench-2	Southwest corner of the former Difco lab area at the bottom of the trench regarding waste disposal pits	5 feet

Sampling Procedures

ISM Sampling

ISM Sampling was conducted in accordance with EGLE's *Incremental Sampling Methodology and Applications* document, dated January 2018. Equal volumes of soil were collected from each increment using a stainless-steel slide-hammer ground probe. Multiple increments comprised one sample from one DU. The samples were collected from the surface to 1-foot bgs. Each increment was transferred from the probe directly into a dedicated bucket lined with a plastic bag. Triplicate samples were collected from DU-3 (T-1 and T-2) for quality assurance/quality control (QA/QC) purposes. Sampling equipment was decontaminated with an Alconox® wash and clean water rinse between DUs and between the parent and triplicate samples to minimize the risk of cross contamination.

These samples were subsequently placed on ice and submitted to Merit Laboratories Inc. (Merit) in East Lansing, Michigan under standard chain-of-custody procedures, and analyses were conducted using ISM laboratory procedures. The soil samples were analyzed for arsenic, cadmium, lead, selenium, and mercury using US EPA Methods 6020A and 7471, and polynuclear aromatic hydrocarbons (PNAs) using US EPA Method 8270D.

Discrete Soil and Groundwater Sampling

For discrete soil samples, soil was extracted from the ground using the drill rig in pre-cleaned, 5-foot-long, acetate liners. Soil encountered during field activities was identified by ASTI's field personnel, examined for visual and/or olfactory evidence of impact, and screened for total VOCs using a photoionization detector (PID), with notes recorded in a field logbook. Prior to sampling, the PID was calibrated to manufacturer specifications using 100 parts per million (ppm) isobutylene calibration gas. All down-hole equipment was decontaminated using an Alconox® wash and clean water rinse prior to and between borings to minimize the risk of cross contamination of the samples.

ASTI collected one or two soil samples from each soil boring. The soil samples were collected into laboratory-certified clean, unpreserved 4-ounce glass jars and 40-milliliter (mL) glass vials preserved with methanol, which were subsequently placed on ice and submitted to Merit under standard chain-of-custody procedures.

A total of five temporary monitoring wells were installed at the Subject Property. The wells were constructed using a one-inch diameter, five-foot-long, 10-slot polyvinyl chloride (PVC) screen threaded onto a one-inch diameter PVC riser. The temporary well at SB-6 did not produce sufficient groundwater to collect a sample. From the remaining temporary wells, groundwater was sampled using a peristaltic pump set at a flow rate of approximately 200 mL/minute. The groundwater samples were collected into two 40-mL glass vials preserved with hydrochloric acid, one 250-mL plastic bottle preserved with nitric acid, two unpreserved 15-mL centrifuge tubes, and an unpreserved 1-liter amber glass jar. The groundwater samples were also placed on ice and submitted to Merit under standard chain-of-custody procedures.

The soil and groundwater samples were analyzed for some combination of the following: VOCs by US EPA Method 8260C, PCBs by US EPA Method E608.3, PNAs by US EPA Method 8270D, PFAS by ASTM Method D7979-19M, and the Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc) by US EPA Method 6020A and 7471B (soil only) or 7470A (groundwater only).

Test Trenches

ASTI oversaw the completion of two test trenches for the purpose of investigating potential waste disposal pits created by former Difco Lab operations. The two trenches were completed with an excavator operated by Republic Services in locations measured and staked out by ASTI. The trenches were excavated to a depth of 5 feet and were each approximately 2-feet wide by 100-feet long. One soil sample was collected from the bottom of each trench (Trench-1 and Trench-2). Trench soil samples were analyzed for VOCs, PNAs, and Michigan 10 metals using the US EPA methods listed above. Following sampling, the trenches were backfilled and returned to grade by Republic Services.

For QA/QC purposes, two duplicate soil samples were collected. DUP-1S was collected from SB-4 (3.5-4'), and DUP-2S was collected from SB-5 (4-5'). One duplicate groundwater sample, DUP-1GW, was collected from MW-7. In addition, a methanol blank was maintained with the soil and groundwater samples during sampling and transport.

Sample depths, depth rationale, and analyses are provided in the following table.

Boring	Sample Matrix	Sample Depth (feet bgs)	Rationale for sample depth	Analysis
SB-1	Soil	4-4.5	Shallow soils in septic system leach field	VOCs, PNAs, Michigan 10 metals
	Soil	14-15	Deeper soils beneath septic system leach field	VOCs, PNAs, Michigan 10 metals
SB-2	Soil	2-2.5	Shallow soils in historical drainage ditch	VOCs, PNAs, Michigan 10 metals
	Soil	13-14	Deeper soils beneath historical drainage ditch	VOCs, PNAs, Michigan 10 metals
SB-3	Soil	3.5-4	Above the water table and historical lead impacts	Lead
SB-4	Soil	3.5-4.5	Within fill soils above the water table and historical lead impacts	Lead
	Groundwater	Screened at 5-10	Historical lead impacts	Lead
SB-5	Soil	4-5	Bottom of fill soils above native sand	VOCs, PNAs, Michigan 10 metals

Boring	Sample Matrix	Sample Depth (feet bgs)	Rationale for sample depth	Analysis
Trench-1	Soil	6'	Soil sample in the trench floor (no debris observed)	VOCs, PNAs, Michigan 10 metals
Trench-2	Soil	6'	Soil sample in the trench floor (no debris observed)	VOCs, PNAs, Michigan 10 metals
MW-7	Groundwater	Screened at 15-20	Intersection of water table	PNAs, PFAS, arsenic, cadmium, lead, selenium, mercury
MW-8	Groundwater	Screened at 0-5	Intersection of water table	PCBs, PFAS
MW-9	Groundwater	Screened at 5-10	Intersection of water table	PNAs, PFAS, arsenic, cadmium, lead, selenium, mercury

The EGLE Part 201 GRCC used for comparison to the soil analytical data are the drinking water protection (DWP), groundwater surface water interface protection (GSIP), direct contact (DC), finite source volatile soil inhalation (VSIC), soil volatilization to indoor air inhalation (SVIAI), and particulate soil inhalation (PSI). The groundwater samples were compared to the GRCC for drinking water (DW), groundwater surface water interface (GSI), and groundwater volatilization to indoor air inhalation (GVIAI).

The soil and groundwater analytical results were also compared to EGLE's residential volatilization to indoor air pathway (VIAP) screening levels (SLs), dated February 26, 2024.

Analytical Results

Soil Analytical

Table 1 presents the laboratory analytical results for the soil samples in comparison to the EGLE Part 201 GRCC and residential VIAP SLs. Table 2 presents the laboratory analytical results for the ISM soil samples in comparison to the EGLE Part 201 GRCC and residential VIAP SLs.

Metals

The laboratory analytical results reported arsenic in soil sample SB-5 (4-5') at a concentration exceeding the EGLE Part 201 GRCC for DWP and GSIP. Note that the arsenic concentration in SB-5 additionally exceeded the GRCC for DC. However, as described below in Section

3.6.6, ASTI calculated a new DC concentration for the Subject Property based on a more accurate exposure scenario for the Subject Property, and the calculated DC for arsenic was greater than the concentration at SB-5 (4-5').

Arsenic also exceeded the GRCC for DWP and GSIP in samples SB-1 (4-4.5'), SB-2 (2-2.5'), Trench-1 (5'), and Trench-2 (5'). However, these four samples were collected in native and/or natural sand or clay soils. The Subject Property is located within the Saginaw Glacial Lobe. Following Part 324.20101(e)(ii) of NREPA Act 451 of 1994 for use of regional background, the regional background concentration for arsenic in sand and clay in the Saginaw Glacial Lobe from the 2015 Michigan Background Soil Survey is 17,000 micrograms per kilogram (µg/kg) and 17,100 µg/kg, respectively. The highest concentration of arsenic reported was 7,350 µg/kg in soil sample SB-1 (4-4.5'). Because the arsenic concentrations in samples SB-1 (4-4.5'), SB-2 (2-2.5'), Trench 1 (5'), and Trench 2 (5') are less than the regional background concentration, the concentrations of arsenic do not represent exceedances of the GRCC nor evidence of a release.

Selenium was detected at concentrations exceeding the GRCC for GSIP in samples SB-2 (13-14') and Trench-1 (5'). However, these samples were also collected in native sand or clay. The Saginaw Glacial Lobe regional background concentration for selenium in sand and clay is 1,100 µg/kg. The highest concentration of selenium reported was 562 µg/kg in sample Trench-1 (5'). Because the selenium concentrations in these samples are less than the regional background concentration, these concentrations do not represent exceedances of the GRCC nor evidence of a selenium release.
Other metals were detected in the soil samples, but at concentrations less than the GRCC.

PNAs and VOCs
No PNAs or VOCs were detected in the soil samples at concentrations at or exceeding the laboratory reporting limits.

ISM Analytical Results
The laboratory reported arsenic and cadmium in each Incremental sample, but at concentrations less than the GRCC. No cadmium, mercury, selenium, or PNAs were detected at or exceeding the laboratory reporting limits in the incremental samples.

Groundwater Analytical

Table 3 presents the laboratory analytical results for the groundwater samples in comparison to the EGLE Part 201 GRCC and residential VIAP SLs.

Metals

Multiple metals were detected in the groundwater samples, but the reported concentrations do not exceed the GRCC or VIAP SLs.

PNAs, VOCs, and PCBs

No PNAs, VOCs, or PCBs were detected in the groundwater samples at or exceeding the laboratory reporting limits.

PFAS

The laboratory reported the PFAS compound perfluorobutane sulfonic acid (PFBS) in groundwater sample MW-9 at a concentration exceeding the GRCC for DWP. Multiple other PFAS were detected in the MW-9 groundwater sample, but the concentrations did not exceed the GRCC.

Quality Assurance/Quality Control

The duplicate soil and groundwater samples were within acceptable ranges of the associated parent samples. No VOCs were reported in the methanol blank at concentrations exceeding the laboratory reporting limits. The relative standard deviation (RSD) between the ISM parent samples and replicates ranged from 2.3 percent to 6.8 percent, for analytes detected exceeding laboratory reporting limits, which is less than 30 percent, which EGLE indicates is generally precise enough to make decisions based on the data.

The laboratory analytical reports and chain-of-custody documentation are provided in Attachment A.

The soil sample analytical results exceeding EGLE GRCC are summarized in the following table.

Sample Identification	Chemical Compound	CAS Number	Exceeded GRCC (µg/kg)	Analytical Result (µg/kg)
SB-5 (4-5')	Arsenic	7440382	DWP – 4,600 GSIP – 4,600 SDBL – 5,800	9,040

DWP = Drinking Water Protection criterion
GSIP = Groundwater Surface Water Interface Protection criterion
SDBL = Statewide Default Background Level (if the SDBL exceeds a GRCC, the GRCC becomes the SDBL)

The groundwater analytical results exceeding the EGLE GRCC are summarized in the following table.

Sample Identification	Chemical Compound	CAS Number	Exceeded GRCC (µg/L)	Analytical Result (µg/L)
MW-9	Perfluorobutane sulfonic acid (PFBS)	375735	DW – 420	460

DW = Drinking Water criteria

Soil and groundwater analytical results that exceed the GRCC are depicted on Figure 3 and Figure 4, respectively. Because contaminants in soil and groundwater are present on the Subject Property at concentrations exceeding EGLE Part 201 GRCC, the Subject Property is a "facility" as defined in Part 201.

3.2 Known Contamination Above Residential Criteria

The 2007 and 2008 subsurface investigations identified concentrations of arsenic in soil and PFBS in groundwater that exceed the GRCC.

3.3 Abandoned or Discarded Containers

ASTI did not identify any abandoned or discarded containers at the Subject Property.

3.4 Geology and Hydrogeology

The general subsurface lithology encountered in the soil borings beneath topsoil (where present) generally consisted of silty clay, silty sand, or clayey sand strata extending to the explored depth of the borings, with the maximum explored depth of 20 feet bgs in soil borings SB-6 and MW-7. Soil fill was encountered in soil borings SB-4 and SB-5 (advanced in the area of the former Difco laboratory) from the surface to 4 feet and 5 feet bgs, respectively. The soil fill in SB-4 and SB-5 was a silty sand or silty clay and contained trace (less than 5 percent) amounts of metal and/or brick. The soil fill in SB-4 was underlain by a clayey sand stratum to the explored depth of 10 feet bgs. The soil fill in SB-5 was underlain by a silty sand

stratum to the explored depth of 15 feet bgs. No other staining or odors were noted in the soil borings, and no VOC readings were detected on the PID during screening of the soil cores.

The general subsurface lithology encountered in the test trenches consisted of a silty sand from the surface to a depth of 3.5 feet bgs that was underlain by a silty clay stratum to the explored depth of 5 feet bgs. Several boulders (0.5 to 1.5 feet in diameter) were observed at various depths throughout the trenches. No VOC readings, staining, odors, or non-natural materials were observed in soils assessed during trenching. Refer to the boring logs provided as Attachment B for further detail on the observed subsurface stratigraphy.

Groundwater was encountered in soil borings SB-3, SB-4, SB-6, MW-7 through MW-9. The depth to groundwater from the surface ranged from 1 foot bgs at MW-8 (approximately 140 feet west of the Shiawassee River, which was flooded at the time of the event) to approximately 17.5 to 18 feet bgs at SB-6 and MW-7 (the furthest borings to the west of the Shiawassee River). The groundwater flow direction was not evaluated as a part of this investigation but is assumed to flow to the east towards the Shiawassee River.

3.5 Hazardous Substance Concentrations, Fate, and Transport

Results of the sampling conducted at the Subject Property indicate that arsenic concentrations in soil and PFBS concentrations in groundwater exceed the EGLE Part 201 GRCC. The primary transport mechanism for arsenic in soil is leaching to groundwater or above ground transport by wind or construction. The primary transport mechanisms for PFBS in groundwater is advection, diffusion, and dispersion.

3.6 Exposure Pathway Evaluation

The analysis of potential human exposure pathways is based on the current conditions and the intended future use of the Subject Property. The Subject Property is currently used for agricultural purposes. Howell Township intends to construct walking trails and a new township hall. Because the property will be municipal land adjacent to residential properties, the intended land use of the Subject Property falls under the residential land use category. The following subsections provide an evaluation of exposure pathways and applicable criteria.

3.6.1 Drinking Water

Groundwater was encountered at the Subject Property, and therefore, the drinking water pathway is relevant. In addition, arsenic and PFBS were reported in soil and groundwater, respectively, at concentrations exceeding the GRCC for DWP/DW. However, Howell

Township will be using municipal water for the proposed township hall building, and therefore, the drinking water pathway will not be complete and will not pose an unacceptable exposure risk to receptors at the Subject Property.

3.6.2 Groundwater Surface Water Interface

Arsenic was reported in soil at a concentration exceeding the GRCC for GSIP. In addition, the Shiawassee River is present on the eastern portion of the Subject Property. Therefore, the ground water surface water interface pathway is complete. However, the groundwater surface water interface pathway is not a human exposure pathway and therefore is not relevant for due care except for preventing exacerbation of existing contamination as described in section 5.1.

3.6.3 Volatilization to Indoor Air

Howell Township will construct a new Township Hall building on the Subject Property, and therefore, the VIAP will be complete in the future. However, no contaminants were reported at the Subject Property at concentrations exceeding the EGLE VIAP SLs, and therefore, the VIAP does not pose an unacceptable exposure risk to receptors at the Subject Property.

3.6.4 Volatilization to Ambient Air

The volatilization to ambient air pathway is complete for the Subject Property; however, no soil samples were reported with concentrations of compounds exceeding the GRCC for VSIC. Therefore, the volatilization to ambient air pathway does not pose an unacceptable exposure risk to receptors at the Subject Property.

3.6.5 Particulate Soil Inhalation

The particulate soil inhalation pathway is complete for the Subject Property; however, no soil samples were reported with concentrations of compounds exceeding the GRCC for PSI. Therefore, the particulate soil inhalation pathway does not pose an unacceptable exposure risk to receptors at the Subject Property.

3.6.6 Direct Contact

The direct contact exposure pathway is complete at the Subject Property. In addition, arsenic was detected in soil sample SB-5 (4-5') at a concentration exceeding the GRCC for direct contact. The exposure scenario for the Subject Property, which is used as a municipal park, more closely resembles a nonresidential exposure scenario than a residential exposure scenario. ASTI used the equation for determining the direct contact criteria (per R 299.20

proposed 2017 revision) for arsenic using residential assumptions except for the ingestion and dermal exposure frequencies. These assumptions were replaced with the nonresidential exposure frequencies to better reflect the Subject Property use for recreational purposes. The resulting site-specific direct contact criteria was calculated to be 11,868 µg/kg. This calculated criterion is greater than the arsenic concentrations identified in the soil samples, as the highest reported arsenic concentration was 9,040 µg/kg in SB-5 (4-5'). The assumptions for the site-specific direct contact criterion calculation for arsenic are shown on Table 4 – Calculation of Site-Specific Direct Contact Criteria for Recreational Usage. In addition, this soil sample was collected in sand, only trace amounts of inert non-natural materials were observed in this soil, and the arsenic concentration in SB-5 (4-5') is less than the regional background concentration for arsenic in sand in the Saginaw Glacial Lobe. Therefore, based on the use of the Subject Property, the concentration of arsenic detected in soil sample SB-5 (4-5') does not pose an unacceptable direct contact exposure risk to receptors at the Subject Property, and the direct contact exposure pathway does not pose an unacceptable exposure risk to receptors at the Subject Property. No response activities are necessary.

3.6.7 Potential Fire or Explosion Hazard

Based on site conditions encountered and analytical results, no flammability or explosivity hazards were identified in subsurface soil at the Subject Property.

4.0 PLAN FOR RESPONSE ACTIVITIES

This DCP is based on the proposed future use of the Subject Property as described in this report. If in the future the use of the Subject Property changes, this DCP must be re-evaluated and revised as appropriate in consideration of those changes. Based on the soil and groundwater sampling completed, the concentrations of compounds detected, and the intended use of the Subject Property, no response activities are necessary at this time.

5.0 EVALUATION AND DEMONSTRATION OF COMPLIANCE WITH SECTION 7A OBLIGATIONS

The following sections provide documentation that the proposed response activities and usage of the Subject Property will be in compliance with Section 7a obligations.

5.1 Exacerbation [Section 7a(1)(a)]

Soil and groundwater with concentrations exceeding the EGLE Part 201 GRCC have been identified on the Subject Property, and therefore, any soil or groundwater removed from the Subject Property should be disposed of at a municipal Type II landfill or other approved disposal facility unless further sampled and characterized to be not impacted. Copies of load tickets, bills of lading, or manifests will be retained by the owner for each shipment of soil or groundwater transported off the Subject Property for disposal. The proposed use of the Subject Property for agricultural land, undeveloped land with hiking trails, and a township hall are not expected to exacerbate the soil or groundwater impacts.

Prior to any further site development, construction plans will be reviewed by an environmental professional prior to commencement to confirm that work will not exacerbate existing conditions. Unless tested, all soil and groundwater on the Subject Property is considered to be impacted, and proper handling procedures shall be followed. To prevent exacerbation of soil and groundwater contamination, ASTI recommends the following:

- Soil removed from the ground that are not directly loaded into soil handling trucks for offsite disposal should be stockpiled on a minimum of 10 mil plastic sheeting and covered with plastic sheeting until the stockpile is removed from the Subject Property.
- Soil generated on the Subject Property as excavation spoils may be reused on the Subject Property but should be returned to the same location and depth from which it was removed.
- Soil and groundwater should not be moved to other locations on the Subject Property without first confirming that they are not impacted by conducting sampling and laboratory analysis.

5.2 Due Care Response Activities [Section 7a (1)(b)]

Based on the analytical results and intended use of the Subject Property, no response activities are proposed.

5.3 Reasonable Precautions [Section 7a(1)(c)]

Reasonable cooperation, assistance, and access will be provided to persons (i.e., including liable parties) that are authorized to conduct response activities at the facility, including the cooperation and access necessary for the installation, integrity, operation, and maintenance of any complete or partial response activity at the facility. Reasonable precautions will be taken against the reasonably foreseeable acts or omissions of a third party and the

consequences that could result from those acts or omissions. Third parties who intend to perform subsurface work that may encounter soil or groundwater on the Subject Property will be notified prior to beginning work. Those who may come in contact with soil or groundwater at the Subject Property will also be notified to prevent unacceptable exposures and allow for proper soil and groundwater management, as applicable. A contaminated soil and groundwater notification form is included as Attachment C.

Future construction plans should be reviewed by an environmental professional prior to commencement to confirm that work will not exacerbate existing conditions, and that all possible precautions are taken during activities with regard to foreseeable acts or omissions of a third party. If soil or groundwater is to be disposed of offsite, regulatory notification may also be required.

5.4 Reasonable Cooperation, Assistance, and Access [Section 7a(1)(d)]

Reasonable cooperation, assistance, and access will be provided to persons (i.e., including liable parties) that are authorized to conduct response activities at the facility, including the cooperation and access necessary for the installation, integrity, operation, and maintenance of any complete or partial response activity at the facility.

5.5 Use Restriction Compliance [Section 7a(1)(e)]

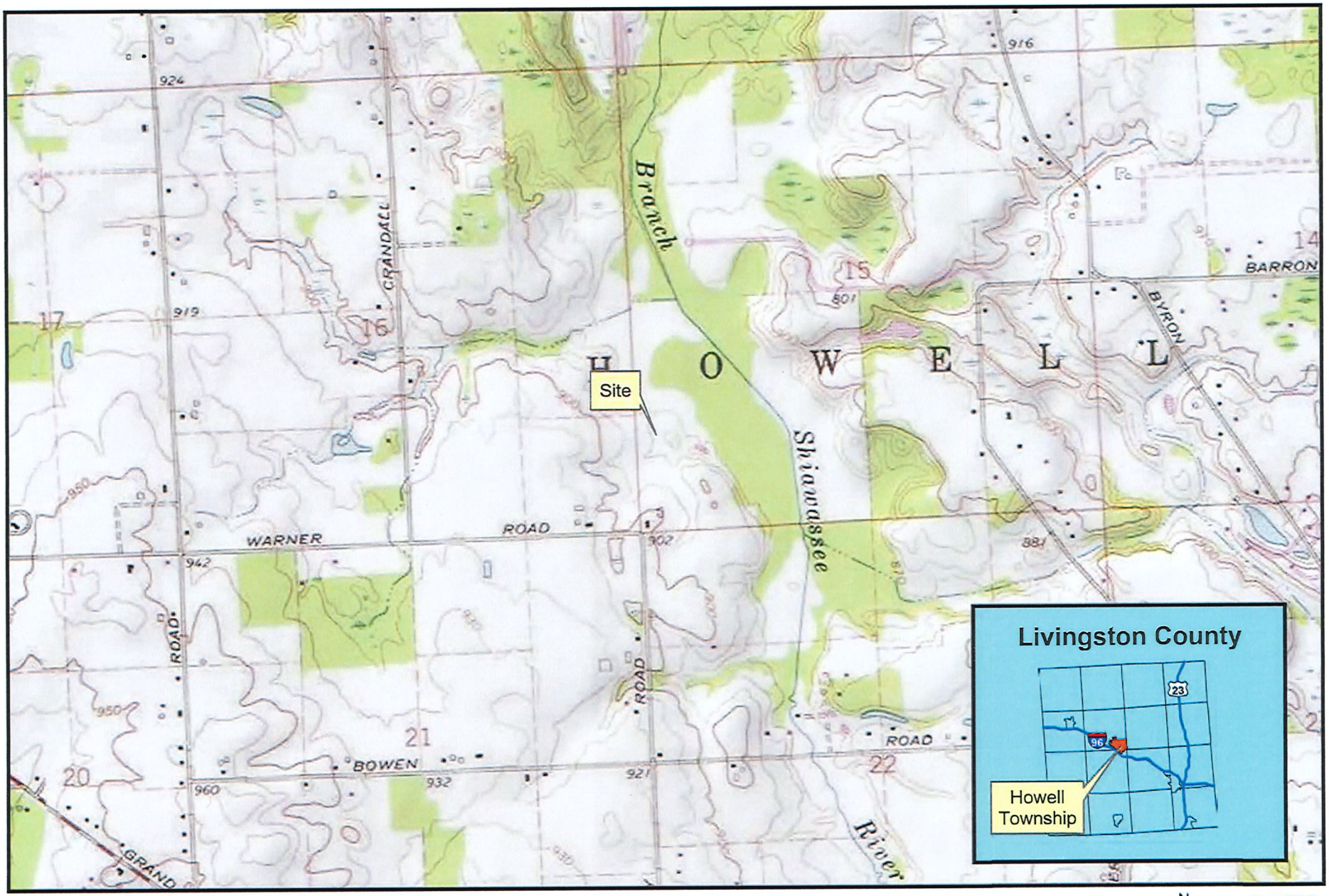
No land or resource use restrictions have been applied to the Subject Property.

5.6 Effectiveness or Integrity of Use Restrictions [Section 7a(1)(f)]

No land or resource use restrictions have been applied to the Subject Property.

FIGURES

ASTI ENVIRONMENTAL



0 Bowen Rd., 2755 Tooley Rd,
and 0 & 2990 Tooley Rd

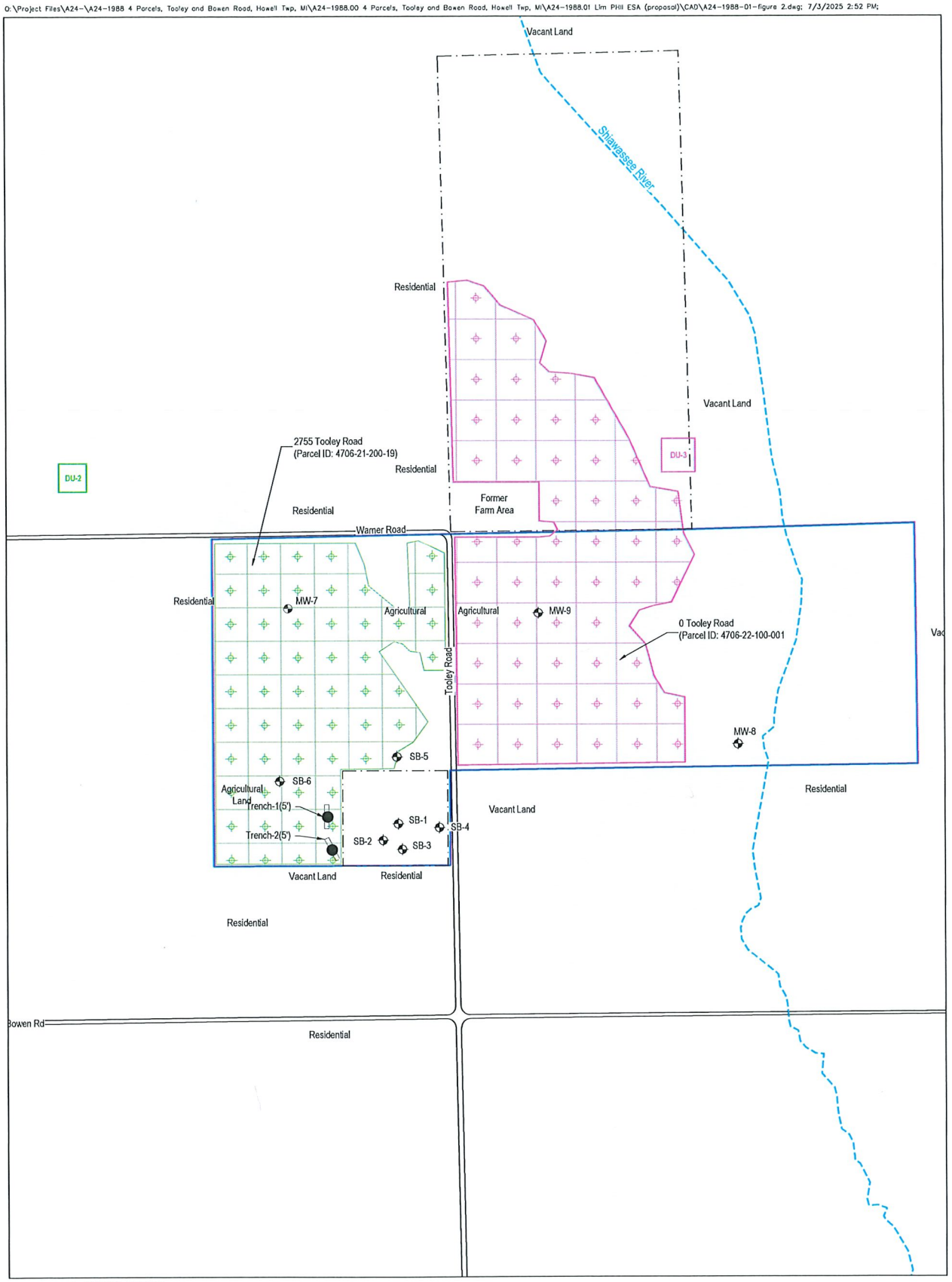
Howell Twp., MI

ASTI Environmental

Created for: Howell Township
Created by: RMH, June 20, 2025, ASTI Project A24-1988.01

Figure 1 - Site Location Map

O:\Project Files\A24-\A24-1988 4 Parcels, Tooley and Bowen Road, Howell Twp, MI\A24-1988.00 4 Parcels, Tooley and Bowen Road, Howell Twp, MI\A24-1988.01 Lim Phil ESA (proposal)\CAD\A24-1988-01-figure 2.dwg; 7/3/2025 2:52 PM;



GRAPHIC SCALE
0 250 500 1000
1 inch = 500 ft.
Paper Size = (11x17)

LEGEND
- Approximate Subject Property Boundary
- Adjacent Property Boundary
- Monitoring Well / Soil Boring Location
- Trench Sample Location
- Incremental Sample Location [0-1']
- Trench Location

N

2755 Tooley Rd and 0 Tooley Rd.

Howell Township, MI

ASTI Environmental

Client: Howell Township

ASTI Project A24-1988.01, JRN, July 3, 2025

Figure 2 - Sample Location Map

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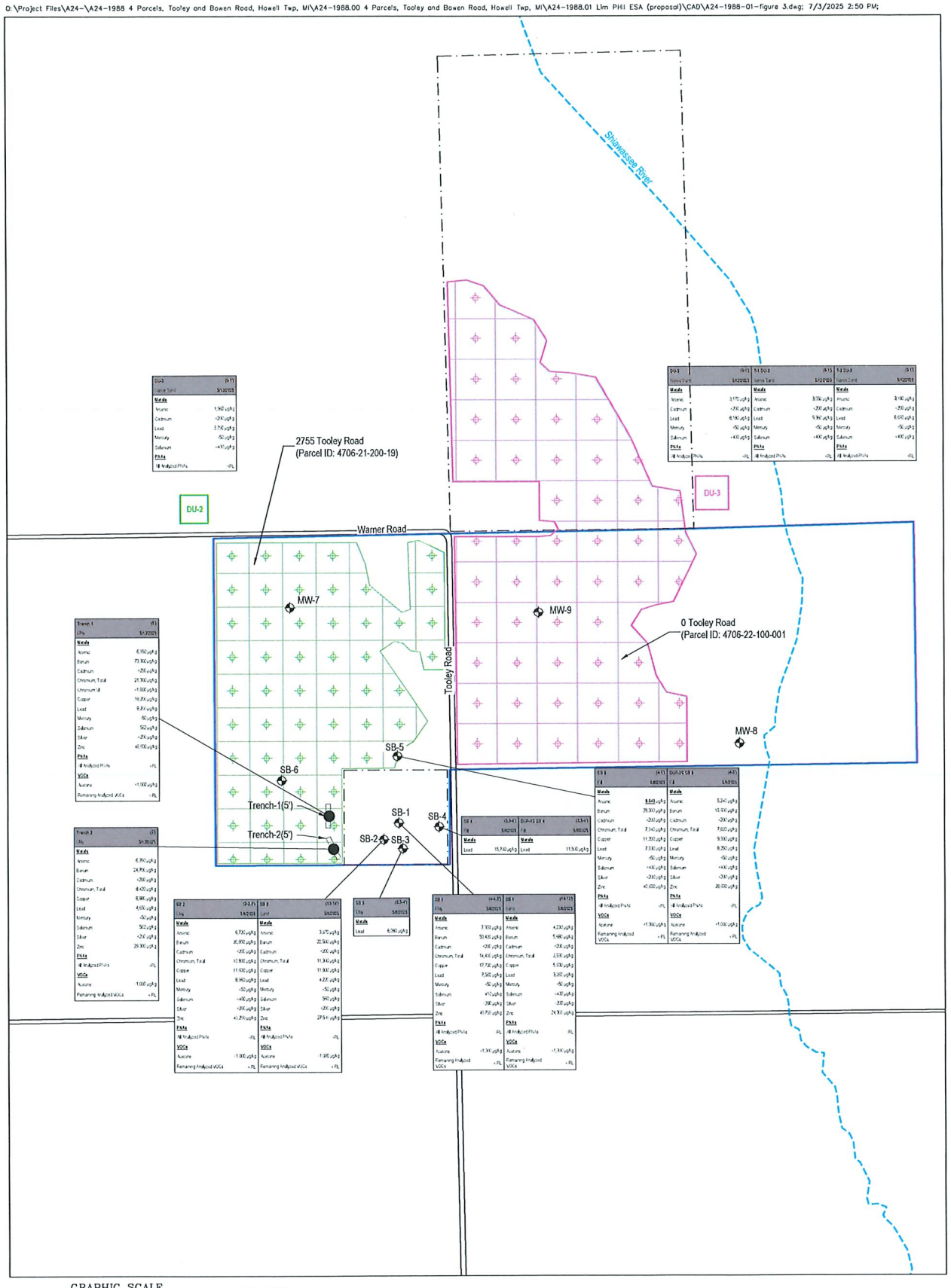


GRAPHIC SCALE

0 250 500 1000

1 inch = 500 ft.
Paper Size = (11x17)

LEGEND

- Approximate Subject Property Boundary
- Adjacent Property Boundary
- Monitoring Well / Soil Boring Location
- Trench Sample Location
- Incremental Sample Location (0-1')
- Trench Location

NOTE: **Bold and Underlined** analytical results exceed one or more GRCC.

N

2755 Tooley Rd and 0 Tooley Rd.

Howell Township, MI

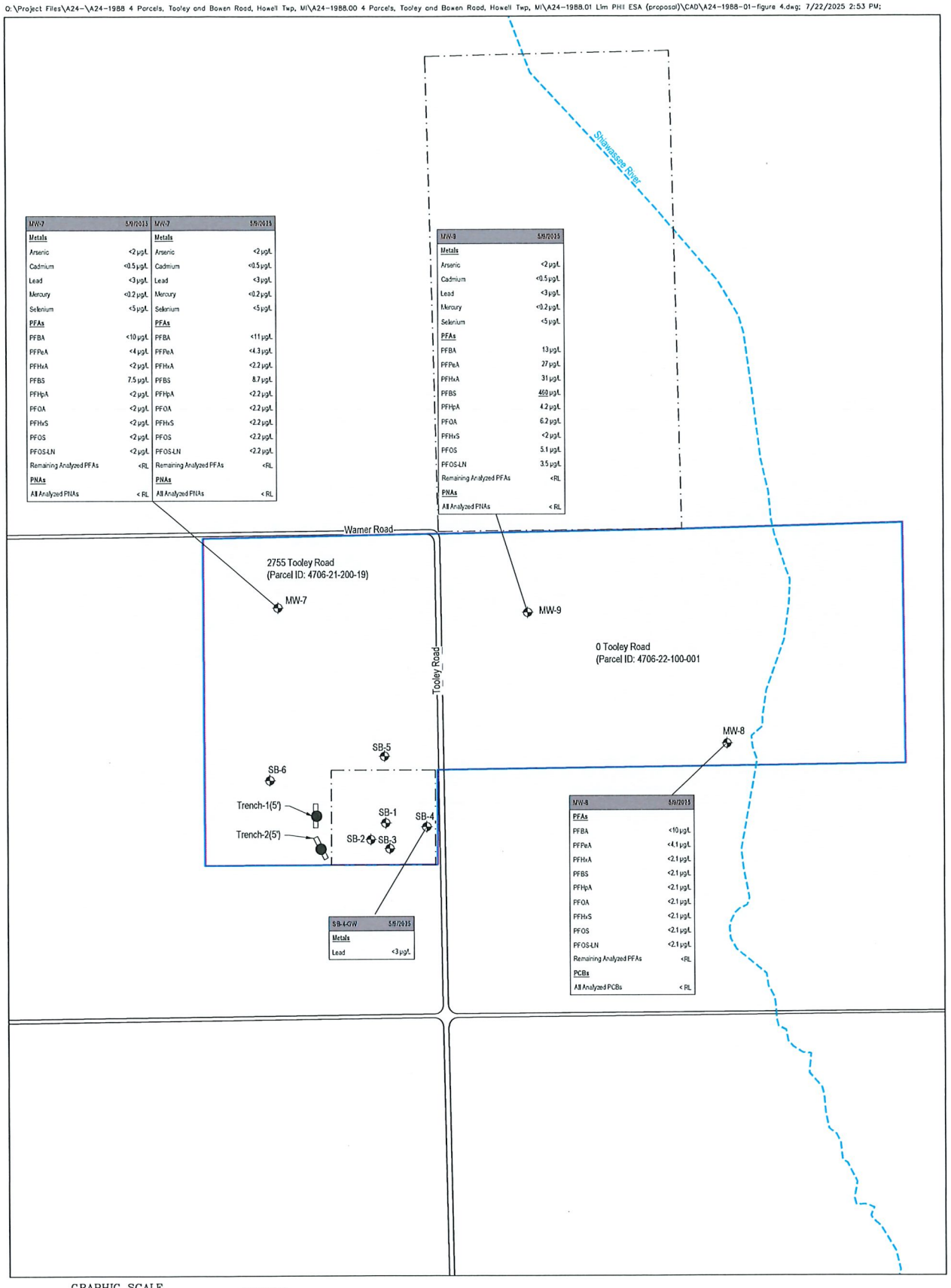
Client: Howell Township

Figure 3 - Soil Sample Analytical Results Map

ASTI Project A24-1988.01, JRN, July 3, 2025

ASTI Environmental

O:\Project Files\A24-\A24-1988 4 Parcels, Tooley and Bowen Road, Howell Twp, MI\A24-1988.00 4 Parcels, Tooley and Bowen Road, Howell Twp, MI\A24-1988.01 Lim PHI ESA (proposal)\CAD\A24-1988-01-figure 4.dwg; 7/22/2025 2:53 PM;



MW-7	5/9/2025
Metals	
Arsenic	<2 µg/L
Cadmium	<0.5 µg/L
Lead	<3 µg/L
Mercury	<0.2 µg/L
Selenium	<5 µg/L
PFAs	
PFBA	<10 µg/L
PFPeA	<4 µg/L
PFHxA	<2 µg/L
PFBS	7.5 µg/L
PFHpA	<2 µg/L
PFOA	<2 µg/L
PFHxS	<2 µg/L
PFOS	<2 µg/L
PFOS-LN	<2 µg/L
Remaining Analyzed PFAs	<RL
PNAs	
All Analyzed PNAs	< RL

MW-7	5/9/2025
Metals	
Arsenic	<2 µg/L
Cadmium	<0.5 µg/L
Lead	<3 µg/L
Mercury	<0.2 µg/L
Selenium	<5 µg/L
PFAs	
PFBA	<11 µg/L
PFPeA	<4.3 µg/L
PFHxA	<2.2 µg/L
PFBS	8.7 µg/L
PFHpA	<2.2 µg/L
PFOA	<2.2 µg/L
PFHxS	<2.2 µg/L
PFOS	<2.2 µg/L
PFOS-LN	<2.2 µg/L
Remaining Analyzed PFAs	<RL
PNAs	
All Analyzed PNAs	< RL

MW-9	5/9/2025
Metals	
Arsenic	<2 µg/L
Cadmium	<0.5 µg/L
Lead	<3 µg/L
Mercury	<0.2 µg/L
Selenium	<5 µg/L
PFAs	
PFBA	13 µg/L
PFPeA	27 µg/L
PFHxA	31 µg/L
PFBS	**460** µg/L
PFHpA	4.2 µg/L
PFOA	6.2 µg/L
PFHxS	<2 µg/L
PFOS	5.1 µg/L
PFOS-LN	3.5 µg/L
Remaining Analyzed PFAs	<RL
PNAs	
All Analyzed PNAs	< RL

MW-8	5/9/2025
PFAs	
PFBA	<10 µg/L
PFPeA	<4.1 µg/L
PFHxA	<2.1 µg/L
PFBS	<2.1 µg/L
PFHpA	<2.1 µg/L
PFOA	<2.1 µg/L
PFHxS	<2.1 µg/L
PFOS	<2.1 µg/L
PFOS-LN	<2.1 µg/L
Remaining Analyzed PFAs	<RL
PCBs	
All Analyzed PCBs	< RL

SB-4-GW	5/9/2025
Metals	
Lead	<3 µg/L

GRAPHIC SCALE
0 250 500 1000
1 inch = 500 ft.
Paper Size = (11x17)

LEGEND
- Approximate Subject Property Boundary
- Adjacent Property Boundary
- Monitoring Well / Soil Boring Location
- Trench Sample Location
- Trench Location

NOTE: **Bold and Underlined** analytical results exceed one or more GRCC.

N

2755 Tooley Rd and 0 Tooley Rd.

Howell Township, MI

Client: Howell Township

ASTI Project A24-1988.01, JRN, July 22, 2025

ASTI Environmental

Figure 4 - Groundwater Sample Analytical Results Map

TABLES

Table 1 - Soil Sample Analytical Results

0, 2755, and 2990 Tooley Road, and 0 Bowen Road, Howell Township, MI

ASTI Project No. A24-1988.01

Parameters	Statewide Default Background Levels* µg/kg	Michigan Background Soil Survey Saginaw Glacial Lobe Regional Background Concentration (Clay) µg/kg	Michigan Background Soil Survey Saginaw Glacial Lobe Regional Background Concentration (Sand) µg/kg	Residential Drinking Water Protection Criteria* µg/kg	Groundwater Surface Water Interface Protection Criteria* µg/kg	Residential Soil Volatilization to Indoor Air Inhalation Criteria* µg/kg	Residential Finite Source Volatile Soil Inhalation for 5 Meter Source Thickness* µg/kg	Residential Particulate Soil Inhalation Criteria* µg/kg	Site-Specific Direct Contact Criterion (SSDCC)*** (µg/kg)	Residential Direct Contact Criteria* µg/kg	Volatilization to Indoor Air Pathway Screening Levels** µg/kg	SB-1 (4-4.5') 5/8/2025 Clay µg/kg	SB-1 (14-15') 5/8/2025 Sand µg/kg	SB-2 (2-2.5') 5/8/2025 Clay µg/kg	SB-2 (13-14') 5/8/2025 Sand µg/kg	SB-3 (3.5-4') 5/8/2025 Clay µg/kg	SB-4 (3.5-4') 5/8/2025 Fill µg/kg	DUP-1S SB-4 (3.5-4') 5/8/2025 Fill µg/kg	SB-5 (4-5') 5/8/2025 Fill µg/kg	DUP-2S SB-5 (4-5') 5/8/2025 Fill µg/kg
Metals																				
Arsenic	5,800	17,100	17,000	4,600	4,600	NLV	NLV	720,000	11,868	7,600 / 11,868 ***	NA	*7,350*	4,230	*6,720*	3,970	~	~	~	9,040	5,240
Barium	75,000	172,000	66,200	1,300,000	(G)	NLV	NLV	330,000,000	NA	37,000,000	NA	50,400	5,680	36,800	22,500	~	~	~	29,300	19,600
Cadmium	1,200	2,000	2,000	6,000	(G,X)	NLV	NLV	1,700,000	NA	550,000	NA	<200	<200	<200	<200	~	~	~	<200	<200
Chromium, Total	18,000 (total)	43,500	19,700	1,000,000,000 (D)	(G,X)	NLV	NLV	330,000,000	NA	790,000,000	NA	14,400	2,930	10,800	11,300	~	~	~	7,940	7,820
Chromium VI	NA	NA	NA	30,000	3,300	NLV	NLV	260,000	NA	2,500,000	NA	~	~	~	~	~	~	~	~	~
Copper	32,000	32,200	20,200	5,800,000	(G)	NLV	NLV	130,000,000	NA	20,000,000	NA	17,700	5,930	11,600	11,800	~	~	~	11,200	9,330
Lead	21,000	38,900	18,000	700,000	(G,X)	NLV	NLV	100,000,000	NA	400,000	NA	7,560	3,260	8,960	4,220	8,080	15,700	11,500	7,930	8,290
Mercury	130	500	230	1,700	50 (M); 1.2	48,000	52,000	20,000,000	NA	160,000	22 (M)	<50	<50	<50	<50	~	~	~	<50	<50
Selenium	410	1,100	1,100	4,000	400	NLV	NLV	130,000,000	NA	2,600,000	NA	410	<400	<400	*560*	~	~	~	<400	<400
Silver	1,000	1,000	1,400	4,500	100 (M); 27	NLV	NLV	6,700,000	NA	2,500,000	NA	<200	<200	<200	<200	~	~	~	<200	<200
Zinc	47,000	91,900	73,600	2,400,000	(G)	NLV	NLV	ID	NA	170,000,000	NA	40,700	24,300	40,200	27,600	~	~	~	40,600	29,600
Polynuclear Aromatic Hydrocarbons (PNAs)																				
All Analyzed PNAs	NA	NA	NA	CS	CS	CS	CS	CS		CS	CS	<RL	<RL	<RL	<RL	~	~	~	<RL	<RL
Volatile Organic Compounds (VOCs)																				
Acetone	NA	NA	NA	15,000	34,000	290,000,000 (C)	130,000,000	390,000,000,000		23,000,000	260,000	<1,000	<1,000	<1,000	<1,000	~	~	~	<1,000	<1,000
Remaining Analyzed VOCs	NA	NA	NA	CS	CS	CS	CS	CS		CS	CS	<RL	<RL	<RL	<RL	~	~	~	<RL	<RL

µg/kg - micrograms per kilogram

*Generic Residential Cleanup Criteria (GRCC) per R299.46, October 12, 2023

**Volatilization to Indoor Air Pathway Screening Levels (VIAP SLs) per VI Guidance Document, updated February 26, 2024

***Calculated Site-Specific Direct Contact Criterion for Arsenic in Soil (see Table 4)

Bold and highlighted results exceed one or more GRCC and/or the VIAP SL

Italicized results in blue text exceed the GRCC but were samples collected in native/natural sand or clay and were compared to and found to be below the regional background concentration

† Per 2005 Michigan Background Soil Survey, Updated 2015

~ Parameter not tested for at this location.

CS - Compound specific.

<RL - Not detected. Below the laboratory reporting limit.

NA - Not available.

NLV - Hazardous substance is not likely to volatilize under most conditions.

C - Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat)

D - Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0e+9 ppb.

G - Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.

M - Calculated criterion is below the analytical target detection limit, therefore, the criterions defaults to the target detection limit.

X - The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.

Table 1 - Soil Sample Analytical Results

0, 2755, and 2990 Tooley Road, and 0 Bowen Road, Howell Township, MI

ASTI Project No. A24-1988.01

Parameters	Statewide Default Background Levels* µg/kg	Michigan Background Soil Survey Saginaw Glacial Lobe Regional Background Concentration (Clay) µg/kg	Michigan Background Soil Survey Saginaw Glacial Lobe Regional Background Concentration (Sand) µg/kg	Residential Drinking Water Protection Criteria* µg/kg	Groundwater Surface Water Interface Protection Criteria* µg/kg	Residential Soil Volatilization to Indoor Air Inhalation Criteria* µg/kg	Residential Finite Source Volatile Soil Inhalation for 5 Meter Source Thickness* µg/kg	Residential Particulate Soil Inhalation Criteria* µg/kg	Site-Specific Direct Contact Criterion (SSDCC)*** (µg/kg)	Residential Direct Contact Criteria* µg/kg	Volatilization to Indoor Air Pathway Screening Levels** µg/kg	SB-11 (2.5-3') 5/9/2025 Fill µg/kg	SB-12 (1-2') 5/9/2025 Sand µg/kg	SB-12 (3-3.5') 5/9/2025 Sand µg/kg	SB-13 (3.5-4') 5/9/2025 Sand µg/kg	SB-14 (3.5-4') 5/9/2025 Sand µg/kg	Methanol Blank 5/9/2024 µg/kg	Trench-1 (5') 5/13/2025 Clay µg/kg	Trench-2 (5') 5/13/2025 Clay µg/kg	Methanol Blank 5/13/2025 µg/kg
Metals																				
Arsenic	5,800	17,100	17,000	**4,600**	**4,600**	NLV	NLV	720,000	11,868	7,600 / 11,868 ***	NA	1,160	1,280	1,110	2,260	790	~	***6,950***	***6,390***	~
Barium	75,000	172,000	66,200	1,300,000	(G)	NLV	NLV	330,000,000	NA	37,000,000	NA	20,100	20,000	17,600	22,500	21,300	~	<200	<200	~
Cadmium	1,200	2,000	2,000	6,000	(G,X)	NLV	NLV	1,700,000	NA	550,000	NA	<200	<200	<200	<200	<200	~	<200	<200	~
Chromium, Total	18,000 (total)	43,500	19,700	1,000,000,000 (D)	(G,X)	NLV	NLV	330,000,000	NA	790,000,000	NA	3,150	2,690	5,640	5,970	2,510	~	21,300	8,420	~
Chromium VI	NA	NA	NA	30,000	3,300	NLV	NLV	260,000	NA	2,500,000	NA	~	~	~	~	~	~	<1,000	~	~
Copper	32,000	32,200	20,200	5,800,000	(G)	NLV	NLV	130,000,000	NA	20,000,000	NA	1,290	1,680	2,090	3,380	970	~	18,200	8,880	~
Lead	21,000	38,900	18,000	700,000	(G,X)	NLV	NLV	100,000,000	NA	400,000	NA	2,400	6,120	4,830	3,350	2,350	~	8,200	4,650	~
Mercury	130	500	230	1,700	50 (M); 1.2	48,000	52,000	20,000,000	NA	160,000	22 (M)	<50	<50	<50	<50	<50	~	<50	<50	~
Selenium	410	1,100	1,100	4,000	400	NLV	NLV	130,000,000	NA	2,600,000	NA	<400	<400	<400	<400	<400	~	***562***	<400	~
Silver	1,000	1,000	1,400	4,500	100 (M); 27	NLV	NLV	6,700,000	NA	2,500,000	NA	<200	<200	<200	<200	<200	~	<200	<200	~
Zinc	47,000	91,900	73,600	2,400,000	(G)	NLV	NLV	ID	NA	170,000,000	NA	6,420	12,000	10,300	12,300	10,400	~	48,600	29,300	~
Polynuclear Aromatic Hydrocarbons (PNAs)																				
All Analyzed PNAs	NA	NA	NA	CS	CS	CS	CS	CS		CS	CS	<RL	<RL	<RL	<RL	<RL	~	<RL	<RL	~
Volatile Organic Compounds (VOCs)																				
Acetone	NA	NA	NA	15,000	34,000	290,000,000 (C)	130,000,000	390,000,000,000		23,000,000	260,000	<1,000	<1,000	<1,000	1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Remaining Analyzed VOCs	NA	NA	NA	CS	CS	CS	CS	CS		CS	CS	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL

µg/kg - micrograms per kilogram

*Generic Residential Cleanup Criteria (GRCC) per R299.46, October 12, 2023

**Volatilization to Indoor Air Pathway Screening Levels (VIAP SLs) per VI Guidance Document, updated February 26, 2024

***Calculated Site-Specific Direct Contact Criterion for Arsenic in Soil (see Table 4)

Bold and highlighted results exceed one or more GRCC and/or the VIAP SL

Italicized results in blue text exceed the GRCC but were samples collected in native/natural sand or clay and were compared to and found to be below the regional background concentration

† Per 2005 Michigan Background Soil Survey, Updated 2015

~ Parameter not tested for at this location.

CS - Compound specific.

<RL - Not detected. Below the laboratory reporting limit.

NA - Not available.

NLV - Hazardous substance is not likely to volatilize under most conditions.

C - Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat)

D - Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0e+9 ppb.

G - Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.

M - Calculated criterion is below the analytical target detection limit, therefore, the criterions defaults to the target detection limit.

X - The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.

Table 2 - Incremental Soil Sample Analytical Results
0 and 2755 Tooley Road, Howell Township, MI

ASTI Project No. A24-1988.01

Parameters	Statewide Default Background Levels* µg/kg	Residential Drinking Water Protection Criteria* µg/kg	Groundwater Surface Water Interface Protection Criteria* µg/kg	Residential Soil Volatilization to Indoor Air Inhalation Criteria* µg/kg	Residential Finite Source Volatile Soil Inhalation for 5 Meter Source Thickness* µg/kg	Residential Particulate Soil Inhalation Criteria* µg/kg	Residential Direct Contact Criteria* µg/kg	Residential Volatilization to Indoor Air Pathway Screening levels** µg/kg	DU-2 (0-1') 5/13/2025 Native Sand µg/kg	DU-3 (0-1') 5/12/2025 Native Sand µg/kg	T-1 DU-3 (0-1') 5/12/2025 Native Sand µg/kg	T-2 DU-3 (0-1') 5/12/2025 Native Sand µg/kg
Metals												
Arsenic	5,800	4,600	4,600	NLV	NLV	720,000	7,600	NA	1,960	3,170	3,050	3,180
Cadmium	1,200	6,000	(G,X)	NLV	NLV	1,700,000	550,000	NA	<200	<200	<200	<200
Lead	21,000	700,000	(G,X)	NLV	NLV	100,000,000	400,000	NA	5,790	8,180	9,360	8,690
Mercury	130	1,700	50 (M); 1.2	48,000	52,000	20,000,000	160,000	22 (M)	<50	<50	<50	<50
Selenium	410	4,000	400	NLV	NLV	130,000,000	2,600,000	NA	<400	<400	<400	<400
Polynuclear Aromatic Hydrocarbons (PNAs)												
All Analyzed PNAs	CS	CS	CS	CS	CS	CS	CS	CS	<RL	<RL	<RL	<RL

µg/kg - micrograms per kilogram
*Per R299.46, October 12, 2023
**Per VI Guidance Document, updated February 26, 2024
CS - Compound specific.
<RL - Not detected. Below the laboratory reporting limit.
NA - Not available.
NLV - Hazardous substance is not likely to volatilize under most conditions.
G - Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M - Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.
X - The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water used as a drinking water source.

Table 3 - Groundwater Sample Analytical Results
0, 2755, and 2990 Tooley Road, and 0 Bowen Road, Howell Township, MI
ASTI Project No. A24-1988.01

Parameters	Residential Drinking Water Criteria* µg/L	Groundwater Surface Water Interface Criteria* µg/L	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria* µg/L	Residential Volatilization to Indoor Air Pathway Screening Levels** µg/L	SB-4-GW 5/9/2025 µg/L	MW-7 5/9/2025 µg/L	DUP-1-GW MW-7 5/9/2025 µg/L	MW-8 5/9/2025 µg/L	MW-9 5/9/2025 µg/L	MW-10 5/9/2025 µg/L	SB-14-GW 5/9/2025 µg/L	MW-15 5/9/2025 µg/L
Metals												
Arsenic	10 (A)	10	NLV	NA	~	<2	<2	~	<2	<2	2	4
Barium	2,000 (A)	(G)	NLV	NA	~	~	~	~	~	~	27	~
Cadmium	5.0 (A)	(G,X)	NLV	NA	~	<0.5	<0.5	~	<0.5	<0.5	<0.5	<0.5
Chromium	100 (A)	11	NLV	NA	~	~	~	~	~	~	<5	~
Copper	1,000 (E)	(G)	NLV	NA	~	~	~	~	~	~	<5	~
Lead	4.0 (L)	(G,X)	NLV	NA	<3	<3	<3	~	<3	<3	<3	<3
Mercury	2 (A)	0.0013	56 (S)	0.088	~	<0.2	<0.2	~	<0.2	<0.2	<0.2	<0.2
Selenium	50 (A)	5	NLV	NA	~	<5	<5	~	<5	<5	<5	<5
Silver	34	0.2 (M)	NLV	NA	~	~	~	~	~	~	<0.5	~
Zinc	2,400	(G)	NLV	NA	~	~	~	~	~	~	7	~
Per- and Polyfluoroalkyl Substances (PFAS)												
Perfluorobutanoic acid (PFBA)	NA	NA	ID	NA	~	<10	<11	<10	13	69	~	<11
Perfluoropentanoic acid (PFPeA)	NA	NA	ID	NA	~	<4	<4.3	<4.1	27	86	~	<4.3
Perfluorohexanoic acid (PFHxA)	400,000 (A)	NA	ID	NA	~	<2	<2.2	<2.1	31	27	~	<2.2
Perfluorobutanesulfonic acid (PFBS)	**420 (A)**	670,000 (X)	ID	NA	~	7.5	8.7	<2.1	**460**	**550**	~	21
Perfluoroheptanoic acid (PFHpA)	NA	NA	ID	NA	~	<2	<2.2	<2.1	4.2	<2.1	~	<2.2
Perfluorooctanoic acid (PFOA)	8 (A)	170 (X)	ID	NA	~	<2	<2.2	<2.1	6.2	<2.1	~	<2.2
Perfluorohexanesulfonic acid (PFHxS)	51 (A)	210 (X)	ID	NA	~	<2	<2.2	<2.1	<2	2.5	~	<2.2
Perfluorooctanesulfonic acid (PFOS)	16 (A)	12 (X)	NLV	NA	~	<2	<2.2	<2.1	5.1	<2.1	~	<2.2
Perfluorooctanesulfonic acid linear (PFOS-LN)	NA	NA	NA	NA	~	<2	<2.2	<2.1	3.5	<2.1	~	<2.2
Remaining Analyzed PFAS	CS	CS	CS	CS	~	<RL	<RL	<RL	<RL	<RL	~	<RL
Polychlorinated Biphenyls (PCBs)												
All Analyzed PCBs	CS	CS	CS	CS	~	~	~	<RL	~	~	~	~
Polynuclear Aromatic Hydrocarbons (PNAs)												
All Analyzed PNAs	CS	CS	CS	CS	~	<RL	<RL	~	<RL	~	<RL	<RL
Volatile Organic Compounds (VOCs)												
All Analyzed VOCs	CS	CS	CS	CS	~	~	~	~	~	~	<RL	~

µg/L = micrograms per liter
ng/L = nanograms per liter
*Generic Residential Cleanup Criteria (GRCC) per R299.46, October 12, 2023
**Volatilization to Indoor Air Pathway Screening Levels (VIAP SLs) per VI Guidance Document, updated February 26, 2024
NA - Not available.
NLV - Hazardous substance is not likely to volatilize under most conditions.
A - Criterion is the State of Michigan drinking water standard established pursuant to Section 5.
E-Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the act.
G - Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
L-Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(10) of the act, and are not calculated using the algorithms and assumptions specified in pathway-specific rules.
S-Criterion defaults to the hazardous substance-specific water solubility limit.
M-Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as drinking water source.
CS - Compound specific.
<RL - Not detected. Below the laboratory reporting limit.
Bold/highlighed results exceed the GRCC and/or VIAP SL

Table 4 - Calculation of Site-Specific Direct Contact Criteria for Recreational Use

0, 2755, and 2990 Tooley Road, and 0 Bowen Road, Howell Township, MI
ASTI Project No. A24-1988.01

Compound	Site-Specific Direct Contact Criterion (SSDCC) (µg/kg)	TR (unitless)	AT (days)	CF (µg/kg)	SFo ((mg/kg-day)$^{-1}$)	EFi (days/year)	IF (mg-yr/kg-day)	AEi (unitless)	SFd ((mg/kg-day)$^{-1}$)	EFd (days/year)	DF (mg-yr/kg-day)	AEd (unitless)
Arsenic^	11,868	1.0E-05	25,550	1.0E+09	1.5	245	101	0.5	1.5	160	425	0.03

Notes:

µg/kg = micrograms per kilogram

SSDCC = (TR*AT*CF)/((SF*EFi*IF*Aei*RBA)+(SF*EFd*DF*AEd)) for chemicals with carcinogenic effects per R 299.20 proposed 2017 revision

TR = Target Risk Level (Carciogens)

AT = Averaging Time

CF = Conversion Factor

SFo = Oral Slope Factor

SFd = Dermal Slope Factor

EFi = Ingestion Exposure Frequency

IF = Age-adjusted Soil Ingestion Factor

AEi = Ingestion Absorption Efficiency

EFd = Dermal Exposure Frequency

DF = Age-adjusted Soil Dermal Factor

AEd = Dermal Absorption Efficiency

^ = SSDCC is based on carcinogenic effects

ATTACHMENTS

Attachment A

Laboratory Analytical Reports and Chain-of-Custody Documentation

Analytical Laboratory Report

Report ID: S74399.01(01)
Generated on 05/21/2025

Report to

Attention: Jeremy Efros
ASTI Environmental
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Brighton, MI 48116

Phone: 810-360-9310 FAX:
Email: jefros@asti-env.com

Addtional Contacts: Brad Buswell, Brady Metzger

Report produced by

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Contacts for report questions:
John Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S74399.01-S74399.23
Project: A24-1988.01 2755, and 2990 Tooley Rd, and 0 Bowen Rd.
Collected Date(s): 05/08/2025 - 05/09/2025
Submitted Date/Time: 05/12/2025 13:40
Sampled by: Brady Metzger
P.O. #:

Table of Contents

Maya Murshak
Technical Director

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.
40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.
QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.
Starred (*) analytes are not NY NELAP accredited.
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)
PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."
Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.
Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.
All accreditations/certifications held by this laboratory are listed on page 3. Not all accreditations/certifications are applicable to this report.
For a specific list of accredited analytes, please feel free to contact the laboratory or visit https://www.meritlabs.com/certifications.

Report Narrative

There is no additional narrative for this analytical report

Laboratory Accreditations (For Reference Only)

Authority	Accreditation ID
Michigan DEQ	#9956
DOD ELAP & ISO/IEC 17025:2017	#69699 PJLA Testing
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
o	Associated EIS outside of control limits
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
q	Qualifier ion ratio outside of control limits
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched

Method Summary

Method	Version
ASTMD7979-19M	ASTM Method D7979 - 19 Modified (Isotopic Dilution)
E200.8	EPA Method 200.8 Revision 5.4
E245.1	EPA Method 245.1 Revision 3.0
E608.3	EPA Method 608.3 December 2016
N/A	Not Applicable
SM2540B	Standard Method 2540 B 2020
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW3050B	SW 846 Method 3050B Revision 2 December 1996
SW3510C	SW 846 Method 3510C Revision 3 December 1996
SW3546	SW 846 Method 3546 Revision 0 February 2007
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW5035A	SW 846 Method 5035A Revision 1 July 2002
SW5035A/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5035A Revision 1 July 2002
SW6020A	SW 846 Method 6020A Revision 1 February 2007
SW7471B	SW 846 Method 7471B Revision 2 February 2007
SW8270D	SW 846 Method 8270D Revision 4 February 2007

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6
FHpPA (7:3 FTCA)	3-Perfluoroheptyl propanoic acid	812-70-4
FPePA (5:3 FTCA)	3-Perfluoropentyl propanoic acid	914637-49-3
FPrPA (3:3 FTCA)	3-Perfluoropropyl propanoic acid	356-02-5
NFDHA	Nonafluoro-3,6-dioxaheptanoic acid	151772-58-6
PFEESA	Perfluoro(2-ethoxyethane)sulfonic acid	113507-82-7
PFMBA	Perfluoro-4-methoxybutanoic acid	863090-89-5
PFMPA	Perfluoro-3-methoxypropanoic acid	377-73-1
NMeFOSAM	N-Methylperfluorooctanesulfonamide	31506-32-8
NMeFOSE	N-Methylperfluorooctanesulfonamidoethanol	24448-09-7
NEtFOSAM	N-Ethylperfluorooctanesulfonamide	4151-50-2
NEtFOSE	N-Ethylperfluorooctanesulfonamidoethanol	1691-99-2
PFDoS	Perfluorododecanesulfonic acid	79780-39-5

Sample Summary (23 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S74399.01	SB-1 (4-4.5)	Soil	05/08/25 09:44
S74399.02	SB-1 (14-15)	Soil	05/08/25 09:57
S74399.03	SB-2 (2-2.5)	Soil	05/08/25 10:25
S74399.04	SB-2 (13-14)	Soil	05/08/25 10:40
S74399.05	SB-3 (3.5-4)	Soil	05/08/25 11:00
S74399.06	SB-4 (3.5-4)	Soil	05/08/25 12:00
S74399.07	SB-5 (4-5)	Soil	05/08/25 12:40
S74399.08	MW-7	Groundwater	05/09/25 13:35
S74399.09	MW-8	Groundwater	05/09/25 12:40
S74399.10	MW-9	Groundwater	05/09/25 11:20
S74399.11	MW-10	Groundwater	05/09/25 10:55
S74399.12	SB-11 (2.5-3')	Soil	05/09/25 09:45
S74399.13	SB-12 (3-3.5)	Soil	05/09/25 10:05
S74399.14	SB-12 (1-2)	Soil	05/09/25 10:26
S74399.15	SB-13 (3.5-4)	Soil	05/09/25 10:13
S74399.16	SB-14 (3.5-4)	Soil	05/09/25 09:30
S74399.17	SB-14-GW	Groundwater	05/09/25 09:45
S74399.18	SB-4-GW	Groundwater	05/09/25 13:02
S74399.19	MW-15	Groundwater	05/09/25 14:35
S74399.20	DUP-1S	Soil	05/08/25 00:01
S74399.21	DUP-2S	Soil	05/08/25 00:01
S74399.22	DUP-1-GW	Groundwater	05/09/25 00:01
S74399.23	Methanol Blank	Methanol	05/09/25 00:01

Analytical Laboratory Report

Lab Sample ID: S74399.01
Sample Tag: SB-1 (4-4.5)
Collected Date/Time: 05/08/2025 09:44
Matrix: Soil
COC Reference: 178350

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	3.2	IR
1	40mL Glass	MeOH	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/14/25 08:50	JRH	
PNA Extraction*	Completed	SW3546	05/14/25 16:00	PTW	
Sample wt. (g) / Methanol (ml)*	11.050/11	SW5035A	05/12/25 16:33	ACK	
Mercury Digestion	Completed	SW7471B	05/13/25 13:00	CTV	

Inorganics

Method: SM2540B, Run Date: 05/13/25 12:45, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	85	1		%	1		

Metals

Method: SW6020A, Run Date: 05/14/25 12:24, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	7,350	200		ug/kg	248	7440-38-2	
Barium	50,400	1,000		ug/kg	248	7440-39-3	
Cadmium	Not detected	200		ug/kg	248	7440-43-9	
Chromium	14,400	500		ug/kg	248	7440-47-3	
Copper	17,700	500		ug/kg	248	7440-50-8	
Lead	7,560	300		ug/kg	248	7439-92-1	
Selenium	410	400		ug/kg	248	7782-49-2	
Silver	Not detected	200		ug/kg	248	7440-22-4	
Zinc	40,700	500		ug/kg	248	7440-66-6	

Method: SW7471B, Run Date: 05/13/25 15:51, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	50		ug/kg	64	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 18:18, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	

Lab Sample ID: S74399.01 (continued)
Sample Tag: SB-1 (4-4.5)

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 18:18, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Organics

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 21:21, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	300		ug/kg	67.4	60-29-7	
Acetone	Not detected	1,000		ug/kg	67.4	67-64-1	
Methyl iodide	Not detected	100		ug/kg	67.4	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	67.4	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	67.4	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	67.4	107-13-1	
2-Butanone (MEK)	Not detected	1,000		ug/kg	67.4	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	67.4	75-71-8	
Chloromethane	Not detected	300		ug/kg	67.4	74-87-3	
Vinyl chloride	Not detected	70		ug/kg	67.4	75-01-4	
Bromomethane	Not detected	300		ug/kg	67.4	74-83-9	
Chloroethane	Not detected	300		ug/kg	67.4	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	67.4	75-69-4	
1,1-Dichloroethene	Not detected	70		ug/kg	67.4	75-35-4	
Methylene chloride	Not detected	100		ug/kg	67.4	75-09-2	
trans-1,2-Dichloroethene	Not detected	70		ug/kg	67.4	156-60-5	
1,1-Dichloroethane	Not detected	70		ug/kg	67.4	75-34-3	
cis-1,2-Dichloroethene	Not detected	70		ug/kg	67.4	156-59-2	
Tetrahydrofuran	Not detected	1,000		ug/kg	67.4	109-99-9	
Chloroform	Not detected	70		ug/kg	67.4	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	67.4	74-97-5	
1,1,1-Trichloroethane	Not detected	70		ug/kg	67.4	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	67.4	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	67.4	591-78-6	
Carbon tetrachloride	Not detected	70		ug/kg	67.4	56-23-5	
Benzene	Not detected	70		ug/kg	67.4	71-43-2	
1,2-Dichloroethane	Not detected	70		ug/kg	67.4	107-06-2	
Trichloroethene	Not detected	70		ug/kg	67.4	79-01-6	
1,2-Dichloropropane	Not detected	70		ug/kg	67.4	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	67.4	75-27-4	
Dibromomethane	Not detected	300		ug/kg	67.4	74-95-3	
cis-1,3-Dichloropropene	Not detected	70		ug/kg	67.4	10061-01-5	
Toluene	Not detected	70		ug/kg	67.4	108-88-3	
trans-1,3-Dichloropropene	Not detected	70		ug/kg	67.4	10061-02-6	
1,1,2-Trichloroethane	Not detected	70		ug/kg	67.4	79-00-5	
Tetrachloroethene	Not detected	70		ug/kg	67.4	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	70		ug/kg	67.4	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	67.4	124-48-1	
1,2-Dibromoethane	Not detected	30		ug/kg	67.4	106-93-4	M

M-Result reported to MDL not RDL

Lab Sample ID: S74399.01 (continued)
Sample Tag: SB-1 (4-4.5)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 21:21, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chlorobenzene	Not detected	70		ug/kg	67.4	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	67.4	630-20-6	
Ethylbenzene	Not detected	70		ug/kg	67.4	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	67.4		
o-Xylene	Not detected	70		ug/kg	67.4	95-47-6	
Styrene	Not detected	70		ug/kg	67.4	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	67.4	98-82-8	
Bromoform	Not detected	100		ug/kg	67.4	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	70		ug/kg	67.4	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	67.4	96-18-4	
n-Propylbenzene	Not detected	70		ug/kg	67.4	103-65-1	
Bromobenzene	Not detected	100		ug/kg	67.4	108-86-1	
1,3,5-Trimethylbenzene	Not detected	70		ug/kg	67.4	108-67-8	
tert-Butylbenzene	Not detected	70		ug/kg	67.4	98-06-6	
1,2,4-Trimethylbenzene	Not detected	70		ug/kg	67.4	95-63-6	
sec-Butylbenzene	Not detected	70		ug/kg	67.4	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	67.4	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	67.4	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	67.4	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	67.4	95-50-1	
1,2,3-Trimethylbenzene	Not detected	70		ug/kg	67.4	526-73-8	
n-Butylbenzene	Not detected	70		ug/kg	67.4	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	67.4	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	67.4	96-12-8	
1,2,4-Trichlorobenzene	Not detected	440		ug/kg	67.4	120-82-1	
1,2,3-Trichlorobenzene	Not detected	440		ug/kg	67.4	87-61-6	
Naphthalene	Not detected	300		ug/kg	67.4	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	67.4	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S74399.02
Sample Tag: SB-1 (14-15)
Collected Date/Time: 05/08/2025 09:57
Matrix: Soil
COC Reference: 178350

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	3.2	IR
1	40mL Glass	MeOH	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/14/25 08:50	JRH	
PNA Extraction*	Completed	SW3546	05/14/25 16:00	PTW	
Sample wt. (g) / Methanol (ml)*	11.146/11	SW5035A	05/12/25 16:33	ACK	
Mercury Digestion	Completed	SW7471B	05/13/25 13:00	CTV	

Inorganics

Method: SM2540B, Run Date: 05/13/25 12:45, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	96	1		%	1		

Metals

Method: SW6020A, Run Date: 05/14/25 12:26, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	4,230	200		ug/kg	215	7440-38-2	
Barium	5,680	1,000		ug/kg	215	7440-39-3	
Cadmium	Not detected	200		ug/kg	215	7440-43-9	
Chromium	2,930	500		ug/kg	215	7440-47-3	
Copper	5,930	500		ug/kg	215	7440-50-8	
Lead	3,260	300		ug/kg	215	7439-92-1	
Selenium	Not detected	400		ug/kg	215	7782-49-2	
Silver	Not detected	200		ug/kg	215	7440-22-4	
Zinc	24,300	500		ug/kg	215	7440-66-6	

Method: SW7471B, Run Date: 05/13/25 15:55, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	50		ug/kg	59	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 18:41, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	

Lab Sample ID: S74399.02 (continued)
Sample Tag: SB-1 (14-15)

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 18:41, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Organics

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 21:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	200		ug/kg	53.5	60-29-7	
Acetone	Not detected	1,000		ug/kg	53.5	67-64-1	
Methyl iodide	Not detected	100		ug/kg	53.5	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	53.5	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	53.5	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	53.5	107-13-1	
2-Butanone (MEK)	Not detected	800		ug/kg	53.5	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	53.5	75-71-8	
Chloromethane	Not detected	300		ug/kg	53.5	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	53.5	75-01-4	
Bromomethane	Not detected	200		ug/kg	53.5	74-83-9	
Chloroethane	Not detected	300		ug/kg	53.5	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	53.5	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	53.5	75-35-4	
Methylene chloride	Not detected	100		ug/kg	53.5	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	53.5	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	53.5	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	53.5	156-59-2	
Tetrahydrofuran	Not detected	1,000		ug/kg	53.5	109-99-9	
Chloroform	Not detected	50		ug/kg	53.5	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	53.5	74-97-5	
1,1,1-Trichloroethane	Not detected	50		ug/kg	53.5	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	53.5	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	53.5	591-78-6	
Carbon tetrachloride	Not detected	50		ug/kg	53.5	56-23-5	
Benzene	Not detected	50		ug/kg	53.5	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	53.5	107-06-2	
Trichloroethene	Not detected	50		ug/kg	53.5	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	53.5	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	53.5	75-27-4	
Dibromomethane	Not detected	300		ug/kg	53.5	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	53.5	10061-01-5	
Toluene	Not detected	50		ug/kg	53.5	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	53.5	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	53.5	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	53.5	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	50		ug/kg	53.5	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	53.5	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	53.5	106-93-4	M

M-Result reported to MDL not RDL

Lab Sample ID: S74399.02 (continued)
Sample Tag: SB-1 (14-15)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 21:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chlorobenzene	Not detected	50		ug/kg	53.5	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	53.5	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	53.5	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	53.5		
o-Xylene	Not detected	50		ug/kg	53.5	95-47-6	
Styrene	Not detected	50		ug/kg	53.5	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	53.5	98-82-8	
Bromoform	Not detected	100		ug/kg	53.5	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	53.5	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	53.5	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	53.5	103-65-1	
Bromobenzene	Not detected	100		ug/kg	53.5	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	53.5	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	53.5	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	53.5	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	53.5	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	53.5	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	53.5	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	53.5	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	53.5	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	53.5	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	53.5	104-51-8	
Hexachloroethane	Not detected	300		ug/kg	53.5	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	53.5	96-12-8	
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	53.5	120-82-1	
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	53.5	87-61-6	
Naphthalene	Not detected	300		ug/kg	53.5	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	53.5	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S74399.03
Sample Tag: SB-2 (2-2.5)
Collected Date/Time: 05/08/2025 10:25
Matrix: Soil
COC Reference: 178350

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	3.2	IR
1	40mL Glass	MeOH	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/14/25 08:50	JRH	
PNA Extraction*	Completed	SW3546	05/14/25 16:00	PTW	
Sample wt. (g) / Methanol (ml)*	10.856/10	SW5035A	05/12/25 16:33	ACK	
Mercury Digestion	Completed	SW7471B	05/13/25 13:00	CTV	

Inorganics

Method: SM2540B, Run Date: 05/13/25 12:45, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	86	1		%	1		

Metals

Method: SW6020A, Run Date: 05/14/25 12:28, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	6,720	200		ug/kg	243	7440-38-2	
Barium	36,800	1,000		ug/kg	243	7440-39-3	
Cadmium	Not detected	200		ug/kg	243	7440-43-9	
Chromium	10,800	500		ug/kg	243	7440-47-3	
Copper	11,600	500		ug/kg	243	7440-50-8	
Lead	8,960	300		ug/kg	243	7439-92-1	
Selenium	Not detected	400		ug/kg	243	7782-49-2	
Silver	Not detected	200		ug/kg	243	7440-22-4	
Zinc	40,200	500		ug/kg	243	7440-66-6	

Method: SW7471B, Run Date: 05/13/25 16:04, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	50		ug/kg	67	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 19:04, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	

Lab Sample ID: S74399.03 (continued)
Sample Tag: SB-2 (2-2.5)

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 19:04, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Organics

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 22:09, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	200		ug/kg	61.7	60-29-7	
Acetone	Not detected	1,000		ug/kg	61.7	67-64-1	
Methyl iodide	Not detected	100		ug/kg	61.7	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	61.7	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	61.7	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	61.7	107-13-1	
2-Butanone (MEK)	Not detected	930		ug/kg	61.7	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	61.7	75-71-8	
Chloromethane	Not detected	300		ug/kg	61.7	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	61.7	75-01-4	
Bromomethane	Not detected	200		ug/kg	61.7	74-83-9	
Chloroethane	Not detected	300		ug/kg	61.7	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	61.7	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	61.7	75-35-4	
Methylene chloride	Not detected	100		ug/kg	61.7	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	61.7	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	61.7	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	61.7	156-59-2	
Tetrahydrofuran	Not detected	1,000		ug/kg	61.7	109-99-9	
Chloroform	Not detected	60		ug/kg	61.7	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	61.7	74-97-5	
1,1,1-Trichloroethane	Not detected	60		ug/kg	61.7	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	61.7	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	61.7	591-78-6	
Carbon tetrachloride	Not detected	60		ug/kg	61.7	56-23-5	
Benzene	Not detected	60		ug/kg	61.7	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	61.7	107-06-2	
Trichloroethene	Not detected	60		ug/kg	61.7	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	61.7	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	61.7	75-27-4	
Dibromomethane	Not detected	300		ug/kg	61.7	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	61.7	10061-01-5	
Toluene	Not detected	60		ug/kg	61.7	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	61.7	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	61.7	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	61.7	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	60		ug/kg	61.7	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	61.7	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	61.7	106-93-4	M

M-Result reported to MDL not RDL

Lab Sample ID: S74399.03 (continued)
Sample Tag: SB-2 (2-2.5)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 22:09, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chlorobenzene	Not detected	60		ug/kg	61.7	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	61.7	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	61.7	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	61.7		
o-Xylene	Not detected	60		ug/kg	61.7	95-47-6	
Styrene	Not detected	60		ug/kg	61.7	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	61.7	98-82-8	
Bromoform	Not detected	100		ug/kg	61.7	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	61.7	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	61.7	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	61.7	103-65-1	
Bromobenzene	Not detected	100		ug/kg	61.7	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	61.7	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	61.7	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	61.7	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	61.7	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	61.7	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	61.7	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	61.7	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	61.7	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	61.7	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	61.7	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	61.7	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	61.7	96-12-8	
1,2,4-Trichlorobenzene	Not detected	410		ug/kg	61.7	120-82-1	
1,2,3-Trichlorobenzene	Not detected	410		ug/kg	61.7	87-61-6	
Naphthalene	Not detected	300		ug/kg	61.7	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	61.7	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S74399.04
Sample Tag: SB-2 (13-14)
Collected Date/Time: 05/08/2025 10:40
Matrix: Soil
COC Reference: 178350

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	3.2	IR
1	40mL Glass	MeOH	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/14/25 08:50	JRH	
PNA Extraction*	Completed	SW3546	05/14/25 16:00	PTW	
Sample wt. (g) / Methanol (ml)*	11.127/11	SW5035A	05/12/25 16:33	ACK	
Mercury Digestion	Completed	SW7471B	05/13/25 13:00	CTV	

Inorganics

Method: SM2540B, Run Date: 05/13/25 12:45, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	90	1		%	1		

Metals

Method: SW6020A, Run Date: 05/14/25 12:30, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	3,970	200		ug/kg	235	7440-38-2	
Barium	22,500	1,000		ug/kg	235	7440-39-3	
Cadmium	Not detected	200		ug/kg	235	7440-43-9	
Chromium	11,300	500		ug/kg	235	7440-47-3	
Copper	11,800	500		ug/kg	235	7440-50-8	
Lead	4,220	300		ug/kg	235	7439-92-1	
Selenium	560	400		ug/kg	235	7782-49-2	
Silver	Not detected	200		ug/kg	235	7440-22-4	
Zinc	27,600	500		ug/kg	235	7440-66-6	

Method: SW7471B, Run Date: 05/13/25 16:08, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	50		ug/kg	61	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 19:28, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	

Lab Sample ID: S74399.04 (continued)
Sample Tag: SB-2 (13-14)

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 19:28, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Organics

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 22:33, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	200		ug/kg	60.5	60-29-7	
Acetone	Not detected	1,000		ug/kg	60.5	67-64-1	
Methyl iodide	Not detected	100		ug/kg	60.5	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	60.5	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	60.5	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	60.5	107-13-1	
2-Butanone (MEK)	Not detected	910		ug/kg	60.5	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	60.5	75-71-8	
Chloromethane	Not detected	300		ug/kg	60.5	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	60.5	75-01-4	
Bromomethane	Not detected	200		ug/kg	60.5	74-83-9	
Chloroethane	Not detected	300		ug/kg	60.5	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	60.5	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	60.5	75-35-4	
Methylene chloride	Not detected	100		ug/kg	60.5	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	60.5	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	60.5	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	60.5	156-59-2	
Tetrahydrofuran	Not detected	1,000		ug/kg	60.5	109-99-9	
Chloroform	Not detected	60		ug/kg	60.5	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	60.5	74-97-5	
1,1,1-Trichloroethane	Not detected	60		ug/kg	60.5	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	60.5	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	60.5	591-78-6	
Carbon tetrachloride	Not detected	60		ug/kg	60.5	56-23-5	
Benzene	Not detected	60		ug/kg	60.5	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	60.5	107-06-2	
Trichloroethene	Not detected	60		ug/kg	60.5	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	60.5	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	60.5	75-27-4	
Dibromomethane	Not detected	300		ug/kg	60.5	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	60.5	10061-01-5	
Toluene	Not detected	60		ug/kg	60.5	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	60.5	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	60.5	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	60.5	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	60		ug/kg	60.5	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	60.5	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	60.5	106-93-4	M

M-Result reported to MDL not RDL

Lab Sample ID: S74399.04 (continued)
Sample Tag: SB-2 (13-14)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 22:33, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chlorobenzene	Not detected	60		ug/kg	60.5	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	60.5	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	60.5	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	60.5		
o-Xylene	Not detected	60		ug/kg	60.5	95-47-6	
Styrene	Not detected	60		ug/kg	60.5	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	60.5	98-82-8	
Bromoform	Not detected	100		ug/kg	60.5	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	60.5	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	60.5	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	60.5	103-65-1	
Bromobenzene	Not detected	100		ug/kg	60.5	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	60.5	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	60.5	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	60.5	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	60.5	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	60.5	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	60.5	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	60.5	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	60.5	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	60.5	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	60.5	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	60.5	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	60.5	96-12-8	
1,2,4-Trichlorobenzene	Not detected	400		ug/kg	60.5	120-82-1	
1,2,3-Trichlorobenzene	Not detected	400		ug/kg	60.5	87-61-6	
Naphthalene	Not detected	300		ug/kg	60.5	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	60.5	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S74399.05
Sample Tag: SB-3 (3.5-4)
Collected Date/Time: 05/08/2025 11:00
Matrix: Soil
COC Reference: 178350

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/14/25 08:50	JRH	

Inorganics

Method: SM2540B, Run Date: 05/13/25 12:45, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	77	1		%	1		

Metals

Method: SW6020A, Run Date: 05/14/25 12:32, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Lead	8,080	300		ug/kg	270	7439-92-1	

Analytical Laboratory Report

Lab Sample ID: S74399.06
Sample Tag: SB-4 (3.5-4)
Collected Date/Time: 05/08/2025 12:00
Matrix: Soil
COC Reference: 178350

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/14/25 08:50	JRH	

Inorganics

Method: SM2540B, Run Date: 05/13/25 12:45, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	84	1		%	1		

Metals

Method: SW6020A, Run Date: 05/14/25 12:34, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Lead	15,700	300		ug/kg	255	7439-92-1	

Analytical Laboratory Report

Lab Sample ID: S74399.07
Sample Tag: SB-5 (4-5)
Collected Date/Time: 05/08/2025 12:40
Matrix: Soil
COC Reference: 178350

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	3.2	IR
1	40mL Glass	MeOH	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/14/25 08:50	JRH	
PNA Extraction*	Completed	SW3546	05/14/25 16:00	PTW	
Sample wt. (g) / Methanol (ml)*	10.041/10	SW5035A	05/13/25 11:48	ACK	
Mercury Digestion	Completed	SW7471B	05/13/25 13:00	CTV	

Inorganics

Method: SM2540B, Run Date: 05/13/25 12:45, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	90	1		%	1		

Metals

Method: SW6020A, Run Date: 05/14/25 12:36, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	9,040	200		ug/kg	236	7440-38-2	
Barium	29,300	1,000		ug/kg	236	7440-39-3	
Cadmium	Not detected	200		ug/kg	236	7440-43-9	
Chromium	7,940	500		ug/kg	236	7440-47-3	
Copper	11,200	500		ug/kg	236	7440-50-8	
Lead	7,930	300		ug/kg	236	7439-92-1	
Selenium	Not detected	400		ug/kg	236	7782-49-2	
Silver	Not detected	200		ug/kg	236	7440-22-4	
Zinc	40,600	500		ug/kg	236	7440-66-6	

Method: SW7471B, Run Date: 05/13/25 16:11, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	50		ug/kg	62	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 19:51, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	

Lab Sample ID: S74399.07 (continued)
Sample Tag: SB-5 (4-5)

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 19:51, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Organics

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/13/25 15:12, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	200		ug/kg	60.9	60-29-7	x
Acetone	Not detected	1,000		ug/kg	60.9	67-64-1	x
Methyl iodide	Not detected	100		ug/kg	60.9	74-88-4	x
Carbon disulfide	Not detected	300		ug/kg	60.9	75-15-0	x
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	60.9	1634-04-4	x
Acrylonitrile	Not detected	100		ug/kg	60.9	107-13-1	x
2-Butanone (MEK)	Not detected	910		ug/kg	60.9	78-93-3	x
Dichlorodifluoromethane	Not detected	300		ug/kg	60.9	75-71-8	x
Chloromethane	Not detected	300		ug/kg	60.9	74-87-3	x
Vinyl chloride	Not detected	60		ug/kg	60.9	75-01-4	x
Bromomethane	Not detected	200		ug/kg	60.9	74-83-9	x
Chloroethane	Not detected	300		ug/kg	60.9	75-00-3	x
Trichlorofluoromethane	Not detected	100		ug/kg	60.9	75-69-4	x
1,1-Dichloroethene	Not detected	60		ug/kg	60.9	75-35-4	x
Methylene chloride	Not detected	100		ug/kg	60.9	75-09-2	x
trans-1,2-Dichloroethene	Not detected	60		ug/kg	60.9	156-60-5	x
1,1-Dichloroethane	Not detected	60		ug/kg	60.9	75-34-3	x
cis-1,2-Dichloroethene	Not detected	60		ug/kg	60.9	156-59-2	x
Tetrahydrofuran	Not detected	1,000		ug/kg	60.9	109-99-9	x
Chloroform	Not detected	60		ug/kg	60.9	67-66-3	x
Bromochloromethane	Not detected	100		ug/kg	60.9	74-97-5	x
1,1,1-Trichloroethane	Not detected	60		ug/kg	60.9	71-55-6	x
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	60.9	108-10-1	x
2-Hexanone	Not detected	3,000		ug/kg	60.9	591-78-6	x
Carbon tetrachloride	Not detected	60		ug/kg	60.9	56-23-5	x
Benzene	Not detected	60		ug/kg	60.9	71-43-2	x
1,2-Dichloroethane	Not detected	60		ug/kg	60.9	107-06-2	x
Trichloroethene	Not detected	60		ug/kg	60.9	79-01-6	x
1,2-Dichloropropane	Not detected	60		ug/kg	60.9	78-87-5	x
Bromodichloromethane	Not detected	100		ug/kg	60.9	75-27-4	x
Dibromomethane	Not detected	300		ug/kg	60.9	74-95-3	x
cis-1,3-Dichloropropene	Not detected	60		ug/kg	60.9	10061-01-5	x
Toluene	Not detected	60		ug/kg	60.9	108-88-3	x
trans-1,3-Dichloropropene	Not detected	60		ug/kg	60.9	10061-02-6	x
1,1,2-Trichloroethane	Not detected	60		ug/kg	60.9	79-00-5	x
Tetrachloroethene	Not detected	60		ug/kg	60.9	127-18-4	x
trans-1,4-Dichloro-2-butene	Not detected	60		ug/kg	60.9	110-57-6	x
Dibromochloromethane	Not detected	100		ug/kg	60.9	124-48-1	x

x-Preserved from bulk sample

Lab Sample ID: S74399.07 (continued)
Sample Tag: SB-5 (4-5)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/13/25 15:12, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromoethane	Not detected	20		ug/kg	60.9	106-93-4	Mx
Chlorobenzene	Not detected	60		ug/kg	60.9	108-90-7	x
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	60.9	630-20-6	x
Ethylbenzene	Not detected	60		ug/kg	60.9	100-41-4	x
p,m-Xylene	Not detected	100		ug/kg	60.9		x
o-Xylene	Not detected	60		ug/kg	60.9	95-47-6	x
Styrene	Not detected	60		ug/kg	60.9	100-42-5	x
Isopropylbenzene	Not detected	300		ug/kg	60.9	98-82-8	x
Bromoform	Not detected	100		ug/kg	60.9	75-25-2	x
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	60.9	79-34-5	x
1,2,3-Trichloropropane	Not detected	100		ug/kg	60.9	96-18-4	x
n-Propylbenzene	Not detected	60		ug/kg	60.9	103-65-1	x
Bromobenzene	Not detected	100		ug/kg	60.9	108-86-1	x
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	60.9	108-67-8	x
tert-Butylbenzene	Not detected	60		ug/kg	60.9	98-06-6	x
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	60.9	95-63-6	x
sec-Butylbenzene	Not detected	60		ug/kg	60.9	135-98-8	x
p-Isopropyltoluene	Not detected	100		ug/kg	60.9	99-87-6	x
1,3-Dichlorobenzene	Not detected	100		ug/kg	60.9	541-73-1	x
1,4-Dichlorobenzene	Not detected	100		ug/kg	60.9	106-46-7	x
1,2-Dichlorobenzene	Not detected	100		ug/kg	60.9	95-50-1	x
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	60.9	526-73-8	x
n-Butylbenzene	Not detected	60		ug/kg	60.9	104-51-8	x
Hexachloroethane	Not detected	400		ug/kg	60.9	67-72-1	x
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	60.9	96-12-8	x
1,2,4-Trichlorobenzene	Not detected	400		ug/kg	60.9	120-82-1	x
1,2,3-Trichlorobenzene	Not detected	400		ug/kg	60.9	87-61-6	x
Naphthalene	Not detected	300		ug/kg	60.9	91-20-3	x
2-Methylnaphthalene	Not detected	100		ug/kg	60.9	91-57-6	x

M-Result reported to MDL not RDL x-Preserved from bulk sample

Analytical Laboratory Report

Lab Sample ID: S74399.08
Sample Tag: MW-7
Collected Date/Time: 05/09/2025 13:35
Matrix: Groundwater
COC Reference: 178350

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	3.2	IR
1	125mL Plastic	HNO3	Yes	3.2	IR
1	15mL Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.03/6.55/9	ASTMD7979-19M	05/14/25 12:30	CED	
Mercury Digestion	Completed	E245.1	05/13/25 11:45	CTV	
Metal Digestion	Completed	SW3015A	05/13/25 09:05	JRH	
PNA Extraction	Completed	SW3510C	05/15/25 10:30	JWR	

Metals

Method: E200.8, Run Date: 05/13/25 12:04, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	Not detected	2		ug/L	5	7440-38-2	
Cadmium	Not detected	0.5		ug/L	5	7440-43-9	
Lead	Not detected	3		ug/L	5	7439-92-1	
Selenium	Not detected	5		ug/L	5	7782-49-2	

Method: E245.1, Run Date: 05/13/25 14:51, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.2		ug/L	1	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatic Hydrocarbon, Method: SW8270D, Run Date: 05/15/25 19:14, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Pyrene	Not detected	5		ug/L	2	129-00-0	
2-Methylnaphthalene	Not detected	5		ug/L	2	91-57-6	
1-Methylnaphthalene	Not detected	5		ug/L	2	90-12-0	

Lab Sample ID: S74399.08 (continued)
Sample Tag: MW-7

Organics

40 PFAs, Method: ASTMD7979-19M, Run Date: 05/15/25 01:38, Analyst: CED

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	0.01		ug/L	2.01	375-22-4	
PFPeA*	Not detected	0.0040		ug/L	2.01	2706-90-3	
4:2 FTSA*	Not detected	0.0020		ug/L	2.01	757124-72-4	
PFHxA*	Not detected	0.0020		ug/L	2.01	307-24-4	
PFBS*	0.0075	0.0020		ug/L	2.01	375-73-5	
PFHpA*	Not detected	0.0020		ug/L	2.01	375-85-9	
PFPeS*	Not detected	0.0020		ug/L	2.01	2706-91-4	
6:2 FTSA*	Not detected	0.0020		ug/L	2.01	27619-97-2	
PFOA*	Not detected	0.0020		ug/L	2.01	335-67-1	
PFHxS*	Not detected	0.0020		ug/L	2.01	355-46-4	
PFHxS-LN*	Not detected	0.0020		ug/L	2.01	355-46-4-LN	
PFHxS-BR*	Not detected	0.0020		ug/L	2.01	355-46-4-BR	
PFNA*	Not detected	0.0020		ug/L	2.01	375-95-1	
8:2 FTSA*	Not detected	0.0020		ug/L	2.01	39108-34-4	
PFHpS*	Not detected	0.0020		ug/L	2.01	375-92-8	
PFDA*	Not detected	0.0020		ug/L	2.01	335-76-2	
N-MeFOSAA*	Not detected	0.0020		ug/L	2.01	2355-31-9	
EtFOSAA*	Not detected	0.0040		ug/L	2.01	2991-50-6	
PFOS*	Not detected	0.0020		ug/L	2.01	1763-23-1	
PFOS-LN*	Not detected	0.0020		ug/L	2.01	1763-23-1-LN	
PFOS-BR*	Not detected	0.0020		ug/L	2.01	1763-23-1-BR	
PFUnDA*	Not detected	0.0020		ug/L	2.01	2058-94-8	
PFNS*	Not detected	0.0020		ug/L	2.01	68259-12-1	
PFDoDA*	Not detected	0.0020		ug/L	2.01	307-55-1	
PFDS*	Not detected	0.0020		ug/L	2.01	335-77-3	
PFTrDA*	Not detected	0.0020		ug/L	2.01	72629-94-8	
FOSA*	Not detected	0.0020		ug/L	2.01	754-91-6	
PFTeDA*	Not detected	0.0040		ug/L	2.01	376-06-7	
11Cl-PF3OUdS*	Not detected	0.0020		ug/L	2.01	763051-92-9	
9Cl-PF3ONS*	Not detected	0.0020		ug/L	2.01	756426-58-1	
ADONA*	Not detected	0.0020		ug/L	2.01	919005-14-4	
HFPO-DA*	Not detected	0.01		ug/L	2.01	13252-13-6	
FHpPA (7:3 FTCA)*	Not detected	0.01		ug/L	2.01	812-70-4	
FPePA (5:3 FTCA)*	Not detected	0.01		ug/L	2.01	914637-49-3	
FPrPA (3:3 FTCA)*	Not detected	0.01		ug/L	2.01	356-02-5	
NFDHA*	Not detected	0.0020		ug/L	2.01	151772-58-6	
PFEESA*	Not detected	0.0020		ug/L	2.01	113507-82-7	
PFMBA*	Not detected	0.0020		ug/L	2.01	863090-89-5	
PFMPA*	Not detected	0.0020		ug/L	2.01	377-73-1	
NMeFOSAM*	Not detected	0.0020		ug/L	2.01	31506-32-8	
NMeFOSE*	Not detected	0.0040		ug/L	2.01	24448-09-7	
NEtFOSAM*	Not detected	0.0020		ug/L	2.01	4151-50-2	
NEtFOSE*	Not detected	0.0040		ug/L	2.01	1691-99-2	
PFDoS*	Not detected	0.0040		ug/L	2.01	79780-39-5	

Analytical Laboratory Report

Lab Sample ID: S74399.09
Sample Tag: MW-8
Collected Date/Time: 05/09/2025 12:40
Matrix: Groundwater
COC Reference: 178350

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	3.2	IR
1	15mL Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	10.81/6.41/9	ASTMD7979-19M	05/14/25 12:30	CED	
Extraction, PCB*	Completed	E608.3	05/15/25 10:30	JWR	

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 05/15/25 16:26, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2	
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2	
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5	
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9	
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6	
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1	
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5	
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3	

Organics

40 PFAs, Method: ASTMD7979-19M, Run Date: 05/15/25 01:58, Analyst: CED

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	0.01		ug/L	2.05	375-22-4	
PFPeA*	Not detected	0.0041		ug/L	2.05	2706-90-3	
4:2 FTSA*	Not detected	0.0021		ug/L	2.05	757124-72-4	
PFHxA*	Not detected	0.0021		ug/L	2.05	307-24-4	
PFBS*	Not detected	0.0021		ug/L	2.05	375-73-5	
PFHpA*	Not detected	0.0021		ug/L	2.05	375-85-9	
PFPeS*	Not detected	0.0021		ug/L	2.05	2706-91-4	
6:2 FTSA*	Not detected	0.0021		ug/L	2.05	27619-97-2	
PFOA*	Not detected	0.0021		ug/L	2.05	335-67-1	
PFHxS*	Not detected	0.0021		ug/L	2.05	355-46-4	
PFHxS-LN*	Not detected	0.0021		ug/L	2.05	355-46-4-LN	
PFHxS-BR*	Not detected	0.0021		ug/L	2.05	355-46-4-BR	
PFNA*	Not detected	0.0021		ug/L	2.05	375-95-1	
8:2 FTSA*	Not detected	0.0021		ug/L	2.05	39108-34-4	
PFHpS*	Not detected	0.0021		ug/L	2.05	375-92-8	
PFDA*	Not detected	0.0021		ug/L	2.05	335-76-2	
N-MeFOSAA*	Not detected	0.0021		ug/L	2.05	2355-31-9	
EtFOSAA*	Not detected	0.0041		ug/L	2.05	2991-50-6	
PFOS*	Not detected	0.0021		ug/L	2.05	1763-23-1	
PFOS-LN*	Not detected	0.0021		ug/L	2.05	1763-23-1-LN	
PFOS-BR*	Not detected	0.0021		ug/L	2.05	1763-23-1-BR	
PFUnDA*	Not detected	0.0021		ug/L	2.05	2058-94-8	
PFNS*	Not detected	0.0021		ug/L	2.05	68259-12-1	

Lab Sample ID: S74399.09 (continued)
Sample Tag: MW-8

40 PFAs, Method: ASTMD7979-19M, Run Date: 05/15/25 01:58, Analyst: CED (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFDoDA*	Not detected	0.0021		ug/L	2.05	307-55-1	
PFDS*	Not detected	0.0021		ug/L	2.05	335-77-3	
PFTrDA*	Not detected	0.0021		ug/L	2.05	72629-94-8	
FOSA*	Not detected	0.0021		ug/L	2.05	754-91-6	
PFTeDA*	Not detected	0.0041		ug/L	2.05	376-06-7	
11Cl-PF3OUdS*	Not detected	0.0021		ug/L	2.05	763051-92-9	
9Cl-PF3ONS*	Not detected	0.0021		ug/L	2.05	756426-58-1	
ADONA*	Not detected	0.0021		ug/L	2.05	919005-14-4	
HFPO-DA*	Not detected	0.01		ug/L	2.05	13252-13-6	
FHpPA (7:3 FTCA)*	Not detected	0.01		ug/L	2.05	812-70-4	
FPePA (5:3 FTCA)*	Not detected	0.01		ug/L	2.05	914637-49-3	
FPrPA (3:3 FTCA)*	Not detected	0.01		ug/L	2.05	356-02-5	
NFDHA*	Not detected	0.0021		ug/L	2.05	151772-58-6	
PFEESA*	Not detected	0.0021		ug/L	2.05	113507-82-7	
PFMBA*	Not detected	0.0021		ug/L	2.05	863090-89-5	
PFMPA*	Not detected	0.0021		ug/L	2.05	377-73-1	
NMeFOSAM*	Not detected	0.0021		ug/L	2.05	31506-32-8	
NMeFOSE*	Not detected	0.0041		ug/L	2.05	24448-09-7	
NEtFOSAM*	Not detected	0.0021		ug/L	2.05	4151-50-2	
NEtFOSE*	Not detected	0.0041		ug/L	2.05	1691-99-2	
PFDoS*	Not detected	0.0041		ug/L	2.05	79780-39-5	

Analytical Laboratory Report

Lab Sample ID: S74399.10
Sample Tag: MW-9
Collected Date/Time: 05/09/2025 11:20
Matrix: Groundwater
COC Reference: 178350

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	3.2	IR
1	125mL Plastic	HNO3	Yes	3.2	IR
1	15mL Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.43/6.50/10	ASTMD7979-19M	05/14/25 12:30	CED	
Mercury Digestion	Completed	E245.1	05/13/25 11:45	CTV	
Metal Digestion	Completed	SW3015A	05/13/25 09:05	JRH	
PNA Extraction	Completed	SW3510C	05/15/25 10:30	JWR	

Metals

Method: E200.8, Run Date: 05/13/25 12:06, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	Not detected	2		ug/L	5	7440-38-2	
Cadmium	Not detected	0.5		ug/L	5	7440-43-9	
Lead	Not detected	3		ug/L	5	7439-92-1	
Selenium	Not detected	5		ug/L	5	7782-49-2	

Method: E245.1, Run Date: 05/13/25 15:01, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.2		ug/L	1	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatic Hydrocarbon, Method: SW8270D, Run Date: 05/15/25 19:37, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Pyrene	Not detected	5		ug/L	2	129-00-0	
2-Methylnaphthalene	Not detected	5		ug/L	2	91-57-6	
1-Methylnaphthalene	Not detected	5		ug/L	2	90-12-0	

Lab Sample ID: S74399.10 (continued)
Sample Tag: MW-9

Organics

40 PFAs, Method: ASTMD7979-19M, Run Date: 05/15/25 02:18, Analyst: CED

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	0.013	0.01		ug/L	2.03	375-22-4	
PFPeA*	0.027	0.0041		ug/L	2.03	2706-90-3	
4:2 FTSA*	Not detected	0.0020		ug/L	2.03	757124-72-4	
PFHxA*	0.031	0.0020		ug/L	2.03	307-24-4	
PFBS*	0.46	0.0020		ug/L	2.03	375-73-5	
PFHpA*	0.0042	0.0020		ug/L	2.03	375-85-9	
PFPeS*	Not detected	0.0020		ug/L	2.03	2706-91-4	
6:2 FTSA*	Not detected	0.0020		ug/L	2.03	27619-97-2	
PFOA*	0.0062	0.0020		ug/L	2.03	335-67-1	
PFHxS*	Not detected	0.0020		ug/L	2.03	355-46-4	
PFHxS-LN*	Not detected	0.0020		ug/L	2.03	355-46-4-LN	
PFHxS-BR*	Not detected	0.0020		ug/L	2.03	355-46-4-BR	
PFNA*	Not detected	0.0020		ug/L	2.03	375-95-1	
8:2 FTSA*	Not detected	0.0020		ug/L	2.03	39108-34-4	
PFHpS*	Not detected	0.0020		ug/L	2.03	375-92-8	
PFDA*	Not detected	0.0020		ug/L	2.03	335-76-2	
N-MeFOSAA*	Not detected	0.0020		ug/L	2.03	2355-31-9	
EtFOSAA*	Not detected	0.0041		ug/L	2.03	2991-50-6	
PFOS*	0.0051	0.0020		ug/L	2.03	1763-23-1	
PFOS-LN*	0.0035	0.0020		ug/L	2.03	1763-23-1-LN	
PFOS-BR*	Not detected	0.0020		ug/L	2.03	1763-23-1-BR	
PFUnDA*	Not detected	0.0020		ug/L	2.03	2058-94-8	
PFNS*	Not detected	0.0020		ug/L	2.03	68259-12-1	
PFDoDA*	Not detected	0.0020		ug/L	2.03	307-55-1	
PFDS*	Not detected	0.0020		ug/L	2.03	335-77-3	
PFTrDA*	Not detected	0.0020		ug/L	2.03	72629-94-8	
FOSA*	Not detected	0.0020		ug/L	2.03	754-91-6	
PFTeDA*	Not detected	0.0041		ug/L	2.03	376-06-7	
11Cl-PF3OUdS*	Not detected	0.0020		ug/L	2.03	763051-92-9	
9Cl-PF3ONS*	Not detected	0.0020		ug/L	2.03	756426-58-1	
ADONA*	Not detected	0.0020		ug/L	2.03	919005-14-4	
HFPO-DA*	Not detected	0.01		ug/L	2.03	13252-13-6	
FHpPA (7:3 FTCA)*	Not detected	0.01		ug/L	2.03	812-70-4	
FPePA (5:3 FTCA)*	Not detected	0.01		ug/L	2.03	914637-49-3	
FPrPA (3:3 FTCA)*	Not detected	0.01		ug/L	2.03	356-02-5	
NFDHA*	Not detected	0.0020		ug/L	2.03	151772-58-6	
PFEESA*	Not detected	0.0020		ug/L	2.03	113507-82-7	
PFMBA*	Not detected	0.0020		ug/L	2.03	863090-89-5	
PFMPA*	Not detected	0.0020		ug/L	2.03	377-73-1	
NMeFOSAM*	Not detected	0.0020		ug/L	2.03	31506-32-8	
NMeFOSE*	Not detected	0.0041		ug/L	2.03	24448-09-7	
NEtFOSAM*	Not detected	0.0020		ug/L	2.03	4151-50-2	
NEtFOSE*	Not detected	0.0041		ug/L	2.03	1691-99-2	
PFDoS*	Not detected	0.0041		ug/L	2.03	79780-39-5	

Analytical Laboratory Report

Lab Sample ID: S74399.11
Sample Tag: MW-10
Collected Date/Time: 05/09/2025 10:55
Matrix: Groundwater
COC Reference: 178350

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	3.2	IR
1	125mL Plastic	HNO3	Yes	3.2	IR
1	15mL Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.13/6.42/10	ASTMD7979-19M	05/14/25 12:30	CED	
Mercury Digestion	Completed	E245.1	05/13/25 11:45	CTV	
Metal Digestion	Completed	SW3015A	05/13/25 09:05	JRH	

Metals

Method: E200.8, Run Date: 05/13/25 12:08, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	Not detected	2		ug/L	5	7440-38-2	
Cadmium	Not detected	0.5		ug/L	5	7440-43-9	
Lead	Not detected	3		ug/L	5	7439-92-1	
Selenium	Not detected	5		ug/L	5	7782-49-2	

Method: E245.1, Run Date: 05/13/25 15:11, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.2		ug/L	1	7439-97-6	

Organics

40 PFAs, Method: ASTMD7979-19M, Run Date: 05/15/25 02:38, Analyst: CED

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	0.069	0.011		ug/L	2.12	375-22-4	
PFPeA*	0.086	0.0042		ug/L	2.12	2706-90-3	
4:2 FTSA*	Not detected	0.0021		ug/L	2.12	757124-72-4	
PFHxA*	0.027	0.0021		ug/L	2.12	307-24-4	
PFBS*	0.55	0.0021		ug/L	2.12	375-73-5	
PFHpA*	Not detected	0.0021		ug/L	2.12	375-85-9	
PFPeS*	Not detected	0.0021		ug/L	2.12	2706-91-4	
6:2 FTSA*	Not detected	0.0021		ug/L	2.12	27619-97-2	
PFOA*	Not detected	0.0021		ug/L	2.12	335-67-1	
PFHxS*	0.0025	0.0021		ug/L	2.12	355-46-4	
PFHxS-LN*	Not detected	0.0021		ug/L	2.12	355-46-4-LN	
PFHxS-BR*	Not detected	0.0021		ug/L	2.12	355-46-4-BR	
PFNA*	Not detected	0.0021		ug/L	2.12	375-95-1	
8:2 FTSA*	Not detected	0.0021		ug/L	2.12	39108-34-4	
PFHpS*	Not detected	0.0021		ug/L	2.12	375-92-8	
PFDA*	Not detected	0.0021		ug/L	2.12	335-76-2	
N-MeFOSAA*	Not detected	0.0021		ug/L	2.12	2355-31-9	
EtFOSAA*	Not detected	0.0042		ug/L	2.12	2991-50-6	
PFOS*	Not detected	0.0021		ug/L	2.12	1763-23-1	
PFOS-LN*	Not detected	0.0021		ug/L	2.12	1763-23-1-LN	
PFOS-BR*	Not detected	0.0021		ug/L	2.12	1763-23-1-BR	

Lab Sample ID: S74399.11 (continued)
Sample Tag: MW-10

40 PFAs, Method: ASTMD7979-19M, Run Date: 05/15/25 02:38, Analyst: CED (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFUnDA*	Not detected	0.0021		ug/L	2.12	2058-94-8	
PFNS*	Not detected	0.0021		ug/L	2.12	68259-12-1	
PFDoDA*	Not detected	0.0021		ug/L	2.12	307-55-1	
PFDS*	Not detected	0.0021		ug/L	2.12	335-77-3	
PFTrDA*	Not detected	0.0021		ug/L	2.12	72629-94-8	
FOSA*	Not detected	0.0021		ug/L	2.12	754-91-6	
PFTeDA*	Not detected	0.0042		ug/L	2.12	376-06-7	
11Cl-PF3OUdS*	Not detected	0.0021		ug/L	2.12	763051-92-9	
9Cl-PF3ONS*	Not detected	0.0021		ug/L	2.12	756426-58-1	
ADONA*	Not detected	0.0021		ug/L	2.12	919005-14-4	
HFPO-DA*	Not detected	0.011		ug/L	2.12	13252-13-6	
FHpPA (7:3 FTCA)*	Not detected	0.011		ug/L	2.12	812-70-4	
FPePA (5:3 FTCA)*	Not detected	0.011		ug/L	2.12	914637-49-3	
FPrPA (3:3 FTCA)*	Not detected	0.011		ug/L	2.12	356-02-5	
NFDHA*	Not detected	0.0021		ug/L	2.12	151772-58-6	
PFEESA*	Not detected	0.0021		ug/L	2.12	113507-82-7	
PFMBA*	Not detected	0.0021		ug/L	2.12	863090-89-5	
PFMPA*	Not detected	0.0021		ug/L	2.12	377-73-1	
NMeFOSAM*	Not detected	0.0021		ug/L	2.12	31506-32-8	
NMeFOSE*	Not detected	0.0042		ug/L	2.12	24448-09-7	
NEtFOSAM*	Not detected	0.0021		ug/L	2.12	4151-50-2	
NEtFOSE*	Not detected	0.0042		ug/L	2.12	1691-99-2	
PFDoS*	Not detected	0.0042		ug/L	2.12	79780-39-5	

Analytical Laboratory Report

Lab Sample ID: S74399.12
Sample Tag: SB-11 (2.5-3')
Collected Date/Time: 05/09/2025 09:45
Matrix: Soil
COC Reference: 178350

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	3.2	IR
1	40mL Glass	MeOH	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/14/25 08:50	JRH	
PNA Extraction*	Completed	SW3546	05/14/25 16:00	PTW	
Sample wt. (g) / Methanol (ml)*	11.183/11	SW5035A	05/12/25 16:33	ACK	
Mercury Digestion	Completed	SW7471B	05/13/25 13:00	CTV	

Inorganics

Method: SM2540B, Run Date: 05/13/25 12:45, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	94	1		%	1		

Metals

Method: SW6020A, Run Date: 05/14/25 12:37, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	1,160	200		ug/kg	221	7440-38-2	
Barium	20,100	1,000		ug/kg	221	7440-39-3	
Cadmium	Not detected	200		ug/kg	221	7440-43-9	
Chromium	3,150	500		ug/kg	221	7440-47-3	
Copper	1,290	500		ug/kg	221	7440-50-8	
Lead	2,400	300		ug/kg	221	7439-92-1	
Selenium	Not detected	400		ug/kg	221	7782-49-2	
Silver	Not detected	200		ug/kg	221	7440-22-4	
Zinc	6,420	500		ug/kg	221	7440-66-6	

Method: SW7471B, Run Date: 05/13/25 16:14, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	50		ug/kg	60	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 20:14, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	

Lab Sample ID: S74399.12 (continued)
Sample Tag: SB-11 (2.5-3')

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 20:14, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Organics

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 22:57, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	200		ug/kg	55.5	60-29-7	
Acetone	Not detected	1,000		ug/kg	55.5	67-64-1	
Methyl iodide	Not detected	100		ug/kg	55.5	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	55.5	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55.5	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	55.5	107-13-1	
2-Butanone (MEK)	Not detected	830		ug/kg	55.5	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	55.5	75-71-8	
Chloromethane	Not detected	300		ug/kg	55.5	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	55.5	75-01-4	
Bromomethane	Not detected	200		ug/kg	55.5	74-83-9	
Chloroethane	Not detected	300		ug/kg	55.5	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	55.5	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	55.5	75-35-4	
Methylene chloride	Not detected	100		ug/kg	55.5	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55.5	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	55.5	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55.5	156-59-2	
Tetrahydrofuran	Not detected	1,000		ug/kg	55.5	109-99-9	
Chloroform	Not detected	60		ug/kg	55.5	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	55.5	74-97-5	
1,1,1-Trichloroethane	Not detected	60		ug/kg	55.5	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55.5	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	55.5	591-78-6	
Carbon tetrachloride	Not detected	60		ug/kg	55.5	56-23-5	
Benzene	Not detected	60		ug/kg	55.5	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	55.5	107-06-2	
Trichloroethene	Not detected	60		ug/kg	55.5	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	55.5	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	55.5	75-27-4	
Dibromomethane	Not detected	300		ug/kg	55.5	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55.5	10061-01-5	
Toluene	Not detected	60		ug/kg	55.5	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55.5	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	55.5	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	55.5	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	60		ug/kg	55.5	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	55.5	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	55.5	106-93-4	M

M-Result reported to MDL not RDL

Lab Sample ID: S74399.12 (continued)
Sample Tag: SB-11 (2.5-3')

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 22:57, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chlorobenzene	Not detected	60		ug/kg	55.5	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55.5	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	55.5	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	55.5		
o-Xylene	Not detected	60		ug/kg	55.5	95-47-6	
Styrene	Not detected	60		ug/kg	55.5	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	55.5	98-82-8	
Bromoform	Not detected	100		ug/kg	55.5	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55.5	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	55.5	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	55.5	103-65-1	
Bromobenzene	Not detected	100		ug/kg	55.5	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55.5	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	55.5	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55.5	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	55.5	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	55.5	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	55.5	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	55.5	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	55.5	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55.5	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	55.5	104-51-8	
Hexachloroethane	Not detected	300		ug/kg	55.5	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	55.5	96-12-8	
1,2,4-Trichlorobenzene	Not detected	370		ug/kg	55.5	120-82-1	
1,2,3-Trichlorobenzene	Not detected	370		ug/kg	55.5	87-61-6	
Naphthalene	Not detected	300		ug/kg	55.5	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	55.5	91-57-6	

Merit Laboratories, Inc.

Analytical Laboratory Report

Lab Sample ID: S74399.13
Sample Tag: SB-12 (3-3.5)
Collected Date/Time: 05/09/2025 10:05
Matrix: Soil
COC Reference: 178254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	3.2	IR
1	40mL Glass	MeOH	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/14/25 08:50	JRH	
PNA Extraction*	Completed	SW3546	05/14/25 16:00	PTW	
Sample wt. (g) / Methanol (ml)*	10.956/10	SW5035A	05/12/25 16:33	ACK	
Mercury Digestion	Completed	SW7471B	05/13/25 13:00	CTV	

Inorganics

Method: SM2540B, Run Date: 05/13/25 12:45, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	79	1		%	1		

Metals

Method: SW6020A, Run Date: 05/14/25 12:39, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	1,110	200		ug/kg	266	7440-38-2	
Barium	17,600	1,000		ug/kg	266	7440-39-3	
Cadmium	Not detected	200		ug/kg	266	7440-43-9	
Chromium	5,640	500		ug/kg	266	7440-47-3	
Copper	2,090	500		ug/kg	266	7440-50-8	
Lead	4,830	300		ug/kg	266	7439-92-1	
Selenium	Not detected	400		ug/kg	266	7782-49-2	
Silver	Not detected	200		ug/kg	266	7440-22-4	
Zinc	10,300	500		ug/kg	266	7440-66-6	

Method: SW7471B, Run Date: 05/13/25 16:18, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	50		ug/kg	69	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 20:37, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	

Lab Sample ID: S74399.13 (continued)
Sample Tag: SB-12 (3-3.5)

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 20:37, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Organics

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 17:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	300		ug/kg	71.1	60-29-7	
Acetone	Not detected	1,000		ug/kg	71.1	67-64-1	
Methyl iodide	Not detected	100		ug/kg	71.1	74-88-4	
Carbon disulfide	Not detected	400		ug/kg	71.1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	71.1	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	71.1	107-13-1	
2-Butanone (MEK)	Not detected	1,100		ug/kg	71.1	78-93-3	
Dichlorodifluoromethane	Not detected	400		ug/kg	71.1	75-71-8	
Chloromethane	Not detected	400		ug/kg	71.1	74-87-3	
Vinyl chloride	Not detected	70		ug/kg	71.1	75-01-4	
Bromomethane	Not detected	300		ug/kg	71.1	74-83-9	
Chloroethane	Not detected	400		ug/kg	71.1	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	71.1	75-69-4	
1,1-Dichloroethene	Not detected	70		ug/kg	71.1	75-35-4	
Methylene chloride	Not detected	100		ug/kg	71.1	75-09-2	
trans-1,2-Dichloroethene	Not detected	70		ug/kg	71.1	156-60-5	
1,1-Dichloroethane	Not detected	70		ug/kg	71.1	75-34-3	
cis-1,2-Dichloroethene	Not detected	70		ug/kg	71.1	156-59-2	
Tetrahydrofuran	Not detected	1,000		ug/kg	71.1	109-99-9	
Chloroform	Not detected	70		ug/kg	71.1	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	71.1	74-97-5	
1,1,1-Trichloroethane	Not detected	70		ug/kg	71.1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	4,000		ug/kg	71.1	108-10-1	
2-Hexanone	Not detected	4,000		ug/kg	71.1	591-78-6	
Carbon tetrachloride	Not detected	70		ug/kg	71.1	56-23-5	
Benzene	Not detected	70		ug/kg	71.1	71-43-2	
1,2-Dichloroethane	Not detected	70		ug/kg	71.1	107-06-2	
Trichloroethene	Not detected	70		ug/kg	71.1	79-01-6	
1,2-Dichloropropane	Not detected	70		ug/kg	71.1	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	71.1	75-27-4	
Dibromomethane	Not detected	400		ug/kg	71.1	74-95-3	
cis-1,3-Dichloropropene	Not detected	70		ug/kg	71.1	10061-01-5	
Toluene	Not detected	70		ug/kg	71.1	108-88-3	
trans-1,3-Dichloropropene	Not detected	70		ug/kg	71.1	10061-02-6	
1,1,2-Trichloroethane	Not detected	70		ug/kg	71.1	79-00-5	
Tetrachloroethene	Not detected	70		ug/kg	71.1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	70		ug/kg	71.1	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	71.1	124-48-1	
1,2-Dibromoethane	Not detected	30		ug/kg	71.1	106-93-4	M

M-Result reported to MDL not RDL

Lab Sample ID: S74399.13 (continued)
Sample Tag: SB-12 (3-3.5)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 17:07, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chlorobenzene	Not detected	70		ug/kg	71.1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	71.1	630-20-6	
Ethylbenzene	Not detected	70		ug/kg	71.1	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	71.1		
o-Xylene	Not detected	70		ug/kg	71.1	95-47-6	
Styrene	Not detected	70		ug/kg	71.1	100-42-5	
Isopropylbenzene	Not detected	400		ug/kg	71.1	98-82-8	
Bromoform	Not detected	100		ug/kg	71.1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	70		ug/kg	71.1	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	71.1	96-18-4	
n-Propylbenzene	Not detected	70		ug/kg	71.1	103-65-1	
Bromobenzene	Not detected	100		ug/kg	71.1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	70		ug/kg	71.1	108-67-8	
tert-Butylbenzene	Not detected	70		ug/kg	71.1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	70		ug/kg	71.1	95-63-6	
sec-Butylbenzene	Not detected	70		ug/kg	71.1	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	71.1	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	71.1	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	71.1	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	71.1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	70		ug/kg	71.1	526-73-8	
n-Butylbenzene	Not detected	70		ug/kg	71.1	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	71.1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	400		ug/kg	71.1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	470		ug/kg	71.1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	470		ug/kg	71.1	87-61-6	
Naphthalene	Not detected	400		ug/kg	71.1	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	71.1	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S74399.14
Sample Tag: SB-12 (1-2)
Collected Date/Time: 05/09/2025 10:26
Matrix: Soil
COC Reference: 178254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	3.2	IR
1	40mL Glass	MeOH	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/14/25 08:50	JRH	
PNA Extraction*	Completed	SW3546	05/14/25 16:00	PTW	
Sample wt. (g) / Methanol (ml)*	11.173/11	SW5035A	05/12/25 16:33	ACK	
Mercury Digestion	Completed	SW7471B	05/13/25 13:00	CTV	

Inorganics

Method: SM2540B, Run Date: 05/13/25 12:45, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	87	1		%	1		

Metals

Method: SW6020A, Run Date: 05/14/25 12:41, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	1,280	200		ug/kg	246	7440-38-2	
Barium	20,000	1,000		ug/kg	246	7440-39-3	
Cadmium	Not detected	200		ug/kg	246	7440-43-9	
Chromium	2,690	500		ug/kg	246	7440-47-3	
Copper	1,680	500		ug/kg	246	7440-50-8	
Lead	6,120	300		ug/kg	246	7439-92-1	
Selenium	Not detected	400		ug/kg	246	7782-49-2	
Silver	Not detected	200		ug/kg	246	7440-22-4	
Zinc	12,000	500		ug/kg	246	7440-66-6	

Method: SW7471B, Run Date: 05/13/25 16:21, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	50		ug/kg	64	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 21:01, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	

Lab Sample ID: S74399.14 (continued)
Sample Tag: SB-12 (1-2)

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 21:01, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Organics

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 17:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	300		ug/kg	64.1	60-29-7	
Acetone	Not detected	1,000		ug/kg	64.1	67-64-1	
Methyl iodide	Not detected	100		ug/kg	64.1	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	64.1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	64.1	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	64.1	107-13-1	
2-Butanone (MEK)	Not detected	960		ug/kg	64.1	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	64.1	75-71-8	
Chloromethane	Not detected	300		ug/kg	64.1	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	64.1	75-01-4	
Bromomethane	Not detected	300		ug/kg	64.1	74-83-9	
Chloroethane	Not detected	300		ug/kg	64.1	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	64.1	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	64.1	75-35-4	
Methylene chloride	Not detected	100		ug/kg	64.1	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	64.1	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	64.1	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	64.1	156-59-2	
Tetrahydrofuran	Not detected	1,000		ug/kg	64.1	109-99-9	
Chloroform	Not detected	60		ug/kg	64.1	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	64.1	74-97-5	
1,1,1-Trichloroethane	Not detected	60		ug/kg	64.1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	64.1	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	64.1	591-78-6	
Carbon tetrachloride	Not detected	60		ug/kg	64.1	56-23-5	
Benzene	Not detected	60		ug/kg	64.1	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	64.1	107-06-2	
Trichloroethene	Not detected	60		ug/kg	64.1	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	64.1	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	64.1	75-27-4	
Dibromomethane	Not detected	300		ug/kg	64.1	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	64.1	10061-01-5	
Toluene	Not detected	60		ug/kg	64.1	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	64.1	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	64.1	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	64.1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	60		ug/kg	64.1	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	64.1	124-48-1	
1,2-Dibromoethane	Not detected	30		ug/kg	64.1	106-93-4	M

M-Result reported to MDL not RDL

Lab Sample ID: S74399.14 (continued)
Sample Tag: SB-12 (1-2)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 17:31, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chlorobenzene	Not detected	60		ug/kg	64.1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	64.1	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	64.1	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	64.1		
o-Xylene	Not detected	60		ug/kg	64.1	95-47-6	
Styrene	Not detected	60		ug/kg	64.1	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	64.1	98-82-8	
Bromoform	Not detected	100		ug/kg	64.1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	64.1	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	64.1	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	64.1	103-65-1	
Bromobenzene	Not detected	100		ug/kg	64.1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	64.1	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	64.1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	64.1	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	64.1	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	64.1	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	64.1	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	64.1	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	64.1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	64.1	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	64.1	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	64.1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	64.1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	420		ug/kg	64.1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	420		ug/kg	64.1	87-61-6	
Naphthalene	Not detected	300		ug/kg	64.1	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	64.1	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S74399.15
Sample Tag: SB-13 (3.5-4)
Collected Date/Time: 05/09/2025 10:13
Matrix: Soil
COC Reference: 178254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	3.2	IR
1	40mL Glass	MeOH	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/14/25 08:50	JRH	
PNA Extraction*	Completed	SW3546	05/14/25 16:00	PTW	
Sample wt. (g) / Methanol (ml)*	10.132/10	SW5035A	05/12/25 16:33	ACK	
Mercury Digestion	Completed	SW7471B	05/13/25 13:00	CTV	

Inorganics

Method: SM2540B, Run Date: 05/13/25 12:45, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	86	1		%	1		

Metals

Method: SW6020A, Run Date: 05/14/25 13:05, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	2,260	200		ug/kg	250	7440-38-2	
Barium	22,500	1,000		ug/kg	250	7440-39-3	
Cadmium	Not detected	200		ug/kg	250	7440-43-9	
Chromium	5,970	500		ug/kg	250	7440-47-3	
Copper	3,380	500		ug/kg	250	7440-50-8	
Lead	3,350	300		ug/kg	250	7439-92-1	
Selenium	Not detected	400		ug/kg	250	7782-49-2	
Silver	Not detected	200		ug/kg	250	7440-22-4	
Zinc	12,300	500		ug/kg	250	7440-66-6	

Method: SW7471B, Run Date: 05/13/25 16:24, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	50		ug/kg	64	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 21:24, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	

Lab Sample ID: S74399.15 (continued)
Sample Tag: SB-13 (3.5-4)

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 21:24, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Organics

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 17:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	300		ug/kg	65.5	60-29-7	
Acetone	1,000	1,000		ug/kg	65.5	67-64-1	
Methyl iodide	Not detected	100		ug/kg	65.5	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	65.5	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	65.5	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	65.5	107-13-1	
2-Butanone (MEK)	Not detected	980		ug/kg	65.5	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	65.5	75-71-8	
Chloromethane	Not detected	300		ug/kg	65.5	74-87-3	
Vinyl chloride	Not detected	70		ug/kg	65.5	75-01-4	
Bromomethane	Not detected	300		ug/kg	65.5	74-83-9	
Chloroethane	Not detected	300		ug/kg	65.5	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	65.5	75-69-4	
1,1-Dichloroethene	Not detected	70		ug/kg	65.5	75-35-4	
Methylene chloride	Not detected	100		ug/kg	65.5	75-09-2	
trans-1,2-Dichloroethene	Not detected	70		ug/kg	65.5	156-60-5	
1,1-Dichloroethane	Not detected	70		ug/kg	65.5	75-34-3	
cis-1,2-Dichloroethene	Not detected	70		ug/kg	65.5	156-59-2	
Tetrahydrofuran	Not detected	1,000		ug/kg	65.5	109-99-9	
Chloroform	Not detected	70		ug/kg	65.5	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	65.5	74-97-5	
1,1,1-Trichloroethane	Not detected	70		ug/kg	65.5	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	65.5	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	65.5	591-78-6	
Carbon tetrachloride	Not detected	70		ug/kg	65.5	56-23-5	
Benzene	Not detected	70		ug/kg	65.5	71-43-2	
1,2-Dichloroethane	Not detected	70		ug/kg	65.5	107-06-2	
Trichloroethene	Not detected	70		ug/kg	65.5	79-01-6	
1,2-Dichloropropane	Not detected	70		ug/kg	65.5	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	65.5	75-27-4	
Dibromomethane	Not detected	300		ug/kg	65.5	74-95-3	
cis-1,3-Dichloropropene	Not detected	70		ug/kg	65.5	10061-01-5	
Toluene	Not detected	70		ug/kg	65.5	108-88-3	
trans-1,3-Dichloropropene	Not detected	70		ug/kg	65.5	10061-02-6	
1,1,2-Trichloroethane	Not detected	70		ug/kg	65.5	79-00-5	
Tetrachloroethene	Not detected	70		ug/kg	65.5	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	70		ug/kg	65.5	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	65.5	124-48-1	
1,2-Dibromoethane	Not detected	30		ug/kg	65.5	106-93-4	M

M-Result reported to MDL not RDL

Lab Sample ID: S74399.15 (continued)
Sample Tag: SB-13 (3.5-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 17:55, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chlorobenzene	Not detected	70		ug/kg	65.5	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	65.5	630-20-6	
Ethylbenzene	Not detected	70		ug/kg	65.5	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	65.5		
o-Xylene	Not detected	70		ug/kg	65.5	95-47-6	
Styrene	Not detected	70		ug/kg	65.5	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	65.5	98-82-8	
Bromoform	Not detected	100		ug/kg	65.5	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	70		ug/kg	65.5	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	65.5	96-18-4	
n-Propylbenzene	Not detected	70		ug/kg	65.5	103-65-1	
Bromobenzene	Not detected	100		ug/kg	65.5	108-86-1	
1,3,5-Trimethylbenzene	Not detected	70		ug/kg	65.5	108-67-8	
tert-Butylbenzene	Not detected	70		ug/kg	65.5	98-06-6	
1,2,4-Trimethylbenzene	Not detected	70		ug/kg	65.5	95-63-6	
sec-Butylbenzene	Not detected	70		ug/kg	65.5	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	65.5	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	65.5	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	65.5	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	65.5	95-50-1	
1,2,3-Trimethylbenzene	Not detected	70		ug/kg	65.5	526-73-8	
n-Butylbenzene	Not detected	70		ug/kg	65.5	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	65.5	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	65.5	96-12-8	
1,2,4-Trichlorobenzene	Not detected	430		ug/kg	65.5	120-82-1	
1,2,3-Trichlorobenzene	Not detected	430		ug/kg	65.5	87-61-6	
Naphthalene	Not detected	300		ug/kg	65.5	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	65.5	91-57-6	

Lab Sample ID: S74399.16
Sample Tag: SB-14 (3.5-4)
Collected Date/Time: 05/09/2025 09:30
Matrix: Soil
COC Reference: 178254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	3.2	IR
1	40mL Glass	MeOH	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/14/25 08:50	JRH	
PNA Extraction*	Completed	SW3546	05/14/25 16:00	PTW	
Sample wt. (g) / Methanol (ml)*	10.044/10	SW5035A	05/13/25 11:48	ACK	
Mercury Digestion	Completed	SW7471B	05/13/25 13:00	CTV	

Inorganics

Method: SM2540B, Run Date: 05/13/25 12:45, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	88	1		%	1		

Metals

Method: SW6020A, Run Date: 05/14/25 13:07, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	790	200		ug/kg	240	7440-38-2	
Barium	21,300	1,000		ug/kg	240	7440-39-3	
Cadmium	Not detected	200		ug/kg	240	7440-43-9	
Chromium	2,510	500		ug/kg	240	7440-47-3	
Copper	970	500		ug/kg	240	7440-50-8	
Lead	2,350	300		ug/kg	240	7439-92-1	
Selenium	Not detected	400		ug/kg	240	7782-49-2	
Silver	Not detected	200		ug/kg	240	7440-22-4	
Zinc	10,400	500		ug/kg	240	7440-66-6	

Method: SW7471B, Run Date: 05/13/25 16:28, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	50		ug/kg	64	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 21:47, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	

Lab Sample ID: S74399.16 (continued)
Sample Tag: SB-14 (3.5-4)

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 21:47, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Organics

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/13/25 15:36, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	300		ug/kg	63.4	60-29-7	x
Acetone	Not detected	1,000		ug/kg	63.4	67-64-1	x
Methyl iodide	Not detected	100		ug/kg	63.4	74-88-4	x
Carbon disulfide	Not detected	300		ug/kg	63.4	75-15-0	x
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	63.4	1634-04-4	x
Acrylonitrile	Not detected	100		ug/kg	63.4	107-13-1	x
2-Butanone (MEK)	Not detected	950		ug/kg	63.4	78-93-3	x
Dichlorodifluoromethane	Not detected	300		ug/kg	63.4	75-71-8	x
Chloromethane	Not detected	300		ug/kg	63.4	74-87-3	x
Vinyl chloride	Not detected	60		ug/kg	63.4	75-01-4	x
Bromomethane	Not detected	300		ug/kg	63.4	74-83-9	x
Chloroethane	Not detected	300		ug/kg	63.4	75-00-3	x
Trichlorofluoromethane	Not detected	100		ug/kg	63.4	75-69-4	x
1,1-Dichloroethene	Not detected	60		ug/kg	63.4	75-35-4	x
Methylene chloride	Not detected	100		ug/kg	63.4	75-09-2	x
trans-1,2-Dichloroethene	Not detected	60		ug/kg	63.4	156-60-5	x
1,1-Dichloroethane	Not detected	60		ug/kg	63.4	75-34-3	x
cis-1,2-Dichloroethene	Not detected	60		ug/kg	63.4	156-59-2	x
Tetrahydrofuran	Not detected	1,000		ug/kg	63.4	109-99-9	x
Chloroform	Not detected	60		ug/kg	63.4	67-66-3	x
Bromochloromethane	Not detected	100		ug/kg	63.4	74-97-5	x
1,1,1-Trichloroethane	Not detected	60		ug/kg	63.4	71-55-6	x
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	63.4	108-10-1	x
2-Hexanone	Not detected	3,000		ug/kg	63.4	591-78-6	x
Carbon tetrachloride	Not detected	60		ug/kg	63.4	56-23-5	x
Benzene	Not detected	60		ug/kg	63.4	71-43-2	x
1,2-Dichloroethane	Not detected	60		ug/kg	63.4	107-06-2	x
Trichloroethene	Not detected	60		ug/kg	63.4	79-01-6	x
1,2-Dichloropropane	Not detected	60		ug/kg	63.4	78-87-5	x
Bromodichloromethane	Not detected	100		ug/kg	63.4	75-27-4	x
Dibromomethane	Not detected	300		ug/kg	63.4	74-95-3	x
cis-1,3-Dichloropropene	Not detected	60		ug/kg	63.4	10061-01-5	x
Toluene	Not detected	60		ug/kg	63.4	108-88-3	x
trans-1,3-Dichloropropene	Not detected	60		ug/kg	63.4	10061-02-6	x
1,1,2-Trichloroethane	Not detected	60		ug/kg	63.4	79-00-5	x
Tetrachloroethene	Not detected	60		ug/kg	63.4	127-18-4	x
trans-1,4-Dichloro-2-butene	Not detected	60		ug/kg	63.4	110-57-6	x
Dibromochloromethane	Not detected	100		ug/kg	63.4	124-48-1	x

x-Preserved from bulk sample

Lab Sample ID: S74399.16 (continued)
Sample Tag: SB-14 (3.5-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/13/25 15:36, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromoethane	Not detected	30		ug/kg	63.4	106-93-4	Mx
Chlorobenzene	Not detected	60		ug/kg	63.4	108-90-7	x
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	63.4	630-20-6	x
Ethylbenzene	Not detected	60		ug/kg	63.4	100-41-4	x
p,m-Xylene	Not detected	100		ug/kg	63.4		x
o-Xylene	Not detected	60		ug/kg	63.4	95-47-6	x
Styrene	Not detected	60		ug/kg	63.4	100-42-5	x
Isopropylbenzene	Not detected	300		ug/kg	63.4	98-82-8	x
Bromoform	Not detected	100		ug/kg	63.4	75-25-2	x
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	63.4	79-34-5	x
1,2,3-Trichloropropane	Not detected	100		ug/kg	63.4	96-18-4	x
n-Propylbenzene	Not detected	60		ug/kg	63.4	103-65-1	x
Bromobenzene	Not detected	100		ug/kg	63.4	108-86-1	x
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	63.4	108-67-8	x
tert-Butylbenzene	Not detected	60		ug/kg	63.4	98-06-6	x
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	63.4	95-63-6	x
sec-Butylbenzene	Not detected	60		ug/kg	63.4	135-98-8	x
p-Isopropyltoluene	Not detected	100		ug/kg	63.4	99-87-6	x
1,3-Dichlorobenzene	Not detected	100		ug/kg	63.4	541-73-1	x
1,4-Dichlorobenzene	Not detected	100		ug/kg	63.4	106-46-7	x
1,2-Dichlorobenzene	Not detected	100		ug/kg	63.4	95-50-1	x
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	63.4	526-73-8	x
n-Butylbenzene	Not detected	60		ug/kg	63.4	104-51-8	x
Hexachloroethane	Not detected	400		ug/kg	63.4	67-72-1	x
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	63.4	96-12-8	x
1,2,4-Trichlorobenzene	Not detected	420		ug/kg	63.4	120-82-1	x
1,2,3-Trichlorobenzene	Not detected	420		ug/kg	63.4	87-61-6	x
Naphthalene	Not detected	300		ug/kg	63.4	91-20-3	x
2-Methylnaphthalene	Not detected	100		ug/kg	63.4	91-57-6	x

M-Result reported to MDL not RDL x-Preserved from bulk sample

Analytical Laboratory Report

Lab Sample ID: S74399.17
Sample Tag: SB-14-GW
Collected Date/Time: 05/09/2025 09:45
Matrix: Groundwater
COC Reference: 178254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	3.2	IR
1	125mL Plastic	HNO3	Yes	3.2	IR
2	40mL Glass	HCL	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	05/13/25 11:45	CTV	
pH check for VOCs*	<2	N/A	05/13/25 11:20	ACK	
Metal Digestion	Completed	SW3015A	05/13/25 09:05	JRH	
PNA Extraction	Completed	SW3510C	05/15/25 10:30	JWR	

Metals

Method: E200.8, Run Date: 05/13/25 12:10, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	2	2		ug/L	5	7440-38-2	
Barium	27	5		ug/L	5	7440-39-3	
Cadmium	Not detected	0.5		ug/L	5	7440-43-9	
Chromium	Not detected	5		ug/L	5	7440-47-3	
Copper	Not detected	5		ug/L	5	7440-50-8	
Lead	Not detected	3		ug/L	5	7439-92-1	
Selenium	Not detected	5		ug/L	5	7782-49-2	
Silver	Not detected	0.5		ug/L	5	7440-22-4	
Zinc	7	5		ug/L	5	7440-66-6	

Method: E245.1, Run Date: 05/13/25 15:14, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.2		ug/L	1	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatic Hydrocarbon, Method: SW8270D, Run Date: 05/15/25 19:59, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	

Lab Sample ID: S74399.17 (continued)
Sample Tag: SB-14-GW

Polynuclear Aromatic Hydrocarbon, Method: SW8270D, Run Date: 05/15/25 19:59, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Pyrene	Not detected	5		ug/L	2	129-00-0	
2-Methylnaphthalene	Not detected	5		ug/L	2	91-57-6	
1-Methylnaphthalene	Not detected	5		ug/L	2	90-12-0	

Organics

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/13/25 05:41, Analyst: NDK

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
Acetone	Not detected	50		ug/L	1	67-64-1	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Tetrahydrofuran	Not detected	90		ug/L	1	109-99-9	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene	Not detected	2		ug/L	1		

Lab Sample ID: S74399.17 (continued)
Sample Tag: SB-14-GW

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/13/25 05:41, Analyst: NDK (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S74399.18
Sample Tag: SB-4-GW
Collected Date/Time: 05/09/2025 13:02
Matrix: Groundwater
COC Reference: 178254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125mL Plastic	HNO3	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3015A	05/13/25 09:05	JRH	

Metals

Method: E200.8, Run Date: 05/13/25 12:12, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Lead	Not detected	3		ug/L	5	7439-92-1	

Analytical Laboratory Report

Lab Sample ID: S74399.19
Sample Tag: MW-15
Collected Date/Time: 05/09/2025 14:35
Matrix: Groundwater
COC Reference: 178254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	3.2	IR
1	125mL Plastic	HNO3	Yes	3.2	IR
1	15mL Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.02/6.42/10	ASTMD7979-19M	05/14/25 12:30	CED	
Mercury Digestion	Completed	E245.1	05/13/25 11:45	CTV	
Metal Digestion	Completed	SW3015A	05/13/25 09:05	JRH	
PNA Extraction	Completed	SW3510C	05/15/25 10:30	JWR	

Metals

Method: E200.8, Run Date: 05/13/25 12:14, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	4	2		ug/L	5	7440-38-2	
Cadmium	Not detected	0.5		ug/L	5	7440-43-9	
Lead	Not detected	3		ug/L	5	7439-92-1	
Selenium	Not detected	5		ug/L	5	7782-49-2	

Method: E245.1, Run Date: 05/13/25 15:17, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.2		ug/L	1	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatic Hydrocarbon, Method: SW8270D, Run Date: 05/15/25 20:22, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Pyrene	Not detected	5		ug/L	2	129-00-0	
2-Methylnaphthalene	Not detected	5		ug/L	2	91-57-6	
1-Methylnaphthalene	Not detected	5		ug/L	2	90-12-0	

Lab Sample ID: S74399.19 (continued)
Sample Tag: MW-15

Organics

40 PFAs, Method: ASTMD7979-19M, Run Date: 05/15/25 02:58, Analyst: CED

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	0.011		ug/L	2.17	375-22-4	
PFPeA*	Not detected	0.0043		ug/L	2.17	2706-90-3	
4:2 FTSA*	Not detected	0.0022		ug/L	2.17	757124-72-4	
PFHxA*	Not detected	0.0022		ug/L	2.17	307-24-4	
PFBS*	0.021	0.0022		ug/L	2.17	375-73-5	
PFHpA*	Not detected	0.0022		ug/L	2.17	375-85-9	
PFPeS*	Not detected	0.0022		ug/L	2.17	2706-91-4	
6:2 FTSA*	Not detected	0.0022		ug/L	2.17	27619-97-2	
PFOA*	Not detected	0.0022		ug/L	2.17	335-67-1	
PFHxS*	Not detected	0.0022		ug/L	2.17	355-46-4	
PFHxS-LN*	Not detected	0.0022		ug/L	2.17	355-46-4-LN	
PFHxS-BR*	Not detected	0.0022		ug/L	2.17	355-46-4-BR	
PFNA*	Not detected	0.0022		ug/L	2.17	375-95-1	
8:2 FTSA*	Not detected	0.0022		ug/L	2.17	39108-34-4	
PFHpS*	Not detected	0.0022		ug/L	2.17	375-92-8	
PFDA*	Not detected	0.0022		ug/L	2.17	335-76-2	
N-MeFOSAA*	Not detected	0.0022		ug/L	2.17	2355-31-9	
EtFOSAA*	Not detected	0.0043		ug/L	2.17	2991-50-6	
PFOS*	Not detected	0.0022		ug/L	2.17	1763-23-1	
PFOS-LN*	Not detected	0.0022		ug/L	2.17	1763-23-1-LN	
PFOS-BR*	Not detected	0.0022		ug/L	2.17	1763-23-1-BR	
PFUnDA*	Not detected	0.0022		ug/L	2.17	2058-94-8	
PFNS*	Not detected	0.0022		ug/L	2.17	68259-12-1	
PFDoDA*	Not detected	0.0022		ug/L	2.17	307-55-1	
PFDS*	Not detected	0.0022		ug/L	2.17	335-77-3	
PFTrDA*	Not detected	0.0022		ug/L	2.17	72629-94-8	
FOSA*	Not detected	0.0022		ug/L	2.17	754-91-6	
PFTeDA*	Not detected	0.0043		ug/L	2.17	376-06-7	
11Cl-PF3OUdS*	Not detected	0.0022		ug/L	2.17	763051-92-9	
9Cl-PF3ONS*	Not detected	0.0022		ug/L	2.17	756426-58-1	
ADONA*	Not detected	0.0022		ug/L	2.17	919005-14-4	
HFPO-DA*	Not detected	0.011		ug/L	2.17	13252-13-6	
FHpPA (7:3 FTCA)*	Not detected	0.011		ug/L	2.17	812-70-4	
FPePA (5:3 FTCA)*	Not detected	0.011		ug/L	2.17	914637-49-3	
FPrPA (3:3 FTCA)*	Not detected	0.011		ug/L	2.17	356-02-5	
NFDHA*	Not detected	0.0022		ug/L	2.17	151772-58-6	
PFEESA*	Not detected	0.0022		ug/L	2.17	113507-82-7	
PFMBA*	Not detected	0.0022		ug/L	2.17	863090-89-5	
PFMPA*	Not detected	0.0022		ug/L	2.17	377-73-1	
NMeFOSAM*	Not detected	0.0022		ug/L	2.17	31506-32-8	
NMeFOSE*	Not detected	0.0043		ug/L	2.17	24448-09-7	
NEtFOSAM*	Not detected	0.0022		ug/L	2.17	4151-50-2	
NEtFOSE*	Not detected	0.0043		ug/L	2.17	1691-99-2	
PFDoS*	Not detected	0.0043		ug/L	2.17	79780-39-5	

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Analytical Laboratory Report

Lab Sample ID: S74399.20
Sample Tag: DUP-1S
Collected Date/Time: 05/08/2025 00:01
Matrix: Soil
COC Reference: 178254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/14/25 08:50	JRH	

Inorganics

Method: SM2540B, Run Date: 05/13/25 12:45, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	84	1		%	1		

Metals

Method: SW6020A, Run Date: 05/14/25 13:08, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Lead	11,500	300		ug/kg	253	7439-92-1	

Analytical Laboratory Report

Lab Sample ID: S74399.21
Sample Tag: DUP-2S
Collected Date/Time: 05/08/2025 00:01
Matrix: Soil
COC Reference: 178254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	3.2	IR
1	40mL Glass	MeOH	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/14/25 08:50	JRH	
PNA Extraction*	Completed	SW3546	05/14/25 16:00	PTW	
Sample wt. (g) / Methanol (ml)*	10.451/10	SW5035A	05/12/25 16:33	ACK	
Mercury Digestion	Completed	SW7471B	05/13/25 13:00	CTV	

Inorganics

Method: SM2540B, Run Date: 05/13/25 12:45, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	92	1		%	1		

Metals

Method: SW6020A, Run Date: 05/14/25 13:10, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	5,240	200		ug/kg	235	7440-38-2	
Barium	19,600	1,000		ug/kg	235	7440-39-3	
Cadmium	Not detected	200		ug/kg	235	7440-43-9	
Chromium	7,820	500		ug/kg	235	7440-47-3	
Copper	9,330	500		ug/kg	235	7440-50-8	
Lead	8,290	300		ug/kg	235	7439-92-1	
Selenium	Not detected	400		ug/kg	235	7782-49-2	
Silver	Not detected	200		ug/kg	235	7440-22-4	
Zinc	29,600	500		ug/kg	235	7440-66-6	

Method: SW7471B, Run Date: 05/13/25 16:37, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	50		ug/kg	60	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 22:10, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	

Lab Sample ID: S74399.21 (continued)
Sample Tag: DUP-2S

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/15/25 22:10, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Organics

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 18:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	200		ug/kg	56.4	60-29-7	
Acetone	Not detected	1,000		ug/kg	56.4	67-64-1	
Methyl iodide	Not detected	100		ug/kg	56.4	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	56.4	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	56.4	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	56.4	107-13-1	
2-Butanone (MEK)	Not detected	850		ug/kg	56.4	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	56.4	75-71-8	
Chloromethane	Not detected	300		ug/kg	56.4	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	56.4	75-01-4	
Bromomethane	Not detected	200		ug/kg	56.4	74-83-9	
Chloroethane	Not detected	300		ug/kg	56.4	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	56.4	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	56.4	75-35-4	
Methylene chloride	Not detected	100		ug/kg	56.4	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	56.4	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	56.4	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	56.4	156-59-2	
Tetrahydrofuran	Not detected	1,000		ug/kg	56.4	109-99-9	
Chloroform	Not detected	60		ug/kg	56.4	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	56.4	74-97-5	
1,1,1-Trichloroethane	Not detected	60		ug/kg	56.4	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	56.4	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	56.4	591-78-6	
Carbon tetrachloride	Not detected	60		ug/kg	56.4	56-23-5	
Benzene	Not detected	60		ug/kg	56.4	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	56.4	107-06-2	
Trichloroethene	Not detected	60		ug/kg	56.4	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	56.4	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	56.4	75-27-4	
Dibromomethane	Not detected	300		ug/kg	56.4	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	56.4	10061-01-5	
Toluene	Not detected	60		ug/kg	56.4	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	56.4	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	56.4	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	56.4	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	60		ug/kg	56.4	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	56.4	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	56.4	106-93-4	M

M-Result reported to MDL not RDL

Lab Sample ID: S74399.21 (continued)
Sample Tag: DUP-2S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 18:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chlorobenzene	Not detected	60		ug/kg	56.4	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	56.4	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	56.4	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	56.4		
o-Xylene	Not detected	60		ug/kg	56.4	95-47-6	
Styrene	Not detected	60		ug/kg	56.4	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	56.4	98-82-8	
Bromoform	Not detected	100		ug/kg	56.4	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	56.4	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	56.4	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	56.4	103-65-1	
Bromobenzene	Not detected	100		ug/kg	56.4	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	56.4	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	56.4	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	56.4	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	56.4	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	56.4	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	56.4	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	56.4	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	56.4	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	56.4	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	56.4	104-51-8	
Hexachloroethane	Not detected	300		ug/kg	56.4	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	56.4	96-12-8	
1,2,4-Trichlorobenzene	Not detected	370		ug/kg	56.4	120-82-1	
1,2,3-Trichlorobenzene	Not detected	370		ug/kg	56.4	87-61-6	
Naphthalene	Not detected	300		ug/kg	56.4	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	56.4	91-57-6	

Analytical Laboratory Report

Lab Sample ID: S74399.22
Sample Tag: DUP-1-GW
Collected Date/Time: 05/09/2025 00:01
Matrix: Groundwater
COC Reference: 178254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	3.2	IR
1	125mL Plastic	HNO3	Yes	3.2	IR
1	15mL Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.08/6.44/10	ASTMD7979-19M	05/14/25 12:30	CED	
Mercury Digestion	Completed	E245.1	05/13/25 11:45	CTV	
Metal Digestion	Completed	SW3015A	05/13/25 09:05	JRH	
PNA Extraction	Completed	SW3510C	05/15/25 10:30	JWR	

Metals

Method: E200.8, Run Date: 05/13/25 12:16, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	Not detected	2		ug/L	5	7440-38-2	
Cadmium	Not detected	0.5		ug/L	5	7440-43-9	
Lead	Not detected	3		ug/L	5	7439-92-1	
Selenium	Not detected	5		ug/L	5	7782-49-2	

Method: E245.1, Run Date: 05/13/25 15:21, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.2		ug/L	1	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatic Hydrocarbon, Method: SW8270D, Run Date: 05/15/25 20:44, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Pyrene	Not detected	5		ug/L	2	129-00-0	
2-Methylnaphthalene	Not detected	5		ug/L	2	91-57-6	
1-Methylnaphthalene	Not detected	5		ug/L	2	90-12-0	

Lab Sample ID: S74399.22 (continued)
Sample Tag: DUP-1-GW

Organics

40 PFAs, Method: ASTMD7979-19M, Run Date: 05/15/25 03:18, Analyst: CED

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	0.011		ug/L	2.16	375-22-4	
PFPeA*	Not detected	0.0043		ug/L	2.16	2706-90-3	
4:2 FTSA*	Not detected	0.0022		ug/L	2.16	757124-72-4	
PFHxA*	Not detected	0.0022		ug/L	2.16	307-24-4	
PFBS*	0.0087	0.0022		ug/L	2.16	375-73-5	
PFHpA*	Not detected	0.0022		ug/L	2.16	375-85-9	
PFPeS*	Not detected	0.0022		ug/L	2.16	2706-91-4	
6:2 FTSA*	Not detected	0.0022		ug/L	2.16	27619-97-2	
PFOA*	Not detected	0.0022		ug/L	2.16	335-67-1	
PFHxS*	Not detected	0.0022		ug/L	2.16	355-46-4	
PFHxS-LN*	Not detected	0.0022		ug/L	2.16	355-46-4-LN	
PFHxS-BR*	Not detected	0.0022		ug/L	2.16	355-46-4-BR	
PFNA*	Not detected	0.0022		ug/L	2.16	375-95-1	
8:2 FTSA*	Not detected	0.0022		ug/L	2.16	39108-34-4	
PFHpS*	Not detected	0.0022		ug/L	2.16	375-92-8	
PFDA*	Not detected	0.0022		ug/L	2.16	335-76-2	
N-MeFOSAA*	Not detected	0.0022		ug/L	2.16	2355-31-9	
EtFOSAA*	Not detected	0.0043		ug/L	2.16	2991-50-6	
PFOS*	Not detected	0.0022		ug/L	2.16	1763-23-1	
PFOS-LN*	Not detected	0.0022		ug/L	2.16	1763-23-1-LN	
PFOS-BR*	Not detected	0.0022		ug/L	2.16	1763-23-1-BR	
PFUnDA*	Not detected	0.0022		ug/L	2.16	2058-94-8	
PFNS*	Not detected	0.0022		ug/L	2.16	68259-12-1	
PFDoDA*	Not detected	0.0022		ug/L	2.16	307-55-1	
PFDS*	Not detected	0.0022		ug/L	2.16	335-77-3	
PFTrDA*	Not detected	0.0022		ug/L	2.16	72629-94-8	
FOSA*	Not detected	0.0022		ug/L	2.16	754-91-6	
PFTeDA*	Not detected	0.0043		ug/L	2.16	376-06-7	
11Cl-PF3OUdS*	Not detected	0.0022		ug/L	2.16	763051-92-9	
9Cl-PF3ONS*	Not detected	0.0022		ug/L	2.16	756426-58-1	
ADONA*	Not detected	0.0022		ug/L	2.16	919005-14-4	
HFPO-DA*	Not detected	0.011		ug/L	2.16	13252-13-6	
FHpPA (7:3 FTCA)*	Not detected	0.011		ug/L	2.16	812-70-4	
FPePA (5:3 FTCA)*	Not detected	0.011		ug/L	2.16	914637-49-3	
FPrPA (3:3 FTCA)*	Not detected	0.011		ug/L	2.16	356-02-5	
NFDHA*	Not detected	0.0022		ug/L	2.16	151772-58-6	
PFEESA*	Not detected	0.0022		ug/L	2.16	113507-82-7	
PFMBA*	Not detected	0.0022		ug/L	2.16	863090-89-5	
PFMPA*	Not detected	0.0022		ug/L	2.16	377-73-1	
NMeFOSAM*	Not detected	0.0022		ug/L	2.16	31506-32-8	
NMeFOSE*	Not detected	0.0043		ug/L	2.16	24448-09-7	
NEtFOSAM*	Not detected	0.0022		ug/L	2.16	4151-50-2	
NEtFOSE*	Not detected	0.0043		ug/L	2.16	1691-99-2	
PFDoS*	Not detected	0.0043		ug/L	2.16	79780-39-5	

Analytical Laboratory Report

Lab Sample ID: S74399.23
Sample Tag: Methanol Blank
Collected Date/Time: 05/09/2025 00:01
Matrix: Methanol
COC Reference: 178254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40mL Glass	MeOH	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample wt. (g) / Methanol (ml)*	10.0/10	SW5035A	05/12/25 16:33	ACK	

Organics

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 18:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	200		ug/kg	50	60-29-7	
Acetone	Not detected	1,000		ug/kg	50	67-64-1	
Methyl iodide	Not detected	100		ug/kg	50	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	50	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	50	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	50	107-13-1	
2-Butanone (MEK)	Not detected	750		ug/kg	50	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	50	75-71-8	
Chloromethane	Not detected	300		ug/kg	50	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	50	75-01-4	
Bromomethane	Not detected	200		ug/kg	50	74-83-9	
Chloroethane	Not detected	300		ug/kg	50	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	50	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	50	75-35-4	
Methylene chloride	Not detected	100		ug/kg	50	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	50	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	50	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	50	156-59-2	
Tetrahydrofuran	Not detected	1,000		ug/kg	50	109-99-9	
Chloroform	Not detected	50		ug/kg	50	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	50	74-97-5	
1,1,1-Trichloroethane	Not detected	50		ug/kg	50	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	50	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	50	591-78-6	
Carbon tetrachloride	Not detected	50		ug/kg	50	56-23-5	
Benzene	Not detected	50		ug/kg	50	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	50	107-06-2	
Trichloroethene	Not detected	50		ug/kg	50	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	50	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	50	75-27-4	
Dibromomethane	Not detected	300		ug/kg	50	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	50	10061-01-5	
Toluene	Not detected	50		ug/kg	50	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	50	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	50	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	50	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	50		ug/kg	50	110-57-6	

Lab Sample ID: S74399.23 (continued)
Sample Tag: Methanol Blank

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/12/25 18:07, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	100		ug/kg	50	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	50	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	50	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	50	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	50	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	50		
o-Xylene	Not detected	50		ug/kg	50	95-47-6	
Styrene	Not detected	50		ug/kg	50	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	50	98-82-8	
Bromoform	Not detected	100		ug/kg	50	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	50	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	50	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	50	103-65-1	
Bromobenzene	Not detected	100		ug/kg	50	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	50	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	50	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	50	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	50	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	50	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	50	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	50	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	50	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	50	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	50	104-51-8	
Hexachloroethane	Not detected	300		ug/kg	50	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	50	96-12-8	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	50	120-82-1	
1,2,3-Trichlorobenzene	Not detected	330		ug/kg	50	87-61-6	
Naphthalene	Not detected	300		ug/kg	50	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	50	91-57-6	

M-Result reported to MDL not RDL

Merit Laboratories Login Checklist

Lab Set ID:S74399

Client:ASTI (ASTI Environmental)

Project: A24-1988.01 2755, and 2990 Tooley Rd, and 0 Bowen Rd.

Submitted:05/12/2025 13:40 Login User: MMC

Attention: Jeremy Efros
Address: ASTI Environmental
10448 Citation Drive, Suite 100
Brighton, MI 48116

Phone: 810-360-9310 FAX:
Email:jefros@asti-env.com

Selection				Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 3.2
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[ ] Yes	[X] No	[ ] N/A	Samples shipped	
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[ ] Yes	[ ] No	[X] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[X] Yes	[ ] No	[ ] N/A	COC adequately filled out	
07.	[X] Yes	[ ] No	[ ] N/A	COC signed and relinquished to the lab	
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[X] Yes	[ ] No	[ ] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[ ] Yes	[X] No	[ ] N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[ ] No	[X] N/A	Do water VOC, TOX, DO or Alkalinity bottles contain	

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date:_____

Merit Laboratories Bottle Preservation Check

Lab Set ID: S74399 Submitted: 05/12/2025 13:40

Client: ASTI (ASTI Environmental)

Project: A24-1988.01 2755, and 2990 Tooley Rd, and 0 Bowen Rd.

Initial Preservation Check: 05/12/2025 14:56 MMC

Preservation Recheck (E200.8): N/A

Attention: Jeremy Efros
Address: ASTI Environmental
10448 Citation Drive, Suite 100
Brighton, MI 48116

Phone: 810-360-9310 FAX:
Email: jefros@asti-env.com

Sample ID	Bottle / Preservation	pH (Orig)	Add ml	pH (New)	Notes
S74399.08	125mL Plastic HNO3	<2			
S74399.10	125mL Plastic HNO3	<2			
S74399.11	125mL Plastic HNO3	<2			
S74399.17	125mL Plastic HNO3	<2			
S74399.18	125mL Plastic HNO3	<2			
S74399.19	125mL Plastic HNO3	<2			
S74399.22	125mL Plastic HNO3	<2			

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 2

178350

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Jeremy Efros / Brady Metzger
COMPANY: ASTI Environmental
ADDRESS: 10448 Citation Dr.
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-360-9316 CELL NO.: 810-599-5464 P.O. NO.:
E-MAIL ADDRESS: efros@asti-env.com bmetzger@asti-env.com QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: A24-1988.01 2755, and 2990 Tooley Rd, and 0 Bowen Rd.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Brady Metzger

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	COLLECTION DATE	COLLECTION TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	PNAs	MI 10 Metals	PFAS	PCBs	Arsenic	Lead	Cadmium	Mercury	Selenium	Special Instructions
74399.01	5/8/25	0944	SB-1 (4-4.5)	S	2	1					1		X	X	X								
.02		0957	SB-1 (14-15)																				
.03		1025	SB-2 (2-2.5)																				
.04		1040	SB-2 (13-14)																				
.05		1100	SB-3 (3.5-4)		1														X				lead only
.06		1200	SB-4 (3.5-4)		1														X				lead only
.07		1240	SB-5 (4-5')																				
.08	5/9/25	1335	MW-7	GW	5	4		1								X		X	X	X	X	X	
.09		1240	MW-8		4	4											X						
.10		1120	MW-9		5	4		1						X				X	X	X	X	X	
.11		1055	MW-10																				
.12		0945	SB-11 (2.5-3')	S	2	1					1		X	X	X								

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Brady Metzger ☒ Sampler — DATE: 5/8/25 TIME: 1730
RECEIVED BY: SIGNATURE/ORGANIZATION: ASTI Cold Storage — DATE: 5/9/25 TIME: 1730

RELINQUISHED BY: SIGNATURE/ORGANIZATION: ASTI Cold Storage — DATE: 5/12/25 TIME: 850
RECEIVED BY: SIGNATURE/ORGANIZATION: BR — DATE: 5/12/25 TIME: 85

RELINQUISHED BY: SIGNATURE/ORGANIZATION: BR — DATE: 5/12/25 TIME: 1340
RECEIVED BY: SIGNATURE/ORGANIZATION: M Chilcote — DATE: 5/12/25 TIME: 1340

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 3.2

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 2 OF 2

178254

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Jeremy Efros / Brady Metzger
COMPANY: ASTI Environmental
ADDRESS: 10448 Citation Dr.
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-360-9310 CELL NO.: P.O. NO.:
E-MAIL ADDRESS: jefros@asti-env.com bmetzger@asti-env.com QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 24-19880.01 2755 and 2990 Tooley Rd, and 0 Bowen Rd
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED: ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED: ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	COLLECTION DATE	COLLECTION TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	PNAs	MI 10 Metals	PFAS	Arsenic	Lead	Cadmium	Mercury	Selenium
74399.13	5/9/25	1005	SB-12 (3-3.5)	S	2	1					1		X	X	X						
.14		1026	SB-12 (1-2)																		
.15		1013	SB-13 (3.5-4)																		
.16		0930	SB-14 (3.5-4)																		
.17		0945	SB-14-GW	GW	4		2	1													
.18		1302	SB-4-GW		1													X			
.19		1435	MW-15		5	4		1						X		X	X	X	X	X	X
.20	5/8/25	-	DUP-1S	S	1	1												X			
.21		-	DUP-2S		2	1					1		X	X	X						
.22	5/9/25	-	DUP-1-GW	GW	5	4		1						X		X	X	X	X	X	X
.23		-	Methanol Blank		1						1		X								

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Sampler	DATE 5/9/25	TIME 1730
RECEIVED BY: SIGNATURE/ORGANIZATION	ASTI Cold Storage	DATE 5/9/25	TIME 1730
RELINQUISHED BY: SIGNATURE/ORGANIZATION	ASTI Cold Storage	DATE 5/12/25	TIME 850
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 5/12/25	TIME 850

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 5/12/25	TIME 1340
RECEIVED BY: SIGNATURE/ORGANIZATION	M Calcato	DATE 5/12/25	TIME 1340

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 3.2

Analytical Laboratory Report

Supplemental Report

Report ID: S74503.01(03)
Generated on 06/05/2025
Replaces report S74503.01(02) generated on 06/03/2025

Report to

Attention: Jeremy Efros
ASTI Environmental
10448 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-360-9310 FAX:
Email: jefros@asti-env.com

Addtional Contacts: Brad Buswell, Brady Metzger

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S74503.01-S74503.08
Project: A24-1988.01 2755 and 2990 Tooley Rd. and 0 Bowen Rd
Collected Date(s): 05/12/2025 - 05/13/2025
Submitted Date/Time: 05/14/2025 11:10
Sampled by: Brady Metzger
P.O. #:

Table of Contents

Maya Murshak
Technical Director

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.
40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.
QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.
Starred (*) analytes are not NY NELAP accredited.
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.
Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)
PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."
Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.
Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.
All accreditations/certifications held by this laboratory are listed on page 3. Not all accreditations/certifications are applicable to this report.
For a specific list of accredited analytes, please feel free to contact the laboratory or visit https://www.meritlabs.com/certifications.

Report Narrative

Chromium VI added to sample .06 per client request

Laboratory Accreditations (For Reference Only)

Authority	Accreditation ID
Michigan DEQ	#9956
DOD ELAP & ISO/IEC 17025:2017	#69699 PJLA Testing
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
o	Associated EIS outside of control limits
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
q	Qualifier ion ratio outside of control limits
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched

Method Summary

Method	Version
SM2540B	Standard Method 2540 B 2020
SW3050B	SW 846 Method 3050B Revision 2 December 1996
SW3546	SW 846 Method 3546 Revision 0 February 2007
SW5035A	SW 846 Method 5035A Revision 1 July 2002
SW5035A/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5035A Revision 1 July 2002
SW6020A	SW 846 Method 6020A Revision 1 February 2007
SW7196A	SW 846 Method 7196A Revision 1 July 1992/SW 846 Method 3060A Revision 1 December 1996
SW7471B	SW 846 Method 7471B Revision 2 February 2007
SW8270D	SW 846 Method 8270D Revision 4 February 2007

Sample Summary (8 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S74503.01	DU-1 (0-1')	Soil	05/12/25 15:20
S74503.02	DU-2 (0-1')	Soil	05/13/25 13:30
S74503.03	DU-3 (0-1')	Soil	05/12/25 11:40
S74503.04	T-1	Soil	05/12/25 00:01
S74503.05	T-2	Soil	05/12/25 00:01
S74503.06	Trench-1	Soil	05/13/25 10:30
S74503.07	Trench-2	Soil	05/13/25 10:40
S74503.08	Methanol Blank	Methanol	05/13/25 00:01

Lab Sample ID: S74503.01
Sample Tag: DU-1 (0-1')
Collected Date/Time: 05/12/2025 15:20
Matrix: Soil
COC Reference: 178257

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Plastic Bag	None	Yes	4.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/19/25 10:30	JRH	
PNA Extraction*	Completed	SW3546	05/19/25 14:00	TAW	
Mercury Digestion	Completed	SW7471B	05/20/25 10:45	CTV	

Metals

Method: SW6020A, Run Date: 05/19/25 12:16, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	3.95	0.20		mg/kg	269	7440-38-2	
Cadmium	Not detected	0.20		mg/kg	269	7440-43-9	
Lead	9.43	0.30		mg/kg	269	7439-92-1	
Selenium	Not detected	0.40		mg/kg	269	7782-49-2	

Method: SW7471B, Run Date: 05/20/25 13:16, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	58	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/21/25 15:57, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Other / Misc.

Method: , Run Date: 05/18/25 20:00, Analyst: SRP

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		i

i-Incremental sampling

Lab Sample ID: S74503.02
Sample Tag: DU-2 (0-1')
Collected Date/Time: 05/13/2025 13:30
Matrix: Soil
COC Reference: 178257

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Plastic Bag	None	Yes	4.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/19/25 10:30	JRH	
PNA Extraction*	Completed	SW3546	05/19/25 14:00	TAW	
Mercury Digestion	Completed	SW7471B	05/20/25 10:45	CTV	

Metals

Method: SW6020A, Run Date: 05/19/25 12:18, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	1.96	0.20		mg/kg	235	7440-38-2	
Cadmium	Not detected	0.20		mg/kg	235	7440-43-9	
Lead	5.79	0.30		mg/kg	235	7439-92-1	
Selenium	Not detected	0.40		mg/kg	235	7782-49-2	

Method: SW7471B, Run Date: 05/20/25 13:26, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	53	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/21/25 16:14, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Other / Misc.

Method: , Run Date: 05/18/25 20:00, Analyst: SRP

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		i

i-Incremental sampling

Lab Sample ID: S74503.03
Sample Tag: DU-3 (0-1')
Collected Date/Time: 05/12/2025 11:40
Matrix: Soil
COC Reference: 178257

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Plastic Bag	None	Yes	4.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/19/25 10:30	JRH	
PNA Extraction*	Completed	SW3546	05/19/25 14:00	TAW	
Mercury Digestion	Completed	SW7471B	05/20/25 10:45	CTV	

Metals

Method: SW6020A, Run Date: 05/19/25 12:20, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	3.17	0.20		mg/kg	278	7440-38-2	
Cadmium	Not detected	0.20		mg/kg	278	7440-43-9	
Lead	8.18	0.30		mg/kg	278	7439-92-1	
Selenium	Not detected	0.40		mg/kg	278	7782-49-2	

Method: SW7471B, Run Date: 05/20/25 13:29, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	58	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/21/25 16:31, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Other / Misc.

Method: , Run Date: 05/18/25 20:00, Analyst: SRP

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		i

i-Incremental sampling

Lab Sample ID: S74503.04
Sample Tag: T-1
Collected Date/Time: 05/12/2025 00:01
Matrix: Soil
COC Reference: 178257

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Plastic Bag	None	Yes	4.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/19/25 10:30	JRH	
PNA Extraction*	Completed	SW3546	05/19/25 14:00	TAW	
Mercury Digestion	Completed	SW7471B	05/20/25 10:45	CTV	

Metals

Method: SW6020A, Run Date: 05/19/25 12:22, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	3.05	0.20		mg/kg	248	7440-38-2	
Cadmium	Not detected	0.20		mg/kg	248	7440-43-9	
Lead	9.36	0.30		mg/kg	248	7439-92-1	
Selenium	Not detected	0.40		mg/kg	248	7782-49-2	

Method: SW7471B, Run Date: 05/20/25 13:33, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	62	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/21/25 16:48, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Other / Misc.

Method: , Run Date: 05/18/25 20:00, Analyst: SRP

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		i

i-Incremental sampling

Lab Sample ID: S74503.05
Sample Tag: T-2
Collected Date/Time: 05/12/2025 00:01
Matrix: Soil
COC Reference: 178257

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Plastic Bag	None	Yes	4.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/19/25 10:30	JRH	
PNA Extraction*	Completed	SW3546	05/19/25 14:00	TAW	
Mercury Digestion	Completed	SW7471B	05/20/25 10:45	CTV	

Metals

Method: SW6020A, Run Date: 05/19/25 12:23, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	3.18	0.20		mg/kg	234	7440-38-2	
Cadmium	Not detected	0.20		mg/kg	234	7440-43-9	
Lead	8.69	0.30		mg/kg	234	7439-92-1	
Selenium	Not detected	0.40		mg/kg	234	7782-49-2	

Method: SW7471B, Run Date: 05/20/25 13:36, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	60	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 05/21/25 17:05, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	
Anthracene	Not detected	300		ug/kg	10	120-12-7	
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	
Chrysene	Not detected	300		ug/kg	10	218-01-9	
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	
Fluorene	Not detected	300		ug/kg	10	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	
Naphthalene	Not detected	300		ug/kg	10	91-20-3	
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	
Pyrene	Not detected	300		ug/kg	10	129-00-0	
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	

Other / Misc.

Method: , Run Date: 05/18/25 20:00, Analyst: SRP

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		i

i-Incremental sampling

Lab Sample ID: S74503.06
Sample Tag: Trench-1
Collected Date/Time: 05/13/2025 10:30
Matrix: Soil
COC Reference: 178257

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.6	IR
1	40mL Glass	None	Yes	4.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/16/25 09:20	JRH	
PNA Extraction*	Completed	SW3546	06/02/25 16:45	TAW	F
Sample wt. (g) / Methanol (ml)*	11.106/11	SW5035A	05/14/25 17:19	ACK	
Mercury Digestion	Completed	SW7471B	05/16/25 12:04	CTV	

Inorganics

Method: SM2540B, Run Date: 05/16/25 13:49, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	83	1		%	1		

Method: SW7196A, Run Date: 06/04/25 13:35, Analyst: JKB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1		mg/kg	100	18540-29-9	

Metals

Method: SW6020A, Run Date: 05/16/25 12:38, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	6.95	0.20		mg/kg	258	7440-38-2	
Barium	73.3	1.0		mg/kg	258	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	258	7440-43-9	
Chromium	21.3	0.50		mg/kg	258	7440-47-3	
Copper	18.2	0.50		mg/kg	258	7440-50-8	
Lead	8.20	0.30		mg/kg	258	7439-92-1	
Selenium	0.562	0.40		mg/kg	258	7782-49-2	
Silver	Not detected	0.20		mg/kg	258	7440-22-4	
Zinc	48.6	0.50		mg/kg	258	7440-66-6	

Method: SW7471B, Run Date: 05/16/25 15:01, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	69	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 06/03/25 16:33, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	G
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	G
Anthracene	Not detected	300		ug/kg	10	120-12-7	G
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	G
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	G

F-Analysis run outside of holding time
G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S74503.06 (continued)
Sample Tag: Trench-1

Polynuclear Aromatics, Method: SW8270D, Run Date: 06/03/25 16:33, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	G
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	G
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	G
Chrysene	Not detected	300		ug/kg	10	218-01-9	G
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	G
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	G
Fluorene	Not detected	300		ug/kg	10	86-73-7	G
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	G
Naphthalene	Not detected	300		ug/kg	10	91-20-3	G
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	G
Pyrene	Not detected	300		ug/kg	10	129-00-0	G
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	G
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	G

Organics - Volatiles

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/15/25 14:38, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	300		ug/kg	69.9	60-29-7	
Acetone	Not detected	1,000		ug/kg	69.9	67-64-1	
Methyl iodide	Not detected	100		ug/kg	69.9	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	69.9	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	69.9	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	69.9	107-13-1	
2-Butanone (MEK)	Not detected	1,000		ug/kg	69.9	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	69.9	75-71-8	
Chloromethane	Not detected	300		ug/kg	69.9	74-87-3	
Vinyl chloride	Not detected	70		ug/kg	69.9	75-01-4	
Bromomethane	Not detected	300		ug/kg	69.9	74-83-9	
Chloroethane	Not detected	300		ug/kg	69.9	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	69.9	75-69-4	
1,1-Dichloroethene	Not detected	70		ug/kg	69.9	75-35-4	
Methylene chloride	Not detected	100		ug/kg	69.9	75-09-2	
trans-1,2-Dichloroethene	Not detected	70		ug/kg	69.9	156-60-5	
1,1-Dichloroethane	Not detected	70		ug/kg	69.9	75-34-3	
cis-1,2-Dichloroethene	Not detected	70		ug/kg	69.9	156-59-2	
Tetrahydrofuran	Not detected	1,000		ug/kg	69.9	109-99-9	
Chloroform	Not detected	70		ug/kg	69.9	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	69.9	74-97-5	
1,1,1-Trichloroethane	Not detected	70		ug/kg	69.9	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	69.9	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	69.9	591-78-6	
Carbon tetrachloride	Not detected	70		ug/kg	69.9	56-23-5	
Benzene	Not detected	70		ug/kg	69.9	71-43-2	
1,2-Dichloroethane	Not detected	70		ug/kg	69.9	107-06-2	
Trichloroethene	Not detected	70		ug/kg	69.9	79-01-6	
1,2-Dichloropropane	Not detected	70		ug/kg	69.9	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	69.9	75-27-4	
Dibromomethane	Not detected	300		ug/kg	69.9	74-95-3	
cis-1,3-Dichloropropene	Not detected	70		ug/kg	69.9	10061-01-5	

G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S74503.06 (continued)
Sample Tag: Trench-1

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/15/25 14:38, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	70		ug/kg	69.9	108-88-3	
trans-1,3-Dichloropropene	Not detected	70		ug/kg	69.9	10061-02-6	
1,1,2-Trichloroethane	Not detected	70		ug/kg	69.9	79-00-5	
Tetrachloroethene	Not detected	70		ug/kg	69.9	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	70		ug/kg	69.9	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	69.9	124-48-1	
1,2-Dibromoethane	Not detected	30		ug/kg	69.9	106-93-4	M
Chlorobenzene	Not detected	70		ug/kg	69.9	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	69.9	630-20-6	
Ethylbenzene	Not detected	70		ug/kg	69.9	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	69.9		
o-Xylene	Not detected	70		ug/kg	69.9	95-47-6	
Styrene	Not detected	70		ug/kg	69.9	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	69.9	98-82-8	
Bromoform	Not detected	100		ug/kg	69.9	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	70		ug/kg	69.9	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	69.9	96-18-4	
n-Propylbenzene	Not detected	70		ug/kg	69.9	103-65-1	
Bromobenzene	Not detected	100		ug/kg	69.9	108-86-1	
1,3,5-Trimethylbenzene	Not detected	70		ug/kg	69.9	108-67-8	
tert-Butylbenzene	Not detected	70		ug/kg	69.9	98-06-6	
1,2,4-Trimethylbenzene	Not detected	70		ug/kg	69.9	95-63-6	
sec-Butylbenzene	Not detected	70		ug/kg	69.9	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	69.9	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	69.9	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	69.9	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	69.9	95-50-1	
1,2,3-Trimethylbenzene	Not detected	70		ug/kg	69.9	526-73-8	
n-Butylbenzene	Not detected	70		ug/kg	69.9	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	69.9	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	69.9	96-12-8	
1,2,4-Trichlorobenzene	Not detected	460		ug/kg	69.9	120-82-1	
1,2,3-Trichlorobenzene	Not detected	460		ug/kg	69.9	87-61-6	
Naphthalene	Not detected	300		ug/kg	69.9	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	69.9	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S74503.07
Sample Tag: Trench-2
Collected Date/Time: 05/13/2025 10:40
Matrix: Soil
COC Reference: 178257

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.6	IR
1	40mL Glass	None	Yes	4.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	05/16/25 09:20	JRH	
PNA Extraction*	Completed	SW3546	06/02/25 16:45	TAW	F
Sample wt. (g) / Methanol (ml)*	11.409/11	SW5035A	05/14/25 17:19	ACK	
Mercury Digestion	Completed	SW7471B	05/16/25 12:04	CTV	

Inorganics

Method: SM2540B, Run Date: 05/16/25 13:49, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	87	1		%	1		

Metals

Method: SW6020A, Run Date: 05/16/25 12:40, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	6.39	0.20		mg/kg	238	7440-38-2	
Barium	24.7	1.0		mg/kg	238	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	238	7440-43-9	
Chromium	8.42	0.50		mg/kg	238	7440-47-3	
Copper	8.88	0.50		mg/kg	238	7440-50-8	
Lead	4.65	0.30		mg/kg	238	7439-92-1	
Selenium	Not detected	0.40		mg/kg	238	7782-49-2	
Silver	Not detected	0.20		mg/kg	238	7440-22-4	
Zinc	29.3	0.50		mg/kg	238	7440-66-6	

Method: SW7471B, Run Date: 05/16/25 15:04, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	64	7439-97-6	

Organics - Semi-Volatiles

Polynuclear Aromatics, Method: SW8270D, Run Date: 06/03/25 16:50, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	300		ug/kg	10	83-32-9	G
Acenaphthylene	Not detected	300		ug/kg	10	208-96-8	G
Anthracene	Not detected	300		ug/kg	10	120-12-7	G
Benzo(a)anthracene	Not detected	300		ug/kg	10	56-55-3	G
Benzo(a)pyrene	Not detected	300		ug/kg	10	50-32-8	G
Benzo(b)fluoranthene	Not detected	300		ug/kg	10	205-99-2	G
Benzo(k)fluoranthene	Not detected	300		ug/kg	10	207-08-9	G
Benzo(ghi)perylene	Not detected	300		ug/kg	10	191-24-2	G
Chrysene	Not detected	300		ug/kg	10	218-01-9	G

F-Analysis run outside of holding time
G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S74503.07 (continued)
Sample Tag: Trench-2

Polynuclear Aromatics, Method: SW8270D, Run Date: 06/03/25 16:50, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibenzo(ah)anthracene	Not detected	300		ug/kg	10	53-70-3	G
Fluoranthene	Not detected	300		ug/kg	10	206-44-0	G
Fluorene	Not detected	300		ug/kg	10	86-73-7	G
Indeno(1,2,3-cd)pyrene	Not detected	300		ug/kg	10	193-39-5	G
Naphthalene	Not detected	300		ug/kg	10	91-20-3	G
Phenanthrene	Not detected	300		ug/kg	10	85-01-8	G
Pyrene	Not detected	300		ug/kg	10	129-00-0	G
2-Methylnaphthalene	Not detected	300		ug/kg	10	91-57-6	G
1-Methylnaphthalene	Not detected	300		ug/kg	10	90-12-0	G

Organics - Volatiles

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/15/25 15:02, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	300		ug/kg	62.9	60-29-7	
Acetone	Not detected	1,000		ug/kg	62.9	67-64-1	
Methyl iodide	Not detected	100		ug/kg	62.9	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	62.9	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	62.9	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	62.9	107-13-1	
2-Butanone (MEK)	Not detected	940		ug/kg	62.9	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	62.9	75-71-8	
Chloromethane	Not detected	300		ug/kg	62.9	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	62.9	75-01-4	
Bromomethane	Not detected	300		ug/kg	62.9	74-83-9	
Chloroethane	Not detected	300		ug/kg	62.9	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	62.9	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	62.9	75-35-4	
Methylene chloride	Not detected	100		ug/kg	62.9	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	62.9	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	62.9	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	62.9	156-59-2	
Tetrahydrofuran	Not detected	1,000		ug/kg	62.9	109-99-9	
Chloroform	Not detected	60		ug/kg	62.9	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	62.9	74-97-5	
1,1,1-Trichloroethane	Not detected	60		ug/kg	62.9	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	62.9	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	62.9	591-78-6	
Carbon tetrachloride	Not detected	60		ug/kg	62.9	56-23-5	
Benzene	Not detected	60		ug/kg	62.9	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	62.9	107-06-2	
Trichloroethene	Not detected	60		ug/kg	62.9	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	62.9	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	62.9	75-27-4	
Dibromomethane	Not detected	300		ug/kg	62.9	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	62.9	10061-01-5	
Toluene	Not detected	60		ug/kg	62.9	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	62.9	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	62.9	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	62.9	127-18-4	

G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S74503.07 (continued)
Sample Tag: Trench-2

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/15/25 15:02, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,4-Dichloro-2-butene	Not detected	60		ug/kg	62.9	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	62.9	124-48-1	
1,2-Dibromoethane	Not detected	30		ug/kg	62.9	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	62.9	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	62.9	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	62.9	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	62.9		
o-Xylene	Not detected	60		ug/kg	62.9	95-47-6	
Styrene	Not detected	60		ug/kg	62.9	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	62.9	98-82-8	
Bromoform	Not detected	100		ug/kg	62.9	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	62.9	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	62.9	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	62.9	103-65-1	
Bromobenzene	Not detected	100		ug/kg	62.9	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	62.9	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	62.9	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	62.9	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	62.9	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	62.9	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	62.9	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	62.9	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	62.9	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	62.9	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	62.9	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	62.9	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	62.9	96-12-8	
1,2,4-Trichlorobenzene	Not detected	420		ug/kg	62.9	120-82-1	
1,2,3-Trichlorobenzene	Not detected	420		ug/kg	62.9	87-61-6	
Naphthalene	Not detected	300		ug/kg	62.9	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	62.9	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S74503.08
Sample Tag: Methanol Blank
Collected Date/Time: 05/13/2025 00:01
Matrix: Methanol
COC Reference: 178257

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40mL Glass	None	Yes	4.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample wt. (g) / Methanol (ml)*	10.0/10	SW5035A	05/14/25 17:19	ACK	

Organics - Volatiles

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/15/25 14:14, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	200		ug/kg	50	60-29-7	
Acetone	Not detected	1,000		ug/kg	50	67-64-1	
Methyl iodide	Not detected	100		ug/kg	50	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	50	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	50	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	50	107-13-1	
2-Butanone (MEK)	Not detected	750		ug/kg	50	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	50	75-71-8	
Chloromethane	Not detected	300		ug/kg	50	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	50	75-01-4	
Bromomethane	Not detected	200		ug/kg	50	74-83-9	
Chloroethane	Not detected	300		ug/kg	50	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	50	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	50	75-35-4	
Methylene chloride	Not detected	100		ug/kg	50	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	50	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	50	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	50	156-59-2	
Tetrahydrofuran	Not detected	1,000		ug/kg	50	109-99-9	
Chloroform	Not detected	50		ug/kg	50	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	50	74-97-5	
1,1,1-Trichloroethane	Not detected	50		ug/kg	50	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	50	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	50	591-78-6	
Carbon tetrachloride	Not detected	50		ug/kg	50	56-23-5	
Benzene	Not detected	50		ug/kg	50	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	50	107-06-2	
Trichloroethene	Not detected	50		ug/kg	50	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	50	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	50	75-27-4	
Dibromomethane	Not detected	300		ug/kg	50	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	50	10061-01-5	
Toluene	Not detected	50		ug/kg	50	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	50	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	50	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	50	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	50		ug/kg	50	110-57-6	

Lab Sample ID: S74503.08 (continued)
Sample Tag: Methanol Blank

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/15/25 14:14, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	100		ug/kg	50	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	50	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	50	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	50	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	50	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	50		
o-Xylene	Not detected	50		ug/kg	50	95-47-6	
Styrene	Not detected	50		ug/kg	50	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	50	98-82-8	
Bromoform	Not detected	100		ug/kg	50	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	50	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	50	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	50	103-65-1	
Bromobenzene	Not detected	100		ug/kg	50	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	50	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	50	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	50	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	50	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	50	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	50	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	50	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	50	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	50	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	50	104-51-8	
Hexachloroethane	Not detected	300		ug/kg	50	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	50	96-12-8	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	50	120-82-1	
1,2,3-Trichlorobenzene	Not detected	330		ug/kg	50	87-61-6	
Naphthalene	Not detected	300		ug/kg	50	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	50	91-57-6	

M-Result reported to MDL not RDL

Merit Laboratories Login Checklist

Lab Set ID:S74503

Client:ASTI (ASTI Environmental)

Project: A24-1988.01 2755 and 2990 Tooley Rd. and 0 Bowen Rd

Submitted:05/14/2025 11:10 Login User: MMC

Attention: Jeremy Efros
Address: ASTI Environmental
10448 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-360-9310 FAX:
Email:jefros@asti-env.com

Selection				Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 4.6
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[ ] Yes	[X] No	[ ] N/A	Samples shipped	
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[ ] Yes	[ ] No	[X] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[X] Yes	[ ] No	[ ] N/A	COC adequately filled out	
07.	[X] Yes	[ ] No	[ ] N/A	COC signed and relinquished to the lab	
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[ ] Yes	[ ] No	[X] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[ ] Yes	[X] No	[ ] N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[ ] No	[X] N/A	Do water VOC, TOX, DO or Alkalinity bottles contain	

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date:_____

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

178257

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Jeremy Efros / Brady Metzger
COMPANY: ASTI Environmental
ADDRESS: 10448 Citation Dr
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO: 810-360-9310 CELL NO: 810-599-5464 P.O. NO:
E-MAIL ADDRESS: efros@asti-env.com bmetzger@asti-env.com QUOTE NO:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO: E-MAIL ADDRESS:

PROJECT NO./NAME: 24-1988.01 2755 and 2990 Tooley Rd. and 0 Bowen Rd
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Brady Metzger

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	COLLECTION DATE	COLLECTION TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PNAs	arsenic	Cadmium	lead	Mercury	Selenium	VOCs	MI 10 metals	Special Instructions
74503.01	5/12/25	1520	DU-1 (0-1')	S	1	1							X	X	X	X	X	X			*ISM
.02	5/13/25	1330	DU-2 (0-1')																		*may need to be run for f/c lead, hex chro
.03	5/12/25	1140	DU-3 (0-1')																		
.04	↓	-	T-1																		
.05	↓	-	T-2																		
.06	5/13/25	1030	Trench - 1		2						1								X	X	
.07		1040	Trench - 2																		
.08	↓	-	Methanol Blank	↓	1	↓					↓		↓						↓	↓	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Brady Metzger (Sampler)	DATE 5/13/25	TIME 1435	RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE 5/14/25 TIME 1110
RECEIVED BY: SIGNATURE/ORGANIZATION	ASTI Cold Storage	DATE 5/13/25	TIME 1435	RECEIVED BY: SIGNATURE/ORGANIZATION	M Chilcote DATE 5/14/25 TIME 1110
RELINQUISHED BY: SIGNATURE/ORGANIZATION	ASTI Cold Storage	DATE 5/14/25	TIME 728	SEAL NO.	SEAL INTACT YES ☐ NO ☐ INITIALS
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 5/14/25	TIME 725	SEAL NO.	SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev 05/24

Attachment B

Soil Boring Logs

ASTI ENVIRONMENTAL

Boring ID: SB-1

Site Address: 2755 Tooley Rd
Howell Township, MI, 48855

Client: Jonathan Hohenstein
Project Name: 2755 Tooley Road
Project Number: A24-1988.01
Date Completed: 5/8/2025

Driller: Metiri Group
Drilling Method: Direct Push
ASTI Geologist: BTM
Total Depth: 20 feet bgs

Size: N/A
Type: N/A
Screen Length: N/A
Well Depth: N/A
Depth to GW: N/A

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0–1		Topsoil: SILTY fine to coarse SAND: trace organics, dark brown, moist, medium dense **(sandy loam)**	0		100
1–8		CLAYEY very fine to very coarse SAND: trace 0.75" gravel, brown, moist, loose **(sandy clay loam)**	0 0 0 0	Soil at 4-4.5'	
8–9		SILTY fine to coarse SAND: trace 1" gravel, gray, moist, loose **(sandy loam)**	0		100
9–10		SILTY fine to coarse SAND: trace 0.75" gravel, brown, moist, loose **(sandy loam)**			
10–15		SILTY fine to coarse SAND: brown, dry, very dense **(sandy loam)**	0 0 0	Soil at 14-15'	100
15–20		SILTY fine to coarse SAND: brown, moist, loose **(sandy loam)**	0 0 0		70
20		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

ASTI ENVIRONMENTAL

Boring ID: SB-2

Site Address:	2755 Tooley Rd Howell Township, MI, 48855	**Size:**	N/A
Client:	Jonathan Hohenstein	**Driller:**	Metiri Group	**Type:**	N/A
Project Name:	2755 Tooley Road	**Drilling Method:**	Direct Push	**Screen Length:**	N/A
Project Number:	A24-1988.01	**ASTI Geologist:**	BTM	**Well Depth:**	N/A
Date Completed:	5/8/2025	**Total Depth:**	20 feet bgs	**Depth to GW:**	N/A

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0–1		Topsoil: SILTY fine to coarse SAND: trace organics and gravel, dark brown, moist, medium dense **(sandy loam)**	0		75
1–8		SILTY CLAY: trace to some fine-grained sand, trace gravel, brown, soft **(silty clay)**	0 0 0 0	Soil at 2-2.5'	
8–13		SILTY CLAY: trace fine-grained sand, brown, medium stiff**(silty clay)**	0 0 0		100
13–14		CLAYEY very fine to very coarse SAND: brown, moist, dense **(sandy clay loam)**	0	Soil at 13-14'	100
14–20		SILTY CLAY: gray, stiff**(silty clay)**	0 0 0 0		100
20		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

ASTI ENVIRONMENTAL

Boring ID: SB-3

Site Address: 2755 Tooley Rd
Howell Township, MI, 48855

Client: Jonathan Hohenstein

Project Name: 2755 Tooley Road

Project Number: A24-1988.01

Date Completed: 5/8/2025

Driller: Metiri Group

Drilling Method: Direct Push

ASTI Geologist: BTM

Total Depth: 10 feet bgs

Size: N/A

Type: N/A

Screen Length: N/A

Well Depth: N/A

Depth to GW: 4 feet bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		Topsoil: SILTY fine to coarse SAND: trace organics, black to dark brown, moist, dense **(sandy loam)**			
1		SILTY CLAY: trace coarse-grained sand and gravel, brown, soft **(silty clay)**	0		
2					
3			0		100
4				Soil at 3.5-4'	
5		CLAYEY very fine to very coarse SAND: brown, wet, loose **(sandy loam)**	0		
6					
7			0		
8					100
9			0		
10		END OF BORING			100

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

▼ Groundwater Encountered at Depth

ASTI ENVIRONMENTAL

Boring ID: SB-4

Site Address: 2755 Tooley Rd, Howell Township, MI, 48855

Client: Jonathan Hohenstein

Project Name: 2755 Tooley Road

Project Number: A24-1988.01

Date Completed: 5/8/2025

Driller: Metiri Group

Drilling Method: Direct Push

ASTI Geologist: BTM

Total Depth: 10 feet bgs

Size: 1-inch

Type: PVC

Screen Length: 5'

Well Depth: 10 feet bgs

Depth to GW: 4 feet bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		Topsoil: SILTY fine to coarse SAND: trace organics, black to dark brown, moist, dense, fill **(sandy loam)**			
1		SILTY CLAY: trace coarse-grained sand, gravel, and brick, brown, soft, fill **(silty clay)**	0		
2					
3			0		100
4		CLAYEY very fine to very coarse SAND: brown, wet, loose **(sandy loam)**		Soil at 3.5-4'	
5			0		
6					
7			0		100
8					
9			0		
10		END OF BORING			100

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

▼ Groundwater Encountered at Depth

ASTI ENVIRONMENTAL

Boring ID: SB-5

Site Address: 2755 Tooley Rd, Howell Township, MI, 48855

Client: Jonathan Hohenstein

Project Name: 2755 Tooley Road

Project Number: A24-1988.01

Date Completed: 5/8/2025

Driller: Metiri Group

Drilling Method: Direct Push

ASTI Geologist: BTM

Total Depth: 15 feet bgs

Size: N/A

Type: N/A

Screen Length: N/A

Well Depth: N/A

Depth to GW: N/A

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		Topsoil: SANDY SILT: trace organics, brown, moist, medium dense, fill **(sandy loam)**	0		75
1		SILTY fine SAND: trace metal, brick, and gravel, brown, moist, loose, fill **(sandy loam)**			
2			0		
3		CLAYEY fine to coarse SAND: trace brick, brown, moist, dense, fill **(sandy clay loam)**			
4		SILTY fine to coarse SAND: trace gravel, brick, metal, brown, moist, medium dense, fill **(sandy loam)**	0	Soil at 4-5'	
5		SILTY very fine to very coarse SAND: brown, moist, very dense **(sandy loam)**			90
6			0		
7					
8			0		
9					
10			0		90
11					
12			0		
13		SILTY coarse SAND: trace gravel, gray, wet, loose **(sandy loam)**			
14					
15		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

ASTI ENVIRONMENTAL

Boring ID: SB-6

Site Address: 2755 Tooley Rd, Howell Township, MI, 48855

Client: Jonathan Hohenstein

Project Name: 2755 Tooley Road

Project Number: A24-1988.01

Date Completed: 5/8/2025

Driller: Metiri Group

Drilling Method: Direct Push

ASTI Geologist: BTM

Total Depth: 20 feet bgs

Size: 1-inch

Type: PVC

Screen Length: 5'

Well Depth: 20 feet bgs

Depth to GW: 18 feet bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0–5		SILTY CLAY: trace gravel, brown, medium soft **(silty clay)**	0 0 0		100
6–9		SILTY CLAY: trace gravel, brown, soft **(silty clay)**	0 0		100
10–17		SILTY fine to coarse SAND: trace gravel, brown, moist, dense **(sandy loam)**	0 0 0 0		80
18–19		SILTY fine to coarse SAND: trace gravel, brown, wet, dense **(sandy loam)**	0		80
20		END OF BORING			

Comments:

insufficient amount of water to sample

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

▼ Groundwater Encountered at Depth

ASTI ENVIRONMENTAL

Boring ID: MW-7

Site Address: 2755 Tooley Rd, Howell Township, MI, 48855

Client: Jonathan Hohenstein

Project Name: 2755 Tooley Road

Project Number: A24-1988.01

Date Completed: 5/8/2025

Driller: Metiri Group

Drilling Method: Direct Push

ASTI Geologist: BTM

Total Depth: 20 feet bgs

Size: 1-inch

Type: PVC

Screen Length: 5'

Well Depth: 20 feet bgs

Depth to GW: 17.5 feet bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0–7		SILTY CLAY: trace gravel, brown, medium soft **(silty clay)**	0, 0, 0, 0		80, 80
7–12		SILTY CLAY: trace gravel, brown, soft **(silty clay)**	0, 0, 0		80
12–16		SILTY fine to coarse SAND: trace gravel, brown, moist, dense **(sandy loam)**	0, 0		80
16–20		SILTY fine to coarse SAND: trace gravel, brown, wet, dense **(sandy loam)**	0, 0		80
20		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

▼ Groundwater Encountered at Depth

ASTI ENVIRONMENTAL

Boring ID: MW-8

Site Address: 0 & 2990 Tooley Rd
Howell Township, MI, 48855

Client: Jonathan Hohenstein
Project Name: 0 & 2990 Tooley Rd
Project Number: A24-1988.01
Date Completed: 5/8/2025

Driller: Metiri Group
Drilling Method: Direct Push
ASTI Geologist: BTM
Total Depth: 5 feet bgs

Size: 1-inch
Type: PVC
Screen Length: 5'
Well Depth: 5 feet bgs
Depth to GW: 1 foot bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		Topsoil: SILTY fine SAND: trace organics, black to dark brown, moist, dense **(sandy loam)**	0		100
1		SILTY fine to coarse SAND: trace organics and gravel, brown, wet, loose **(sandy loam)**	0		
2			0		
3			0		
4					
5		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

▼ Groundwater Encountered at Depth

ASTI ENVIRONMENTAL

Boring ID: MW-9

Site Address: 0 & 2990 Tooley Rd, Howell Township, MI, 48855

Client: Jonathan Hohenstein

Project Name: 0 & 2990 Tooley Rd

Project Number: A24-1988.01

Date Completed: 5/8/2025

Driller: Metiri Group

Drilling Method: Direct Push

ASTI Geologist: BTM

Total Depth: 10 feet bgs

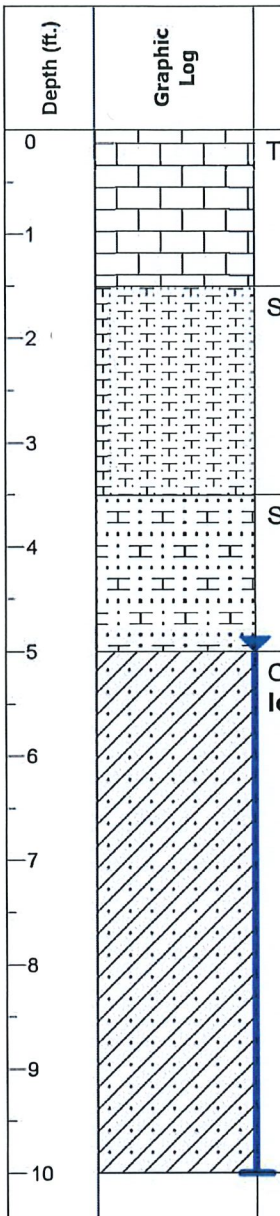
Size: 1-inch

Type: PVC

Screen Length: 5'

Well Depth: 10 feet bgs

Depth to GW: 5 feet bgs



Depth (ft.)	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0–1	Topsoil: SILTY fine to coarse SAND: brown, dry, loose **(sandy loam)**	0		100
1–3	SILTY fine SAND: trace gravel, brown, moist, loose **(sandy loam)**	0		
3–4	SILTY CLAY: trace fine-grained sand, brown, medium soft **(silty clay)**	0		
4–10	CLAYEY very fine to medium SAND: brown, wet, medium dense **(sandy loam)**	0		100
10	END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

▼ Groundwater Encountered at Depth

ASTI ENVIRONMENTAL

Boring ID: MW-10

Site Address: 2755 Tooley Rd
Howell Township, MI, 48855

Client: Jonathan Hohenstein
Project Name: 2755 Tooley Road
Project Number: A24-1988.01
Date Completed: 5/8/2025

Driller: Metiri Group
Drilling Method: Direct Push
ASTI Geologist: BTM
Total Depth: 10 feet bgs

Size: 1-inch
Type: PVC
Screen Length: 5'
Well Depth: 10 feet bgs
Depth to GW: 7 feet bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		Topsoil: SILTY fine to coarse SAND: brown, dry, loose **(sandy loam)**			
1		SILTY fine SAND: trace gravel, brown, moist, loose **(sandy loam)**	0		100
2					
3			0		
4					
5			0		
6					
7		SILTY fine SAND: trace gravel, brown, wet, loose **(sandy loam)**	0		100
8					
9			0		
10		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

▼ Groundwater Encountered at Depth

ASTI ENVIRONMENTAL

Boring ID: SB-11

Site Address:	0 & 2990 Tooley Rd				
	Howell Township, MI, 48855		**Size:**	N/A	
Client:	Jonathan Hohenstein	**Driller:**	Metiri Group	**Type:**	N/A
Project Name:	0 & 2990 Tooley Rd	**Drilling Method:**	Hand Auger	**Screen Length:**	N/A
Project Number:	A24-1988.01	**ASTI Geologist:**	BTM	**Well Depth:**	N/A
Date Completed:	5/8/2025	**Total Depth:**	4 feet bgs	**Depth to GW:**	N/A

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		Topsoil: SILTY very fine to coarse SAND: black, moist, loose, fill **(sandy loam)**			
-1		SILTY fine to very coarse SAND: trace to some brick, metal, and ceramic, brown, moist, loose, fill **(sandy loam)**	0		
-2					100
-3			0	Soil at 2.5-3'	
-4		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

ASTI ENVIRONMENTAL

Boring ID: SB-12

Site Address: 0 & 2990 Tooley Rd
Howell Township, MI, 48855

Client: Jonathan Hohenstein
Project Name: 0 & 2990 Tooley Rd
Project Number: A24-1988.01
Date Completed: 5/8/2025

Driller: Metiri Group
Drilling Method: Hand Auger
ASTI Geologist: BTM
Total Depth: 4 feet bgs

Size: N/A
Type: N/A
Screen Length: N/A
Well Depth: N/A
Depth to GW: N/A

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		Topsoil: SILTY fine to coarse SAND: black, moist, loose **(sandy loam)**			100
1		SILTY fine SAND: brown, moist, medium dense **(sandy loam)**	0	Soil at 1-2'	
2					
3			0		
4		SILTY fine to coarse SAND: brown, moist, medium dense **(sandy loam)**		Soil at 3-3.5'	
		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

ASTI ENVIRONMENTAL

Boring ID: SB-13

Site Address:	0 & 2990 Tooley Rd Howell Township, MI, 48855	**Size:**	N/A
Client:	Jonathan Hohenstein	**Driller:**	Metiri Group	**Type:**	N/A
Project Name:	0 & 2990 Tooley Rd	**Drilling Method:**	Hand Auger	**Screen Length:**	N/A
Project Number:	A24-1988.01	**ASTI Geologist:**	BTM	**Well Depth:**	N/A
Date Completed:	5/8/2025	**Total Depth:**	3 feet bgs	**Depth to GW:**	N/A

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		Topsoil: SILTY fine to coarse SAND: trace organics, black, moist, loose **(sandy loam)**			
		SILTY fine to coarse SAND: light brown, moist, loose **(sandy loam)**	0		100
1					
2			0	Soil at 2.5-3'	
3		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

ASTI ENVIRONMENTAL

Boring ID: SB-14

Site Address: 0 & 2990 Tooley Rd
Howell Township, MI, 48855

Client: Jonathan Hohenstein
Project Name: 0 & 2990 Tooley Rd
Project Number: A24-1988.01
Date Completed: 5/8/2025

Driller: Metiri Group
Drilling Method: Direct Push
ASTI Geologist: BTM
Total Depth: 10 feet bgs

Size: 1-inch
Type: PVC
Screen Length: 5'
Well Depth: 10 feet bgs
Depth to GW: 4.5 feet bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		Topsoil: SILTY fine to coarse SAND: trace organics, black, moist, loose **(sandy loam)**			
1		SILTY fine SAND: brown, moist, medium dense **(sandy loam)**	0		
2					
3			0		65
4				Soil at 3.5-4'	
5		SILTY fine to coarse SAND: brown, wet, loose **(sandy loam)**	0		
6					
7			0		
8					100
9			0		
10		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

▼ Groundwater Encountered at Depth

ASTI ENVIRONMENTAL

Boring ID: MW-14

Site Address: 2755 Tooley Rd, Howell Township, MI, 48855

Client: Jonathan Hohenstein

Project Name: 2755 Tooley Road

Project Number: A24-1988.01

Date Completed: 5/8/2025

Driller: Metiri Group

Drilling Method: Direct Push

ASTI Geologist: BTM

Total Depth: 20 feet bgs

Size: 1-inch

Type: PVC

Screen Length: 5'

Well Depth: 20 feet bgs

Depth to GW: 19 feet bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0–1		SILTY very fine to medium SAND: trace gravel, brown, dry **(silty clay)**	0		100
2–4		SILTY CLAY: trace gravel, brown, medium soft **(silty clay)**	0		
5–6			0		100
7–8			0		
9–10			0		
11–12		SILTY fine to coarse SAND: trace clay and gravel, brown, moist, dense **(sandy loam)**	0		75
13–14			0		
15–16			0		
17–18			0		75
19		SILTY medium to coarse SAND: trace gravel, brown, wet at 19', dense **(sandy loam)**	0		
20		END OF BORING			

Comments:

insufficient amount of water to sample

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

▼ Groundwater Encountered at Depth

ASTI ENVIRONMENTAL

Boring ID: MW-15

Client: Jonathan Hohenstein
Project Name: 0 Bowen Road
Project Number: A24-1988.01
Date Completed: 5/8/2025

Site Address: 0 Bowen Road, Howell Township, MI, 48855
Driller: Metiri Group
Drilling Method: Direct Push
ASTI Geologist: BTM
Total Depth: 15 feet bgs

Size: 1-inch
Type: PVC
Screen Length: 5'
Well Depth: 15 feet bgs
Depth to GW: 12 feet bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0–1		Topsoil: SILTY fine to coarse SAND: trace organics, black, moist, loose **(sandy loam)**	0		100
2–3		SANDY CLAY: brown, moist, medium dense **(sandy loam)**	0		
4–5			0		
6–7			0		100
8–9			0		
10–11		SILTY fine to very coarse SAND: trace gravel, brown, wet, dense **(sandy loam)**	0		75
12–13		SILTY coarse SAND: trace gravel, brown, wet, dense **(sandy loam)**	0		
14–15			0		
		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface **( ) = USDA soil texture**

▼ Groundwater Encountered at Depth

Attachment C

Contaminated Soil and Groundwater Notification Form

CONTAMINATED SOIL AND GROUNDWATER NOTIFICATION FORM

DATE: _____

To Whom It May Concern

Subsurface investigations conducted at 0 and 2755 Tooley Road in Howell Township, Michigan (Subject Property) have identified the metal arsenic in soil and the per- and polyfluoroalkyl substance (PFAS) perfluorobutane sulfonic acid in groundwater at concentrations exceeding the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Part 201 Generic Residential Cleanup Criteria (GRCC). However, these concentrations do not pose a long-term threat to utility workers or landscape personnel, whose exposure would be of short duration in comparison to the assumptions used to calculate the exposure risk.

Soil analytical results that exceed the GRCC are depicted on Figure 3. Groundwater analytical results that exceed the GRCC are depicted on Figure 4. The Due Care Plan requires that any future site work and/or construction plans be reviewed by an environmental professional to ensure that all reasonable precautions are taken to avoid exposure and/or exacerbation of existing site conditions. Unless tested, all soil and groundwater on the Subject Property should be considered to be impacted, and proper handling procedures shall be followed. Any soil or groundwater removed from the Subject Property should be characterized for disposal at a municipal Type II Landfill or other approved disposal facility.

To prevent exacerbation of soil and groundwater impacts, ASTI recommends the following:

- Soils removed from the ground that are not directly loaded into soil handling trucks for offsite disposal should be stockpiled on a minimum of 10 mil plastic sheeting and be covered with plastic sheeting until removal from the Subject Property.
- Soil generated on the Subject Property as excavation spoils may be reused on the Subject Property but should be returned to the same location and depth from which it was removed.
- Soils and groundwater should not be moved to other locations on the Subject Property without first confirming that they are not impacted by conducting sampling and laboratory analysis.

After use, all equipment that has encounters site soils or groundwater, including but not limited to hand tools, boots, and power tools, should be decontaminated. Gloves and other disposable items shall be disposed of with the general site refuse. It's recommended that on-site personnel wash their hands following contact with soil or groundwater on the Subject Property.

Contaminated soil has been identified from 4 to 5 feet below ground surface (bgs) at the location specified on Figure 3 and may be at varying depths in areas not sampled. Groundwater was encountered at varying depths from 1-foot bgs to 18 feet bgs with the depth to groundwater increasing to the west.

Any soil or groundwater removed from the Subject Property must be properly characterized for disposal at a licensed facility, which must be documented. Copies of all disposal manifests must be provided to the Subject Property owner.

Attachments:

Figure 3 – Soil Analytical Results Exceeding GRCC Map (2007 and 2008)
Figure 4 – Groundwater Analytical Results Exceeding GRCC Map (2007 and 2008)

Please sign below to acknowledge your notification of site impacts and to assure your compliance with the above conditions.

_____

My Signature in Acknowledgement of the Above

_____

Printed Name

_____

_____

_____

Employer Name, Address, and Phone Number

ASTI ENVIRONMENTAL

ENVIRONMENTAL INVESTIGATION, REMEDIATION, COMPLIANCE AND RESTORATION PROJECTS THROUGHOUT THE GREAT LAKES SINCE 1985.

OUR SERVICES INCLUDE:

- ASBESTOS, LEAD, MOLD, AND RADON ASSESSMENTS
- BROWNFIELD/GREYFIELD REDEVELOPMENT ASSISTANCE
- DEVELOPMENT INCENTIVES AND GRANT MANAGEMENT
- ECOLOGICAL ASSESSMENTS AND RESTORATION
- ENVIRONMENTAL ASSESSMENTS AND IMPACT STATEMENTS
- ENVIRONMENTAL OPPORTUNITIES ASSESSMENT
- GIS MAPPING
- HAZARD MITIGATION PLANNING
- MINING AND RECLAMATION ASSISTANCE
- REMEDIATION IMPLEMENTATION, OPERATION AND MAINTENANCE
- PHASE I ESA AND ENVIRONMENTAL DUE DILIGENCE ASSESSMENTS
- REGULATORY COMPLIANCE AND PERMITTING
- SOIL AND GROUNDWATER ASSESSMENTS
- SOIL AND GROUNDWATER REMEDIATION
- STORAGE TANK COMPLIANCE AND CLOSURE
- THREATENED AND ENDANGERED SPECIES SURVEYS
- WATERSHED AND STORMWATER MANAGEMENT PROGRAMS
- WETLAND DELINEATION, PERMITTING, MITIGATION AND BANKING

ASTI ENVIRONMENTAL
Detroit/Grand Rapids/Brighton

Phone: 1-800-395-2784
www.asti-env.com
Email: environmental@asti-env.com

ASTI ENVIRONMENTAL

12A

Howell Township

Invoice and Check Registers

As of 7/31/2025

INVOICE REGISTER FOR HOWELL TOWNSHIP

Inv Ref #	Vendor	Invoice Date	Due Date	Invoice Amount	Amount Due	Status	Posted
00024696	LIVINGSTON COUNTY TREASURER	07/01/2025	07/15/2025	845.00	0.00	Paid	Y
00024697	LIVINGSTON COUNTY TREASURER	07/01/2025	07/15/2025	23.50	0.00	Paid	Y
00024698	HOWELL PARKS AND RECREATION	07/01/2025	07/15/2025	914.44	0.00	Paid	Y
00024699	HOWELL CARNEGIE LIBRARY	07/01/2025	07/15/2025	4,055.48	0.00	Paid	Y
00024700	LIV EDUC SERVICE AGENCY	07/01/2025	07/15/2025	8,780.68	0.00	Paid	Y
00024701	HOWELL AREA FIRE AUTHORITY	07/01/2025	07/15/2025	7,878.46	0.00	Paid	Y
00024703	HOWELL PUBLIC SCHOOLS	07/01/2025	07/15/2025	18,433.84	0.00	Paid	Y
00024704	HOWELL PUBLIC SCHOOLS	07/01/2025	07/15/2025	19,907.64	0.00	Paid	Y
00024684	PVS TECHNOLOGIES, INC	06/23/2025	07/03/2025	9,093.13	0.00	Paid	Y
00024686	DTE ENERGY	06/16/2025	07/08/2025	39.25	0.00	Paid	Y
00024691	AT&T	07/01/2025	07/11/2025	128.04	0.00	Paid	Y
00024692	CONSUMERS ENERGY	06/18/2025	07/15/2025	24.36	0.00	Paid	Y
00024695	TRUE VALUE	06/30/2025	07/15/2025	9.96	0.00	Paid	Y
00024706	CUMMINS SALES AND SERVICE	06/12/2025	07/15/2025	910.60	0.00	Paid	Y
00024708	CONSUMERS ENERGY	06/19/2025	07/16/2025	148.86	0.00	Paid	Y
00024709	BRIGHTON ANALYTICAL	06/20/2025	07/20/2025	30.00	0.00	Paid	Y
00024713	COMCAST	07/02/2025	07/13/2025	435.88	0.00	Paid	Y
00024714	GENOA TOWNSHIP DPW	07/02/2025	08/02/2025	30,920.92	0.00	Paid	Y
00024725	BYRUM ACE HARDWARE	07/02/2025	07/31/2025	89.99	0.00	Paid	Y
00024726	CITY ELECTRIC SUPPLY	06/25/2025	07/31/2025	85.16	0.00	Paid	Y
00024727	REPUBLIC SERVICES	06/25/2025	07/20/2025	127.47	0.00	Paid	Y
00024667	PICTOMETRY INTERNATIONAL INC	06/01/2025	07/01/2025	15,676.88	0.00	Paid	Y
00024676	PRINTING SYSTEMS	06/17/2025	07/03/2025	470.61	0.00	Paid	Y
00024677	CAROL MAKUSHIK	06/30/2025	07/03/2025	48.61	0.00	Paid	Y
00024685	BS&A SOFTWARE	06/24/2025	07/03/2025	350.00	0.00	Paid	Y
00024687	JONATHAN HOHENSTEIN	06/23/2025	07/08/2025	187.02	0.00	Paid	Y
00024688	GREEN OAK TWP TREASURER'S OFFICE	06/23/2025	07/08/2025	10.83	0.00	Paid	Y
00024689	MARNIE HEBERT	09/05/2025	07/08/2025	102.11	0.00	Paid	Y
00024690	MARNIE HEBERT	06/30/2025	07/08/2025	269.60	0.00	Paid	Y
00024693	TANYA DAVIDSON	12/31/2024	07/15/2025	15.85	0.00	Paid	Y
00024694	TANYA DAVIDSON	06/30/2025	07/15/2025	216.16	0.00	Paid	Y
00024705	PERFECT MAINTENANCE	06/29/2025	07/15/2025	195.00	0.00	Paid	Y
00024707	ION	07/02/2025	07/15/2025	175.00	0.00	Paid	Y
00024710	BRENT KILPELA	06/30/2025	07/20/2025	67.76	0.00	Paid	Y
00024711	JONATHAN HOHENSTEIN	06/30/2025	07/20/2025	20.72	0.00	Paid	Y
00024712	MUTUAL OF OMAHA INSURANCE COMPANY	07/02/2025	07/20/2025	219.00	0.00	Paid	Y
00024715	FAHEY SCHULTZ BURZYCH RHODES PLC	07/01/2025	07/31/2025	2,804.50	0.00	Paid	Y
00024716	FAHEY SCHULTZ BURZYCH RHODES PLC	07/01/2025	07/31/2025	96.00	0.00	Paid	Y
00024717	FAHEY SCHULTZ BURZYCH RHODES PLC	07/01/2025	07/31/2025	384.00	0.00	Paid	Y
00024718	FAHEY SCHULTZ BURZYCH RHODES PLC	07/01/2025	07/31/2025	285.00	0.00	Paid	Y
00024719	FAHEY SCHULTZ BURZYCH RHODES PLC	07/01/2025	07/31/2025	2,430.02	0.00	Paid	Y
00024720	SPRUNGTOWN OUTDOOR SERVICES	07/01/2025	07/31/2025	5,250.00	0.00	Paid	Y
00024728	CHLORIDE SOLUTIONS, LLC	07/02/2025	08/01/2025	1,415.35	0.00	Paid	Y
00024729	MICRO WORKS COMPUTING, INC	06/30/2025	07/20/2025	40.00	0.00	Paid	Y
00024730	LIVINGSTON CO. SHERIFF DEPARTMENT	06/19/2025	07/20/2025	210.00	0.00	Paid	Y
00024731	DTE ENERGY	06/30/2025	08/11/2025	668.92	0.00	Paid	Y
00024732	KENT COMMUNICATIONS INC	06/30/2025	07/30/2025	1,241.20	0.00	Paid	Y
00024733	SPICER GROUP	07/07/2025	06/30/2025	2,888.00	0.00	Paid	Y
00024734	CARLISLE WORTMAN ASSOC, INC.	07/07/2025	06/30/2025	800.00	0.00	Paid	Y
00024735	CHESTNUT DEVELOPMENT	07/07/2025	06/30/2025	4,608.50	0.00	Paid	Y
00024737	SPICER GROUP	07/08/2025	06/30/2025	813.50	0.00	Paid	Y
00024738	SPICER GROUP	07/08/2025	06/30/2025	4,514.50	0.00	Paid	Y
00024739	SPICER GROUP	07/08/2025	06/30/2025	592.00	0.00	Paid	Y
00024741	LIVINGSTON COUNTY TREASURER	07/01/2025	07/01/2025	12,571.08	0.00	Paid	Y

INVOICE REGISTER FOR HOWELL TOWNSHIP

Inv Ref #	Vendor	Invoice Date	Due Date	Invoice Amount	Amount Due	Status	Posted
00024742	STATE OF MICHIGAN	07/01/2025	07/01/2025	12,109.60	0.00	Paid	Y
00024762	HOWELL PUBLIC SCHOOLS	07/16/2025	07/16/2025	44,378.24	0.00	Paid	Y
00024763	HOWELL PUBLIC SCHOOLS	07/16/2025	07/16/2025	75,177.01	0.00	Paid	Y
00024764	LIVINGSTON COUNTY TREASURER	07/16/2025	07/16/2025	100,691.78	0.00	Paid	Y
00024765	LIV EDUC SERVICE AGENCY	07/16/2025	07/16/2025	53,033.76	0.00	Paid	Y
00024766	LIVINGSTON COUNTY TREASURER	07/16/2025	07/16/2025	53,397.96	0.00	Paid	Y
00024736	BYRUM ACE HARDWARE	06/25/2025	07/30/2025	265.42	0.00	Paid	Y
00024740	SMART BUSINESS SOURCE, LLC	07/08/2025	08/07/2025	655.22	0.00	Paid	Y
00024743	SEI CONSTRUCTION CO	06/16/2025	07/01/2025	185.00	0.00	Paid	Y
00024744	CINTAS CORPORATION	07/09/2025	07/20/2025	124.57	0.00	Paid	Y
00024745	CARLISLE WORTMAN ASSOC, INC.	07/09/2025	07/20/2025	1,100.00	0.00	Paid	Y
00024746	CARLISLE WORTMAN ASSOC, INC.	07/09/2025	07/20/2025	3,017.50	0.00	Paid	Y
00024747	GENOA OCEOLA SWATH	07/11/2025	07/20/2025	3,669.60	0.00	Paid	Y
00024748	GENOA TOWNSHIP DPW	06/24/2025	07/20/2025	28,382.00	0.00	Paid	Y
00024749	GANNETT MICHIGAN LOCALIQ	06/30/2025	07/20/2025	72.92	0.00	Paid	Y
00024750	ABSOPURE	06/30/2025	07/20/2025	35.80	0.00	Paid	Y
00024751	ABSOPURE	06/30/2025	07/30/2025	12.00	0.00	Paid	Y
00024752	CHLORIDE SOLUTIONS, LLC	07/07/2025	08/06/2025	2,966.04	0.00	Paid	Y
00024753	DTE ENERGY	07/07/2025	07/29/2025	110.29	0.00	Paid	Y
00024754	DTE ENERGY	07/07/2025	07/29/2025	215.43	0.00	Paid	Y
00024755	DTE ENERGY	07/07/2025	07/29/2025	527.35	0.00	Paid	Y
00024756	CARLISLE WORTMAN ASSOC, INC.	07/15/2025	06/30/2025	345.00	0.00	Paid	Y
00024757	VANSTON / O'BRIEN, INC	07/15/2025	06/30/2025	490.50	0.00	Paid	Y
00024758	SPICER GROUP	07/15/2025	06/30/2025	1,492.00	0.00	Paid	Y
00024759	BS&A SOFTWARE	07/14/2025	07/29/2025	200.00	0.00	Paid	Y
00024760	HI-TECH SAFE & LOCK COMPANY, INC	06/26/2025	07/29/2025	35.00	0.00	Paid	Y
00024761	CEMIFY	07/15/2025	07/29/2025	2,970.00	0.00	Paid	Y
00024767	DTE ENERGY	07/11/2025	08/04/2025	273.66	0.00	Paid	Y
00024768	DTE ENERGY	07/11/2025	08/04/2025	128.39	0.00	Paid	Y
00024769	DTE ENERGY	07/11/2025	08/04/2025	259.31	0.00	Paid	Y
00024770	DTE ENERGY	07/11/2025	08/04/2025	271.66	0.00	Paid	Y
00024771	DTE ENERGY	07/11/2025	08/04/2025	35.12	0.00	Paid	Y
00024772	DTE ENERGY	07/11/2025	08/04/2025	480.64	0.00	Paid	Y
00024773	DTE ENERGY	07/11/2025	08/04/2025	6,278.43	0.00	Paid	Y
00024774	PRECISION COMFORT	07/17/2025	07/17/2025	680.00	0.00	Paid	Y
00024777	BLUE CARE NETWORK	07/25/2025	07/25/2025	5,184.59	0.00	Paid	Y
00024781	BS&A SOFTWARE	07/17/2025	08/31/2025	5,093.00	0.00	Paid	Y
00024775	FIRST NATIONAL BANK	07/25/2025	07/25/2025	5,582.90	0.00	Paid	Y
00024776	HOWELL TOWNSHIP	07/25/2025	07/25/2025	123.08	0.00	Paid	Y
00024778	AMERICAN FUNDS	07/25/2025	07/25/2025	3,583.21	0.00	Paid	Y
00024779	TREASURY STATE OF MICHIGAN	07/25/2025	07/25/2025	1,858.84	0.00	Paid	Y
00024780	EMPOWER	07/25/2025	07/25/2025	1,460.33	0.00	Paid	Y

# of Invoices: 96 # Due: 0	Totals:	579,473.53	0.00	
# of Credit Memos: 0 # Due: 0	Totals:	0.00	0.00	
Net of Invoices and Credit Memos:		579,473.53	0.00	

(Agrees with Check Register BK

--- TOTALS BY FUND ---

101	GENERAL FUND	78,553.63	0.00
204	ROAD FUND	4,381.39	0.00
592	SWR/WTR	84,340.04	0.00
701	TRUST & AGENCY	85,519.72	0.00
703	TAX FUND	326,678.75	0.00

Inv Ref #	Vendor	Invoice Date	Due Date	Invoice Amount	Amount Due	Status	Posted
--- TOTALS BY DEPT/ACTIVITY ---							
	000 OTHER			460,689.94	0.00		
	215 CLERK			216.16	0.00		
	253 TREASURER			1,566.62	0.00		
	257 ASSESSING			15,793.25	0.00		
	262 ELECTIONS			608.17	0.00		
	265 TOWNSHIP HALL			10,220.47	0.00		
	268 TOWNSHIP AT LARGE			6,668.44	0.00		
	276 CEMETERY			3,720.00	0.00		
	538 WWTP			75,246.91	0.00		
	701 PLANNING			4,117.50	0.00		
	702 ZONING			626.07	0.00		

CHECK REGISTER FOR HOWELL TOWNSHIP

CHECK DATE 07/01/2025 - 07/31/2025

Check Date	Check	Vendor Name	Description	Amount
Bank GEN GENERAL FUND CHECKING				
07/07/2025	101002056(E)	COMCAST	JULY 2025	435.88
07/08/2025	19100	BS&A SOFTWARE	NEW CREDIT CARD TERMINAL	350.00
07/08/2025	19101	CARLISLE WORTMAN ASSOC, INC.	Check Request For Bond: BSP25-0003	800.00
07/08/2025	19102	CHESTNUT DEVELOPMENT	Check Request For Bond: BSP24-0007	4,608.50
07/08/2025	19103	TANYA DAVIDSON	DEPUTY CLERK EXPENSES	15.85
			DEPUTY CLERK EXPENSES	216.16
				232.01
07/08/2025	19104	DTE ENERGY	STREETLIGHTS	668.92
07/08/2025	19105	FAHEY SCHULTZ BURZYCH RHODES	GENERAL	2,804.50
			CODE ENFORCEMENT	96.00
			HOWELL-MASON LITIGATION (24-32242-CZ)	384.00
			ZONING	285.00
			HOWELL TOWNSHIP V SHANE FAGAN (25-398-A	2,430.02
				5,999.52
07/08/2025	19106	GREEN OAK TWP TREASURER'S OFF	2025 SUMMER DEFERMENT NOTICE	10.83
07/08/2025	19107	MARNIE HEBERT	ELECTION MILEAGE	102.11
			ELECTION MILEAG/ZONING CLASS	269.60
				371.71
07/08/2025	19108	JONATHAN HOHENSTEIN	TREASURER/ZONING EXPENSES	187.02
			TREASURER/ZONING ADMINISTRATOR MILEAGE	20.72
				207.74
07/08/2025	19109	ION	GENERATOR BATTERY REPLACEMENT	175.00
07/08/2025	19110	KENT COMMUNICATIONS INC	2025 SUMMER TAX BILL PRINTING	1,241.20
07/08/2025	19111	BRENT KILPELA	ASSESSOR MILEAGE	67.76
07/08/2025	19112	LIVINGSTON CO. SHERIFF DEPART	BOARD MEETING SECURITY	210.00
07/08/2025	19113	CAROL MAKUSHIK	DEPUTY ASSESSOR MILEAGE	48.61
07/08/2025	19114	CHLORIDE SOLUTIONS, LLC	DUST CONTROL - WARNER, FLEMING	1,415.35
07/08/2025	19115	MICRO WORKS COMPUTING, INC	TERESA OUTLOOK ASSISTANCE	40.00
07/08/2025	19116	MUTUAL OF OMAHA INSURANCE COM	JULY 2025	219.00
07/08/2025	19117	PERFECT MAINTENANCE	JULY 2025 CLEANING	195.00
07/08/2025	19118	PICTOMETRY INTERNATIONAL INC	2024 FLIGHT YEAR 2 (7/1/2025)	15,676.88
07/08/2025	19119	PRINTING SYSTEMS	MASTER CARDS, VOTER INFO CARDS	470.61
07/08/2025	19120	SPICER GROUP	Check Request For Bond: BSP25-0004	2,888.00
			Check Request For Bond: BSP25-0002	813.50
			Check Request For Bond: BSP21-0006	4,514.50
			Check Request For Bond: BSP24-0009	592.00
				8,808.00
07/08/2025	19121	SPRUNGTOWN OUTDOOR SERVICES	JUNE LAWN & LANDSCAPE SERVICES	5,250.00
07/21/2025	19122	ABSOPURE	3 BOTTLES OF WATER	35.80

Check Date	Check	Vendor Name	Description	Amount	
Bank GEN GENERAL FUND CHECKING					
			COOLER RENTAL JUNE 2025	12.00	
				47.80	
07/21/2025	19123	BS&A SOFTWARE	DEPUTY TREASURER GOVERNMENTAL ACCTG CLA	200.00	
			ONLINE SERVICES ANNUAL SUPPORT FEE 2025	5,093.00	
				5,293.00	
07/21/2025	19124	CARLISLE WORTMAN ASSOC, INC.	MONTHLY RETAINER FEE	1,100.00	
			GENERAL CONSULTATION	3,017.50	
			Check Request For Bond: BSP25-0005	345.00	
				4,462.50	
07/21/2025	19125	VANSTON / O'BRIEN, INC	Check Request For Bond: BSP21-0005	490.50	
07/21/2025	19126	PRECISION COMFORT	Check Request For Bond: BP25-0001	680.00	
07/21/2025	19127	CEMIFY	IMPLENTATION FEE FOR CEMETERY SOFTWARE	2,970.00	
07/21/2025	19128	CINTAS CORPORATION	BLUE MATS	124.57	
07/21/2025	19129	BLUE CARE NETWORK	Remittance Check	5,184.59	
07/21/2025	19130	GANNETT MICHIGAN LOCALIQ	JUNE PUBLICATIONS	72.92	
07/21/2025	19131	CHLORIDE SOLUTIONS, LLC	DUST CONTROL FISHER RD	2,966.04	
07/21/2025	19132	SEI CONSTRUCTION CO	SERVICE CALL TO REPAIR DOORS	185.00	
07/21/2025	19133	SMART BUSINESS SOURCE, LLC	OFFICE CALENDARS, PENS, MOUSE, TONER, P	655.22	
07/21/2025	19134	SPICER GROUP	Check Request For Bond: BSP25-0004	1,492.00	
07/25/2025	101002057(E)	EMPOWER	Remittance Check	1,460.33	
07/25/2025	101002058(E)	FIRST NATIONAL BANK	Remittance Check	5,582.90	
07/25/2025	101002059(E)	HOWELL TOWNSHIP	Remittance Check	123.08	
07/25/2025	101002060(E)	AMERICAN FUNDS	Remittance Check	3,583.21	
07/25/2025	101002061(E)	TREASURY STATE OF MICHIGAN	Remittance Check	1,858.84	
GEN TOTALS:					
Total of 41 Checks:				84,735.02	
Less 0 Void Checks:				0.00	
Total of 41 Disbursements:				84,735.02	
Bank T&A TRUST & AGENCY CHECKING					
07/02/2025	3681	HOWELL PARKS AND RECREATION	DPPT JAN-JUNE 2025	914.44	
07/02/2025	3682	HOWELL AREA FIRE AUTHORITY	DPPT JAN-JUNE 2025	7,878.46	
07/02/2025	3683	HOWELL CARNEGIE LIBRARY	DPPT JAN-JUNE 2025	4,055.48	
07/02/2025	3684	HOWELL PUBLIC SCHOOLS	DPPT JAN-JUNE 2025	19,907.64	
07/02/2025	3685	HOWELL PUBLIC SCHOOLS	DPPT JAN-JUNE 2025	18,433.84	
07/02/2025	3686	LIV EDUC SERVICE AGENCY	DPPT JAN-JUNE 2025	8,780.68	
07/02/2025	3687	LIVINGSTON COUNTY TREASURER	MOBILE HOME FEES	845.00	
07/02/2025	3688	LIVINGSTON COUNTY TREASURER	DOG LICENSES	23.50	
07/02/2025	3689	LIVINGSTON COUNTY TREASURER	DPPT JAN-JUNE 2025	24,680.68	V
07/09/2025	3690	STATE OF MICHIGAN	DPPT JAN-JUNE 2025	12,109.60	
07/09/2025	3691	LIVINGSTON COUNTY TREASURER	DPPT JAN-JUNE 2025	12,571.08	
T&A TOTALS:					
Total of 11 Checks:				110,200.40	
Less 1 Void Checks:				24,680.68	

CHECK REGISTER FOR HOWELL TOWNSHIP

CHECK DATE 07/01/2025 - 07/31/2025

Check Date	Check	Vendor Name	Description	Amount
Bank T&A TRUST & AGENCY CHECKING				
Total of 10 Disbursements:				85,519.72
Bank TAX TAX CHECKING				
07/16/2025	6125	HOWELL PUBLIC SCHOOLS	2025 SUMMER TAXES 7/1/25 - 7/15/2025	75,177.01
07/16/2025	6126	HOWELL PUBLIC SCHOOLS	2025 SUMMER TAXES 7/1/25 - 7/15/2025	44,378.24
07/16/2025	6127	LIV EDUC SERVICE AGENCY	2025 SUMMER TAXES 7/1/25 - 7/15/2025	53,033.76
07/16/2025	6128	LIVINGSTON COUNTY TREASURER	2025 SUMMER TAXES 7/1/25 - 7/15/2025	100,691.78
07/16/2025	6129	LIVINGSTON COUNTY TREASURER	2025 SUMMER TAXES 7/1/25 - 7/15/2025	53,397.96
TAX TOTALS:				
Total of 5 Checks:				326,678.75
Less 0 Void Checks:				0.00
Total of 5 Disbursements:				326,678.75
Bank UTYCK UTILITY CHECKING				
07/07/2025	3333	BYRUM ACE HARDWARE	WEED AND GRASS KILLER 1 GALLON	89.99
07/07/2025	3334	BRIGHTON ANALYTICAL	ANIONS	30.00
07/07/2025	3335	CITY ELECTRIC SUPPLY	4 TIME DELAY FUSE FOR TRANSFER SWITCH	85.16
07/07/2025	3336	CUMMINS SALES AND SERVICE	3888 OAKGROVE LS REPAIR	910.60
07/07/2025	3337	GENOA TOWNSHIP DPW	PLANT MAINTENANCE JULY 2025	30,920.92
07/07/2025	3338	PVS TECHNOLOGIES, INC	FERRIC CHLORIDE 50,000LB	9,093.13
07/07/2025	3339	REPUBLIC SERVICES	WASTE PICKUP SERVICE	127.47
07/07/2025	3340	TRUE VALUE	HOSE BARB	9.96
07/07/2025	59004168(E)	AT&T	WWTP INTERNET	128.04
07/07/2025	59004169(E)	CONSUMERS ENERGY	391 N BURKHART RD JUNE 2025	24.36
07/07/2025	59004170(E)	CONSUMERS ENERGY	2571 OAKGROVE RD JUNE 2025	148.86
07/07/2025	59004171(E)	DTE ENERGY	271 E HIGHLAND RD JUNE 2025	39.25
07/21/2025	3341	BYRUM ACE HARDWARE	LOCKS - 21 TOTAL	265.42
07/21/2025	3342	GENOA OCEOLA SWATH	LAB COSTS 4/1/2025 - 6/30/2025	3,669.60
07/21/2025	3343	GENOA TOWNSHIP DPW	ANNUAL VACTOR TRUCK USAGE	28,382.00
07/21/2025	3344	HI-TECH SAFE & LOCK COMPANY,	PUMP STATION KEYS	35.00
07/21/2025	59004172(E)	DTE ENERGY	391 N BURKHART JULY 2025	110.29
07/21/2025	59004173(E)	DTE ENERGY	1009 N BURKHART JULY 2025	215.43
07/21/2025	59004174(E)	DTE ENERGY	2571 OAKGROVE RD JULY 2025	527.35
07/21/2025	59004175(E)	DTE ENERGY	1034 AUSTIN CT JULY 2025	273.66
07/21/2025	59004176(E)	DTE ENERGY	3888 OAKGROVE JULY 2025	128.39
07/21/2025	59004177(E)	DTE ENERGY	2700 TOOLEY RD JULY 2025	259.31
07/21/2025	59004178(E)	DTE ENERGY	2559 W GRAND RIVER JULY 2025	271.66
07/21/2025	59004179(E)	DTE ENERGY	1216 PACKARD JULY 2025	35.12
07/21/2025	59004180(E)	DTE ENERGY	1575 N BURKHART JULY 2025	480.64
07/21/2025	59004181(E)	DTE ENERGY	1222 PACKARD JULY 2025	6,278.43
UTYCK TOTALS:				
Total of 26 Checks:				82,540.04
Less 0 Void Checks:				0.00
Total of 26 Disbursements:				82,540.04
REPORT TOTALS:				
Total of 83 Checks:				604,154.21
Less 1 Void Checks:				24,680.68
Total of 82 Disbursements:				579,473.53

✓ Agrees with Invoice Register BK

CHECK REGISTER FOR HOWELL TOWNSHIP

For Check Dates 07/01/2025 to 07/31/2025

Check Date	Bank	Check Number	Name	Check Gross	Physical Check Amount	Direct Deposit	Status
07/11/2025	GEN	DD6236	BRENT J. KILPELA	5,396.35	0.00	4,042.85	Open
07/11/2025	GEN	DD6237	CAROL A. MAKUSHIK	2,273.60	0.00	1,450.25	Open
07/11/2025	GEN	DD6238	JEFFREY A. SMITH	80.00	0.00	70.48	Open
07/11/2025	GEN	DD6239	SUSAN K. DAUS	1,605.49	0.00	1,160.49	Open
07/11/2025	GEN	DD6240	TANYA L. DAVIDSON	2,025.07	0.00	1,481.37	Open
07/11/2025	GEN	DD6241	MICHAEL CODDINGTON	1,409.33	0.00	934.17	Open
07/11/2025	GEN	DD6242	JONATHAN C. HOHENSTEIN	4,220.33	0.00	2,719.47	Open
07/11/2025	GEN	DD6243	TERESA M. MURRISH	2,101.28	0.00	1,550.22	Open
07/11/2025	GEN	DD6244	MARNIE E. HEBERT	2,314.26	0.00	1,892.95	Open
07/25/2025	GEN	DD6245	BRENT J. KILPELA	5,516.89	0.00	4,134.58	Open
07/25/2025	GEN	DD6246	CAROL A. MAKUSHIK	2,329.60	0.00	1,493.99	Open
07/25/2025	GEN	DD6247	MATTHEW E. COUNTS	508.92	0.00	448.36	Open
07/25/2025	GEN	DD6248	SHANE FAGAN	508.92	0.00	448.36	Open
07/25/2025	GEN	DD6249	ROBERT K. WILSON	508.92	0.00	448.36	Open
07/25/2025	GEN	DD6250	SUSAN K. DAUS	1,609.34	0.00	1,163.41	Open
07/25/2025	GEN	DD6251	TANYA L. DAVIDSON	2,204.26	0.00	1,599.82	Open
07/25/2025	GEN	DD6252	TIMOTHY C. BOAL	588.92	0.00	518.84	Open
07/25/2025	GEN	DD6253	SHARON LOLLIO	80.00	0.00	70.48	Open
07/25/2025	GEN	DD6254	MICHAEL W. NEWSTEAD	80.00	0.00	70.48	Open
07/25/2025	GEN	DD6255	ROBERT A. SPAULDING	80.00	0.00	70.48	Open
07/25/2025	GEN	DD6256	MATT STANLEY	80.00	0.00	70.48	Open
07/25/2025	GEN	DD6257	WAYNE R. WILLIAMS JR	80.00	0.00	73.88	Open
07/25/2025	GEN	DD6258	MICHAEL CODDINGTON	1,409.33	0.00	934.16	Open
07/25/2025	GEN	DD6259	JONATHAN C. HOHENSTEIN	4,289.33	0.00	2,765.06	Open
07/25/2025	GEN	DD6260	TERESA M. MURRISH	2,168.36	0.00	1,594.55	Open
07/25/2025	GEN	DD6261	MARNIE E. HEBERT	2,325.29	0.00	1,901.37	Open
Report Total:				45,793.79	0.00	33,108.91	
			Number of Checks	26			
			Total Physical Checks	0			
			Total Check Stubs	26			