Regular Meeting of the Mt. Pleasant City Commission Monday September 23, 2024 7:00 p.m.

AGENDA

CALL TO ORDER:
PLEDGE OF ALLEGIANCE:
LAND ACKNOWLEDGEMENT STATEMENT:
ROLL CALL:

PROCLAMATIONS AND PRESENTATIONS:

- 1. Introduce and swear in Mt. Pleasant Police Officer Kyle Eisenberger.
- 2. Proclamation recognizing Indigenous Peoples' Day (October 14, 2024).

ADDITIONS/DELETIONS TO AGENDA:

PUBLIC INPUT ON AGENDA ITEMS:

RECEIPT OF PETITIONS AND COMMUNICATIONS:

- 3. Receipt of Experimental Aircraft Association EAA's rent-free lease for City-owned hangar 2024 benefits.
- 4. Minutes of the Planning Commission (July and August).

CONSENT ITEMS:

- 5. Approval of minutes from the regular meeting held September 9, 2024.
- 6. Approval of minutes from the closed session held September 9, 2024.
- 7. Approve designation of Marilyn Wixson as Deputy City Clerk.

All interested persons may attend and participate. Persons with disabilities who need assistance to participate may call the Human Resources Office at 989-779-5313. A 48-Hour advance notice is necessary for accommodation. Hearing or speech impaired individuals may contact the City via the Michigan Relay Service by dialing 7-1-1. Public Comment and Public Hearings are opportunities for the public to comment on business and non-business items. Questions will not be answered during these times and instead should be directed to City Hall staff during normal business hours.

City Commission Agenda Monday, September 23, 2024 Page 2

- 8. Consider Changing Signatory Authorized to Transact Business of the City Bank Accounts.
- 9. Consider approval of Payrolls and Warrants.

PUBLIC HEARINGS:

- 10. Public hearing to allow for public input and adopt section 110.27 (Vendors) in the City of Mt. Pleasant Code of Ordinances and set fee schedule as presented.
- 11. Public hearing to allow for public input and adopt section 110.28 (Transitory Food Service Units) in the City of Mt. Pleasant Code of Ordinances and set fee schedule as presented.

NEW BUSINESS:

12. Consider prioritization and approval of submission of City requests for fall 2024 Saginaw Chippewa Indian Tribe 2% allocation.

ANNOUNCEMENTS ON CITY-RELATED ISSUES AND NEW BUSINESS:

PUBLIC COMMENT ON AGENDA AND NON-AGENDA ITEMS:

RECESS:

WORK SESSION:

13. Proposed 2025 Operating Budget Presentation.

13. Froposed 2023 Operating Budget Fresentation

RECESS:

CLOSED SESSION:

ADJOURNMENT:

All interested persons may attend and participate. Persons with disabilities who need assistance to participate may call the Human Resources Office at 989-779-5313. A 48-Hour advance notice is necessary for accommodation. Hearing or speech impaired individuals may contact the City via the Michigan Relay Service by dialing 7-1-1. Public Comment and Public Hearings are opportunities for the public to comment on business and non-business items. Questions will not be answered during these times and instead should be directed to City Hall staff during normal business hours.

TO: MAYOR AND CITY COMMISSION SEPTEMBER 23, 2024

FROM: AARON DESENTZ, CITY MANAGER

SUBJECT: CITY MANAGER REPORT ON AGENDA ITEMS

Proclamations and Presentations:

Receipt of Petitions and Communications:

Consent Items:

7. Approve designation of Marily Wixson as Deputy City Clerk

- a. With the resignation of Finance Director Chris Saladine (who has served as the Deputy Clerk), the City Commission is asked to appoint Marilyn Wixson as the Deputy Clerk in the interim. Marilyn has worked under the City Clerk for several years and has experience in working elections. She is willing and able to serve in this capacity.
- 8. Consider Changing Signatory Authorized to Transact Business of the City Bank Accounts.
 - a. With the resignation of Finance Director Chris Saladine, the City will be losing a designated signatory authorized for the City's bank accounts. The City Commission is asked to authorize the individuals listed in the Resolution as signatories for the City's bank accounts.

Public Hearings:

- 10. Public hearing to allow for public input and adopt section 110.27 (Vendors) in the City of Mt. Pleasant Code of Ordinances and set fee schedule as presented.
 - a. The City Commission is asked to consider the approval of several proposed changes to the City's Vendor ordinance. The proposed modifications attempt to capture desired changes offered by the City Commission as part of a work session held in May this year and feedback from the City Commission provided in August. Vendors would need to obtain a license and the sale of animals would be prohibited outside of actions taken by accredited non-profit organizations. Additionally, based on the input received in August, staff has proposed a revised tiered fee schedule of \$550 and \$350 to be adopted with the ordinance.
 - i. <u>Recommended Action</u>: After the public hearing a motion to adopt the ordinance and revised fee schedule as presented.
- 11. Public hearing to allow for public input and adopt section 110.28 (Transitory Food Service Units) in the City of Mt. Pleasant Code of Ordinances and set fee schedule as presented.
 - a. The City Commission is asked to consider the approval of several proposed changes to the City's Transitory Food Service Units ordinance. The proposed modifications attempt to capture desired changes offered by the City Commission as part of a work session held in May this year and feedback from the City Commission provided in August. Operators of transitory food service units would need to obtain a license and adhere to

the rules established in the ordinance around time and location of service. Additionally, based on the input received in August, staff has proposed a revised tiered fee schedule of \$550 and \$350 to be adopted with the ordinance.

i. <u>Recommended Action</u>: After the public hearing a motion to adopt the ordinance and revised fee schedule as presented.

New Business:

- 12. Consider prioritization and approval of submission of City requests for fall 2024 Saginaw Chippewa Indian Tribe 2% allocation.
 - a. The City Commission annually reviews staff requests for 2% Allocation Grants through the Saginaw Chippewa Indian Tribe. Proceeds from certain types of gaming are offered by the SCIT as part of this grant program. As part of this review the City Commission is asked to rank the top five (5) projects for consideration from the Tribe. The City Commission packet from 09/09/2024 included all of the applications that staff has prepared. At the upcoming meeting, each Commissioner will state their top five (5) projects that are a priority for them. Staff will then provide the collective top 5 ranking to the Tribe while submitting all of the grant applications. The Tribal Council considers these priority projects listed by the City Commission when making their awards.
 - i. <u>Recommended Action</u>: Feedback on the top 5 projects is needed from each City Commissioner.

Work Session:

- 13. Proposed 2025 Operating Budget Presentation.
 - a. I will present the highlights of the 2025 proposed operating budget. The presentation will include a review of the General Fund, Special Revenue Funds, and Enterprise Funds. The Clty Commission will be asked to engage in a discussion around several City services and provide feedback and thoughts on the proposed budget. A follow-up work session on the budget will be scheduled for October 15th.

Closed Session:

PROCLAMATION

WHEREAS, the Indigenous peoples of this land have inhabited these territories for thousands of

years, cultivating vibrant cultures, traditions, and rich histories that are integral to the

fabric of our nation; and

WHEREAS, the injustices and hardships endured by Indigenous peoples throughout history,

including forced displacement, violence, and discrimination, have left lasting scars; and

WHEREAS, we honor the resilience and strength of Indigenous peoples who have persisted in the

face of adversity, preserving their languages, customs, and spiritual practices for future

generations; and

WHEREAS, we acknowledge that Indigenous Peoples Day provides an opportunity for all individuals

to learn about the diverse cultures, languages, and traditions of Indigenous peoples and to engage in meaningful dialogue to promote understanding, respect, and

reconciliation;

NOW, THEREFORE, I, Amy Perschbacher, Mayor of the City of Mt. Pleasant do hereby recognize October 14,

2024, as a day of remembrance for Indigenous Peoples; and

FURTHER, The Mt. Pleasant City Commission encourages our residents to reflect upon and

recognize the ongoing struggles and challenges faced by Indigenous communities and

stand in solidarity with them.

AND FURTHER, The City of Mt. Pleasant City Commission recognizes the value of working collaboratively

together with the Saginaw Chippewa Indian Tribe and looks forward to fostering a spirit

of inclusivity, respect, and cooperation within our community.

In Witness Whereof, I hereunto set my hand and the Great Seal of the City of Mount Pleasant, Michigan, this 23rd day of

September 2024.

Amy Perschbacher, Mayor
City of Mount Pleasant, Michigan



TO: Aaron Desentz, City Manager

FROM: Jason Moore, DPW Director

DATE: September 11, 2024

SUBJECT: Experimental Aircraft Association Chapter 907

Lease Renewal Benefits Update

Approximately seven years ago, the Experimental Aircraft Association (EAA) Chapter 907 moved into one of the oldest hangars at the Mt. Pleasant Municipal Airport. They spent approximately \$5,000 and 100 man hours cleaning, repairing, and modifying the hangar to be a usable space. The EAA continues to maintain the hangar and complete minor repairs when needed.

In 2019, the EAA began construction of a home-built aircraft in the hangar. Local youth participate in the project on Saturdays, with an average of five attending each session. Several EAA members donate their time, tools and expertise and, when complete, it will be a fully functioning experimental aircraft. The aircraft is currently in the final phase of construction and almost ready to fly.

The EAA's Young Eagles program offers youth ages 8-17 the opportunity to learn about avionics and inspires them to consider careers in the aviation field. The EAA pilots volunteer their time and aircraft, at an average cost of \$35-40 per hour. To date, more than 1,000 youth have participated in the annual Young Eagles events.

EAA members also assist the airport manager with airport tours and job shadowing to students and other groups to learn about the day-to-day airport operations, as well as the mechanics of flying an airplane. Some of the EAA pilots have allowed students to sit in and work the controls of their personal aircraft.

The EAA is not solely focused on youth-based activities or events. The annual Fly In/Drive-In Breakfast brings over 100 visitors and 30 aircraft to the airport, while the annual Wings and Wheels event allows an estimated 300 attendees to observe 100 classic cars and 40-50 aircraft. Wings and Wheels is open to the public and all proceeds benefit the EAA's scholarship fund and St. Jude Children's Research Hospital. Unfortunately, we are not able to host the Wings and Wheels event in 2024 due to the reconstruction of the taxiways.

In conclusion, the EAA has been a valued partner in providing fun and educational opportunities and activities at the airport that are well-attended and enjoyed by the participants. The decision to allow the EAA to occupy the hangar free of charge has proven beneficial to the City, and I recommend they be allowed to do so for another year.

Mt. Pleasant Planning Commission Minutes of the Regular Meeting July 11, 2024

I. Vice Chair Ortman called the meeting to order at 7:00 p.m.

Present: Haveles, Irwin, Kingsworthy, Liesch, Nicholas, Ortman

Absent: Devenney, Friedrich, Hoenig

Staff: Manuela Powidayko, Susan Tham

II. Approval of the Agenda:

Motion by Haveles, support by Irwin to approve the agenda.

Motion approved unanimously.

III. Approval of the Minutes:

A. June 6, 2024 Regular Minutes

Motion by Kingsworthy, support by Irwin to approve the minutes from the June 6, 2024 regular meeting as presented.

Motion approved unanimously.

IV. Zoning Board of Appeals report for June:

Commissioner Haveles reported that the ZBA did not meet in June.

V. Communications:

Powidayko reported that there were no communications to report.

VI. Public Hearings:

A. TC-24-01 – A proposed ordinance to amend Table 154.405.A of the zoning ordinance regarding building standards in commercial districts and related Sections.

Powidayko introduced the proposed ordinance to amend Table 154.405.A of the zoning ordinance regarding building standards in commercial districts and related Sections.

Powidayko recapped what was discussed last year in the September 1 and November 2, 2023 work sessions and the proposed modification from the June 6, 2024 regular meeting. There was general agreement to pursue an amendment to the City's building standards that apply within Commercial Districts to provide additional flexibility for the design of commercial and mixed-use buildings along major commercial corridors and in certain instances, within Downtown sites.

More specifically, the Planning Commission agreed with the following amendments (Note: Items marked with an * exclude Downtown properties):

1. Frontage buildout rules:

- Allow the 60% Buildout rule to be reduced in certain instances (narrow lots, greater site access needs/design limitations)*
- Clarify that the 60% Buildout is only applicable to Principal Frontages
- Give more flexibility for projects to determine their Principal Frontage to enable designs that better match context.

2. Regulations governing the interior of buildings:

- Remove the exiting 11' min ceiling height requirement
- Replace the min 2-story requirement & min 25' height requirement with a min 24' height requirement*

3. Setback rules*:

- Remove the 0' mandatory front setback for corners*
- Remove of the 24' maximum side setback requirement*

4. Additional items:

• Change the current 5% Administrative Dimensional Waiver to 10%.

Powidayko closed her presentation with the requested action for the Planning Commission to recommend that the City Commission adopts Text Change 24-01.

Discussion took place.

Motion by Irwin, support by Haveles to recommend that the City Commission adopts Text Change 24-01.

Ayes: Haveles, Irwin, Kingsworthy, Liesch, Nicholas, Ortman

Nays: None

VII. Site Plan Review

A. None

VIII. Public Comments:

Vice Chair Ortman opened the public comment. Powidayko noted that there were no public comments submitted via zoom or electronically. There being no one who wished to speak, public comment was closed.

IX. Unfinished Business:

A. None

X. New Business:

A. Presentation by Progressive Companies about the Mission Street Improvement Plan's existing conditions evaluation and community survey results.

Powidayko introduced Jason Ball, the Senior Planner from Progressive Companies who are the planning consultants that have been facilitating the development of a Mission Street Improvement Plan. Powidayko introduced the topic of the day: an update about the Mission Street Improvement Plan's existing conditions evaluation and community survey results, which concludes the first milestone for the project.

Ball presented a summary of the following items:

- Evaluation of previous plans and studies that had been completed previously, highlighting concepts that are still relevant today and those that must be changed;
- Demographic changes since the previously adopted Master Plan, including analysis of how those relate to CMU's enrollment reduction and new trends that have been identified of segments of the population that have been recently increasing, and potential opportunities into housing policy, and the Mission Street corridor:
- Results of the walk audit and the strengths/weaknesses, and opportunities/challenges (SWOC) analysis, completed by the Mission Street Improvement Plan Steering Committee;
- Evaluation of corridor's existing physical conditions as it related to sidewalks, right-of-way widths, block structures, land uses, traffic and crash data;
- Results of the community-wide survey, which closed on May 31, 2024.

He then closed the presentation summarizing the following emerging themes:

- Safety is a top concern.
- MDOT is a willing and collaborative partner.
- There is a strong desire for improvement, but it must strike a balance between aspirational vision and current constraints.
- There are opportunities to enhance land uses, but they vary block-by-block.
- Enhancing connections to destinations is critical (to not through).
- Mt. Pleasant has policy tools and opportunities to impact significant change, but taking a phased approach is a must.

Ball concluded his presentation by announcing the next steps, which will be to develop conceptual designs and policy options during the summer, and hold a public input and education event on September. He then opened for questions.

Discussion took place.

XI. Other:

A. Staff Report

a. Administrative Review Report

Powidayko reviewed the three administrative site plan reviews that staff had approved in June. The first was the approval of SPR-24-08 for new asphalt areas, parking stripping and layout, new dumpster, and gravel replacement for the current Etna Supply Company at 3709 S Isabella Rd. The second was the approval of SPR-24-09 for the conversion of a former Tim Hortons drive-through to a new Starbucks drive-through (new dumpster, drive-through equipment, patio railings and façade renovations) at 1723 S Mission. The third was SPR-24-11 for the conversion from a three- to a four-unit building (new trees, bicycle parking, and additional roller cart within existing screened area) at 1004 S University.

XII. Adjournment:

Motion by Liesch, support by Haveles to adjourn.

Motion approved unanimously.

Meeting adjourned at 7:51 p.m.

sst

Mt. Pleasant Planning Commission Minutes of the Regular Meeting August 1, 2024

I. Chair Hoenig called the meeting to order at 7:11 p.m.

Present: Haveles, Hoenig, Irwin, Kingsworthy

Absent: Devenney, Friedrich, Liesch, Nicholas, Ortman

Staff: Manuela Powidayko, Susan Tham

Powidayko stated there being no quorum, Chair Hoenig was to entertain the motion to adjourn.

II. Adjournment:

Motion by Haveles, support by Irwin to adjourn.

Motion approved unanimously.

Meeting adjourned at 7:12 p.m.

sst

Minutes of the regular meeting of the City Commission held Monday, September 9, 2024, at 7:00 p.m., in the City Commission Room, 320 W. Broadway St., Mt. Pleasant, Michigan with virtual options.

Mayor Perschbacher called the meeting to order.

The Pledge of Allegiance was recited.

Land Acknowledgement statement was recited.

Commissioners Present: Mayor Amy Perschbacher and Vice Mayor Mary Alsager; Commissioners Liz Busch, Bryan Chapman, Maureen Eke, Grace Rollins & Boomer Wingard

Commissioners Absent: None

Others Present: City Manager Aaron Desentz and City Clerk Heather Bouck

Proclamations and Presentations

1. Presentation by Jim McBryde on Middle Michigan Development Corporation's (MMDC) 2023 Annual Report.

Additions/Deletions to Agenda

Moved by Commissioner Wingard and seconded by Vice Mayor Alsager to add Item #14 "Maner Costerisan Engagement Letter" to the agenda. Motion unanimously approved.

Moved by Commissioner Eke and seconded by Commissioner Wingard to approve the agenda as amended. Motion unanimously adopted.

Public Input on Agenda Items

Bill Gerstenlauer, 1514 Gaylord St., inquired if the MMDC would have any benefit from the results of the Placer.ai information.

Receipt of Petitions and Communications

Received the following petitions and communications:

2. Monthly report on police related citizen complaints received.

Moved by Commissioner Eke and seconded by Commissioner Rollins to approve the following items on the Consent Calendar:

- 3. Minutes of the regular meeting of the City Commission held August 26, 2024.
- 4. Receive Fall 2024 Saginaw Chippewa Indian Tribe 2% funding requests from City departments. No action required at this time.
- 5. Receive proposed 2025 Annual Operating Budget and set a public hearing for Monday, November 11, 2024 at 7:00 p.m. on same.
- 6. Resolution to amend 2024 Operating Budget as follows:

WHEREAS, Article VII, Section 10 authorizes the City Commission to amend the annual operating budget by resolution, and

WHEREAS, the 2024 operating budget was originally adopted by resolution on November 27, 2023 and

WHEREAS, the activities of the City since the budget was adopted have been such as to necessitate an amendment at this time, during the year beginning January 1, 2024 and ending December 31, 2024;

NOW THEREFORE, BE IT RESOLVED, that the following revenue and expenditure appropriations be approved and the 2024 operating budget be amended, effective immediately.

	Fund Balance <u>January 1</u>	2024 Revenue	2024 Expenditures	Fund Balance <u>December 31</u>
GOVERNMENTAL FUNDS				
GENERAL FUND				
Unassigned	\$6,090,875	\$15,825,367		
Legislative Division			1,304,880	
Finance Division			2,494,450	
Public Safety Division			7,904,660	
Community Services Division			3,338,200	
Public Works Division			849,300	
Amount from Fund Balance		*	(69,030)	*****
Total Unassigned	\$6,090,875	\$15,825,367	\$15,822,460	\$6,093,782
Assigned for Next Year's Budget	69,030	0	69,030	0
Assigned for Economic Initiatives	721,088	0	0	721,088
Assigned for Projects/Programs	3,349,668	1,301,950	136,410	4,515,208
Restricted	895,564	266,933	181,840	980,657
Committed for Special	005 740	0	0	005 740
Assessments	335,718	0	0	335,718
Committed for Neighborhoods	144,556	0	100,000	44,556
Committed for Capital Projects	3,015,741	2,125,860	2,193,880	2,947,721
Non-spendable	671,227	0	0	671,227
Total General Fund	\$15,293,467	\$19,520,110	\$18,503,620	\$16,309,957
SPECIAL REVENUE FUNDS				
MAJOR STREET FUND				
Restricted	\$1,391,752	1,979,880	2,292,310	\$1,079,322
Restricted for Donation	15,400	0	15,400	0
Total Major Street Fund	1,407,152	1,979,880	2,307,710	1,079,322
LOCAL STREET FUND				
Restricted	868,581	1,437,660	1,410,320	\$895,921
Restricted for Donation	15,210	0	15,210	0
Total Local Street Fund	883,791	1,437,660	1,425,530	895,921
OPIOID SETTLEMENT FUND	•	•	•	
Restricted	15,443	19,600	0	35,043
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DOWNTOWN SPECIAL ASSESSMENT Restricted from Special 154,736 105,320 131,710 Assessment 128,346 **Total Governmental Funds** Appropriated Budget \$17,754,589 \$23,062,570 \$22,368,570 \$18,448,589 Fund Fund Balance 2024 2024 Balance December 31 Expenditures December 31 Revenue **CAPITAL PROJECT FUNDS** STORM SEWER FUND Committed -21,285 574,000 552,000 715 Total Storm Sewer Fund -21,285 574,000 552,000 715 **Capital Project Funds Informational Summaries** -\$21,285 \$574,000 \$552,000 \$715 **Component Units** MISSION STREET DDA FUND \$1,614,070 \$415,510 \$255,700 Assigned \$1,773,880 TAX INCREMENT FIN AUTH FUND Ind Park North Assigned 90,000 0 90,000 0 Ind Park North Unassigned 6,392 0 6,392 0 0 Total TIFA 96,392 96,392 **BROWNFIELD REDEVELOPMENT FUND** 14,194 14,194 Assigned 53,520 53,520 Unassigned 300 358 58 **Total Brownfield** 14,252 53,820 53,520 14,552 **Total Component Unit Funds Informational Summaries** \$1,724,714 \$469,330 \$405,612 \$1,788,432 Working Sources of Uses of Working Capital Working Working Capital December 31 Capital Capital December 31 **PROPRIETARY FUNDS Enterprise Funds** RECREATION FUND Restricted for PEAK 10,400 10,400 0 0 Assigned for PEAK 1,244,750 553,550 843,390 954,910 Restricted for Recreation 0 0 0

712,780

1,266,330

117,614

1,372,764

722,820

1,576,610

107,574

1,062,484

Assigned for Recreation

Total Recreation Fund

LAND DEVELOPMENT FUND				
Restricted	\$50,000	0	0	\$50,000
Unassigned	9,141	90,980	86,780	13,341
Total Land Development	59,141	90,980	86,780	63,341
AIRPORT FUND				
Restricted	212,527	180,000	147,481	245,046
Assigned	82,519	0	82,519	0
Unassigned	306,127	3,155,610	3,336,670	125,067
Total Airport	601,173	3,335,610	3,566,670	370,113
WATER RESOURCE RECOVER	RY FUND			
Assigned	2,662,288	150,000	373,150	2,439,138
Restricted	800,220	10,375,440	10,875,660	300,000
Unassigned	2,776,990	3,638,680	2,962,800	3,452,870
Total Water Resource Recovery				
Fund	6,239,498	14,164,120	14,211,610	6,192,008
WATER FUND				
Assigned	1,728,043	949,000	1,732,880	944,163
Restricted	25,000	0	0	25,000
Unassigned	2,892,433	3,218,140	3,764,860	2,345,713
Total Water	3,209,355	4,167,140	5,497,740	3,314,876
SOLID WASTE FUND				
Restricted	200,000	0	0	200,000
Unassigned	819,638	667,170	830,270	656,538
Total Solid Waste	1,019,638	667,170	830,270	856,538
Internal Service Funds				
MOTOR POOL FUND				
Unassigned	555,789	846,330	602,410	799,709
SELF INSURANCE FUND	695,559	2,916,100	3,263,900	347,759
Total Proprietary Funds				
Informational Summaries	\$13,752,917	\$27,453,780	\$29,635,990	\$13,006,828

- 7. Received proposed ordinance to amend Section 110.27 Vendors and to set a public hearing to allow for public input on said ordinance amendment for Monday, September 23, 2024 at 7:00 p.m.
- 8. Received proposed ordinance to amend Section 110.28 Transitory Food Service Units and to set a public hearing to allow for public input on said ordinance amendment for Monday, September 23, 2024 at 7:00 p.m.
- 9. Warrants and payrolls dated August 23 & 26 and September 5, 2024 all totaling \$938,352.76.

Motion unanimously adopted.

A public hearing was held to consider proposed ordinance to amend Table 154.405.A District Standards: CD-4 General Urban, and CD-5 Urban Central Character Districts and related sections in Article IV: Building and Lot Plans & Standards, Article VI: Administration & Enforcement and Article VII: Definitions of the Mount Pleasant Zoning Ordinances regarding Setbacks and Building Standards. Tim Bebee, Central Michigan Surveying, 2257 E. Broomfield, expressed his appreciation to be involved in the discussion of this change. There being no additional public comments or communications received, the Mayor closed the public hearing.

Moved by Commissioner Wingard to approve the proposed Ordinance removing the minimum height requirement of a second story. Motion dies from lack of support.

Moved by Commissioner Chapman and seconded by Commissioner Rollins that Ordinance 1098 an Ordinance to amend Table 154.405. A District Standards: CD-4 General Urban, and CD-5 Urban Central Character Districts and related sections in Article IV: Building and Lot Plans & Standards, Article VI: Administration & Enforcement and Article VII: Definitions of the Mount Pleasant Zoning Ordinances having been introduced and read, now be passed, ordained and ordered published.

AYES: Alsager, Busch, Chapman, Eke, Perschbacher & Rollins

NAYS: Wingard ABSENT: None Motion carried.

A public hearing was held to consider proposed ordinance to amend Title V: PUBLIC WORKS, Chapter 52: WATER of the City's Code of Ordinances to add a new section entitled *Administration and Enforcement*. There being no public comments or communications received, the Mayor closed the public hearing.

Moved by Commissioner Eke and seconded by Commissioner Chapman that Ordinance 1099 an Ordinance to amend Title V: PUBLIC WORKS, Chapter 52: WATER of the City's Code of Ordinances having been introduced and read, now be passed, ordained and ordered published.

AYES: Alsager, Busch, Chapman, Eke, Perschbacher, Rollins & Wingard

NAYS: None ABSENT: None

Motion unanimously adopted.

A public hearing was held to consider proposed Ordinance to amend Title XV: LAND USE, Chapter 152: HOUSING LICENSING CODE of the City's Code of Ordinances. Jennifer Slayton, 3300 Deerfield, thanked the Commission for protecting residents. There being no additional public comments or communications received, the Mayor closed the public hearing.

Moved by Commissioner Eke and seconded by Commissioner Rollins that Ordinance 1100 an Ordinance to amend Title XV: LAND USE, Chapter 152: HOUSING LICENSING CODE of the Code of Ordinances of the City of Mt. Pleasant having been introduced and read, now be passed, ordained and ordered published.

AYES: Alsager, Busch, Chapman, Eke, Perschbacher, Rollins & Wingard

NAYS: None ABSENT: None

Motion unanimously adopted.

Planning & Community Development Director Manuela Powidayko gave a presentation on the PRD Agreement.

Moved by Commissioner Chapman and seconded by Vice Mayor Alsager to approve the termination of the PRD Agreement for the southwest corner of Crawford and Broomfield as received. Motion unanimously adopted.

Moved by Commissioner Eke and seconded by Vice Mayor Alsager to approve the Maner Costerisan Engagement Letter as presented. Motion unanimously adopted.

Announcements on City-Related Issues and New Business

Commissioner Eke announced the Isabella County Human Rights Committee and the City of Mt. Pleasant will hold a peace walk and have presentations on 9/21/2024 from 4-7 pm which is International Peace Day.

Commissioner Wingard announced the City in partnership with CMU is hoping to plant trees in the spring of 2025 from seeds that come from the bombing of Hiroshima, Japan.

Public Comment on Agenda and Non-Agenda Items

Cynthia Kilmer, 219 N. Lansing St., provided information on an alleged sexual assault case from many years ago.

Marja Nothstine, 1361 S. Crawford, expressed her unhappiness with the vote on the school.

Joe Carreon, 109 N. Arnold, indicated he has been studying bicycle infrastructure and parking. He would like to see parking for bicycles increase and hopes the City does not see bike lanes as a fad. He would like to see a deadline for implementation on bike standards.

The Commission recessed at 9:00 p.m. and reconvened at 9:06 p.m.

WORK SESSION: Discussion on Climate Change Response Plan Goals & Objectives.

Manager Desentz provided a presentation. Discussion ensued.

The Commission recessed at 9:36 p.m. and reconvened at 9:38 p.m.

Moved by Mayor Perschbacher and seconded by Vice Mayor Alsager to enter into Closed Session pursuant to subsection 8(c) of the Open Meetings Act for strategy and negotiation sessions connected with the negotiation of a collective bargaining agreement.
AYES: Alsager, Busch, Chapman, Eke, Perschbacher, Rollins & Wingard NAYS: None ABSENT:None
Motion carried.
Closed session ended at 10:06 p.m. A separate set of minutes was taken for the closed session.
Moved by Commissioner Eke and seconded by Commissioner Alsager to adjourn the meeting at 10:07 p.m. Motion unanimously adopted.

Heather Bouck, City Clerk

Amy Perschbacher, Mayor



TO: Aaron Desentz, City Manager

FROM: Chris Witmer, Treasurer/Deputy Finance Director

DATE: September 16, 2024

SUBJECT: Consider Changing Signatory Authorized to Transact Business of the City Bank Accounts

Attached please find a depository resolution for the City Commission to consider at their meeting on September 23, 2024. This resolution will allow for updated banking institutions and signatories on the accounts.

Requested Action:

Approve the attached resolution so that staff may continue to work with the banking institutions to implement the appropriate authority.

The following resolution v	was offered by Commissioner	and supported by
Commissioner	:	

BE IT RESOLVED, that Isabella Bank, Isabella Wealth, Huntington Bank, Michigan Class and Independent Bank, or their successors (herein called the "Depositories") be, and are hereby designated, depositories of this city and that funds so deposited may be withdrawn upon a check, draft, note or order of the city,

BE IT FURTHER RESOLVED, that Christopher Saladine be removed from all depositories as a signatory for any checks, drafts, notes or orders drawn against said accounts.

BE IT FURTHER RESOLVED, that all checks, drafts, notes or orders drawn against said accounts, except as noted below, be signed and countersigned by any two of the following, with exception of the Flexible Spending and Health Care checking account, which do not require a countersignature:

Christine Witmer, Treasurer/Deputy Finance Director

Heather Bouck, City Clerk/Deputy Assessor

Michelle Sponseller, Downtown Development Director

Whose signatures have been duly certified to said depositories and that no checks, drafts, notes or orders drawn against said depositories shall be valid unless so signed.

BE IT FURTHER RESOLVED, that these designated individuals have authority to process the Automated Clearing House (ACH) transactions within bank accounts for electronic transfers.

CHECK REGISTER FOR CITY OF MT PLEASANT CHECK DATE FROM 09/06/2024 - 09/19/2024

Check Date	Vendor Name	Description	Amount
Pank COMM (COMMON CASH		
09/06/2024	DTE ENERGY	UTILITIES	0 170 62
			8,178.63
09/11/2024 09/11/2024	THELEN AUTO GROUP	RETIREMENT CAPITAL OUTLAY	7,272.50
09/11/2024			52,500.00
	CONSUMERS ENERGY	UTILITIES	82,640.70
09/16/2024	CITY TREASURER - UTILITIES	UTILITIES	11,987.38
09/19/2024	ISABELLA BANK	BOND PAYMENT	448,223.75
09/19/2024	CHRISTINE WITMER	REIMBURSEMENT	100.00
09/19/2024	MICHELLE SPONSELLER	REIMBURSEMENT	243.95
09/19/2024	SHAR RAPPUHN	REIMBURSEMENT	3.08
09/19/2024	21ST CENTURY MEDIA - MICHIGAN	PUBLICATIONS	1,107.03
09/19/2024	AIDAN MCCARTHY	CONTRACT SVCS	60.00
09/19/2024	AINSLEY KISTE	CONTRACT SVCS	60.00
09/19/2024	ALEXANDER KIMBALL	FARMERS MKT	470.00
09/19/2024	ALEXANDER MATTHEWS	REIMBURSEMENT	100.00
09/19/2024	ALMA BOLT COMPANY	SUPPLIES	84.83
09/19/2024	ALMA TIRE SERVICE INC	SUPPLIES	259.43
09/19/2024	AMY SHANER	FARMERS MKT	260.00
09/19/2024	AUDRA SZELAG	CONTRACT SVCS	75.00
09/19/2024	BATTERIES PLUS	SUPPLIES	21.25
09/19/2024	BEN DVORAK	CONTRACT SVCS	75.00
09/19/2024	BEN FUSSMAN	CONTRACT SVCS	90.00
09/19/2024	BILL KEHOE	FARMERS MKT	121.00
09/19/2024	BLOCK ELECTRIC COMPANY	CONTRACT SVCS	276.53
09/19/2024	BLOCK FARM OPERATIONS, LLC	CONTRACT SVCS	280,000.00
09/19/2024	BRAD DOEPKER	REIMBURSEMENT	82.00
09/19/2024	BROWN & BROWN INSURANCE SERVICES	CONTRACT SVCS	12,500.00
09/19/2024	BRUCE JORCK	FARMERS MKT	398.00
09/19/2024	C & O SPORTSWEAR	SUPPLIES	628.95
09/19/2024	CDW GOVERNMENT, INC	SUPPLIES	781.33
09/19/2024	CENTRAL CONCRETE INC	SUPPLIES	941.00
09/19/2024	CENTRAL MICHIGAN UNIVERSITY	CONTRACT SVCS	420.67
09/19/2024	CENTURYLINK	COMMUNICATIONS	10.84
09/19/2024	CINTAS CORP	SUPPLIES	127.46
09/19/2024	CITY TREASURER-CONTR RETAINAGE	CONTRACT SVCS	1,438.64
09/19/2024	CITY TREASURER-CONTR RETAINAGE	CONTRACT SVCS	222,968.83
09/19/2024	CLAYTON MOLYNEUX	CONTRACT SVCS	30.00
09/19/2024	COLTON DYSINGER	CONTRACT SVCS	90.00
09/19/2024	CORE TECHNOLOGY CORPORATION	CONTRACT SVCS	31,900.00

09/19/2024	COREY D WALTHER	FARMERS MKT	84.00
09/19/2024	COYNE OIL CORPORATION	FUEL	21,744.13
09/19/2024	DAN SODINI - MI GREAT LAKES FISH CO	FARMERS MKT	65.00
09/19/2024	DAVID GROTHAUSE	FARMERS MKT	40.00
09/19/2024	DAVID MCCLAIN	CONTRACT SVCS	75.00
09/19/2024	DAVID MCGUIRE	REFUND	150.00
09/19/2024	DAWN WINKELMAN	REIMBURSEMENT	37.32
09/19/2024	DIXON ENGINEERING, INC	CONTRACT SVCS	13,750.00
09/19/2024	ELIZA FABER	CONTRACT SVCS	15.00
09/19/2024	FIDELITY SECURITY LIFE INSURANCE CO	INSURANCE PREMIUMS	1,224.42
09/19/2024	FISHBECK - ENGINEERS/ARCHITECTS/	CONTRACT SVCS	23,342.50
09/19/2024	FITNESS THINGS	SUPPLIES	864.29
09/19/2024	FITNESS THINGS	SUPPLIES	3,568.42
09/19/2024	FLEX ADMINISTRATORS	FSA ADMINISTRATIVE FEE	231.00
09/19/2024	FREDRICKSON SUPPLY, LLC	SUPPLIES	4,582.93
09/19/2024	FRONTIER CMR CLAIMS DEPARTMENT	CONTRACT SVCS	3,042.85
09/19/2024	GALLS, LLC	UNIFORMS - POLICE	122.24
09/19/2024	GREEN SCENE LANDSCAPING, INC.	CONTRACT SVCS	2,514.29
09/19/2024	HANK MCDONALD	CONTRACT SVCS	60.00
09/19/2024	HARLEY BONTRAGER	FARMERS MKT	8.00
09/19/2024	HAVILAND PRODUCTS COMPANY	CHEMICALS	7,095.00
09/19/2024	HOLIDAY OUTDOOR DECOR	SUPPLIES	7,049.00
09/19/2024	HYDROCORP, INC.	INSPECTIONS/REPORTING SVCS	4,829.50
09/19/2024	INFOSEND, INC	CONTRACT SVCS	3,430.93
09/19/2024	JACK'S AUTO GLASS, INC.	SUPPLIES	439.00
09/19/2024	JOSEPH BRYANT	REIMBURSEMENT	100.00
09/19/2024	JOSH SCHAEFFER	FARMERS MKT	10.00
09/19/2024	KAMDEN WILLIAMS	CONTRACT SVCS	90.00
09/19/2024	KAREN FENTON	FARMERS MKT	21.00
09/19/2024	KAYA FLAHERTY	CONTRACT SVCS	45.00
09/19/2024	KIPP MOE	REIMBURSEMENT	149.00
09/19/2024	LACEY ORLANDO	FARMERS MKT	20.00
09/19/2024	LANDON ALEXANDER	FARMERS MKT	167.00
09/19/2024	LILLY PIERCE	CONTRACT SVCS	60.00
09/19/2024	LOGOS GALORE/MORDICA SALES	UNIFORMS	130.00
09/19/2024	LUCAS SZELAG	CONTRACT SVCS	90.00
09/19/2024	LUCY KEYES	CONTRACT SVCS	45.00
09/19/2024	MARK KARIMI	CONTRACT SVCS	60.00
09/19/2024	MARK KARIMI	CONTRACT SVCS	30.00 V
09/19/2024	MCLAREN CORPORATE SERVICES	CONTRACT SVCS	504.00
09/19/2024	MEAD & HUNT	CONTRACT SVCS	4,214.51
09/19/2024	MICHIGAN CHLORIDE SALES LLC	CONTRACT SVCS	1,981.54
09/19/2024	MICHIGAN DOWNTOWN ASSOCIATION	MEMBERSHIP	400.00
09/19/2024	MID MICHIGAN AREA CABLE	CONTRACT SVCS	450.00

09/19/2024	MID-MICHIGAN INDUSTRIES	CONTRACT SVCS	8,845.23
09/19/2024	MONCHILOV SEWER SERVICE, LLC	CONTRACT SVCS	133,326.00
09/19/2024	MOREY'S LOGO	CAPITAL OUTLAY	1,740.00
09/19/2024	MORGANN BOOTH	CONTRACT SVCS	90.00
09/19/2024	MOTOROLA SOLUTIONS, INC.	SUPPLIES	23.49
09/19/2024	MP AREA CHAMBER OF COMMERCE	TRAINING	50.00
09/19/2024	MRWA	TRAINING	360.00
09/19/2024	MRWA	TRAINING	920.00
09/19/2024	MT PLEASANT HEATING	CONTRACT SVCS	171.00
09/19/2024	MT PLEASANT KIWANIS CLUB	MEMBERSHIP	175.00
09/19/2024	MUFFLER MAN	SUPPLIES	432.62
09/19/2024	NCL OF WISCONSIN	CHEMICALS WRRF	1,203.25
09/19/2024	NOLAN CASZATT	CONTRACT SVCS	90.00
09/19/2024	NORTHERN MICHIGAN LAW ENFORCEMEN	SUPPLIES	6,455.56
09/19/2024	ODP BUSINESS SOLUTIONS LLC	SUPPLIES	213.66
09/19/2024	ORKIN	CONTRACT SVCS	132.99
09/19/2024	PAPAS PUMPKIN PATCH	FARMERS MKT	461.00
09/19/2024	PIONEER ATHLETICS	SUPPLIES	1,315.72
09/19/2024	PIVOT POINT PARTNERS LLC	CONTRACT SVCS	1,789.90
09/19/2024	PIYUSH SARAIYA	CONTRACT SVCS	30.00
09/19/2024	PVS TECHNOLOGIES, INC	CHEMICALS	10,051.25
09/19/2024	RACHEL MCCLINTIC-MARKETING &	CONTRACT SVCS	580.00
09/19/2024	RCL CONSTRUCTION CO. INC	CONTRACT SVCS	1,991,987.49
09/19/2024	REBECCA PARKER	FARMERS MKT	4.00
09/19/2024	REBECCA SWAREY	FARMERS MKT	10.00
09/19/2024	RENEE EARLE	FARMERS MKT	145.00
09/19/2024	RENT-RITE, INC - ALMA	CONTRACT SVCS	291.46
09/19/2024	RJTHOMAS MFG. CO., INC.	SUPPLIES	11,362.00
09/19/2024	ROMANOW BUILDING SERVICES	CONTRACT SVCS	14,372.75
09/19/2024	RON WIGGINS	REIMBURSEMENT	100.00
09/19/2024	RYLEIGH FOSTER	CONTRACT SVCS	105.00
09/19/2024	SARAH FAN	FARMERS MKT	23.00
09/19/2024	SARAH MARSHALL	REIMBURSEMENT	89.11
09/19/2024	SCOTT WAGER	REIMBURSEMENT	490.00
09/19/2024	STATE OF MICHIGAN	CONTRACT SVCS	165.00
09/19/2024	STERICYCLE, INC.	CONTRACT SVCS	707.51
09/19/2024	T.H. EIFERT, LLC	CONTRACT SVCS	9,551.84
09/19/2024	THOMAS DEBOER JR	FAMRERS MKT	45.00
09/19/2024	TINA CAPUSON	FAMRERS MKT	170.00
09/19/2024	TOP DOG CAR AUDIO CENTER	SUPPLIES	379.99
09/19/2024	TYLER HEARD	REIMBURSEMENT	100.00
09/19/2024	ULLIANCE, INC	CONTRACT SVCS	625.00
09/19/2024	UNIFIRST CORPORATION	CONTRACT SVCS	234.00
09/19/2024	USABLUEBOOK	SUPPLIES	4,373.66

09/19/2024	VIRGINIA ELIZABETH LOOSE	FAMRERS MKT	218.00	
09/19/2024	WSG ARCHITECT	CONTRACT SVCS	225.00	
09/19/2024	YEO & YEO TECHNOLOGY	CONTRACT SVCS	45,151.00	
09/19/2024	MICAH KARIMI	CONTRACT SVCS	30.00	
				
COMM TOTAL	_S:			
Total of 130 C	Checks:		3,522,872.13	
Less 1 Void C	checks:		30.00	
Total of 129 D	Disbursements:		3,522,842.13	



TO: Aaron Desentz, City Manager

CC: Heather Bouck, City Clerk

Chris Saladine, Finance Director

FROM: Michelle Sponseller, Downtown Development Director

DATE: September 9, 2024

SUBJECT: Hold Public Hearing and Set Fee Schedule – Vendor Ordinance (110.27)

In May, staff was tasked with updating two existing ordinances, 110.27 (Vendors) and 110.28 (Mobile Food Service Providers), to ensure they are clear and easy for applicants to follow. Staff believes that splitting the two ordinances is in the best interest of both applicants and staff, providing a clear delineation between them. The revised 110.27 (Vendors) will cover non-food items or items not intended for immediate consumption, while 110.28 (Transitory Food Service Units) will address ready-to-eat or immediately consumable food items.

Additionally, staff collected information from various communities across the state to compare data points such as fee structure, hours of operation, locations of operations, number of licenses, and proximity to brick-and-mortar restaurants. This data was used to ensure the ordinance is comprehensive and reflects the most up-to-date practices from around the state. Based on this information, staff developed tiered fee schedule, tailored to specific nuanced situations, rather than the current one-size-fits-all fee of \$1,000 and requested City Commission provide direction. At the August 12 meeting consensus was reached to revise the fee schedule, a copy of the revised fee schedule is attached with this packet.

Additionally, at the August 12, 2024 City Commission meeting a request was made to add language prohibiting the sale of animals. This new language appears in section 110.27e Regulations, item #5 Sale of Animals.

5. Sale of Animals: No Vendor shall sell, give, or offer to sell or give, any animal, except for Vendors that are 501(c)(3) charitable organizations whose primary purpose is animal care, rescue, and adoption. Such Vendors must comply with all applicable laws and regulations and must operate in a safe and sanitary manner for both humans and animals.

Synopsis of Key Changes in Vendor Ordinance

The proposed ordinance introduces several critical updates and additions compared to the previous vendor regulations:

- 1. Purpose: The new ordinance specifically targets vendors selling non-food items or items not intended for immediate consumption. It aims to encourage new businesses, reduce traffic congestion, and protect public health and safety.
- 2. Definitions:



- PEDDLER: The new definition excludes food vendors.
- TRANSIENT MERCHANT: Now explicitly excludes sales on city-owned property unless separately authorized.
- VENDORS: New exclusions for charitable fundraising stands and informal children's activities.

3. Permit Requirements:

- The new ordinance details application fees, background checks, inspections, and display requirements.
- Specific provisions for operations in city parks and vehicle regulations.

4. Application Process:

 Specifies application timelines, fee structures, required documentation, and insurance requirements.

5. Regulations:

 Permitted Areas of Operation: Vendors may operate throughout the City except in SD-A (Agriculture) districts.

• Hours of Operation:

- 1. Vendors are allowed to operate from 9 a.m. to 8 p.m. in most districts, including CD-3L, CD-3, CD-4, CD-5, CZ, SD-H, SD-I, SD-RC, SD-U, and PRD, unless part of an approved special event.
- 2. Vendors may operate anywhere in the City during special events or as part of the Farmers Market, with separate applications possibly required for Farmers Market participation.
- Quality of Goods: Vendors must not sell defective, faulty, or deteriorated items.
- **Inspections**: Annual inspections by the City of Mt. Pleasant Fire Department are required.
- **Vehicle Size**: Vendor vehicles or trailers must not exceed 36 feet in length and nine feet in width. Trailers must be detached from tow vehicles.
- **Service Window Location**: Service must be conducted from the side facing a curb, lawn, or sidewalk when parked on a street.
- Waste Management: Vendors must provide a waste container, collect, and dispose
 of all trash off-site daily. Gray water dumping on streets is prohibited.
- Noise: Operations must comply with City Noise Ordinance guidelines, including generator noise.
- Exterior Lighting: Must be shielded to direct illumination downward.
- **Signage**: Permitted signage includes vehicle wraps and one auxiliary sandwich board sign not exceeding six square feet in area and three feet in height, ensuring clear pedestrian pathways.
- Advertising of Alcoholic Beverages: Prohibited.
- Unattended Business: Vendors must not be left unattended and unsecured;
 violations may result in ticketing or towing.
- **Distance from Special Events**: Vendors must not operate within 500 feet of any fair, festival, or special event unless permitted by the event sponsor.



- Parking: Vendors must conform to parking restrictions and not hinder lawful parking or vehicle operation.
- **Pedestrian Traffic and Movement**: Vendors must maintain a clear pedestrian pathway of at least five feet.
- Vehicle Traffic and Movement: Vendors must not obstruct vehicular traffic or designated public parking.
- **Private Property**: Vendors may operate on private property with owner consent and compliance with the City Zoning Code.
- Awning/Signage Clearance: Must have a minimum clearance of eight feet.
- **Tents**: Tents exceeding 10' x 10' require a separate permit.
- **Utilities**: Vendors must be self-contained for power on public property and may use electrical power from private property with owner consent. Use of city electrical outlets, hydrants, or sewers is prohibited.
- **Emissions**: Only reasonable vapors, steam, or exhaust permitted.
- **Generator Use**: May be prohibited if deemed a nuisance or safety hazard; must comply with International Fire Code and have a fire extinguisher present.

Recommended Action

Hold a public hearing for September 23, 2024 to allow for public input and adopt section 110.27 (Vendors) in the City of Mt. Pleasant Code of Ordinances and set fee schedule as presented.

Attachments

- 1. Revised Draft Vendor Ordinance (110.27)
- 2. Revised Vendor Fee Options
- 3. Existing Vendor (110.27) Ordinance

CITY COMMISSION CITY OF MOUNT PLEASANT ISABELLA COUNTY, MICHIGAN

ORDINANCE §110-27

AN ORDINANCE TO A REGULATE THE OPERATION OF VENDORS AND THE ISSUANCE OF PERMITS, LICENSES, OR APPROVALS

IT IS HEREBY ORDAINED BY THE PEOPLE OF THE CITY OF MOUNT PLEASANT:

<u>Section 1. Amendment of Title XI: Business Regulations, Chapter 110: General Licensing,</u> Section 110.27: Vendors

Sections 110.27 of the City's Code is hereby amended in its entirety to read as follows:

Section 110.27a. Purpose

The purpose of this Ordinance is to establish regulations for Vendors selling non-food items or items not intended for immediate consumption in the City of Mt. Pleasant; to permit and regulate these units in various districts; to reduce vehicular and pedestrian traffic congestion; to encourage new business; and to protect the health, safety, and welfare of the City's residents and visitors.

Section 110.27b. Definitions

For the purposes of this section, the following definitions shall apply unless the context clearly indicates or requires a different meaning:

- **PEDDLER**: Any person who travels from place to place for the purpose of attracting customers, distributing literature, displaying, selling, offering for sale, leasing with the option to buy, taking orders for, or attempting to take orders for the retail sale of any goods, property, or services (excluding food) for current or future delivery. This includes persons traveling by foot, vehicle, wagon, cart, or any other means, and those using pushcarts or structures powered by bicycles or human power, with at least two operational wheels.
- **PERSON**: Any natural person, corporation, partnership, or entity with a common interest, including both principals and agents.
- TRANSIENT MERCHANT: Any person, firm, association, or corporation engaging temporarily in the retail sale of goods, wares, or merchandise in any place in the city and temporarily occupying any private lot, building, room, or structure. This excludes sales on city-owned property unless authorized under a separate written agreement.
- VENDORS: Any peddler or transient merchant, as defined in this section. This does not include persons selling at an art fair, farmers market, festival, or similar special event if the sponsor has obtained a Vendor's license and the person provides the sponsor of the special event with their sales tax license number.

These definitions exclude:

- Charitable Fundraising Stands: Tables or stands set up by 501(c)(3) charitable organizations for fundraising activities involving the sale of food products (e.g., bake sales, cookies, and popcorn). Such activities must comply with all applicable regulations and be conducted in a safe and sanitary manner.
- Informal Children's Activities: Activities such as children running lemonade stands or similar informal setups.

Section 110.27c. Permit Requirements

No Vendor may engage in the sale or distribution of goods, property, or services in the City on public or private property without first obtaining a permit from the City in the manner prescribed in this Ordinance. The requirements are as follows:

- **Application Fee**: The application fee will be set by resolution of the City Commission. All fees must be paid at the time the application is submitted.
- **Background Check**: Applicants must undergo a background check, for which a fee will be charged.
- **Inspection**: An inspection by the City of Mt. Pleasant Fire Department and/or Building Official is required before a permit is issued. This inspection will ensure compliance with safety and building standards.
- **Permit Display**: All permits issued must be available on site for inspection upon request by a City Public Safety Officer or City official and must be conspicuously displayed on the premises or any cart, stand, tent, booth, motorized vehicle, mobile trailer, or similar apparatus used in the business at all times.
- **City Park Operations**: Vendors operating in any City park must first secure written permission from the Parks Director before applying for a license and shall comply with all applicable park rental fees, rules, and regulations in compliance with Chapter 97 of this Ordinance.

Section 110.27d. Applications

- 1. Applications for a Vendor permit must be submitted no more than six months in advance and no less than five business days prior to the proposed operation date to the City Clerk.
- 2. Applications are to be on forms provided by the City and must state under oath such facts as may be required for, or applicable to, the granting of the permit.
- 3. The applicant must pay a fee set by the City Commission. Fees must be made payable to "The City of Mt. Pleasant."
- 4. Permits are valid until December 31 of each year.
- 5. A Vendor using any gas or liquid heating may not receive a permit until reviewed and inspected by the City of Mt. Pleasant Fire Department.
- 6. The application must include:
 - Name, signature, phone number, email contact, and business address of the applicant.
 - Date of inspection by the City of Mt. Pleasant Fire Marshal.
 - Information on each vehicle, trailer, unit, or other device, including year, make, model, vehicle identification number, vehicle or trailer registration plate number, and dimensions.
 - Proposed plans for power access, water supply, and wastewater disposal.

- Copies of all necessary licenses or permits issued by the Central Michigan District Health Department.
- Proof of a general comprehensive liability policy with limits of no less than \$1,000,000 combined single limit coverage and public liability and property damage motor vehicle policy with limits of no less than \$1,000,000, naming the City as an additional insured.

Section 110.27e. Regulations

All the following regulations must be followed by any Vendor operating in the City:

- 1. **Permitted Areas of Operation**: Vendors may be located throughout the City with the exception of SD-A (Agriculture) districts.
- 2. **Hours of Operation**: CD-3L (Sub-Urban Large Lot), CD-3 (Sub-Urban), CD-4 (General Urban), CD-5 (Urban Center), CZ (Civic), SD-H (Hospital), SD-I (Industrial), SD-RC (Research Center), SD-U (University), and PRD (Planned Residential Development) from 9 a.m. to 8 p.m., unless part of an approved special event.
- 3. **Special Events and Farmers' Market**: Vendors may be located anywhere in the City for a special event and/or as part of the Farmers Market. A separate application is necessary for participation in the Farmers Market.
- 4. **Quality of Goods**: No Vendor shall sell or offer for sale any defective, faulty, or deteriorated article of goods. All items must be in good working order, free from damage, and fit for their intended use.
- 5. Sale of Animals: No Vendor shall sell, give, or offer to sell or give, any animal, except for Vendors that are 501(c)(3) charitable organizations whose primary purpose is animal care, rescue, and adoption. Such Vendors must comply with all applicable laws and regulations and must operate in a safe and sanitary manner for both humans and animals.
- 6. **Hospitals and Schools**: No Vendor may operate within the right-of-way of a hospital or school entrance or within 150 feet of the main entrance unless written permission has been granted by the respective institution.
- 7. **Inspections**: The Vendor and/or equipment requiring inspection shall be inspected annually by the City of Mt. Pleasant Fire Department to verify compliance with the adopted International Fire Code with amendments.
- 8. **Vehicle Size**: A Vendor vehicle or trailer shall not exceed 36 feet in length and nine feet in width. Vendor trailers are required to be detached from the tow vehicle.
- 9. **Service Window Location**: Service shall be conducted from the side of the Vendor vehicle that faces a curb, lawn, or sidewalk when parked on a street. No service shall be provided on the driving-lane side unless part of an approved special event.

- 10. **Waste Management**: Vendor must provide a waste container for public use, which the operator shall empty at its own expense. All trash and garbage originating from the operation must be collected and disposed of off-site by the operators each day. Spills must be cleaned up immediately, and no dumping of gray water on the streets is allowed. The use of public and private dumpsters is forbidden unless the Vendor has obtained written permission from the owner.
- 11. **Noise**: The operations shall meet the guidelines established in the City Noise Ordinance, including generators. No loud music or other high-decibel sounds, horns, or amplified announcements are allowed.
- **12. Exterior Lighting**: All exterior lighting associated with the Vendor must be shielded to direct illumination downward.
- 13. **Signage**: Signage is allowed on the Vendor pursuant to City code. Additionally, one auxiliary sandwich board sign not exceeding six square feet in area and three feet in height is permitted. The auxiliary sign must not be placed in vehicle travel lanes and must maintain at least a five-foot clear pedestrian pathway. Signage affixed directly to the vehicle (such as vehicle wraps) is not regulated under the City's sign standards.
- 14. **Advertising of Alcoholic Beverages**: Vendors shall not offer or advertise the offering of beer, wine, or other alcoholic beverages.
- 15. **Unattended Business**: No Vendor shall be left unattended and unsecured. Any unattended Vendor shall be considered a public safety hazard and may be ticketed and/or towed at the owner's expense.
- 16. **Distance from Special Events**: A Vendor shall not operate within 500 feet of any fair, festival, special event, or civic event licensed or sanctioned by the City unless the Vendor has obtained permission from the event sponsor.
- 17. **Parking**: The issuance of a Vendor license does not grant or entitle the Vendor to exclusive use of any service route or parking space. When parked on public streets, units must conform to all applicable parking restrictions and not hinder the lawful parking or operation of other vehicles. No Vendor vehicle, trailer, or tent may be left overnight, or unattended on public property, unless specified in a special events permit.
- 18. **Pedestrian Traffic and Movement**: No Vendor may block, obstruct, restrict, or otherwise interfere with the flow of pedestrian foot traffic, movement, or access to public walkways, trails or public amenities. Five feet of clear pedestrian pathway must be retained.
- 19. **Vehicle Traffic and Movement**: No Vendor may block, obstruct, restrict, or otherwise interfere with the movement of vehicular traffic or designated public parking.
- 20. **Private Property**: Vendor may operate on private property only with owner consent and in compliance with the City Zoning Code.

- 21. **Awning/Signage Clearance**: When extended, Vendor awnings must have a minimum clearance of eight feet.
- 22. **Tents**: A Vendor tent exceeding 10' x 10" requires a separate tent permit from the City.
- 23. **Utilities**: Any power required for Vendor operation on public property must be self-contained. Vendor units on private property may use electrical power from the property with written consent from the property owner. Vendor operators are prohibited from utilizing any city electrical outlets, drawing water from city hydrants, or disposing of liquid wastes, including, but not limited to, grease, into storm or sanitary sewers. Power for the Vendor must be from an adequate source to function all necessary equipment.
- 24. **Emissions**: Only reasonable vapors, steam, or exhaust will be permitted to emit from the Vendor vehicle, trailer, or tent.
- 25. **Generator Use**: The use of generators by Vendor may be prohibited if the City of Mt. Pleasant Fire Department determines that their use, location, or condition is anticipated to create a nuisance or safety hazard to neighbors, pedestrians, or other nearby businesses. Factors considered in determining whether a generator constitutes a nuisance or safety hazard include noise levels, exhaust emissions, vibration, and any potential safety risks. If approved, the units shall comply with the IFC and a fire extinguisher shall be present near the unit (IFC, chapter 12). Vendors must ensure that generators are well-maintained, comply with all local noise ordinances, and are positioned to minimize disturbances and risks to the surrounding area.
- 26. **Compliance with Codes and Laws**: The Vendor must comply with all local, county, state, and federal codes and laws with jurisdiction over its operation, and product sales.
- 26. **Non-Transferable Permits**: A Vendor license issued under this Ordinance shall not be transferable:
 - Person to Person: Licenses cannot be transferred from one individual to another.
 - Vehicle to Vehicle or Unit to Unit: Licenses are specific to the original vehicle or unit for which they were issued and cannot be transferred to another vehicle or unit. This restriction does not apply to vehicles used for towing or pulling the Vendor.
 - Business to Business: Licenses are valid for one business only and cannot be transferred between different businesses.

Section 110.27f. Indemnification

A permit holder agrees to hold harmless and indemnify the City of Mt. Pleasant, its agencies, employees, or agents in all matters arising from the permitted application or operation of the Vendor.

Section 110.27g. Insurance

A Vendor permit holder operating on public property must have no less than \$1,000,000 business liability insurance naming the City of Mt. Pleasant as an additional insured. Proof of insurance must be submitted with the permit application.

Section 110.27h. Impoundment

Any equipment associated with a Vendor not in compliance with this Ordinance and left on public property may be impounded at the owner's expense.

Section 110.27i. Non-Exclusivity

No provision in this chapter limits the right of a Vendor or its operator to offer or sell its products to the general public, other businesses, or municipalities before, during, or after the operation permitted herein.

Section 110.27j. Revocation, Suspension, or Refusal; Appeal

A Vendor permit may be revoked, suspended, or not renewed for failure to comply with this Ordinance. The City must provide notice and an opportunity to be heard before revoking or suspending a permit. Appeals can be made to the City Commission within ten days.

Section 110.27k. Other Permits

A Vendor permit under this Ordinance does not relieve any unit of its responsibility for obtaining other permits or licenses required by any other ordinance, statute, law, or administrative rule.

Section 2. Validity and Severability

Should any portion of this Ordinance be found invalid, such holding will not affect the validity of the remaining portions.

Section 3. Repealer Clause

Any ordinances in conflict with this Ordinance are repealed to the extent necessary to give this Ordinance full effect.

Section 4. Violation

A violation of this Ordinance is a municipal civil infraction, and the City of Mt. Pleasant may seek injunctive relief or any other remedy allowed by law.

Section 5. Effective Date

This Ordinance is effective 30 days after publication.

85714:00008:200766799-1

Vendor (110.27) Annual Fee Options

	Existing Fee	Option 2
Vendor (110.27) Type	(w/addition of inspection fee)	(concensus 8-12-2024)
	\$1,000 License Fee	\$350 License Fee
	\$75 Inspection Fee	\$75 Inspection Fee
Vandar with nuch part, nodel part, booth, artent	\$10 Background Check Fee	\$10 Background Check Fee
Vendor with push cart, pedal cart, booth, or tent.	Farmers' Market Fee (if applicable)	Farmers' Market Fee (if applicable)
	Tent Permit Fee (if applicable)	Tent Permit Fee (if applicable)
	Sign Permit Fee (if applicable)	Sign Permit Fee (if applicable)
	License Fee N/A	License Fee N/A
	\$75 Inspection Fee	\$75 Inspection Fee
Vendor with push cart, pedal cart, booth,or tent and if	\$10 Background Check Fee	\$10 Background Check Fee
a qualified Veteran or 501c3 charitable organization.	Farmers' Market Fee (if applicable)	Farmers' Market Fee (if applicable)
	Tent Permit Fee (if applicable)	Tent Permit Fee (if applicable)
	Sign Permit Fee (if applicable)	Sign Permit Fee (if applicable)
	\$1,000 License Fee	\$550 License Fee
	\$75 Inspection Fee	\$75 Inspection Fee
Manada u with waki ala au tuailau	\$10 Background Check Fee	\$10 Background Check Fee
Vendor with vehicle or trailer.	Farmers' Market Fee (if applicable)	Farmers' Market Fee (if applicable)
	Tent Permit Fee (if applicable)	Tent Permit Fee (if applicable)
	Sign Permit Fee (if applicable)	Sign Permit Fee (if applicable)
	License Fee N/A	License Fee N/A
	\$75 Inspection Fee	\$75 Inspection Fee
Vendor with vehicle or trailer and if a qualified Veteran	\$10 Background Check Fee	\$10 Background Check Fee
or 501c3 charitable organization.	Farmers' Market Fee (if applicable)	Farmers' Market Fee (if applicable)
	Tent Permit Fee (if applicable)	Tent Permit Fee (if applicable)
	Sign Permit Fee (if applicable)	Sign Permit Fee (if applicable)

§ 110.27 VENDORS.

(A) *Definitions*. For the purpose of this section, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

PEDDLER. Any person who travels from place to place for the purpose of distributing leaflets, pamphlets, fliers, or other literature, displaying, selling, making sales, offering for sale, or leasing with the option to buy, takes orders for, or attempts to take orders for the retail sale of any goods, property, or services whatsoever for current or future delivery. Peddler includes any person who travels by foot, vehicle, wagon, cart or any other means displaying, selling, offering for sale, taking orders for sale, or leasing with the option to buy, at retail, any food, goods, property, or service. **PEDDLER** also includes any person who operates a pushcart, or other structure powered by bicycles or human power, with at least two operational wheels, which can be easily moved and which is used by a vendor to conduct sales.

PERSON. Any natural person, corporation or partnership, including both principals and agents thereof, or two or more persons having a joint or common interest.

TRANSIENT MERCHANT. Any person, firm, association or corporation, while not traveling from place to place, engaging temporarily in a retail sale of goods, wares or merchandise in any place in the city and who for the purpose of conducting business temporarily occupies any private lot, building, room or structure of any kind. This section shall not be construed to permit sales on city-owned property unless authorized under a separate written agreement.

VENDORS. Any peddler or transient merchant, as provided in this section. **VENDOR** shall not include a person selling at an art fair, farmers' market, festival or similar special event at the invitation of the event's sponsor, if all of the following conditions are met:

- (a) The sponsor has obtained a vendor's license; and
- (b) The person provides the sponsor with the person's sales tax license number.
- (B) License required. No vendor shall engage in such business within the city without first obtaining a license as provided under this chapter. Such licenses shall be subject to the application fees as may be set from time to time by the City Commission and paid in accordance with § 110.08 of this code. Transient merchant license fee waived if currently licensed and using truck/trailer as mobile food service provider.
- (C) Regulations. In addition to the license requirements in this chapter, and except as otherwise provided, the following regulations apply to vendors:
- (1) Vendors who conduct their business by going door-to-door shall not solicit at any premises posted with a "no solicitation" sign or other similar marking.
- (2) No vendor shall have any exclusive right to any location in the public street, sidewalk, or right-of-way, or be permitted a permanent, stationary location, or be permitted to operate in any congested area where his or her operations impede or inconvenience the public. For the purpose of this section, the judgment of a police officer or Code Enforcement Officer, exercised in good faith, shall be deemed conclusive as to whether the area is congested or the public has been impeded or inconvenienced.
- (3) Vendors shall dispose of their own trash including empty product containers into trash bags which shall be disposed of off-site by the vendor each day. The vendor shall keep the areas in which it operates clean, sightly, and free of trash. Vendors shall be completely self-contained, and are prohibited from utilizing any city electrical outlets, water from city hydrants, and disposing of liquid wastes, including but not limited to grease, into storm or sanitary sewers.
- (4) Unless otherwise first authorized in wiring by the city, no vendor shall obstruct any street, alley, sidewalk or driveway, except as may be necessary and reasonable to consummate a sale or engage in any business regulated by this chapter. Except with prior written permission of appropriate school officials, no vendor shall conduct any sale within 150 feet of the entrance of any school building between the hours of 8:00 a.m. and 5:00 p.m. on the days when school is in session.
- (5) Applicants for a vendors license who are selling, or offering to sell food, goods, wares, and merchandise owned by themselves, who furnish to the City Clerk, with all other license application materials, proof of an honorable discharge from the armed services and a copy of a license issued pursuant to 1921 PA 359, as amended, M.C.L.A. §§ 35.441 through 35.443, shall not be required to pay the annual license fee.
- (6) Individuals or groups wishing to do their business under this section in any city park must first secure written permission from the Parks Director before applying for a license, and shall comply with all applicable park rental fees, rules, and regulations.
- (7) Vendors shall present a valid license for inspection or examination when requested by any City Public Safety Officer or city official.
- (8) No vendor shall sell or offer for sale any unsound, unripe or unwholesome food or drink or any defective, faulty or deteriorated article of food.
 - (D) Exceptions. The provisions of this chapter shall not apply to any of the following:
- (1) Representatives of duly established businesses, located elsewhere, calling upon merchants or other established businesses for the purposes of selling them merchandise or services and who normally make repeated calls on such

businesses at regular intervals, such as wholesale suppliers, office supply firms and similar businesses.

(2) Solicitations including sale or distribution of goods, wares, merchandise, leaflets, pamphlets or other materials for religious, charitable or political purposes.

(Ord. 753, passed 7-11-94; Am. Ord. 888, passed 2-24-03; Am. Ord. 982, passed 10-14-13; Am. Ord. 990, passed 10-13-14) Penalty, see § 110.99

Memorandum



TO: Aaron Desentz, City Manager

CC: Heather Bouck, City Clerk

Chris Saladine, Finance Director

FROM: Michelle Sponseller, Downtown Development Director

DATE: September 9, 2024

SUBJECT: Hold Public Hearing – Transitory Food Service Units Ordinance (110.27)

and Set Fee Schedule

In May, staff was tasked with updating two existing ordinances, 110.27 (Vendors) and 110.28 (Mobile Food Service Providers), to ensure they are clear and easy for applicants to follow. Staff believes that splitting the two ordinances is in the best interest of both applicants and staff, providing a clear delineation between them. The revised 110.28 Transitory Food Service Units (TFSU) ordinance will address ready-to-eat or immediately consumable food items.

Additionally, staff collected information from various communities across the state to compare data points such as fee structure, hours of operation, locations of operations, number of licenses, and proximity to brick-and-mortar restaurants. This data was used to ensure the ordinance is comprehensive and reflects the most up-to-date practices from around the state. Based on this information, staff developed tiered fee schedule, tailored to specific nuanced situations, rather than the current one-size-fits-all fee of \$1,000 and requested City Commission provide direction. At the August 12 meeting consensus was reached to revise the fee schedule, a copy of the revised fee schedule is attached with this packet.

No changes were proposed to the draft TFSU ordinance at the August 12, 2024 City Commission meeting.

Synopsis of Key Differences

Between Transitory Food Service Units Ordinance vs Mobile Food Service Provider Versions

The proposed ordinance introduces several critical updates and additions compared to the previous mobile food service provider regulations:

1. **Purpose:** The new ordinance aims to regulate Transitory Food Service Units (TFSU) to encourage new business, reduce traffic congestion, and protect public health and safety.

2. Definitions:

- Transitory Food Service Unit (TFSU): Includes motorized vehicles, mobile trailers, temporary food service stations, carts, smokers, grills, freezing or cutting units, and similar apparatuses for ready-to-eat food items.
- Exclusions: Charitable fundraising stands and informal children's activities are excluded.

Memorandum



3. Permit Requirements:

- The new ordinance details application fees, background checks, inspections, and display requirements.
- Specific provisions for operations in city parks and vehicle regulations.

4. Application Process:

 Specifies application timelines, fee structures, required documentation, and insurance requirements.

5. Regulations:

• **Permitted Areas of Operation**: TFSUs may operate throughout the City except in SD-A (Agriculture) districts.

• Hours of Operation:

- CD-3L (Sub-Urban Large Lot), CD-3 (Sub-Urban), CZ (Civic), SD-H (Hospital), SD-I (Industrial), SD-RC (Research Center), SD-U (University), and PRD (Planned Residential Development) from 9 a.m. to 8 p.m. unless part of an approved special event.
- 2. CD-4 (General Urban) and CD-5 (Urban Center) from 9 a.m. to 11 p.m. unless part of an approved special event or within the Central Business District.
- 3. Central Business District from 9 a.m. to 3 a.m. unless part of an approved special event.
- 4. For special events and Farmers' Market, TFSUs may operate anywhere in the City with permission from the event organizer.
- **Proximity to Restaurants**: must not be within 150 feet of any entrance to an existing brick-and-mortar restaurant during the restaurant's hours of operation unless written permission is given by the restaurant owner.
- **Hospitals and Schools**: may not operate within the right-of-way of a hospital or school entrance or within 150 feet of the main entrance unless written permission has been granted by the respective institution.
- **Inspections**: Annual inspections by the City of Mt. Pleasant Fire Department are required.
- **Vehicle Size**: vehicles or trailers must not exceed 36 feet in length and nine feet in width. Trailers must be detached from tow vehicles.
- Service Window Location: Service must be conducted from the side facing a curb, lawn, or sidewalk when parked on a street.
- Dining Area: Dependent on location, outdoor seating including but not limited to tables, chairs, booths, stools, benches, or stand-up counters shall be subject to the approval of the Downtown Development Director, City Engineer, Parks and Public Spaces Director, or their designee.
- Waste Management: must provide a waste container, collect, and dispose of all trash off-site daily. Gray water dumping on streets is prohibited.
- Noise: Operations must comply with City Noise Ordinance guidelines, including generator noise.
- Exterior Lighting: Must be shielded to direct illumination downward.

Memorandum



- **Signage**: Permitted signage includes vehicle wraps and one auxiliary sandwich board sign not exceeding six square feet in area and three feet in height, ensuring clear pedestrian pathways.
- Advertising of Alcoholic Beverages: Prohibited.
- **Unattended Business**: must not be left unattended and unsecured; violations may result in ticketing or towing.
- **Distance from Special Events**: must not operate within 500 feet of any fair, festival, or special event unless permitted by the event sponsor.
- Parking: must conform to parking restrictions and not hinder lawful parking or vehicle operation.
- **Pedestrian Traffic and Movement**: must maintain a clear pedestrian pathway of at least five feet.
- Vehicle Traffic and Movement: must not obstruct vehicular traffic or designated public parking.
- Private Property: may operate on private property with owner consent and compliance with the City Zoning Code.
- Awning/Signage Clearance: Must have a minimum clearance of eight feet.
- Tents: Tents exceeding 10' x 10' require a separate permit.
- **Utilities**: must be self-contained for power on public property and may use electrical power from private property with owner consent. Use of city electrical outlets, hydrants, or sewers is prohibited.
- **Emissions**: Only reasonable vapors, steam, or exhaust permitted.
- **Generator Use**: May be prohibited if deemed a nuisance or safety hazard; must comply with International Fire Code and have a fire extinguisher present.

Recommended Action

Hold a public hearing for September 23, 2024 to hold a public hearing to allow for public input and adopt section 110.28 (Transitory Food Service Units) in the City of Mt. Pleasant Code of Ordinances and set fee schedule as presented.

Attachments

- 1. Draft Transitory Food Service Unit Ordinance (110.28)
- 2. Updated Draft Transitory Food Service Unit Fee Option
- 3. 150' Map of Existing Downtown Businesses
- 4. Existing Mobile Food Service Provider (110.28) Ordinance
- 5. Vendor and Transitory Food Service Unit Comparative Data

CITY COMMISSION CITY OF MOUNT PLEASANT ISABELLA COUNTY, MICHIGAN

ORDINANCE §110-28

AN ORDINANCE TO REGULATE THE OPERATION OF TRANSITORY FOOD SERVICE UNITS AND THE ISSUANCE OF PERMITS, LICENSES, OR APPROVALS FOR TRANSITORY FOOD SERVICE UNITS

IT IS HEREBY ORDAINED BY THE PEOPLE OF THE CITY OF MOUNT PLEASANT:

<u>Section 1. Amendment of Title XI: Business Regulations, Chapter 110: General Licensing, Section 110.28: Transitory Food Service Units</u>

Sections 110.28 of the City's Code is hereby amended in its entirety to read as follows:

Section 110.28a. Purpose

The purpose of this Ordinance is to establish regulations for Transitory Food Service Units (TFSU) in the City of Mt. Pleasant; to permit and regulate these units in various districts; to reduce vehicular and pedestrian traffic congestion; to encourage new business; and to protect the health, safety, and welfare of the City's residents and visitors.

Section 110.28b. Definition

Transitory Food Service Unit means a motorized vehicle, including a pulled mobile trailer, temporary food service station, cart, smoker, grill, freezing or cutting unit, or similar apparatus that engages in the storage, preparation, service, sale, or distribution of ready-to-eat or immediately consumable food items to the public directly from the unit. This includes a "special transitory food unit" and a "temporary food establishment" as defined under the Michigan Food Law, MCL 289.1111. This definition excludes:

- Charitable Fundraising Stands: Tables or stands set up by 501(c)(3) charitable organizations for fundraising activities involving the sale of food products (e.g., bake sales, cookies, popcorn). Such activities must comply with all applicable regulations and be conducted in a safe and sanitary manner.
- Informal Children's Activities: Activities such as children running lemonade stands or similar informal setups.

Section 110.28c. Permit Requirements

No TFSU may engage in the preparation, service, sale, or distribution of food in the City on public or private property without first obtaining a permit from the City in the manner prescribed in this Ordinance. The requirements are as follows:

- **Application Fee**: The application fee will be set by resolution of the City Commission. All fees must be paid at the time the application is submitted.
- Background Check: Applicants must undergo a background check, for which an additional fee will be charged.

- **Inspection**: An inspection by the City of Mt. Pleasant Fire Department and/or Building Official is required before a permit is issued. This inspection will ensure compliance with safety and building standards.
- **Permit Display**: All permits issued must be available on site for inspection upon request by a City Public Safety Officer or City official and must be conspicuously displayed on the premises or any cart, stand, tent, booth, motorized vehicle, mobile trailer, or similar apparatus used in the business at all times.
- City Park Operations: TFSUs operating in any City park must first secure written permission from the Parks Director before applying for a license and shall comply with all applicable park rental fees, rules, and regulations in compliance with Chapter 97 of this Ordinance.

Section 110.28d. Applications

- 1. Applications for a TFSU permit must be submitted no more than six months in advance and no less than fourteen days prior to the proposed operation date.
- 2. Applications are to be on forms provided by the City and must state under oath such facts as may be required for, or applicable to, the granting of the permit.
- 3. The applicant must pay a fee set by the City Commission. Fees must be made payable to "The City of Mt. Pleasant."
- 4. Permits are valid until December 31 of each year.
- 5. A TFSU using any gas or liquid for cooking or heating may not receive a permit until reviewed and inspected by the City of Mt. Pleasant Fire Department.
- 6. The application must include:
 - Name, signature, phone number, email contact, and business address of the applicant.
 - Date of food truck inspection by the City of Mt. Pleasant Fire Marshal.
 - Information on each vehicle, trailer, unit or other device, including year, make, model, vehicle identification number, vehicle or trailer registration plate number, and dimensions.
 - Proposed plans for power access, water supply, and wastewater disposal.
 - Copies of all necessary licenses or permits issued by the Central Michigan District Health Department.
 - Proof of a general comprehensive liability policy with limits of no less than \$1,000,000 combined single limit coverage and public liability and property damage motor vehicle policy with limits of no less than \$1,000,000, naming the City as an additional insured.
 - Dependent on location, outdoor seating, including but not limited to tables, chairs, booths, stools, benches, or stand-up counters, shall be subject to the approval of the Downtown Development Director, City Engineer, Parks and Public Spaces Director or their designee.

Section 110.28e. Regulations

All the following regulations must be followed by any TFSU operating in the City:

1. Permitted Areas of Operation: TFSU may be located throughout the City with the exception of SD-A (Agriculture) districts.

2. Hours of Operation:

- CD-3L (Sub-Urban Large Lot), CD-3 (Sub-Urban), CZ (Civic), SD-H (Hospital), SD-I (Industrial), SD-RC (Research Center), SD-U (University), and PRD (Planned Residential Development) from 9 a.m. to 8 p.m., unless part of an approved special event.
- CD-4 (General Urban) and CD-5 (Urban Center) from 9 a.m. to 11 p.m., unless part of an approved special event or within the Central Business District.
- Central Business District from 9 a.m. to 3 a.m., unless part of an approved special event.
- **3. Special Events and Farmers' Market**: TFSUs may be located anywhere in the City for special events and/or as part of the Farmers' Market. TFSUs must obtain permission from the event organizer to participate. Additionally, a separate application is required for TFSU participation in City-sponsored events or at the City's Farmers' Market.
- **4. Proximity to Restaurants**: TFSU shall not be within 150 feet of any entrance to an existing, brick-and-mortar restaurant during the hours when such kitchen is open, unless written permission is given by the restaurant owner.
- **5. Hospitals and Schools**: No TFSU may operate within the right-of-way of a hospital or school entrance or within 150 feet of the main entrance unless written permission has been granted by the respective institution.
- **6. Inspections**: The TFSU and/or equipment shall be inspected annually by the City of Mt. Pleasant Fire Department to verify compliance with the adopted International Fire Code with amendments.
- 7. Vehicle Size: A TFSU vehicle or trailer shall not exceed 36 feet in length and nine feet in width. TFSU trailers are required to be detached from the tow vehicle.
- **8. Service Window Location**: Food and beverage service shall be conducted from the side of the TFSU that faces a curb, lawn, or sidewalk when parked on a street. No food service shall be provided on the driving-lane side of the truck unless part of an approved special event. No food shall be actively prepared, sold, or displayed outside of a TFSU unless part of an approved special event.
- **9. Dining Area**: Dependent on location, outdoor seating, including, but not limited to, tables, chairs, booths, stools, benches, or stand-up counters, shall be subject to the approval of the Downtown Development Director, City Engineer, Parks and Public Spaces Director or their designee.
- 10. Waste Management: All TFSU must provide a waste container for public use, which the operator shall empty at its own expense. All trash and garbage originating from the operation must be collected and disposed of off-site by the operators each day. Spills of food or food by-products must be cleaned up immediately, and no dumping of gray water on the streets is allowed. The use of public and private dumpsters is forbidden unless the TFSU has obtained permission from the owner.

- 11. Noise: The operation of all TFSU shall meet the City Noise Ordinance, including generators. No loud music, other high-decibel sounds, horns, or amplified announcements are allowed.
- **12. Exterior Lighting**: All exterior lighting associated with the TFSU must be shielded to direct illumination downward.
- 13. Signage: Signage is allowed on TFSUs in accordance with City code. Additionally, one auxiliary sandwich board sign not exceeding six square feet in area and three feet in height is permitted. The auxiliary sign must not be placed in vehicle travel lanes and must maintain at least a five-foot clear pedestrian pathway. Signage affixed directly to the vehicle (such as vehicle wraps) is not regulated under the City's sign standards.
- **14.** Advertising of Alcoholic Beverages: TFSU shall not offer or advertise the offering of beer, wine, or other alcoholic beverages.
- **15. Unattended Business**: No TFSU shall be left unattended and unsecured at any time food is in the vehicle. Any unattended TFSU shall be considered a public safety hazard and may be ticketed and/or towed at the owner's expense.
- **16. Distance from Special Events**: A TFSU shall not operate within 500 feet of any fair, festival, special event, or civic event licensed or sanctioned by the City unless the vendor has obtained permission from the event sponsor.
- 17. Parking: The issuance of a TFSU license does not grant or entitle the vendor to exclusive use of any service route or parking space. When parked on public streets, units must conform to all applicable parking restrictions and not hinder the lawful parking or operation of other vehicles. No TFSU may be left overnight, or unattended on public property, unless specified in a special events permit.
- **18. Pedestrian Traffic and Movement:** No TFSU may block, obstruct, restrict, or otherwise interfere with the flow of pedestrian foot traffic, movement or access to public walkways, trails or public amenities. Five feet of clear pedestrian pathway must be retained.
- **19. Vehicle Traffic and Movement**: No TFSU may block, obstruct, restrict, or otherwise interfere with the movement of vehicular traffic, or designated public parking.
- **20. Private Property**: TFSU may operate on private property only with owner consent.
- 21. Tents: A TFSU tent exceeding 10' x 10" requires a separate tent permit from the City.
- **22. Awning/Signage Clearance**: When extended, TFSU awnings must have a minimum clearance of eight feet.
- **23. Utilities**: Any power required for TFSU operation on public property must be self-contained. TFSU units on private property may use electrical power from the property with written consent from the property owner. TFSU operators are prohibited from utilizing any city electrical outlets, drawing water from city hydrants, or disposing of liquid wastes,

including but not limited to grease, into storm or sanitary sewers. Power for the TFSU must be from an adequate source to function all necessary equipment in the kitchen facility.

- **24. Emissions**: Only reasonable vapors, steam, or exhaust will be permitted to emit from the TFSU.
- 25. Generator Use: The use of generators by TFSU may be prohibited if the City of Mt. Pleasant Fire Department determines that their use, location, or condition is anticipated to create a nuisance or safety hazard to neighbors, pedestrians, or other nearby businesses. Factors considered in determining whether a generator constitutes a nuisance or safety hazard include noise levels, exhaust emissions, vibration, and any potential safety risks. If approved, the units shall comply with the IFC and a fire extinguisher shall be present near the unit (IFC, chapter 12). TFSU operators must ensure that generators are well-maintained, comply with all local noise ordinances, and are positioned to minimize disturbances and risks to the surrounding area.
- **26.** Compliance with Laws: The TFSU must comply with all local, state, and federal laws set forth by the Michigan Food Code, Michigan Health Department, USDA, Michigan Department of Agriculture, Michigan Secretary of State, Michigan Liquor Control Code, Internal Revenue Service, International Fire Code, Central Michigan District Health Department, or any other agency or entity with lawful jurisdiction over the Transitory Food Service Unit, its operation, and product sales.
- **27. Non-Transferable Permits**: A TFSU license issued under this ordinance shall not be transferable:
 - Person to Person: Licenses cannot be transferred from one individual to another.
 - Vehicle to Vehicle or Unit to Unit: Licenses are specific to the original vehicle or unit for which they were issued and cannot be transferred to another vehicle or unit. This restriction does not apply to vehicles used for towing or pulling the TFSU.
 - Business to Business: Licenses are valid for one business only and cannot be transferred between different businesses.

Section 110.28f. Indemnification

A permit holder agrees to hold harmless and indemnify the City of Mt. Pleasant, its agencies, employees, or agents in all matters arising from the permitted application or operation of the TFSU.

Section 110.28g. Insurance

A TFSU permit holder operating on public property must have no less than \$1,000,000 business liability insurance naming the City of Mt. Pleasant as an additional insured. Proof of insurance must be submitted with the permit application.

Section 110.28h. Impoundment

Any equipment associated with a TFSU not in compliance with this Ordinance and left on public property may be impounded at the owner's expense.

Section 110.28i. Non-exclusivity

No provision in this chapter limits the right of a TFSU or its operator to offer or sell its products to the general public, other businesses, or municipalities before, during, or after the operation permitted herein.

Section 110.28j. Revocation, Suspension, or Refusal; Appeal

A TFSU permit may be revoked, suspended, or not renewed for failure to comply with this Ordinance. The City must provide notice and an opportunity to be heard before revoking or suspending a permit. Appeals can be made to the City Commission within ten days.

Section 110.28k. Other Permits

A TFSU permit under this Ordinance does not relieve any unit of its responsibility for obtaining other permits or licenses required by any other ordinance, statute, law, or administrative rule.

Section 2. Validity and Severability

Should any portion of this Ordinance be found invalid, such holding will not affect the validity of the remaining portions.

Section 3. Repealer Clause

Any ordinances in conflict with this Ordinance are repealed to the extent necessary to give this Ordinance full effect.

Section 4. Violation

A violation of this Ordinance is a municipal civil infraction, and the City of Mt. Pleasant may seek injunctive relief or any other remedy allowed by law.

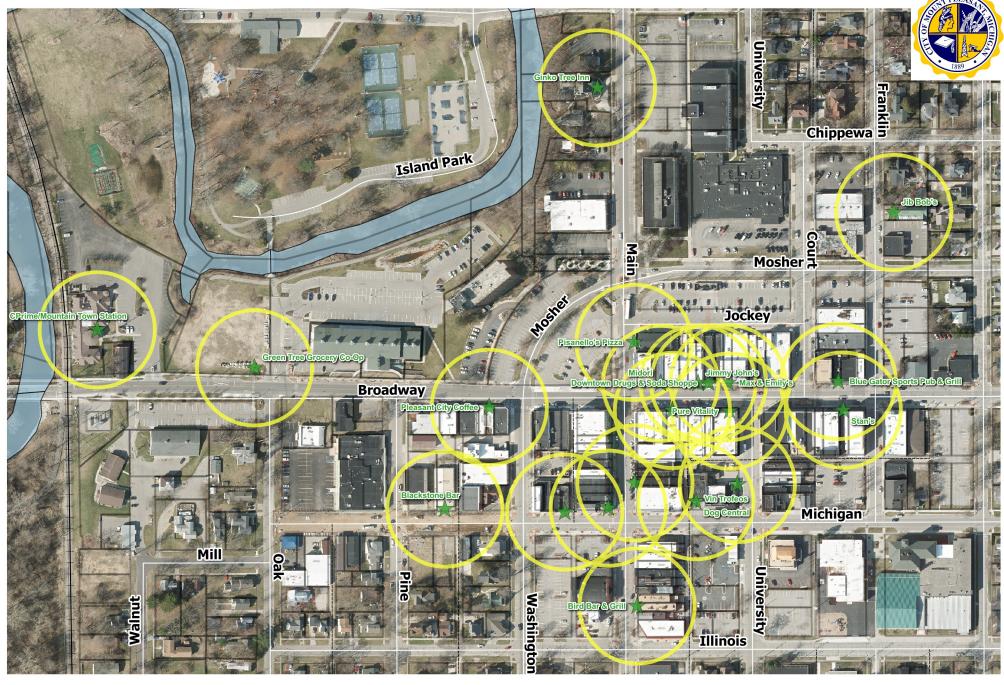
Section 5. Effective Date

This Ordinance is effective 30 days after publication.

85714:00008:200678671-1

Transitory Food Service Unit (110.28) Annual Fee Options

	Existing Fee	Option 2
Transitory Food Service Unit (110.28) Type	(w/addition of inspection fee)	(concensus 8-12-2024)
	\$1,000 License Fee	\$350 License Fee
	\$75 Inspection Fee	\$75 Inspection Fee
TFSU with push cart, pedal cart, booth, or tent.	\$10 Background Check Fee	\$10 Background Check Fee
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	Tent Permit Fee (if applicable)	Tent Permit Fee (if applicable)
	Sign Permit Fee (if applicable)	Sign Permit Fee (if applicable)
	License Fee N/A	License Fee N/A
	\$75 Inspection Fee	\$75 Inspection Fee
TFSU with push cart, pedal cart, booth,or tent and if	\$10 Background Check Fee	\$10 Background Check Fee
a qualified Veteran or 501c3 charitable organization.	Farmers' Market Fee (if applicable)	Farmers' Market Fee (if applicable)
	Tent Permit Fee (if applicable)	Tent Permit Fee (if applicable)
	Sign Permit Fee (if applicable)	Sign Permit Fee (if applicable)
	\$1,000 License Fee	\$550 License Fee
	\$75 Inspection Fee	\$75 Inspection Fee
TECH with vehicle or trailer	\$10 Background Check Fee	\$10 Background Check Fee
TFSU with vehicle or trailer.	Farmers' Market Fee (if applicable)	Farmers' Market Fee (if applicable)
	Tent Permit Fee (if applicable)	Tent Permit Fee (if applicable)
	Sign Permit Fee (if applicable)	Sign Permit Fee (if applicable)
	License Fee N/A	License Fee N/A
	\$75 Inspection Fee	\$75 Inspection Fee
TFSU with vehicle or trailer and if a qualified Veteran	\$10 Background Check Fee	\$10 Background Check Fee
or 501c3 charitable organization.	Farmers' Market Fee (if applicable)	Farmers' Market Fee (if applicable)
	Tent Permit Fee (if applicable)	Tent Permit Fee (if applicable)
	Sign Permit Fee (if applicable)	Sign Permit Fee (if applicable)

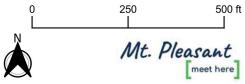


Downtown Restaurants

City of Mt.Pleasant

06/26/2024





§ 110.28 MOBILE FOOD SERVICE PROVIDERS.

- (A) *Purpose*. The purpose of this section is to license and regulate the movement, location, business practice and hours of operation of mobile food providers in the city, to reduce vehicular and pedestrian traffic congestion, to promote the safe use of the streets and sidewalks; and, to protect the health, safety, and welfare of the people of the city.
- (B) *Definition*. For the purpose of this section the following definition shall apply unless the context clearly indicates or requires a different meaning.

MOBILE FOOD SERVICE PROVIDER. A motorized vehicle which, upon issuance of a license by the City Clerk and conformance with the regulations under this chapter, may temporarily park upon a public street or in a public parking lot, and engage in the preparation, service, sale or distribution of ready-to-eat food for individual portion service to the general public directly from the vehicle. For the purposes of this section, mobile food vehicle includes a trailer pulled by a motorized vehicle engaged in the preparation, service, sale, or distribution of ready-to-eat food for individual portion service to the general public directly from the trailer; and shall include cookers, grills, smokers or other similar apparatuses. MOBILE FOOD SERVICE PROVIDER shall be considered a transient merchant and will be subject to all transient merchant regulations when operating on private property with the permission of the property owner. MOBILE FOOD SERVICE PROVIDER shall not include a person selling at an art fair, farmers' market, festival or similar special event at the invitation of the event's sponsor, if all of the following conditions are met:

- (a) The sponsor has obtained a vendor's license; and
- (b) The person provides the sponsor with the person's sales tax license number.
- (C) License requirements. No mobile food service provider may engage in the service, sale, or distribution of food in the city without first obtaining a license from the City Clerk. The City Clerk shall charge an application fee for mobile food service provider licenses. Such licenses shall be subject to the application fee as may be set from time to time by the City Commission and paid in accordance with § 110.08 of this code. Mobile food service provider license fee waived if currently licensed and using truck/trailer as a transient merchant. The City Clerk may annually issue up to 12 mobile food service provider licenses per year.

(D) Regulations.

- (1) Mobile food service providers may conduct business in the C-2 Central Business District as defined in § 154.066 as well as on-street parking places on South Main Street from East High Street on the north to East Bellows Street on the south. Mobile food service providers may not conduct business in any other area of the city.
- (2) Mobile food service providers may conduct business only between the hours of 8:00 p.m. and 3:00 a.m. Mobile food service providers shall not conduct business at any other time.
- (3) Mobile food service providers may conduct business in on-street parking places and public parking lots during the permitted hours of operation. While conducting business, mobile food service providers shall operate in such a manner so as not to interfere with pedestrian or vehicular traffic. If directed by city staff or public safety personnel for snow plows or in response to emergency situations, mobile food service providers shall promptly relocate.
- (4) Mobile food service providers shall serve customers only on the curb, lawn, or sidewalk side of the mobile food service vehicle while parked in on-street parking spaces. Mobile food service providers shall not provide food service in any right-of-way. Mobile food service providers may serve customers only when parked.

- (5) If operating on sidewalks or while parked on city streets or in public parking lots, mobile food service providers shall not supply or provide tables and chairs, booths, stools, benches, tents, or other similar dining area for customers.
- (6) Mobile food service providers shall provide adequate dining utensils as reasonably necessary for its customers. Mobile food service providers shall place a trash receptacle outside the mobile food service vehicle which shall be emptied and disposed of off- site by the mobile food service provider each day. The mobile food service provider shall keep the area in which it operates clean, sightly, and free of trash. Mobile food service providers shall be completely self-contained, and are prohibited from utilizing any city electrical outlets, water from city hydrants, and disposing of liquid wastes, including but not limited to grease, into storm or sanitary sewers.
- (7) Mobile food service providers shall not be parked on the street, or in public parking lots in which they intend to provide service overnight or left unattended and unsecured at any time food is in the vehicle.
- (8) Mobile food service providers shall comply at all times with all city nuisance regulations as provided in Chapter 96 of this code.
- (9) Mobile food service providers shall not be located within 150 feet of a permanent business with a food license during the business's hours of operation.
- (10) A license is valid only for each individual vehicle or trailer operated by a mobile food service provider and shall not be transferred among vehicles or trailers.
- (11) Mobile food service providers shall present a valid license for inspection or examination when requested by any City Public Safety Officer or city official.
- (12) Applicants for a mobile food service providers license who are selling, or offering to sell food, owned by themselves, who furnish to the City Clerk, with all other license application materials, proof of an honorable discharge from the armed services and a copy of a license issued pursuant to 1921 PA 359, as amended, M.C.L.A. §§ 35.441 through 35.443, shall not be required to pay the annual license fee.
- (13) Mobile food service providers shall comply with all applicable law, rules, regulations and licensing or permit requirements including, but not limited to those issued by the Isabella County Health Department or the Michigan Department of Agriculture and Rural Development or its successor agency, the Michigan Secretary of State, the Michigan Liquor Control Code, and any other agency with licensing or regulatory jurisdiction over the mobile food service provider.
- (14) Mobile food service providers shall not offer or advertise the offering of beer, wine, or other alcoholic beverages.
- (E) License revocation or suspension. Any mobile food service provider that violates any provision of this section may, in addition to any other penalties, have its license suspended or revoked as provided by § 110.04 of this code.

(Ord. 982, passed 10-14-13; Am. Ord. 990, passed 10-13-14)

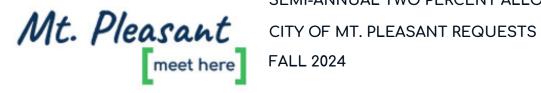
	DESIGNATED AREAS				
	Whole City?	HOURS OF OPERATIONS			
CITY	Limitations on reseidential neighborhoods?	Residential?			LICENSE REGULATIONS
	Use of Streets?	Central Business District?	DINING AREA	ANNUAL INSPECTION	Number of Licneses?
	Use of Public Parking Lots?	Limits elsewhere?	Supplying tables, chairs, etc.?	Yes? No? Fee?	Fee(s)?
			117 0 7		
		A mobile food vending unit license may be granted by resolution of the city			
		council or by the city manager pursuant to guidelines approved by city			
		council within appropriate areas of the public rights-of-way or other city-			
		owned property located in zoning districts B1-General Office Business, B2-	-		
		Retail Sales Business, B3-City Center Commercial, B4-Restricted Office			
		Business, B5-Community Retail Sales Business,			
		OIP - Office Industrial Park, C-Community Facilities, and any other			
	after 9:00 p.m. unless by prior invitation of the occupant.	property owned by the City and used as a public park regardless of zoning			
		district.	All exterior lighting associated with the mobile		
	Soliciting, peddling, or mobile food vending within 20 feet of a		food vending unit, whether on the mobile food		
East Lansing	licensed restaurant unless support from the licensed restaurant is	B1-General Office Business	vending unit itself or placed on the site where		
	provided in writing as part of the license application.	(6:00 AM – 10:00 PM) If within the Downtown Development Authority	the mobile food vending is occurring, shall be		
		District Boundary: (6:00 AM – 12:00 AM)	shielded to direct the illumination downward.		
	Mobile food vending within 10 feet of any building or other mobile	B2-Retail Sales Business (6:00 AM – 10:00 PM) If within the Downtown			
	food vending unit.	Development Authority District Boundary: (6:00 AM – 12:00 AM)	No tables or seating shall be placed in the		
		B3-City Center Commercial (6:00 AM – 12:00 AM)	public right-of-way and in parks for mobile food		
	Soliciting, peddling, or mobile food vending on a street or within 500	B4-Restricted Office Business (6:00 AM – 10:00 PM)	vending operations.		
	feet of an area which has been closed by council resolution for an art	B5-Community Retail Sales Business (6:00 AM – 10:00 PM)			
	fair, street fair, or other special event, except where special permits	OIP - Office Industrial Park (6:00 AM – 10:00 PM) C-Community Facilities	Any tables or seating infrastructure proposed		
	are issued in accordance with standards established by city	(facility's operational hours)	for use on private property for mobile		No limit on number of licenses.
	council. Soliciting, peddling, or mobile food vending within 20 feet of a	Any city owned park regardless of zoning designation (facility or event	food vending unit operations requires a site plan		
	licensed restaurant unless support from the licensed restaurant is	specific)	approved by the Planning and Zoning		\$225 annually, \$50 inspection fee annually
	provided in writing as part of the license application.	City Sponsored or Sanctioned Events (event specific)	Administrator.	Yes, \$50 annual inspection	No fee for special event food vendor applications
https://www.cityofe	astlansing.com/DocumentCenter/View/14829/FOOD-TRUCK-ORDINA	NCE_AKC-Ordinance-1534_clean-PDF#:~:text=(1)%20Mobile%20food%2	20vendors%20and,the%20City%20of%20East%	20Lansing.	N/C for special event food vending permit.
Grand Rapids		Hours of Operation. Operating hours shall be no later than 10:00 p.m.			No limit on number of licenses.
Orana napiao	-		Site amentities may be used so long as they		
	Į.	otherwise approved by the Planning Commission as a Special Land Use.	they meet all other aspects of ordinance.		\$327 Annual / \$20 each additional truck/vehicle/structure
https://library.munic	code.com/mi/grand_rapids/codes/code_of_ordinances?nodeId=TITVZ	ONING_PLANNING_CH61ZOOR_ART9USRE_S5.9.15MOFOVE_			
	Any yandar angaging in mahila food yanding may anarata an private				
	Any vendor engaging in mobile food vending may operate on private				
	property located in the B-1, B 2 B 3 or Industrial assign districts without a license from the City.				No limit on number of licenses
Houghton	B-2, B-3, or Industrial zoning districts without a license from the City.				No limit on number of licenses.
					AFOO food two objects of two objects of two objects of two objects of the control
	Specific locations on public property within downtown district. No	No house of an austina linked	Ovinces of the section of the sectio	Orinanaa daaa nat wafananaa	\$500 food truck (annual), \$200 Food truck three months consecutive (1 permit per
later a //la a callata a a lite	5	No hours of operation listed.	Orinance does not reference.	Orinance does not reference.	year), \$100 food cart, \$50 per special event
nttps://noughtoncity	rmi.documents-on-demand.com/document/4e3881c2-820c-ee11-a3c	2-000c29a5955//Cnapter%2018%20-%20Businesses.PDF			
			No mobile food business vendor shall provide		
			or allow any dining area within 10 feet of the		
Kalamazoo			mobile food business, including but not limited		
Natamazoo			to tables and chairs, booths, stools, benches or		No limit on number of licenses.
			stand-up counters or within the public right-of-		To diffic of fideligoo.
	150' from existing businesses.	Locations set by resolution. Commercial and industrial location allowed, n		Part of annual fee.	\$300 annually.
https://ecode360.co	•	- Essection 5 out by 1000 teation. Commissional and industrial tocalion allowed, in	may, motualing but not utilited to sidewarks.	r arcor armuacros.	
ps.// ccoucood.co	1111 10200017				
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		_			
Marquette	Areas include: Residential Commercial City-owned properties (parking lots and parks) Mobile food vending units parked on city-owned or controlled property shall not be parked within 150 feet of any entrance to an existing, brick and mortar restaurant during the hours when such restaurant is open for business to the public, unless written permission, a copy of which must be provided to the city, is first	Residential: 9am - 9pm Commercial: 7am - 2am Downtown: 6pm - 2am Parks: during hours of operations When not in operation mobile food vending units shall be removed from City-owned or controlled property between the hours of 2am and 7am in commercial areas, 9pm to 9am in residential raes and during closed hours			No limit on number of licenses. Food truck - \$470 annually, \$235 each additional unit. Food cart - \$105 annual, each additional \$55 Manufacturered / Pre-packaged \$105 annually
	given by the restaurant owner.	in City parks.	No reference to supplying tables, chairs, etc.	Yes, by both police and fire.	Transient merchant \$140 annually
https://www.marg	uettemi.gov/wp-content/uploads/2024/03/MFV-2024.pdf				
					No limit on number of licenses.
Midland	Ordinance does not specify locations, hours or operation, tables/cha	nire		Yes, \$75 annual inspection	Annual - \$25 food truck permit, \$75 food truck inspection
https://cityofmidla	andmi.gov/DocumentCenter/View/2123/Chapter-15Licenses-and-Bus			roo, ¢, o annaachiopootion	7 milate \$\pi_20 \text{ foot track pointing \$\pi_7 \text{ foot track moposition}}
IIIIps.//Cityofffiluta	shuffil.gov/DocumentCenter/View/2125/Chapter-15Licenses-and-bus	Siliess-negulations-FDF?bidid-			
Saginaw	Mobile food vending shall be permitted in the B-1, B-2, B-3, B-3A, B-4, CB-1, and M-1 zoning districts located on a State of Michigan highway or a Saginaw County principal arterial road whose underlying zoning permits restaurants or commercial food establishments by right, under special conditions, or by special use permit. Vendors shall not be located within 300 feet of another permanent restaurant-type food establishment unless written consent is provided as outlined in Section 18-507.1(h).	7:00am and 9:00pm, unless the operation is a component of a Township approved special or civic event, in which case the hours of that event approval shall apply to the mobile food vendor's operations.	Outdoor seating, including but not limited to tables, chairs, booths, stools, benches, or stand-up counters, shall be subject to the approval of the Director of Community Development or their designee.	The mobile food vendor vehicle and/or equipment shall be inspected by the Saginaw Township Fire Department to verify compliance with the adopted International Fire Code with amendments.	No limit on number of licenses. \$50 - Mobile Food Vendor Base License (One Location) \$40 - Each Additional Approved Location

https://codelibrary.amlegal.com/codes/saginaw/latest/saginaw_mi/0-0-0-5237

		Hours of Presence and/or operation. For residential areas, vending may occur between the hours of 9 a.m. and 9 p.m. For commercial areas,			No limit on number of licenses.
		vending may occur between the hours of 7 a.m. and 11 p.m. For private			\$1,225 – if vending on city property (if you are also vending on private property, this
Traverse City		property in commercial areas, vending may occur between the hours of 6			fee applies)
		a.m. to 3 a.m. No mobile vending unit may be present or operate except			\$ 725 – if vending on private property only
	Certain public parking lots, downtown on paricular streets and in	during the specific hours mentioned in this section - Including set up and			\$ 500 – if a city-based food service establishment operating on city property
	certain locations by hospital, and campus, civic center.	tear down.	No reference to supplying tables, chairs, etc.	Part of annual application.	\$ 0 – if a city-based food service establishment operating on non-city property

https://www.traversecitymi.gov/userfiles/filemanager/1v16hxc2xlr6nx14kp6a/



SEMI-ANNUAL TWO PERCENT ALLOCATION

DEPARTMENT/PROJECT NAME	<u>AMOUNT</u>	<u>PRIORITY</u>
Airport		
Airport Operational Funding	\$80,000.00	С
Airport Snow Removal	\$23,230.00	С
Community Services		
Partners Empowering All Kids	\$115,000.00	С
Police		
Emergency Services Team Van	\$74,565.00	С
Youth Services Officer Vehicle	\$55,000.00	С
Public Works		
Sewer Pipeline Inspection Camera	\$57, 615.00	М
Pickard Storm Sewer	\$85,500.00	Н
Sidewalk Replacement 2025	\$100,000.00	L
1303 N Franklin Former Landfill Remediation	\$50,000.00	С
Kinney Street Mill and Overlay	\$290,000.00	М
Lime Disposal	\$215,000.00	Н
Annual Roadway Pavement Markings	\$35,000.00	L
Island Park - New Sidwalk for War Memorials	\$12,000.00	М
Total Requested	\$1,135,295.00	

Priority Definitions

Critical:

- Project must be done to address failure of infrastructure OR
- Funding is needed to support essential program or it will not be able to continue

High:

• Important project or program to meet <u>current</u> service or program needs

Medium:

• Important project or program to meet <u>future or new</u> service or program needs

Low:

New project or program that would be nice to have

Overview

Project Name

Airport Operational Funding

Total Requested

\$80,000.00

(amount based on the Itemized Budget total)

Applicant Project Priority

Critical

Reocurring Need?

This Request is Reocurring

Applicant Information

Applicant Name

bbrickner@mt-pleasant.org

Applicant Email

Bill Brickner

Organization

Mt. Pleasant Airport

Address

5453 E. Airport Rd

Mt. Pleasant, 48858

Phone Number

9897722965

Organization Information

Primary Organization

City of Mt. Pleasant

Authorizers

adesentz@mt-pleasant.org

Status

Review

Address

320 W. Broadway

Mount Pleasant, Michigan 48858

Phone

(989) 779-5300

Fax

Project Partners

Partnered With

Union Township

Authorizers

Mark Stuhldreher <u>mstuhldreher@uniontownshipmi.com</u>

Status

Review

Address

2010 S Lincoln Road

Mount Pleasant, Michigan 48858

Phone

989-772-4600

Fax

989-773-1988

Partnered With

Isabella County

Authorizers

nfrost@isabellacounty.org

Status

Review

Address

200 N. Main Street Mount Pleasant, Michigan 48858

Phone

989 772-0911

Fax

Categories

- Economic development
- Infrastructure
- Safety/Security
- Transportation

Project Description

This funding request is to provide funds to support basic operations of the airport. Appropriate staffing levels to cover operational needs have, in the past, been covered in part by using airport fund balance. Staffing at the airport ensures that appropriate staff is available 7 days per week to service aircraft.

In order to provide the necessary funds for basic operations of the Mt. Pleasant Municipal Airport, the City has had to contribute \$81,600 per year from the general fund. The Saginaw Chippewa Tribe has provided funding for the airport operations on a regular basis. Without ongoing funding from the Tribal 2% allocations, the services at the airport could not be maintained.

Benefit Description

The airport is an economic driver for economic development and business growth. The Mt. Pleasant Airport is a major gateway to the Tribal community's casino and resort operations. Many entertainers appreciate the convenience and service they experience at the airport when coming to preform at the resort. The ability to provide essential service to the Tribal community's visitors and business associates may be affected without adequate funding. A recent study by MDOT indicated the economic benefit to the surrounding area is \$8 million per year.

Funding Requirements

A partnership to share oversite and management with partners including Isabella County, Union Township, MMDC, and the Saginaw Chippewa Indian Tribe has been recently instituted. This partnership provides \$17,000 annually towards the operation of the airport.

Description of Reocurring Need

Project Timeline

Not Entered

Budget Items

Name	Cost	Quantity	Total	Category
Airport Operational Funding	\$80,000.00	1	\$80,000.00	Transportation
AmountRequested	\$80,000.00			

Matching Funds

Name	Cost	Quantity	Total
Airport Fuel Revenue	\$150,000.00	1	\$150,000.00
Airport Rentals	\$50,000.00	1	\$50,000.00
Call outs	\$14,000.00	1	\$14,000.00
Contribution from general fund	\$82,000.00	1	\$82,000.00
AmountMatched	\$296,000.00		

Budget Summary

Amount Requested

\$80,000.00

Amount Matched

\$296,000.00

Total Amount

\$376,000.00

Uploaded Files

Nar	ne
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No files have been uploaded.

There are no comments to display.

Overview

Project Name

Airport snow removal equipment

Total Requested

\$23,230.00

(amount based on the Itemized Budget total)

Applicant Project Priority

Critical

Reocurring Need?

Not Reocurring

Applicant Information

Applicant Name

bbrickner@mt-pleasant.org

Applicant Email

Bill Brickner

Organization

Mt. Pleasant Airport

Address

5453 E. Airport Rd

Mt. Pleasant, 48858

Phone Number

9897722965

Organization Information

Primary Organization

City of Mt. Pleasant

Authorizers

adesentz@mt-pleasant.org

Status

Review

Address

320 W. Broadway

Mount Pleasant, Michigan 48858

Phone

(989) 779-5300

Fax

Project Partners

Partnered With

Union Township

Authorizers

Mark Stuhldreher <u>mstuhldreher@uniontownshipmi.com</u>

Status

Review

Address

2010 S Lincoln Road

Mount Pleasant, Michigan 48858

Phone

989-772-4600

Fax

989-773-1988

Partnered With

Isabella County

Authorizers

nfrost@isabellacounty.org

Status

Review

Address

200 N. Main Street Mount Pleasant, Michigan 48858

Phone

989 772-0911

Fax

Categories

- Economic development
- Infrastructure
- Safety/Security
- Transportation

Project Description

This funding request is to purchase a replacement loader mounted snow blower at a cost of \$212,960, and a pull behind broom at a cost of \$253,000. Currently the airport is using a 25 year old PTO driven blower that can only work at 1 MPH, and takes upwards of 4 hours to clear the runway. The new blower is planned to be purchased in 2025 using BIL funding, and will able to remove snow at a much faster pace. The current broom that is being used is also 25 years old, and is only 10 foot wide. The runway is 100 foot wide, and currently takes over an hour to broom the runway. The new unit will be 20 foot wide and capable of removing 1 inch of snow at 15 MPH. The broom is required to clear the compacted snow from the working areas of the airport, as we cannot use salt to remove ice and snow. The broom is planned to be purchased in 2026 using BIL funding. The request is for 5% of the cost of the equipment purchases \$10,648 for the blower and \$12,650 for the broom.

Benefit Description

The airport will be able to remove snow more efficiently during winter operations, keeping plans moving in and out of the airport. The airport is an economic driver and per a study by MDOT generates \$8 million per year for the surrounding area.

Funding Requirements

Not Entered

Project Timeline

2025 purchase snow blower

2026 purchase broom

Budget Items

Name	Cost	Quantity	Total	Category
Airport snow removal equipment	\$23,230.00	1	\$23,230.00	Transportation
AmountRequested	\$23,230.00			

Matching Funds

Name	Cost	Quantity	Total
BIL funding	\$419,300.00	1	\$419,300.00
State funding	\$23,300.00	1	\$23,300.00
AmountMatched	\$442,600.00		

Budget Summary Amount Requested

\$23,230.00

Amount Matched

\$442,600.00

Total Amount

\$465,830.00

Uploaded Files

Name	
No files have been uploaded.	

There are no comments to display.

Overview

Project Name

Partners Empowering All Kids (PEAK)

Total Requested

\$115,000.00

Applicant Project Priority

Critical

Reoccurring Need

Reoccurring Yearly

Applicant Information

Applicant Name

Phil Biscorner

Applicant Email

pbiscorner@mt-pleasant.org

Organization

City of Mt. Pleasant Parks and Recreation Department

Address

320 W. Broadway Mt. Pleasant , 48858

Phone Number

989-779-5328

Organization Information

Primary Organization

City of Mt. Pleasant

Authorizers

adesentz@mt-pleasant.org

Status

Review

Address

320 W. Broadway Mount Pleasant, Michigan 48858

Phone

(989) 779-5300

Fax

Categories

- Education
- PEAK
- Safety/Security

Project Description

The PEAK program stands for Partners Empowering All Kids and is a partnership between the City of Mt. Pleasant, Mt. Pleasant Public Schools, Saginaw Chippewa Indian Tribe, and United Way of Gratiot and Isabella Counties. PEAK has worked collaboratively with the Saginaw Chippewa Indian Tribe and United Way of Gratiot and Isabella Counties on multiple special events. Events such as PEAK's Super Summer Showcase is preceded by a "penny war" that the program uses to raise funds for United Way in order to teach children about community service and helping those in need. In addition, the PEAK program holds an annual community service day – held in partnership with the Saginaw Chippewa Indian Tribe and Central Michigan University's Office of Native American Programs – that brings children, families and the community together in order to provide food and other household necessities for those in need in the Mt. Pleasant community. The PEAK program has put a renewed focus on enrichment opportunities through collaborative efforts, unique community partnerships and the importance and understanding of cultural diversity. PEAK is entering its 24th year of operation and has become a staple for children's services that the community and school system relies on to keep area children safe, educated and enriched.

The PEAK After-School program operates at all five Mount Pleasant Public School elementary schools (Fancher, Ganiard, McGuire, Pullen, Vowles) – serving area children grades K-5. The PEAK Summer Camp program operates for 10 weeks during the summer at elementary schools based on availability from 7:30 AM to 5:30 PM.

PEAK provides mentorship and enrichment programming for 200 elementary school students every day after school and for 350 students daily during PEAK Summer Camp through educational, recreational, physical and social-based programming in collaboration with Mt. Pleasant Discovery Museum, Central Michigan University's recreational, educational and athletics programs, Potter Park Zoo, The Jump Station, Therapy Dogs International and many other area businesses and organizations. We have also been successful in implementing Native American cultural programming into our summer curriculum though SCIT music and arts presentations and teachings. The goal of this programming is to increase cultural awareness of the community's Native American population. An

increased focus has also been put on MPPS involvement from principals, teachers and other administrative staff in areas of hiring, program development and expectations in order to lay a foundation for continued program growth and strength.

In addition to the general education students, PEAK also staffs Special Needs Assistants at each site in order to provide the same high-quality programming for students with educational, emotional and physical disabilities. It's very important to the program and to the community that we are able to meet the needs of every child, regardless of their limitations. Inclusivity of all children is a major component of the PEAK program.

The PEAK staff consists of roughly 50 highly-qualified individuals, most of which are CMU students majoring in general education, special education, recreation and other related fields. Another major component of the PEAK program is not simply to have staff, but to have qualified and trained staff who are capable of providing the children in the program with the care they need and deserve. In order to achieve this high-level of training and qualified staff, PEAK partners with the Children and Family Enrichment Child Advocacy Center of Isabella County, Michigan Department of Health and Human Services and other agencies to achieve the highest level of training possible.

One of the goals of the PEAK program is to ensure that every child is able to participate, regardless of their ability to pay. Scholarship assistance is available to ensure that every child has the opportunity to participate in the program and enjoy all the benefits – regardless of their ability to pay.

Benefit Description

While there are literally thousands of studies and statistics and testimonials to support the long-term benefits of quality after-school and summer programming for children, the simple answer to why PEAK is so important is that there are a great number of area children who simply do not have a place to go after school. For those who do have a place to go, many times that place is not safe and/or conducive to educational, physical and social growth. PEAK is able to provide students of all walks of life and backgrounds the opportunity to grow in ways that will set them up for future success by means of quality programming, positive role models and a safe and enriching environment. Quite simply, without the PEAK program, hundreds of children would have no place to go after school and would be put in dangerous positions and situations that would compromise their safety

and the safety of others. PEAK provides the program participants, their parents and the community as a whole with a sense of security, knowing that their children are well cared for in an environment that will help develop good educational and social habits to ensure future growth and success.

In addition to the school day and summer camp curriculum, PEAK also puts a strong focus on teaching children the importance of community and of giving back. Each summer, special events such as Community Service Day, Super Summer Showcase and the Penny War highlight the relationship with United Way and the community by having children generate monetary funds and thousands of food items and school supplies that they then give back to those who are in need. We feel that this is a benefit to the children by teaching to them the importance of giving back to those in need, while meeting critical needs in the community.

The increased focus on MPPS involvement will also help ensure that the PEAK program serves as an extension of what teachers are trying to accomplish during the school day. Consistent communication with teachers and parents of the children enrolled in the PEAK program allows PEAK to put a focus on and meet the most challenging aspects of the school curriculum. PEAK offers one-on-one tutoring and homework help that can be targeted to specific areas of the school day that children find most challenging. Through the relationship with CMU, PEAK hires CMU students in education, recreation and other related fields so that they can gain real-life experience to better prepare them for both their professional and personal life after graduation.

The PEAK program has been working with members and organizations of the Tribe on implementing Native American cultural components into our summer programming. We aim to increase cultural awareness and understanding of our local cultures in order to create more accepting, understanding and culturally-educated students. Cultural diversity is a part of the Mt. Pleasant community that we are blessed to have and we feel this should be celebrated by working directly with the Tribe and their affiliated organizations to create fun, engaging and culturally enriching opportunities for both the Tribe and our PEAK students.

Next summer we are planning a field trip to the Ziibiwing Center for our Summer Camp PEAK sites. We are looking forward to going to visit new and existing exhibits and learning about history and traditions from the Anishinabe people. Through these experiences we hope increase the knowledge of the youth of our city and expose them to different cultural components and opportunities that are present

right in Mt. Pleasant. If awarded, a portion of this grant will be used in order for us to attend this field trip and other field trips similar to it.

Funding Requirements

The 21st Century Grant that awarded in 2000 only covered the first five years of operation. Since then, the program has relied heavily on funding from outside sources in order to keep program fees low, without having to sacrifice the quality of care being offered to local school children. The Saginaw Chippewa Indian Tribe has been instrumental in allowing this program to exist in a manner that allows children of all economic and social backgrounds to participate – regardless of their ability to pay.

Historically, one-half of the PEAK program budget came in the form of Tribal 2% funds. Tribal support is extremely important to the overall quality and long-term health of the PEAK program and all the children and families it serves and over time, efforts have been made to control expenses program-wide. The remaining PEAK budget is made up of program fees, and support from entities such as United Way have provided the remaining funding needs. Program fees are kept at a minimum and are based on family income and a family's ability to pay. Over \$60,000 is made available annually in form of scholarship assistance to ensure that every child is able to participate in PEAK – regardless of their ability to pay. It has been the goal of PEAK to increase the amount of revenue generated from the PEAK K-5 program through fundraising and other available grants while decreasing the portion requested form the Saginaw Chippewa Indian Tribe. Without the continued support of the Saginaw Chippewa Indian Tribe through 2% allocations, the PEAK program would need to undergo a comprehensive evaluation in order to determine if this is a program that is economically feasible. Therefore, the PEAK program is requesting approximately 30 percent of the total funds needed to continue to provide the K-5 grade PEAK program to children and families in the community as it currently exists.

Project Timeline
The project is a yearly program and is ongoing.

Budget Items

Matching Funds

Budget Summary

Amount Requested

\$115,000.00

Amount Matched

\$549,670.00 - City

Total Amount

\$779,670.00

Total Requested from Tribal 2% Fall Total Requested from Tribal 2% Spring \$ 115,000

\$ 115,000

Overview

Project Name

Emergency Services Team Van

Total Requested

\$74,565.00

(amount based on the Itemized Budget total)

Applicant Project Priority

Critical

Reocurring Need?

Not Reocurring

Applicant Information

Applicant Name

plauria@mt-pleasant.org

Applicant Email

Paul Lauria

Organization

Mt. Pleasant Police and Fire Department

Address

804 E. High St

Mount Pleasant, 48858

Phone Number

9893304378

Organization Information

Primary Organization

City of Mt. Pleasant

Authorizers

adesentz@mt-pleasant.org

Status

Review

Address

320 W. Broadway

Mount Pleasant, Michigan 48858

Phone

(989) 779-5300

Fax

Categories

- Safety/Security
- Transportation

Project Description

The Emergency Services Team (EST) is a multijurisdictional unit consisting of officers from the Mt. Pleasant Police Department, Saginaw Chippewa Tribal Police Department, Isabella County Sheriff's Department, and the Central Michigan University Police Department. The EST responds and manages high risk critical incidents throughout Isabella County.

The EST utilizes two transport vans when responding to high risk critical incidents with its 16 member tactical team due to the size of the team and specific tactics. When responding to a critical incident one of the transport vehicles the team uses is a 2003 Dodge Ram 1500 rear wheel drive transport van. The van is 21 years old, beyond it's service life and unreliable causing logistical problems when the EST is needed.

This project is for the replacement of the Emergency Services Team (EST) Personnel Van. If funded, a 1-Ton 4 Wheel Drive Chevrolet Express Cargo Van would be purchased. This van would also be up-fitted with all the necessary equipment.

Benefit Description

EST responds to critical, high-risk incidents throughout all of Isabella County. The goal of every incident is to resolve it peacefully and to save lives. Part of that is accomplished first by members of the EST arriving on scene efficiently, safely and with all the equipment they may need. The vehicle would enhance our abilities to get to scenes in any weather or terrain in rural areas of the county. The enhanced stability and load capabilities of a one-ton vehicle that carries 12 members plus their equipment would be a significant improvement over our current van. When fully loaded with personnel and equipment the weight exceeds 3500 pounds. In addition, this vehicle would allow for the towing of a specialized equipment trailer that the current van is unable to tow due to weight capacity limitations. In addition to the EST use, this van would also be used during the Annual Youth Police Academy to transport cadets. Cadets are brought to numerous different locations throughout the Youth Academy and having safe and reliable transportation is very important. At the start of the Fall Semester for CMU the van would also serve as our civil unrest (riot) gear equipment carrier that can be deployed in a moment's notice if need be.

Funding Requirements

Routine maintenance, repairs and upkeep will be split among the participating EST police agencies as the need arises.

Project Timeline

The van would be ordered immediately if funding was granted.

Budget Items

Name	Cost	Quantity	Total	Category
Emergency Services Team Van	\$54,420.00	1	\$54,420.00	Transportation
Van Conversion/Up-Fitting	\$20,145.00	1	\$20,145.00	Safety/Security
AmountRequested	\$74,565.00			

Matching Funds

Name	Cost	Quantity	Total		
No Matching Funds items have been added.					
AmountMatched	\$0.00				

Budget Summary

Amount Requested

\$74,565.00

Amount Matched

\$0.00

Total Amount

\$74,565.00

Uploaded Files

Name

ESTVanConfigurationSummary 2024-08-28.pdf

Quigley2024GMPriceList212 2024-08-28.pdf

There are no comments to display.



Your 2024 Express Passenger

3500 Extended Wheelbase, LT, RWD

Build Code: MQ1V3U



Standard Vehicle Price	\$48,600
Model	\$48,600
3500 Extended Wheelbase, LT, RWD	
Exterior	-
16" x 6.5" steel wheels (QB5) - Standard	-
Summit White (GAZ)	
Interior	-
Cloth front bucket seats (AS5) - Standard	-
Medium Pewter, Custom Cloth (93G)	
6-way power driver seat (AG1)	\$275
6-way power front passenger seat (AG2)	\$275
Options	-
8-speed heavy-duty automatic transmission (N8X) -	
Standard	-
AM/FM stereo with MP3 player (U0F) - Standard	-
Paratransit Package (Y3H)	-\$1,265
Swing-out passenger-side door (E24)	
3.42 rear axle ratio (GU6)	
Trailer wiring with dual 4-pin/7-pin sealed connector	
(UY7)	
9,900 lbs. GVWR (C4M)	
Trailer hitch (VR4)	
Outside temperature display (UFA)	\$10
Heavy-duty 770 cold-cranking amps battery (UA1)	\$60

220-amp alternator (KW5)	\$75
Rear window defogger (C49)	\$155
High idle switch (UF3)	\$200
Keyless Entry Control Module (RDI)	\$250
Heavy-duty trailering equipment (Z82)	\$280
Rear Park Assist (UD7)	\$295
Remote Start (BTV)	\$300
Automatic locking rear differential (G80)	\$325
Molded assist steps (VXW)	\$795
6.6L V8 Gas engine (L8T)	\$1,895
Total Vehicle and Options	\$52,525
Destination Freight Charge	\$1,895
Total Vehicle Price	\$54,420
Net Price After Offers*	\$54,420

Disclosures

Note: Due to current supply-chain shortages, certain features shown have limited or late availability, or are no longer available. See the window label or dealer regarding the features on an individual vehicle.

Net Price After Offers: MSRP excludes tax, title, license and dealer fees.

Quigley 4x4 PRICING

Item/Details		
Quigley 4x4: New Untitled 2024 (5yr./60,000 match GM Warranty with FAN#)		
4x4 Van 4.3L Gas, 6.6L Gas	\$16,500.00	
4x4 Cutaway 139" WB. SRW/DRW 4.3L or 6.6L Gas SRW must be ordered with option code JFF	\$18,500.00	
4x4 Cutaway 159", 177" WB 4.3L or 6.6L Gas	\$17,650.00	
Quigley 4x4: Pre-Owned/Used 2014-2022 (Under 60k miles. See terms and conditions	for warranty details)	
4x4 Van 2.8L diesel, 4.3L, 4.8L, 6.0L, 6.6L Gas and Diesel 6.6L Diesel must have optional 3" lift	\$17,000.00	
4x4 Cutaway 139" SRW/DRW, 4.3L, 6.0L, 6.6L Gas SRW must be ordered with option code JFF	\$19,000.00	
4x4 Cutaway 159", 177" WB 4.3L, 6.0L, and 6.6L Gas 6.6L diesel conversion not available unless raw chassis and includes 3" lift option	\$18,150.00	
Optional Upgrades (Manufacturer specific items carry the original manufacturer's warranty	ONLY)	
Quigley LIFS Option Approx 3" lift, Price based upon installation of lift at time of 4x4 installation CAUTION: the LIFS option will raise the center of gravity; see Warranty Packet for full details	\$995.00	
Quigley Retro-LIFS Option Approx 3" lift, Price based upon installation of lift after 4x4 installation complete CAUTION: the LIFS option will raise the center of gravity; see Warranty Packet for full details	\$4,600.00	
Tires BFGoodrich LT245/75R 16E All Terrain T/A KO tires, Qty 4 WITH 4 OEM tire exchange	\$1,195.00	
Shocks Bilstein Heavy Duty Shocks, Qty 4	\$800.00	
Sway Bar Hellwig Sway Bar, Van Only	\$800.00	
HD Tie Rod Assembly	\$400.00	
Installed GM G80 Locking Rear Differential One year, 12K mile warranty	\$1,400.00	
Quigley Electronic Shift (2.8L & 4.3, 135" or 155", 6.6L 155" only)	\$1,750.00	

Quigley 4x4 PRICING

Item/Details				
Accessories (Manufacturer specific items carry the original manufacturer's warranty ONLY)				
Installed Quigley Front Bumper w/ Pathfinder Spot & Flood Pod Lights (2 Each)	\$3,875.00			
Installed Quigley Rear Bumper	\$3,045.00			
Installed Quigley Steel Rocker Guards	\$2,545.00			
Installed Quigley Spare Tire Carrier	\$1,250.00			
Shipping: See Authorized Codes**				
GM Ship-Thru Charge added to factory invoice	\$1850.00			
Vehicle Pickup/Delivery by Quigley TBD by Transportation Department at time of Quote/Sales Order	TBD			
Special Transportation To/From Harrisburg Intl. Airport or Train Station	\$75.00			
Additional Charges				
Altered Factory WB Vehicle arriving with altered wheel base	\$250.00			
Undercoating Removal Vehicle arriving with aftermarket undercoating	\$300.00			
Specialty Upfit				
Dual Rear Wheel Conversion Full details upon request				

Overview

Project Name

Youth Services Officer Vehicle

Total Requested

\$55,000.00

(amount based on the Itemized Budget total)

Applicant Project Priority

Critical

Reocurring Need?

Not Reocurring

Applicant Information

Applicant Name

plauria@mt-pleasant.org

Applicant Email

Paul Lauria

Organization

Mt. Pleasant Police and Fire Department

Address

804 E. High St

Mount Pleasant, 48858

Phone Number

9893304378

Organization Information

Primary Organization

City of Mt. Pleasant

Authorizers

adesentz@mt-pleasant.org

Status

Review

Address

320 W. Broadway

Mount Pleasant, Michigan 48858

Phone

(989) 779-5300

Fax

Project Partners

Partnered With

Mt. Pleasant Public Schools

Authorizers

jverleger@mtpleasant.edzone.net

Status

Review

Address

720 N Kinney Ave

Mount Pleasant, Michigan 48858

Phone

(989) 775-2300

Fax

Categories

- Education
- Safety/Security
- Transportation

Project Description

This is a request for funds to purchase an unmarked 2024/25 Chevrolet Tahoe or similar SUV. This vehicle will be used by the Youth Services Officer assigned to the Mt. Pleasant High School. This officer is funded by a grant that was awarded to the Mt. Pleasant Public Schools.

Currently this officer uses a 2009 Ford Fusion with 112,000 miles. After 15 years of service the vehicle is showing its age with rust and mechanical issues that go beyond the value of the car.

Benefit Description

A new vehicle is less likely to experience mechanical issues, ensuring the officer can respond to emergencies without concerns about the vehicle breaking down, comes with updated safety features like advanced airbags which can protect both the officer and others in case of an accident, can respond more efficiently to incidents both on and off school property, can contribute to a more professional appearance within the community and among students, lowers maintenance and repair costs, and accommodates the necessary space to securely store equipment that may be needed by the officer. These benefits collectively enhance the school officer's ability to perform their duties effectively, contribute to school safety, and build trust within the school community.

Funding Requirements

The general maintenance, repair and upkeep of the vehicle will be incorporated into the annual police department operating budget.

Project Timeline

The vehicle will be ordered immediately if funding is granted. The attached quote is for the current model year. A 2025 Tahoe will have a slight price increase of approximately \$2,000.

Budget Items

Name	Cost	Quantity	Total	Category
2024/25 Chevy Tahoe	\$55,000.00	1	\$55,000.00	Safety/Security
AmountRequested	\$55,000.00			

Matching Funds

Name	Cost	Quantity	Total					
No Matching Funds items have been added.								
AmountMatched	\$0.00							

Budget Summary Amount Requested

\$55,000.00

Amount Matched

\$0.00

Total Amount

\$55,000.00

Uploaded Files

Name

MtPleasantTahoeprice 2024-08-28.pdf

There are no comments to display.

BID PER ENCLOSED SPECIFICATIONS

Cost per vehicle \$52,991.00 Vehicle Description:

Year <u>2024</u> Number of units 1

Number of units <u>1</u>
Make <u>Chevrolet</u>

Total Bid Amount \$52,991.00 Model Tahoe 4wd

police package

Vendor: Bid Prepared For:

Berger Chevrolet Inc.

Address 2525 28th Street S.E.

Grand Rapids, MI 49512

Phone (616) 949-5200

 $\frac{\text{Price includes title fee and delivery. Price based on}}{\text{Fax}} \qquad \frac{\text{(616) 988-9178}}{\text{Municipal discount in the State of Michigan.}}$

Signature Robert Evans

Printed Signature <u>Robert M. Evans</u>
Date <u>8/21/2024</u>

Overview

Project Name

Sewer Pipeline Inspection Camera

Total Requested

\$57,615.00

(amount based on the Itemized Budget total)

Applicant Project Priority

Medium

Reocurring Need?

Not Reocurring

Applicant Information

Applicant Name

jmoore@mt-pleasant.org

Applicant Email

Jason Moore

Organization

City of MtPleasant

Address

320 W Broadway St

MOUNT PLEASANT, 48858

Phone Number

9897795405

Organization Information

Primary Organization

City of Mt. Pleasant

Authorizers

adesentz@mt-pleasant.org

Status

Review

Address

320 W. Broadway

Mount Pleasant, Michigan 48858

Phone

(989) 779-5300

Fax

Categories

- Environmental
- Infrastructure

Project Description

This request is for the purchase of a new sewer camera for completing routine and emergency pipeline inspections.

Benefit Description

Regular inspections and assessments are essential for effectively prioritizing capital projects concerning the city's sanitary and storm sewer collection systems. Without direct visibility into the condition of the pipes, we must resort to less accurate indicators, such as pipe age and material.

During emergencies, the pipeline inspection camera proves invaluable and saves time in identifying issues. This proactive approach

protects properties from potential flood damage by enabling timely resolution before sewer backups exacerbate the situation.

The initial support from SCIT in procuring our first sewer camera for pipeline inspections in 2004 was instrumental. Since then, we have used the system extensively to evaluate miles of sewer pipe and deployed it in numerous emergency situations. However, with the current equipment demanding significant upkeep and lagging behind advancements in technology, it is necessary to upgrade to a new system.

Funding Requirements

Equipment maintenance will be managed within the motor pool operational budget.

Project Timeline

Not Entered

Budget Items

Name	Cost	Quantity	Total	Category
Sewer Camera and Required Accessories	\$57,615.00	1	\$57,615.00	Infrastructure
AmountRequested	\$57,615.00			

Matching Funds

Name	Cost	Quantity	Total
Sewer Camera and Required Accessories	\$57,615.00	1	\$57,615.00
AmountMatched	\$57,615.00		

Budget Summary

Amount Requested

\$57,615.00

Amount Matched

\$57,615.00

Total Amount

\$115,230.00

Uploaded Files

Name

SewerCameraQuote 2024-08-26.pdf

There are no comments to display.



Michigan 78 Northpointe Drive Lake Orion, MI 48359 Phone: 248-370-0000 Fax: 248-370-0011

Ohio 1045 Taylor Rd. Gahanna, OH 43230 Phone: 614-655-0022 Fax: 614-655-0022

ENVIROSIGHT ROVVER X PIPELINE HD INSPECTION SYSTEM MIDEAL PRICING CONTRACT #071B7700091

- Rovver X Crawler with Wheels and HIGH-DEFINITION CAMERA
- V (1) Integrated lift for lifting camera head out of flow in bigger pipe
- > (1) Cable Reel with 1000 feet of cable
- (1) RCX90 Pan & Tilt camera
- VC500 Pendant and Controller
- (1) Rear View Camera with auxiliary LED for camera lift
- > (4) Large Quick Change Grease Wheels
- (4) Medium Quick Change Grease Wheels
- (4) XXL Quick Change Rubber Wheels
- (1) Flexible Cable Guide Pulley for Manhole-Bottom
- (1) Manhole Roller
- Training and Delivery included

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Available Options

Large Diameter Carriage – Large Diameter Pipe Carriage to Elevate Camera for 24" and Bigger \$14,520.00



Michigan 78 Northpointe Drive Lake Orion, MI 48359 Phone: 248-370-0000 Fax: 248-370-0011

Ohio 1045 Taylor Rd. Gahanna, OH 43230 Phone: 614-655-0022 Fax: 614-655-0022

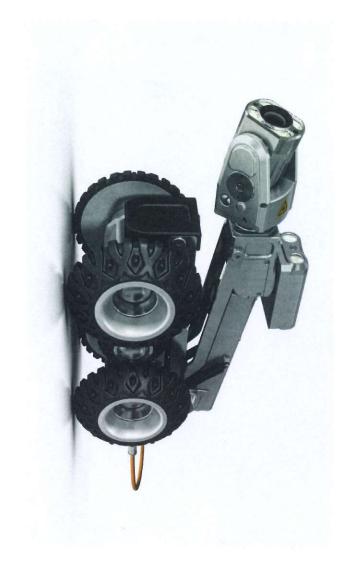
REFERENCES

Orion Township Bill Basigow	City of Ferndale Dar	MDOT Detroit Rys	City of Warren Gus	City of St. Clair Shores Bry	City of Roseville Bri	City of Troy - Mike Schlegelmann or Andy Willetts	
	Dan Harper	Ryan Buhl	Gus Ghanam	Bryan Babcok	Brian Schulte	nn or Andy Willetts	
2/8 301 030/	248-546-2514	989-233-2182	586-574-4605	586-445-5363	586-909-0396	248-524-3497	

More provided upon request

Thank you for the Opportunity,

Steve Clelland
Bell Equipment Co.
248-770-5696
sclelland@bellequip.com

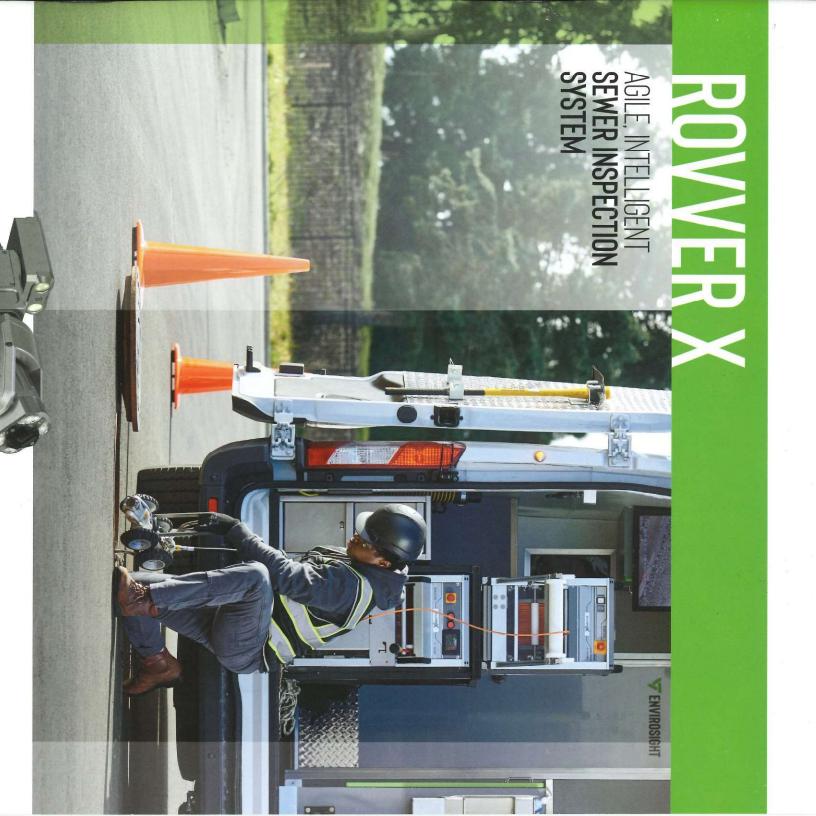


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Steve Clelland

Territory Equipment Manager
O. 248-370-0000 C. 248-770-5696
D. 248-370-0000 #1329
E. sclelland@bellequip.com
78 Northpointe Dr. |
Lake Orion, MI 48359



FENVIROSIGHT

GAIN DEEPER INSIGHT

When you open a manhole, be ready to get the full picture.





SIMPLE

Cut out complexity for your crew with technology that's easy to learn and use, a responsive support team, and a regional service network that delivers rapid turnaround.



RELIABLE

Stay on schedule and within budget with ROVVER X's industry-low downtime and cost-of-ownership. Not only is it built to endure punishment, its intuitive design lets you perform routine maintenance right in the field.

advanced capabilities and support for digital workflows. offers industry-leading productivity with a simple interface, insight you need to make critical maintenance decisions. It With unmatched power and agility, ROVVER X delivers the





ADAPTABLE

Tackle any inspection challenge. ROVVER X accessories and wheels swap in seconds to fit any pipe size, material and condition. And when the job calls for specialized capabilities, easily add lateral launch, laser profiling, side scanning and more.



AGILE

Power past obstacles that sideline other crawlers. With steerable six-wheel drive, ROVVER X avoids obstructions and climbs over debris and offsets. An array of onboard sensors helps you avoid hazards.

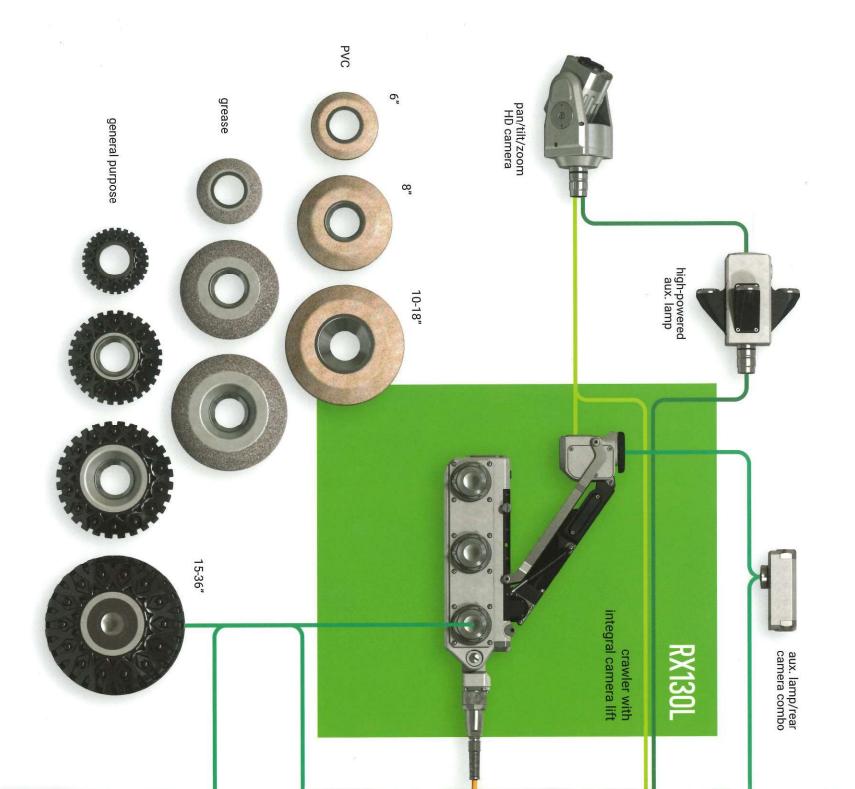


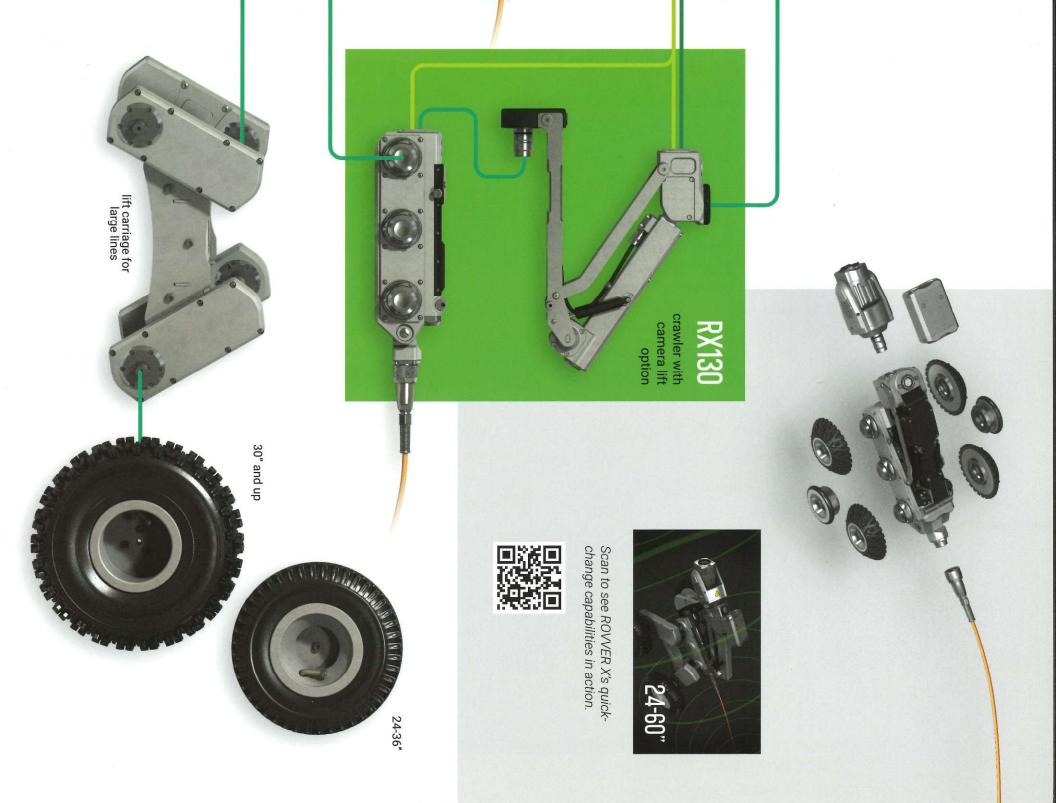
SMART

Access every capability from a single interface—operate the crawler, record video, overlay text, log observations, measure defects and create reports. Inspection data streams securely to the cloud, and the system auto-updates to the latest features.

ADAPTABLE

wheels and accessories rapidly without tools. Achieve new ROVVER X is the only crawler system that lets you change of pipe size, material and condition. levels of productivity, and confidently handle any combination





SMART

Simple to learn yet powerfully capable, ROVVER X's touchscreen controls support your entire inspection workflow. And with built-in Wi-Fi, you can share inspections online and keep your ROVVER X system updated with the latest features.



Sometimes you need maximum detail, sometimes you need minimum file size—and sometimes you need a compromise. With Flexspection, the choice is yours.





NEED LESS?

This remote control puts all major crawler and reel functions in the palm of your hand, and it comes standard with every ROVVER X system.



NEED EVEN MORE?

For maximum productivity, this optional desktop command center offers precision control, full QWERTY keyboard, and ergonomic comfort.



OPERATE

against operating hazards. controls and real-time feedback. joysticks, intuitive touchscreen using twin multi-function Onscreen notifications help warn Control every ROVVER X function

OVERLAY TEXT

and your logo. Customize text With drag-and-drop simplicity, create an overlay that has static text, live data, observation details to your preference. position, color and background



MEASURE DEFECTS

much more. bend angles, inclination and pipe diameter, wall features you size up cracks, water level, Powerful measurement tools let



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observations with help from

Create an inspection, then log

ENTER OBSERVATIONS

including PACP and WRc. onboard defect catalogs,





Generate PDF reports from completed inspections, then

CREATE REPORTS

deliver them via USB drive.



CONNECTED

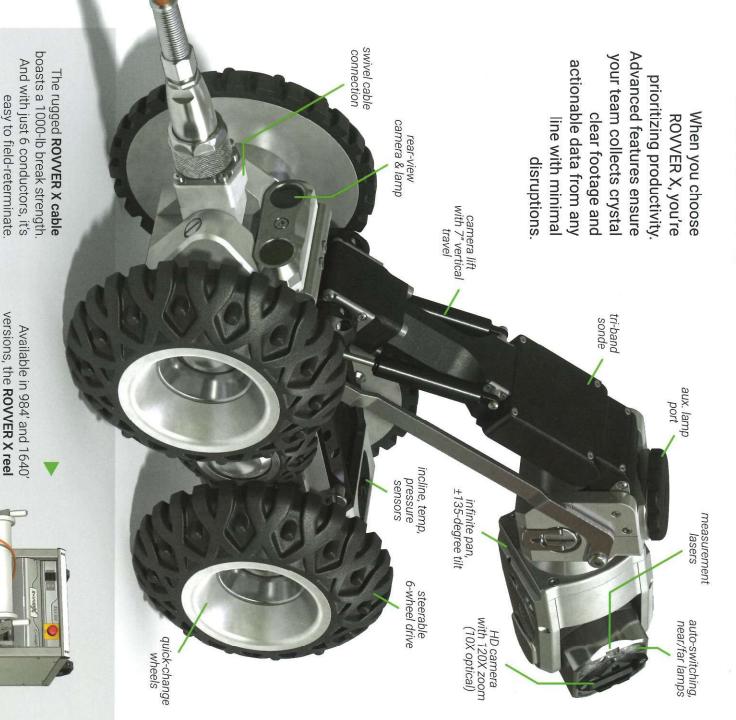
data online, and securely share results with your entire team. edit, analyze and map inspection sewer inspection data. Review, Web, the cloud platform for Wirelessly upload your inspections directly to WinCan



Web trial account: Scan to set up your free WinCan



CAPABLE



automatically feeds cable so the crawler doesn't have to pull it off the reel. This extends travel

range and reduces crawler

wear-and-tear

SCALABLE

capability, so you can meet any inspection challenge. Specialty crawlers and attachments give you plug-and-play Once you own the ROVVER X platform, the sky is the limit.



MOBILE

tools, and safety gear are within easy reach. crew and offer full amenities—ensuring your equipment, ROVVER X in the field. Envirosight-built vehicles protect your Stay safe, productive and comfortable while deploying your



BOX TRUCKS

Get maximum elbow room, plus extra capacity for lateral launch systems, generator power sources and cranes.



TRAILERS

Gain flexibility when inspection is part time or when inspection equipment must be shared between crews.



ENCLOSURES

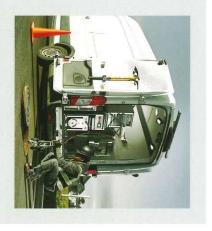
Deploy an Envirosight Outpost when you need access to easements and other remote worksites using a pickup or ATV



TRUSTED

locations—so wherever the job takes you, help is never far. the industry's largest network of regional support and service experience helping sewer professionals succeed. We've built Standing behind ROVVER X is a team with decades of





Don't take our word for it. Some of the largest cities and contractors trust ROVVER X. Scan to read their stories.



LOCAL PRESENCE

Success in our industry is a ground game. That's why we have systems, parts inventory and capabilities strategically deployed nationwide, ready for you on demand.

WARRANTY

ROVVER X is backed by one of the industry's most comprehensive warranties. Optional maintenance plans and extended warranties offer further cost predictability. And with more than 25 factory-certified service centers across North America, we're never far when you need help.

TRAINING

Your operators will be productive out of the gate with on-site training from certified ROVVER X instructors. Not only do we cover equipment care, operation and safety, we're available to provide PACP training, too. Need virtual training? We deliver it on demand from a fully equipped studio.

TURNAROUND

Gain access to our comprehensive online parts portal, where in-stock orders placed before 3:00 pm ship the same day, with next-day delivery available. And when unique challenges require unique capabilities, know that rental gear is available from 23 locations across the continent.



crawler systems worldwide



locations in North America



average yearly cost of ownership compared to purchase price



average distance inspected per day

SPECIFICATIONS

system

storage temp4 to 158°F	operating temp32 to 104°F	viewing capability pipelines 4-96" dia.	power	ratings
*				17.
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-33				
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camera (RCX90 HD)

crawler (RX130 HD, RX130L HD)

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protection class
sensors pitch, roll, temperature, pressure pressure rating
turn radius
drivetrain steerable 6-wheel drive

control pendant (VC500 HD)

weight	protection class	connectivity LAN, USB 2, USB 3, Wi-Fi, HDMI	image capture	video capture MPEG-4 AVC (H.256)	1280×800 px, 1280 cd/m², 150-deg view ang	touchscreen 10.1" color TFT, multi-touch,	controls Joyaneka, touchacteen, power, amp
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auxiliary lamp (RAL200 HD, optional)

forward illumination twin tri-LED lamps



cable reel (RAX300 HD)

camera lift (optional)

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TYPICAL SYSTEM

- RX130 HD crawler body
- RCX90 HD camera head RAX300 HD reel with 984' cable
- VC500 HD control pendant
- handheld wireless remote
- assortment of who





Request a FREE On-site Demo





Overview

Project Name

Pickard Storm Sewer

Total Requested

\$85,500.00

(amount based on the Itemized Budget total)

Applicant Project Priority

High

Reocurring Need?

Not Reocurring

Applicant Information

Applicant Name

jmoore@mt-pleasant.org

Applicant Email

Jason Moore

Organization

City of MtPleasant

Address

320 W Broadway St MOUNT PLEASANT , 48858

Phone Number

9897795405

Organization Information

Primary Organization

City of Mt. Pleasant

Authorizers

adesentz@mt-pleasant.org

Status

Review

Address

320 W. Broadway

Mount Pleasant, Michigan 48858

Phone

(989) 779-5300

Fax

Categories

Infrastructure

Project Description

This request is for funding to upsize large-diameter storm sewer structures at the Pickard and Brown Street intersection. A large trunk line storm sewer that serves much of the east side of the City of Mt. Pleasant runs down Brown Street and crosses Pickard Street. Based on the analysis provided by the Multi-Jurisdictional Stormwater Master Plan that was accomplished with a previous two-percent grant, this trunk line sewer will need upgrading to provide adequate service to the upstream areas.

MDOT has begun reconstructing Pickard Street and will be finishing in 2024. Incorporating storm work into the project at that time will save significant costs associated with traffic control and contractor mobilization. The engineering consultant has incorporated the upsizing into the plans and MDOT is prepared to do the work if provided funding from the City.

Benefit Description

This project will allow for future upgrades to the stormwater collection system in order to meet the demands of future storm events.

Funding Requirements

Future funding requirements for operations and maintenance of the stormwater infrastructure are roughly equal to that of the current infrastructure.

Project Timeline

Summer/Fall 2024

Budget Items

Name	Cost	Quantity	Total	Category
Work Items	\$60,500.00	1	\$60,500.00	Infrastructure
Mobilization	\$20,000.00	1	\$20,000.00	Infrastructure
Traffic Control	\$5,000.00	1	\$5,000.00	Infrastructure
AmountRequested	\$85,500.00			

Matching Funds

Name	Cost	Quantity	Total
Work Items	\$60,500.00	1	\$60,500.00
Mobilization	\$20,000.00	1	\$20,000.00
Traffic Control	\$5,000.00	1	\$5,000.00
AmountMatched	\$85,500.00		

Budget Summary Amount Requested

\$85,500.00

Amount Matched

\$85,500.00

Total Amount

\$171,000.00

Uploaded Files

Name

No files have been uploaded.

There are no comments to display.

Overview

Project Name

Sidewalk Replacement 2025

Total Requested

\$150,000.00

(amount based on the Itemized Budget total)

Applicant Project Priority

Low

Reocurring Need?

Not Reocurring

Applicant Information

Applicant Name

jmoore@mt-pleasant.org

Applicant Email

Jason Moore

Organization

City of MtPleasant

Address

320 W Broadway St MOUNT PLEASANT , 48858

Phone Number

9897795405

Organization Information

Primary Organization

City of Mt. Pleasant

Authorizers

adesentz@mt-pleasant.org

Status

Review

Address

320 W. Broadway

Mount Pleasant, Michigan 48858

Phone

(989) 779-5300

Fax

Categories

Infrastructure

Project Description

Each year the City invests in maintenance of the sidewalk system. Focus is generally placed on identifiable hazards such as large obstacles and trees blocking sidewalk paths, small lips and cracks, pocketing water and spalling. Replacement sidewalks are built to coincide with planned street and water main replacement projects.

This project would replace sidewalk in various locations within the city.

Benefit Description

Since 1996, sidewalk has been replaced each year throughout the City. The Division of Public Works has created a sidewalk rating system so that the sidewalk replacement list can be prioritized and this project would address the worst sidewalk within the city.

Funding Requirements

Sidewalk replacement is an ongoing expense.

Project Timeline

Not Entered

Budget Items

Name	Cost	Quantity	Total	Category
Sidewalk Replacement - Various Locations	\$150,000.00	1	\$150,000.00	Infrastructure
AmountRequested	\$150,000.00			

Matching Funds

	Name	Cost	Quantity	Total	
No Matching Funds items have been added.					
	AmountMatched	\$0.00			

Budget Summary

Amount Requested

\$150,000.00

Amount Matched

\$0.00

Total Amount

\$150,000.00

Uploaded Files

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No files have been uploaded.

There are no comments to display.

Overview

Project Name

1303 N Franklin Former Landfill Remediation

Total Requested

\$50,000.00

(amount based on the Itemized Budget total)

Applicant Project Priority

Critical

Reocurring Need?

Not Reocurring

Applicant Information

Applicant Name

<u>jmoore@mt-pleasant.org</u>

Applicant Email

Jason Moore

Organization

City of MtPleasant

Address

320 W Broadway St MOUNT PLEASANT , 48858

Phone Number

9897795405

Organization Information

Primary Organization

City of Mt. Pleasant

Authorizers

adesentz@mt-pleasant.org

Status

Review

Address

320 W. Broadway

Mount Pleasant, Michigan 48858

Phone

(989) 779-5300

Fax

Categories

Environmental

Project Description

This request is for funding to continue work at 1303 N Franklin Street (a City-owned property). We would continue work according to the advisement of our environmental consultant and the Michigan Department of Environment Great Lakes and Energy (EGLE). We are expecting to be able to begin remediation activities once the site assessment has been completed. This funding would be used for the eventual remediation project.

Community landfills were common throughout the state and country for several decades for the disposal of local trash. This former landfill was operated until 1975 for placement of general refuse from residents and business owners throughout the community. In the early 1980s, the landfill was closed and capped with clean fill material, as appropriate with the regulatory requirements applicable at the time. The City is working in conjunction with the State and Federal regulatory agencies to evaluate the environmental condition of the former landfill.

Previous funding awarded during the 2020-2022 two-percent processes have allowed for further characterization of the site and refinement of the Conceptual Site Model (CSM). Deep wells were installed in the spring of 2022 and have been sampled. The environmental consultant compiled data and put together a report of work done. It was determined that another deep well outside the landfill area should be installed and water tested to verify that the clay layer found during prior work is sufficient to eliminate the drinking water pathway. This work has been completed.

Benefit Description

The retired municipal landfill at 1303 N Franklin was utilized by Mt. Pleasant and the surrounding area from some time in the 1950s to 1975 when it was closed. Shortly after closure, the area had a clay cap placed over it to limit the rainwater entering the landfill area.

Funding for this project will allow for future work at the site in accordance with the advisement of our environmental consultant and the Michigan Department of Environment Great Lakes and Energy (EGLE).

Funding Requirements

Future funding requirements are unknown and will depend on the type of remediation that may be required.

Project Timeline

2025

Budget Items

Name	Cost	Quantity	Total	Category
Remediation	\$50,000.00	1	\$50,000.00	Environmental
AmountRequested	\$50,000.00			

Matching Funds

Name	Cost	Quantity	Total
Remediation	\$50,000.00	1	\$50,000.00
AmountMatched	\$50,000.00		

Budget Summary

Amount Requested

\$50,000.00

Amount Matched

\$50,000.00

Total Amount

\$100,000.00

Uploaded Files

Name

Latest Site Report

There are no comments to display.

REPORT ON RESPONSE ACTIVITY PLAN IMPLEMENTATION

1301-1303 FRANKLIN STREET MOUNT PLEASANT, MICHIGAN



SEPTEMBER 28, 2022

PREPARED FOR:

THE CITY OF MOUNT PLEASANT DIVISION OF PUBLIC WORKS MOUNT PLEASANT, MICHIGAN

320 WEST BROADWAY MOUNT PLEASANT, MICHIGAN



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Mount Pleasant, Isabella County, Michigan

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1.0 INTRODUCTION

The Mannik & Smith Group, Inc. (MSG) was retained by the City of Mount Pleasant, Michigan to provide professional environmental consulting services for investigation of a former landfill area at City-owned property located north of the intersection of West Pickard and North Franklin Streets in Mount Pleasant. MSG has been assisting the City with regulatory compliance issues associated with the former landfill area since November 2020. An investigation of the former landfill was conducted by MSG in 2021 under an Agreement for Services with The City based on MSG's March 2021 Proposal for Professional Services No. OP210419. The results of the investigation were documented in MSG's July 20, 2021 Report on Investigation of Former Landfill.

The investigation documented in the July 20, 2021 report focused primarily on delineation of the area of buried refuse, determining the suitability and engineering properties of the landfill's clay cap, and characterization of shallow groundwater conditions at the subject site. In addition, a Response Activity Plan for additional investigation of the former landfill was developed by MSG, as necessary and appropriate based on the findings contained in the above noted July 20, 2021 report and on regulatory requirements. The primarily objective of the additional investigation described in the September 8, 2021 Response Activity Plan (RAP) was characterization of site hydrogeologic conditions at depths below the base of the landfill.

The scope of work described in the September 8, 2021 RAP was implemented by MSG in 2022 under an Agreement for Services between the City of Mount Pleasant and MSG based on MSG's January 31, 2022 Proposal for RAP Implementation¹, as authorized by The City on February 14, 2022. This report presents the results of the RAP implementation activities.

1.1 Site Description

The subject site is located at 1301-1303 North Franklin Street in Mount Pleasant, Michigan, north of the intersection of North Franklin and West Pickard Streets. *Figure 1, Site Location*, depicts the location of the site as referenced to nearby roads and geographic features. The site is located north of and adjacent to the City's Wastewater Treatment Plant facility (1301 North Franklin) and facilities of the City's Street and Motor Pool Departments (1303 North Franklin), including a vehicle maintenance garage, a garage for storage of salt trucks, and other City-owned staging and storage areas. The site is located in a "SD-I (Industrial)" zoning district.

As shown on *Figure 2, Site Map*, the site is bordered by the Chippewa River on the west side. A golf course is located adjacent to the site on the north and northwest sides. A cemetery is located directly east of the site. Surrounding properties to the south and west of the site and north of West Pickard Street are primarily commercial/industrial. The area located south of West Pickard is primarily residential.

The central portion of the site is occupied by an area that was a formerly used as a landfill. There are low-lying wet areas located north and northeast of the former landfill area. A wooded area with numerous patches of wet ground is located east and northeast of the landfill area. Most of the western and northwestern portions of the site, including the area of the site located along the Chippewa River, are heavily wooded and vegetated. Access to most of the wooded/wet areas located to the north, west, and northeast of the former landfill area is very limited.

-

¹ MSG Proposal No.OP220226

1.2 Project Background

The landfill at the subject site reportedly operated from the 1950s until approximately 1975. For at least part of that time (in the 1960s), the landfill was licensed as a Solid Waste Disposal Area under former Michigan Public Act 87 (Garbage and Refuse Disposal Act). The landfill has a clay cap. The Chippewa River borders the site on the west, although it does not appear that the former landfill area extends laterally to the river.

In late 2018, a clay tile pipe located on the riverbank at the site was identified to be draining into the river. Further investigation by City personnel found four additional pipes near the former landfill area. Water being discharged by the clay pipes was sampled and analyzed. Subsequent investigation by the City and an environmental services provider contracted by the City found elevated levels of regulated substances in the discharge water, including elevated levels of per and polyfluoroalkyl substances (PFAS). Initial investigation of groundwater at the site conducted in 2019 indicated that PFAS concentrations in site-specific shallow groundwater samples exceeded regulatory levels (Michigan Public Act 451² Part 201 Generic Cleanup Criteria) for both the drinking water (DW) and groundwater surface water interface (GSI) exposure pathways.

Additional monitoring wells were installed at the site in 2019-2020 by others and additional groundwater samples were collected and analyzed. The groundwater sample analytical results indicated that PFAS concentrations and concentrations of other analytes (metals, volatile organic compounds, semivolatile organic compounds, and polychlorinated biphenyls) exceeded Part 201 residential and/or nonresidential Generic Cleanup Criteria (GCC). The site-specific shallow groundwater flow direction was not determined. Deeper groundwater underlying the site was not investigated.

The City of Mt. Pleasant has been working closely with the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Remediation and Redevelopment Division (RRD) since the discharge into the Chippewa River was first discovered. Seventeen groundwater monitoring wells were installed in and around the landfill area at the site in 2019-2020 by AKTPeerless (AKT) of Saginaw, Michigan. Groundwater samples have been collected from most of the wells and have been analyzed for an extensive parameter list. The clay pipes have reportedly been grouted and capped.

MSG conducted Ground Water Testing Project Number 3 for the City in November and December 2020 under the scope of work specified in the August 2020 Request for Proposals issued by the City. Nine additional shallow groundwater monitoring wells were installed by MSG in November 2020. Six of the nine monitoring wells installed by MSG are located in close proximity to the Chippewa River. Groundwater samples were collected in November 2020 from the nine new monitoring wells and from four of the previously installed monitoring wells. The November 2020 groundwater samples were analyzed for an extensive suite of analytes including PFAS compounds.

The results of Ground Water Testing Project Number 3 were documented in a report by MSG dated December 22, 2020. The results indicated that the shallow groundwater at some of the onsite monitoring well locations, including locations in close proximity to the Chippewa River, contained concentrations of PFAS compounds and dissolved phase metals (dissolved boron and dissolved arsenic) that exceeded Part 201 GCC for the DW and/or GSI exposure pathways. No PCBs were detected in the November 2020 groundwater samples. None of the samples contained volatile organic compounds or semi-volatile organics at concentrations that exceeded Part 201 GCC.

A meeting with City of Mount Pleasant, EGLE RRD, and MSG personnel was convened on February 22, 2021 to review the results of Ground Water Testing Project Number 3. During the meeting, EGLE RRD personnel outlined additional site characterization measures necessary for regulatory compliance under Part 201 of NREPA. As requested by the City of Mt. Pleasant, MSG developed a scope of work to complete the next phase

THE MANNIK & SMITH GROUP, INC.

² The Natural Resources and Environmental Protection Act (NREPA), Michigan Public Act 451, 1994 as amended.

of site characterization required by EGLE (MSG Proposal No. OP 210419 dated March 2, 2021). Following a request by EGLE RRD personnel, the scope of work was revised to include a shallow groundwater monitoring event. The revised MSG proposal No. OP 210419 was reissued to the City on March 24, 2021 and was authorized by the City on April 14, 2021. The investigation conducted by MSG in 2021 included:

- Determining the exact locations, ground surface elevations, top of well casing elevations, total depths, and overall condition of the site monitoring wells. Seventeen monitoring wells were installed at the site by AKT in 2019-2020. Nine additional monitoring wells were installed at the site by MSG in 2020. In addition, 6 monitoring wells were reportedly installed at the site by Keck Consulting Services, Inc. (Keck) in 1977.
- Measuring and recording static groundwater levels in each of the site monitoring wells, referenced to the respective well top of casing elevations.
- Determining the site-specific groundwater flow direction for the shallow groundwater zone.
- Conducting a groundwater monitoring event utilizing existing groundwater monitoring wells located near the Chippewa River and the wet areas in the northern and northeast portions of the site.
- Investigating the lateral and vertical extent of buried refuse at the site and the composition of the refuse.
- Determining the thickness of the landfill cover (clay cap).
- Collecting samples of the landfill cover materials and testing selected samples for relevant engineering properties.
- Preparing a technical report documenting the investigative methods and findings.
- Developing a work plan (Response Action Plan) for additional investigation, as necessary and appropriate based on the available data and information and EGLE RRD regulatory requirements under Part 201 of NREPA.

The results of the 2021 investigation indicated that the site-specific shallow groundwater flows to the west/northwest towards the Chippewa River with a flow velocity of 3.2-7.8 feet/day (1168-2847 feet/year) and an average hydraulic conductivity of 0.033 cm/sec (93.5 feet/day). The area of buried refuse at the site is approximately 17 acres. The known maximum depth of buried refuse is on the order of approximately 26-30 feet below the ground surface (bgs). The observed buried refuse consists primarily of paper (including decomposing newspaper); metal (including aluminum cans); glass fragments; metal fragments; construction and demolition debris including wood, concrete debris, roofing materials, and bricks; cloth/fabric; and fibrous materials of uncertain origin. The buried refuse was most commonly mixed with soil including sand, clayey sand, and sandy clay. In general, there was more soil and wood than refuse present in the soil/refuse mixture.

The results of the May 2021 shallow groundwater monitoring event indicated that PCBs and SVOCs were not detected in the shallow groundwater samples. One VOC was detected in one shallow groundwater sample at a concentration below residential and nonresidential GCC. The reported dissolved arsenic, dissolved aluminum, and dissolved boron concentrations of some of the May 2021 shallow groundwater samples exceeded the respective GCC for the drinking water exposure pathway. The dissolved arsenic concentrations for two of the shallow groundwater samples exceeded the respective GSI GCC. The reported PFAS concentrations for the groundwater samples from 6 of the shallow groundwater monitoring wells were above the respective DW GCC. The reported PFOS³ concentrations for the groundwater samples from 4 of the shallow monitoring wells were above the GSI GCC for PFOS.

The buried refuse at the site is covered by a clay cap that is at least two feet thick. The results of geotechnical engineering tests completed on samples of the clay cap materials indicate that the clay cap is generally suitable for landfill cover purposes.

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³ PFOS (Perfluorooctanesulfonic Acid) is a PFAS compound that is regulated under Part 201 of NREPA

The September 8, 2021 Response Action Plan was formally submitted to EGLE RRD on December 6, 2021 and was approved with conditions by EGLE via correspondence dated December 14, 2021.

2.0 PURPOSE AND SCOPE

The primary objective of the work described in the Response Activity Plan was to investigate and characterize site-specific hydrogeologic conditions at depths below the base of the former landfill and below the shallow groundwater zone at the site. Based on the information provided on the logs for existing AKT monitoring wells MW-3-19, MW-4-19, MW-5-19 and MW-6-19 and the ground surface elevations at those locations determined by MSG during the 2021 monitoring well survey, the base of the former landfill is at elevations generally on the order of 740-750 feet, assuming that buried refuse extends to a maximum depth of 26 feet bgs as noted on the AKT logs. Therefore, the RAP implementation activities included characterizing site-specific hydrogeologic conditions at depths below an approximate elevation of 745 feet.

The investigation of deep groundwater conditions at the site included five primary tasks:

- 1. Deep exploratory borings
- 2. Installation of deep groundwater monitoring wells
- 3. Soil laboratory testing
- 4. Deep monitoring well sampling and analysis
- 5. Shallow groundwater sampling and analysis
- 6. Data review, evaluation, and technical report preparation

The RAP implementation activities were directed and overseen by a Certified Professional Geologist (CPG) from MSG's Canton, Michigan office. The individual tasks are described below in more detail.

3.0 FIELD INVESTIGATION

The field portion of the RAP implementation activities was conducted by MSG personnel in April and May 2022 under the direct supervision of a Certified Professional Geologist (CPG) from MSG's Canton, Michigan office. Six deep exploratory borings were drilled and sampled during the period of April 11-13, 2022. Groundwater monitoring wells were installed in three of the exploratory borings. A shallow groundwater sampling event was conducted by MSG field personnel on May 16, 2022.

The six deep exploratory borings were drilled and sampled to depths of 40-50 feet below the ground surface, corresponding to elevations of approximately 704.2 feet to 719.5 feet. Low permeability cohesive soils (glacial till and hardpan-like till) were encountered at depth in each of the six exploratory borings. The glacial till/hardpan soils extended to the boring terminus depth at each of the deep exploratory boring locations. No deep water-bearing zones or lower aquifers were encountered in the April 2022 borings. Therefore, three new groundwater monitoring wells were installed at the base of the uppermost groundwater bearing zone, with two of the three new monitoring wells located upgrdadient of the landfill area and one at a downgradient location.

Photographs of the RAP implementation field activities are included in *Appendix A, Photo Log.*

3.1 Deep Exploratory Borings

Six deep exploratory borings, designated SB-19 through SB-21 and MW-200 through MW-202, were drilled and sampled at the approximate locations shown on Figure 2. The borings were drilled and sampled by Cascade Environmental of Flint, Michigan using a rubber track mounted Boart Longyear LS 250 Minisonic drill rig and rotosonic drilling methodology. A subsurface utility staking request was made through the MISS DIG utility locating system prior to commencement of drilling and sampling. The boring logs are included in *Appendix B, Boring and Monitoring Well Logs*.

The rotosonic drilling method uses high-frequency resonant energy to advance a core barrel into the subsurface formations. The resonant energy is transferred down the drill string to the drill bit face at various sonic frequencies. The subsurface materials are continuously cored and recovered using a 4-inch diameter steel coring barrel. The 4-inch diameter coring barrel is overridden by a six-inch diameter steel barrel that cases the borehole and prevents collapse. Water is used when necessary to reduce drilling friction and heat buildup.

As shown on Figure 2, borings SB-19 and SB-20 were located within the area of buried refuse. Each of these borings was drilled and sampled to a depth of 50 feet bgs (boring terminus elevations of 719.5 feet for each boring). Boring SB-21 was drilled to a depth of 40 feet bgs (terminus elevation of 706.5 feet) near the location of groundwater monitoring well MW-102 and approximately 60 feet from the Chippewa River. Borings MW-200 and MW-201 were each drilled to a depth of 50 feet (boring terminus elevations of 706 feet and 711.1 feet, respectively), near the eastern site boundary. Boring MW-202 was drilled to a depth of 40 feet bgs (terminus elevation of 704.2 feet) in relatively close proximity to the northwest corner of the area of buried refuse.

Four-inch diameter soil cores were collected at each boring location on a continuous basis from the ground surface to the respective boring terminus depths. Five foot long coring runs were used in the uppermost 10 feet of drilling, followed by 10-foot long runs from 10 feet bgs to the respective boring terminus depths. Sample recovery, as shown on the boring logs in Appendix B, was generally good, with 100% recovery in many cases. The recovered soils at each boring location were examined and logged in the field by an experienced MSG field geologist/CPG.

Upon completion of drilling and sampling, borings SB-19, SB-20, and SB-21 were backfilled with hydrated bentonite⁴ suitable for borehole decommissioning in environmental applications. Borings MW-200, MW-201, and MW-202 were used for installation of new groundwater monitoring wells, as described below in Section 3.2.

The locations of the borings were surveyed by MSG field personnel using a hand-held global positioning system (GPS) instrument with sub centimeter accuracy capability. The ground surface elevations at the locations of borings SB-19, SB-20, and SB-21 were also surveyed by MSG field personnel using a sub centimeter accuracy capability GPS unit. The ground surface elevations at the locations of the borings used for installation of groundwater monitoring wells (borings MW-200, MW-201, and MW-202) were surveyed by a professional survey crew from MSG's Canton, Michigan office under the supervision of an MSG State of Michigan licensed Professional Surveyor.

3.2 Monitoring Well Installation

Groundwater monitoring wells were installed in borings MW-200, MW-201, and MW-202 upon completion of drilling and soil sampling. The locations of the monitoring wells, also designated MW-200, MW-201, and MW-202 are shown on Figure 2. The monitoring well construction details are included on the boring/monitoring wells logs in Appendix B. Additional monitoring well information, including the location coordinates and elevations, is provided on *Table 1*, *Monitoring Well Information*.

Each well assembly consists of a 2-inch diameter 10-slot⁵ Schedule 40 PVC well screen flush threaded to 2-inch diameter Schedule 40 PVC riser pipe. As shown on the boring/monitoring well logs in Appendix B, the well screens for MW-200, MW-201 and MW-202 were set at the approximate base of the glacial lacustrine sand and gravel deposit that is the uppermost groundwater bearing geologic unit at the site. There were no

⁴ Puregold Medium Chips (NSF/ANSI/Standard 60 certified) manufactured by Cetgo/Minerals Technologies Incorporated

⁵ A 10-slot well screen has 0.010 inch openings

lower aquifers encountered in the deep exploratory borings. Each boring was terminated in low permeability cohesive glacial till material. Therefore, no deep monitoring wells were installed.

The well screens for MW-200 and MW-201 are 10 feet long and are set from 15-25 feet bgs. MW-202 has a five-foot long screen set from 4-9 feet bgs. Each well is equipped with an above ground riser and an above ground steel protective cover secured in a concrete pad at the ground surface.

The wells were developed by surging and pumping until the purge water became relatively clear. A professional survey crew from MSG's Canton, Michigan office surveyed the top of casing elevations of new monitoring wells MW-200, MW-201, and MW-202 to the nearest 0.01 foot. The survey crew's work was conducted under the supervision of a State of Michigan licensed Professional Surveyor from MSG's Canton office.

3.3 Groundwater Sampling and Analysis

A groundwater monitoring event was included as part of the RAP implementation activities. The following monitoring wells were sampled by MSG field personnel on May 16, 2022: MW-101 through MW-106, MW-108, MW-109, MW-9-20, MW-10-20, MW-14-20, MW-15-20, MW-200, MW-210, and MW-202.

The static groundwater level in each sampled well was measured by MSG personnel using an electronic water level meter prior to well purging and groundwater sampling. Static groundwater levels were also measured in monitoring wells MW-107, MW-1-19, MW-2-19, MW-7-20, MW-12-20, MW-16-20, MW-17-20, and MW-X. The water level meter has an accuracy of +/- 0.01 feet (approximately 1/8 inch). The static groundwater level measurements were recorded on field sampling forms that are included in *Appendix C*, *Field Sampling Forms*.

MSG personnel then purged and sampled the groundwater monitoring wells in general accordance with the United States Environmental Protection Agency (USEPA) *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures* guidance document (EPA/540/S-95/504, April 1996). Groundwater samples were collected using a peristaltic pump equipped with high-density polyethylene (HDPE) tubing. A new HDPE disposable bailer and nylon rope were used for sampling monitoring well MW-109. Groundwater samples for PFAS analysis were collected in general accordance with the October 16, 2018 EGLE guidance document entitled *General PFAS Sampling Guidance*.

Water quality field parameters including pH, specific conductance, temperature, oxidation-reduction potential, specific conductance, turbidity, and dissolved oxygen were monitored during purging and sampling activities using a Horiba U-52 Multiparameter Water Quality Meter and Flowcell. Samples collected for metals analysis were filtered at the time of sampling using 0.45-micron disposable filters specifically designed for environmental groundwater sampling. A blind duplicate groundwater sample designated DUP was collected from monitoring well MW-200. A PFAS field blank sample was also collected at the location of MW-200 while MW-200 was being purged and sampled.

As noted on the field sampling forms in Appendix C, Monitoring wells MW-108 and MW-9-20 purged dry on May 16, 2022 and did not recharge sufficiently to allow for collection of groundwater samples.

The groundwater samples, PFAS field blank sample, and a laboratory-supplied trip blank sample were submitted under standard chain of custody protocol to the ALS Environmental laboratory in Holland, Michigan (ALS) for analysis. The groundwater samples were analyzed for VOCs, SVOCs, PCBs, sixteen dissolved metals⁶ and the PFAS compounds on the October 1, 2019 EGLE PFAS compound list, as specified in the RAP. PFAS analysis was conducted by Method EPA 537 Modified (537 Mod - isotope dilution method).

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⁶ The 10 Michigan metals (arsenic, barium, cadmium, chromium, copper, mercury, lead, selenium, silver, and zinc) and aluminum, antimony, beryllium, boron, nickel, and thallium.

The laboratory analytical data report provided by ALS is included in *Appendix D, Laboratory Analytical Report* (*Groundwater*). The May 16, 2022 groundwater sample analytical results are tabulated on *Table 2,* Groundwater Sample Analytical Data – Residential Criteria, and Table 3, Groundwater Sample Analytical Data – Nonresidential Criteria.

3.4 Soil Sample Testing

Twelve soil samples from the 4-inch diameter rotosonic drilling cores were collected for analysis for hydrogeologic/geotechnical engineering properties. The twelve soil samples included one sample of the granular glacial lacustrine sand and gravel materials within the screened interval of each of the three new groundwater monitoring wells installed (MW-200, MW-201, and MW-202), and nine samples of the cohesive glacial till materials that were encountered underneath the lacustrine sand and gravel and underneath the buried refuse within the former landfill area. At least one glacial till sample was collected from each deep exploratory boring for analysis.

The three granular lacustrine sand and gravel deposit samples were analyzed by MSG's Canton, Michigan Soil Mechanics Laboratory for grain size distribution by sieve analysis (ASTM D6913). The following lacustrine sand and gravel deposit samples were analyzed:

- Boring MW-200, 17-20 feet bgs
- Boring MW-201, 20-24 feet bgs
- Boring MW-202, 5-7 feet bgs

The nine samples of the cohesive glacial till soils that underlie the glacial sand and gravel and buried refuse at the site were analyzed for grain size distribution by sieve and hydrometer (ASTM D7928) and Atterberg Limits (ASTM D4318). The following glacial till soil samples were analyzed:

- Boring MW-200, 25.5-30 feet bgs
- Boring MW-200, 37-39.5 feet bgs
- Boring MW-201, 29-30 feet bgs
- Boring MW-201, 39-40 feet bgs
- Boring MW-202, 8.5-10 feet bgs
- Boring SB-19, 34-35 feet bgs
- Boring SB-19, 47-49 feet bgs
- Boring SB-20, 45-50 feet bgs
- Boring SB-21, 23-25 feet bgs

The grain size distribution and Atterberg Limits test results are included in *Appendix E*, *Soil Sample Test Data*. The test results are discussed further in Section 4.2 of this report. Photographs of the analyzed soil samples are included on pages 14-18 of the Photo Log in Appendix A.

4.0 CONCEPTUAL SITE MODEL

The conceptual site model (CSM) presented below for the subject site is based on currently available data and information regarding site hydrogeologic conditions. Like any CSM, it can be modified and updated as additional information and data become available.

4.1 Regional Hydrogeology

The subject site is located in the Saginaw glacial lobe in the south-central portion of the Michigan Basin geomorphic province. The Michigan Basin is a bowl-shaped intracratonic crustal depression that contains several thousand feet of relatively flat-lying sedimentary rocks deposited during the Paleozoic geologic era. These sedimentary rocks overlie older Precambrian age crystalline basement rocks. The maximum thickness of accumulated sedimentary rocks in the Michigan Basin is approximately 15,000 feet in the Midland area of the Lower Peninsula. In general, the Michigan Basin rocks are predominately carbonate evaporates of marine origin (dolomite and limestone) with lesser amounts of shale and sandstone.

Pleistocene age glacial drift sediments overlie the bedrock throughout most of the Michigan Basin. The glacial features are the result of advancing and retreating continental glaciers during the Wisconsin glacial stage of the Pleistocene epoch (approximately 35,000 to 10,000 years before present). The glacial drift ranges in thickness from less than 10 feet to several hundred feet. Glacial drift greater than 1,000 feet thick has been documented in parts of the north central Lower Peninsula of Michigan (Western Michigan University, 1982). Bedrock exposures in the Lower Peninsula are rare. Bedrock is not exposed in the Mount Pleasant area.

The glacial drift deposits in Isabella County range generally from 150 to 600 feet in total thickness and include: granular outwash deposits, lacustrine deposits, and glacial till characteristic of morainal terranes (Apple and Reeves, 2007). The till deposits are generally medium to coarse textured material but can range from clay to boulder size. The tills are found in three prominent glacial moraines that occur in the western portion of Isabella County, including the Gladwin Moraine. The glacial outwash deposits are composed primarily of sand and gravel. The lacustrine deposits can consist of sand, gravel, silt and/or clay.

The regional geologic setting of the site is shown on *Figure 3, Regional Geologic Setting*. The site is located on the western fringe of the Saginaw Lowlands, an extensive, relatively flat-lying glacial lake plain that formed when glacial ice retreated northeast from the Gladwin Moraine to Saginaw Bay (Westjohn and Hoard, 2006). The Gladwin Moraine allowed ponding of glacial meltwater and subsequent deposition of glacial lacustrine sediments when the Saginaw Lobe glacial ice retreated to Saginaw Bay and formed the Port Huron Moraine.

As shown on Figure 3, the subject site is located in an area of glacial lacustrine sand and gravel. The Gladwin Moraine is located to the west, northwest and southeast of the site. The glacial drift in the region is reported to be on the order of 280-350 feet thick (Western Michigan University, 1981; Westjohn and Hoard, 2006; Newcombe, 1933). The regional bedrock formations underlying the glacial drift are the Jurassic Red Beds and the Pennsylvanian age Saginaw Formation, neither of which are exposed at the surface in the Mount Pleasant area. The Jurassic Red Beds bedrock formation has been described as red mudstone, red sandstone/siltstone, and gypsum (Westjohn and Hoard, 2006), and as sandstone and shale with minor limestone and gypsum beds (Dorr and Eschman, 1970). The Pennsylvanian age Saginaw Formation bedrock consists primarily of sandstone with some interlayered shale, limestone, and coal beds. The bedrock underlying the glacial drift deposits at the site has been identified as the Jurassic Red Beds (Westjohn and Hoard, 2006).

Groundwater occurs regionally in the Pleistocene glacial deposits and in the underlying bedrock formations. Groundwater in the glacial lacustrine sand and gravel and glacial outwash deposits has been used historically for domestic use. Freshwater is encountered in the glacial deposits of the region, although saline water has been observed near the base of the glacial deposits. Both freshwater and saline water have been encountered in the underlying bedrock formations.

Glacial sands and gravels form the principal aquifer for domestic water supply wells in the region (Westjohn and Hoard, 2006). Apple and Reeves (2007) note that "According to the February 2005 Wellogic database, approximately 99 percent of the wells in Isabella County are completed in the glacial deposits, and less than 1 percent in the bedrock units."

Interpretation of well drillers' logs for water supply wells in the Wellogic database has identified a regional sand and gravel aquifer at depths ranging from approximately 60-130 feet bgs. These sands and gravels have been interpreted as glaciofluvial deposits from an outwash plain that form a regional glacial aquifer. Deeper aquifers in the 130-320 feet bgs depth interval within the glacial deposits of the region have also been identified.

In 2006, the United States Geological Survey published a report by D.B. Westjohn and C.J. Hoard titled *Hydrogeology and Groundwater Quality, Chippewa Township, Isabella County, Michigan, 2002-2005*, (U.S. Geological Survey Scientific Investigations Report 2006-5193). That report, which covered a study area that included the City of Mount Pleasant and contiguous townships, notes that logs of water supply wells in Chippewa Township (located directly east of Mount Pleasant) "indicate the presence of a near-surface clayrich unit in almost all areas. This upper clay unit is probably basal-lodgment till that was deposited by the Saginaw Lobe of glacial ice when ice advanced to the position of the Gladwin Moraine." The upper clay rich lodgment till described by Westjohn and Hoard (2006) is likely represented at the subject site by the till clay and hardpan-like till encountered directly below the surficial glacial lacustrine sand and gravel in the six deep exploratory borings completed at the subject site for the RAP implementation activities. Additional discussion is provided below in Section 4.2 of this report.

Westjohn and Hoard (2006) constructed a potentiometric surface map of groundwater in the glacial deposits of the region, based on static water levels recorded on 1,559 regional water supply wells. As shown on *Figure 4*, *Regional Groundwater Flow Direction*, there is a prominent sense of groundwater flow potential to the east for the glacial groundwater.

The City of Mount Pleasant owns and operates a municipal water supply system that supplies potable water to the City. The Mount Pleasant municipal water supply is derived from municipal water supply wells. None of the City's water supply wells is located within one (1) mile of the site. The surrounding township, Charter Township of Union (Union Township) also provides municipal water. The Union Township water supply is derived from seven (7) groundwater wells configured in three (3) separate well fields. The Township's water supply wells are set in a glacial sand and gravel aquifer and are located more than one (1) mile from the site.

As noted in MSG's December 22, 2020 Report on Groundwater Testing Project Number 3, public records indicate that there are 18 domestic water supply wells located within a one mile radius of the site. These wells have reported depths ranging from 19-238 feet bgs and are set in the glacial drift materials. Eleven of the 18 wells are listed as household wells.

4.2 Site Hydrogeology

The locations of the deep exploratory borings completed in April 2022 (SB-19 through SB-21 and MW-200 through MW-202) are shown on Figure 2. The boring logs are included in Appendix B. The logs in Appendix B also include construction details for the groundwater monitoring wells that were installed in borings MW-200, MW-201, and MW-202. As noted on the boring logs, the deep exploratory borings were drilled and sampled to depths of 40-50 feet bgs. The corresponding boring terminus elevations range from 704.2 feet to 719.5 feet. Based on the subsurface information derived from borings SB-19 and SB-20, the elevation of the base of buried refuse at the site is at an approximate elevation of 739.5-740.3 feet.

The subsurface geologic units at the site include a surficial deposit of granular soils (glacial lacustrine sand and gravel) underlain by clay-rich glacial till. Subsurface profiles have been developed to illustrate the approximate configuration of the site geology relative to the area of buried refuse and the Chippewa River. The locations and orientations of the geologic profiles are shown on *Figure 5*, *Geologic Profile Location Map*. The profiles are shown on *Figure 6*, *Generalized Geologic Profile A-A'* and *Figure 7*, *Generalized Geologic Profile B-B'*.

As shown on Figures 6 and 7, the surficial lacustrine sand and gravel deposit extends vertically to approximately elevation 730-735 feet or approximately 5-10 feet below the base of the buried refuse. The underlying clay-rich glacial till was encountered in each of the six deep exploratory borings and extends vertically to elevation 705 feet or deeper. Each of the six deep exploratory borings completed for the RAP implementation was terminated in the till deposit. Numerous photographs of the lacustrine sand and gravel and the glacial till recovered from the rotosonic borings are included in the Photo Log in Appendix A.

As noted on the boring logs in Appendix B and the soil sample test results in Appendix E, the glacial lacustrine sand and gravel deposit at the subject site consists primarily of silty sand, gravelly sand, and sandy gravel, classified as SM, SP and GW, respectively under the Unified Soil Classification System (USCS). The underlying glacial till consists primarily of silty-sandy clay (USCS classification as CL), with lesser amounts of clayey sand (SC) and silty-clayey sand (SC-SM). Seven of the nine analyzed till samples consist of CL soil material (lean clay). One of the till samples consists of SC soil material (clayey sand). One of the analyzed till samples consists of SC-SM soil material (silty, clayey sand) under the USCS.

A sandy silt layer encountered in boring MW-200 in the 21-25.5 feet bgs depth interval represents a transition between the overlying lacustrine sand and the underlying glacial till. As shown on Figure 7, sandy fill soils were encountered from the ground surface to 14.5 feet bgs at the location of boring MW-200, which is located in the grassy area outside of the former office portion of the maintenance garage building. A number of subsurface utilities are located in this area.

The glacial till deposit encountered in the deep exploratory borings included hard to very hard till⁷ and cemented hardpan-like till. These supplemental descriptions of the encountered till are noted on the boring logs. Very hard till was encountered from 8.5-40 feet bgs in boring MW-202, from 33.5-50 feet bgs in boring SB-19, from 40-44.5 feet bgs in boring SB-20, and from 12-25 feet bgs in boring SB-21. The cemented hardpan-like till was encountered in the borings at the following depth intervals:

- Boring MW-200 from 33-39.5 feet bgs and 47-50 feet bgs
- Boring MW-201 from 34.9-42 feet bgs
- Boring SB-20 from 44.5-50 feet bgs
- Boring SB-21 from 25-40 feet bgs

The hardpan-like till observed in the deep exploratory borings is analogous to the above noted near-surface upper clay-rich basal-lodgment till described by Westjohn and Hoard (2006).

Unconfined groundwater was encountered during drilling and soil sampling in April 2022 at depths ranging from 5-10 feet bgs. At the locations of borings MW-200 and MW-201, groundwater was encountered at 9 feet bgs in sandy fill soils and at 10 feet bgs in lacustrine silty sand, respectively. At the location of boring MW-202, groundwater was encountered at 5 feet bgs in lacustrine sandy gravel. At the location of boring SB-21, groundwater was encountered at 5 feet bgs in a silty clay layer located directly above a lacustrine sandy gravel layer at 7 feet bgs. Both MW-202 and SB-21 are located at lower elevations than borings MW-200 and MW-201.

Potable water was used during rotosonic drilling in the buried refuse at the locations of borings SB-19 and SB-20. The depth to encountered groundwater at those two boring locations could not be determined. The potable water from the City of Mount Pleasant municipal water supply system was obtained at the onsite maintenance garage (see Page 1 of the Photo Log in Appendix A).

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⁷ Hard corresponds to an estimated unconfined compressive strength of 8,000-16,000 pounds/square foot (PSF). Very hard corresponds to an estimated unconfined compressive strength of greater than 16,000 PSF.

The hydraulic conductivity of the shallow groundwater zone at the site can be approximated from grain size distribution data for the granular glacial lacustrine sand and gravel deposit using the empirical model developed by Hazen. The Hazen equation for soil hydraulic conductivity (K) can be expressed as K (in cm/sec) = $C(D_{10})^2$ where

C = Dimensionless constant equal to 1

D₁₀ = Grain size (in millimeters) at which 10% of the soil sample mass (by dry weight) is comprised of less than this value

The available D_{10} values for the granular soil samples collected from the screened intervals of the onsite monitoring wells (MW-104, MW-105, MW-109, MW-200, MW-201 and MW-202) range from 0.075 to 0.443, with an average D_{10} value of 0.22. Using the average D_{10} value and the Hazen empirical equation, the estimated K value for the lacustrine sand and gravel at the subject site is 0.0484 cm/sec (137.2 feet/day). This K value is consistent with the range of K values for sand and gravelly sand soils found in the published literature.

Static groundwater levels were measured and recorded for each of the monitoring wells sampled on May 16, 2022 prior to purging and sampling. Static groundwater levels were also measured in monitoring wells MW-107, MW-1-19, MW-2-19, MW-7-20, MW-16-20, MW-17-20, and MW-X on May 16, 2022. The static groundwater levels and corresponding piezometric surface elevations are provided on Table 1 and are shown graphically on *Figure 8, Groundwater Elevation Contour Map – May 16, 2022*.

The piezometric surface elevations shown on Figure 8 range from 738.04 feet at monitoring well MW-106 to 757.06 feet at monitoring well MW-7-20. The piezometric surface elevation for MW-7-20 is considered anomalously high for groundwater contouring. Monitoring well MW-7-20 was installed by AKT in February 2020 (prior to MSG's involvement with the subject site) and may be located within the area of buried refuse. The anomalously high peizometric surface elevation for MW-7-20 appears to be the result of groundwater mounding.

As shown on Figure 8, the sense of groundwater flow potential (primary groundwater flow direction) for the unconfined glacial lacustrine sand and gravel water-bearing zone at the site is to the west and northwest, generally towards the Chippewa River. It is noted that the Chippewa River bends generally eastward as it flows through the golf course property located directly north of the site beyond the view shown on Figure 8. As such, both the west and northwest shallow groundwater flow directions shown on Figure 8 indicate that the shallow groundwater flow towards the river.

Groundwater flow velocity at the site can be calculated using Darcy's Equation, V = Ki/n_e, where:

V = Groundwater flow velocity in feet per day

K = Hydraulic conductivity of the water-bearing unit in feet per day

i = Lateral hydraulic gradient in feet per foot (change in elevation ÷ change in lateral distance)

n_e = Effective porosity

Using the piezometric surface elevation data for May 16, 2022 shown on Figure 8, the site-specific shallow groundwater flow velocity for the site was calculated along the groundwater flow paths labeled as A, B, and C on Figure 8. The groundwater flow velocity calculations are provided on *Table 4*, *Groundwater Flow Velocity Calculations – May 16, 2022*. As shown on Table 4, the lateral hydraulic gradient was calculated to range from 0.0063 to 0.0068 ft/foot. Using the lateral gradients, an average hydraulic conductivity of 137.2 feet/day and an estimated effective porosity of 0.3, the calculated site-specific shallow groundwater flow velocity is 2.9-3.1 ft/day (1059-1132 ft/year).

5.0 GROUNDWATER SAMPLE ANALYTICAL RESULTS

The groundwater samples collected by MSG from monitoring wells MW-101 through MW-106, MW-109, MW-200, MW-201, MW-202, MW-10-20, MW-14-20, MW-15-20, and the blind duplicate sample collected from MW-200 on May 16, 2022 were analyzed by ALS for VOCs, SVOCs, PCBs, dissolved phase metals (10 Michigan metals plus aluminum, antimony, beryllium, boron, nickel, and thallium), and PFAS compounds (EGLE October 1, 2019 list). The field blank sample collected during groundwater sampling activities at the location of monitoring well MW-200 was analyzed for the above noted PFAS compounds. The laboratory analytical data report is included in Appendix D.

The May 2022 groundwater sample analytical data have been tabulated and compared to Part 201 Residential GCC on Table 2. The groundwater sample analytical results have also been compared to Part 201 Nonresidential GCC on Table 3. The data is discussed below in terms of parameter groupings. Exceedances of the GCC are depicted graphically on *Figure 9, Groundwater Sample Criteria Exceedances – May 16, 2022*.

PCBs - PCBs were not detected in any of the May 2022 groundwater samples.

SVOCs – SVOCs were not detected in any of the May 2022 groundwater samples.

<u>VOCs</u> – one VOC compound was detected in the groundwater sample from monitoring well MW-202. The reported chlorobenzene concentration of 6.1 micrograms/liter (ug/l) for the groundwater sample from MW-202 is below the residential and nonresidential DW GCC of 100 ug/l, and is also below the GSI GCC of 25 ug/l. No other VOCs were detected in the groundwater sample from MW-202. VOCs were not detected in any of the other May 2022 groundwater samples.

<u>PFAS</u> – as shown on Table 1 and Table 2, PFAS compounds were detected in each of the fourteen groundwater samples collected at the subject site on May 16, 2022. Exceedances of the DW GCC for PFAs compounds are observed for MW-101 (PFOS and PFOA⁸), MW-102 (PFOS and PFOA), MW-106 (PFOA), MW-109 (PFOA), MW-200 and the associated blind duplicate (PFOA), MW-201 (PFOA), MW-202 (PFOS, PFOA, PFHxS, and PFNA⁹), MW-10-20 (PFHxS, PFNA, PFOS and PFOA), MW-14-20 (PFOA), and MW-15-20 (PFOS), Exceedances of the GSI GCC for PFAS compounds are observed at MW-101 (PFOS), MW-102 (PFOS), MW-202 (PFOS), and MW-10-20 (PFOS).

The reported PFAS concentrations for the groundwater samples collected from monitoring wells MW-103, MW-104, and MW-105 are below the Residential and Nonresidential GCC for the drinking water exposure and GSI exposure pathways.

<u>Metals</u> – dissolved phase metals were detected in each of the groundwater samples collected at the site on May 16, 2022. Exceedances of the DW GCC are observed for the groundwater samples from monitoring wells MW-102 (dissolved boron), MW-103 (dissolved arsenic), MW-105 (dissolved arsenic), MW-109 (dissolved aluminum), and MW-202 (dissolved boron). Exceedances of the GSI GCC are observed for the groundwater samples from monitoring wells MW-103 (dissolved arsenic), and MW-105 (dissolved arsenic).

The reported dissolved metals concentrations for the groundwater samples collected on May 16, 2022 from monitoring wells MW-101, MW-104, MW-106, MW-200, MW-201, MW-10-20, MW-14-20, and MW-15-20 are below the Residential and Nonresidential GCC for the DW and GSI exposure pathways.

As shown on Figure 9, there are exceedances of the Part 201 Residential and Nonresidential GCC for the May 16, 2022 groundwater samples collected from monitoring wells located on the west, north and east sides of the landfill area. Most of the GCC exceedances for the GSI pathway occur west of the area of buried refuse at monitoring wells

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⁸ Perfluorooctanesulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA), respectively

⁹ Perfluorohexanesulfonic Acid (PFHxS) and Perfluorononanoic Acid (PFNA), respectively

MW-101, MW-102, MW-103, and MW-105 located along the Chippewa River, and at MW-202. Each of these monitoring wells is located hydraulically downgradient of the landfill area with respect to the shallow groundwater flow direction. The other monitoring well showing a GSI exceedance (MW-10-20) is located in close proximity to the northeast corner of the landfill area. It is likely that the extent of shallow groundwater with elevated concentrations of metals and/or PFAS extends downgradient from the landfill to the west and northwest to the Chippewa River, and to the north towards the river where it flows through the offsite golf course area.

The May 2022 groundwater samples collected from monitoring wells located east and southeast of the landfill (MW-200 and MW-201) show exceedances of the DW GCC for PFOA, but do not exhibit GSI exceedances. MW-201 is located hydraulically upgrapadient of the area of buried refuse. MW-200 appears to be in a cross-gradient location. Both MW-200 and MW-201 are located outside of the groundwater flow path of the area of buried refuse, indicating the possibility of an upgradient, offsite source or sources to the east or southeast of the site.

The Michigan PFAS Action Response Team (MPART) is a team of seven state government agencies of created in 2017 by executive order of the Governor to identify PFAS sources and address PFAS contamination in Michigan. MPART became an advisory body within EGLE in 2019. MPART maintains a List of PFAS Sites and Areas of Interest and an associated PFAS Geographic Information System (GIS). The MPART GIS shows three PFAS sites in the Mt. Pleasant area including:

- 1. The subject site
- 2. The Roosevelt Refinery site (600 W. Pickard Street)
- 3. The 104 North Kinney Avenue site (104 North Kinney Avenue)

The Roosevelt Refinery was a crude oil refinery that operated from the 1930s to the early 1970s. It is located at 600 W. Pickard Street on the west side of the Chippewa River opposite the subject site. The location of the Roosevelt Refinery on the west side of the Chippewa River makes it an unlikely source of groundwater impacts to the subject site.

The 104 North Kinney Avenue (NKA) site is an operating commercial dry cleaner that is reportedly associated with a plume of tetrachloroethylene-impacted groundwater. According to the EGLE MPART listing, concentrations of tetrachloroethylene (PCE) have been found several blocks downgradient of the NKA site. According to the EGLE MPART listing for the NKA site, nine of seventeen groundwater samples collected in November 2021 at locations surrounding the NKA site had PFOA concentrations above the DW GCC of 8 nanograms/liter (ng/l – equivalent to parts per trillion). The highest reported concentration was 160 ng/l.

The EGLE listing also notes that groundwater contamination associated with the NKA site is found in the 12-15 feet bgs depth range, and that groundwater flows to the northwest toward the Chippewa River. The NKA site is located approximately 0.8 miles southeast of the subject site. Based on its location relative to the location of the subject site and the northwest direction of shallow groundwater flow in the area, the NKA site could represent a possible upgradient offsite source of shallow groundwater contamination relative to the subject site.

6.0 PATHWAY EVALUATION

An exposure pathway is the link between a contaminant source and a receptor. An exposure pathway has five components:

- 1. A source of contamination
- 2. A transport mechanism
- 3. A point of exposure

¹⁰ The seven state agencies are EGLE and the Departments of Health and Human Services, Natural Resources, Agriculture and Rural Development, Transportation, Military and Veteran Affairs, and Licensing and Regulatory Affairs.

- 4. A route of exposure
- 5. A receptor population

When the five components are present, the pathway is considered complete.

For the subject site, the contaminant source is the landfill area. For the GSI exposure pathway, the transport mechanism is leaching and groundwater transport. The point of exposure is the water of the Chippewa River. The route of exposure is the shallow groundwater zone within the near surface glacial lacustrine sand and gravel deposit at the site. Receptors include aquatic organisms in the river, other organisms that may ingest the river water (e.g., deer, birds, farm animals, etc.), and possible recreational users. Although the Chippewa River water is not used locally or regionally as a source of potable water supply, it is a tributary to the Tittabawassee River. The Tittabawassee is a tributary to the Saginaw River. The Saginaw River empties into Saginaw Bay near Bay City. The GSI exposure pathway is considered complete for the subject site.

The unconfined shallow groundwater in the near surface glacial lacustrine sand and gravel deposit is the uppermost aquifer at the site. The near surface glacial lacustrine deposit groundwater flows toward the Chippewa River and presumably vents into the river at an elevation of approximately 733 feet along the west side of the site. The cohesive glacial till deposit that underlies the glacial lacustrine sand and gravel deposit across the site extends vertically to elevation 700 or lower. The till deposit acts as an aquitard preventing vertical migration of shallow groundwater into deeper aquifers that may be present and that may be used locally or regionally as sources of potable water. Therefore, the groundwater ingestion as drinking water exposure pathway is considered to be incomplete for the subject site.

The area of buried refuse at the subject site has a compacted clay cap. The clay cap is covered by extensive native grasses and other vegetation. The clay cap and surface vegetation prevent direct contact with the underlying buried refuse. The clay cap also acts as a barrier to vertical migration of landfill gas into ambient air.

The available records provided by the City for the landfill at the subject site indicate that construction of the landfill did not include gas management components, side slope liners, or a perimeter dike. Therefore, lateral migration of subsurface landfill gas, including methane, could be possible. There have been no known occurrences of lateral migration of subsurface gas from the landfill area. Although there are no aboveground structures present within the footprint of the landfill area, there are buildings located in close proximity to the landfill that are used by City personnel for municipal activities.

7.0 CONCLUSIONS

Based on the results of the RAP implementation activities completed for the former Mount Pleasant landfill as described herein, the following conclusions are made:

- The site is underlain by a near surface granular glacial lacustrine deposit that is on the order of 10-25 feet thick, depending on location and elevation within the site. The granular lacustrine deposit is underlain by a relatively thick, low permeability cohesive glacial till deposit that is extensive both laterally and vertically. The till deposit was encountered at depth in each of the six deep exploratory borings completed for the RAP implementation activities. The base of the till deposit was not encountered in any of the deep exploratory borings.
- The uppermost groundwater occurs in the granular lacustrine deposit under unconfined conditions. The underlying till deposit acts as a lower confining layer preventing vertical migration of the shallow groundwater. No lower groundwater zones were encountered in the deep exploratory borings completed for the RAP implementation.
- The site-specific shallow groundwater flow direction is primarily to the west and northwest towards the Chippewa River. The average hydraulic conductivity of the shallow groundwater zone is 0.0484 cm/sec (137.2 feet/day). The shallow groundwater flow velocity is approximately 3 feet/day (1,095 feet/year).

➤ The results of the May 2022 shallow groundwater monitoring event indicate that PCBs and SVOCs were not detected. One VOC was detected in one shallow groundwater sample at a concentration below the residential and nonresidential GCC. The reported dissolved arsenic, dissolved aluminum, and dissolved boron concentrations of some of the May 2022 shallow groundwater samples exceed the respective GCC for the drinking water exposure pathway. The dissolved arsenic concentrations for two of the shallow groundwater samples exceed the respective GSI GCC. The reported PFAS compound concentrations for the groundwater samples from 10 of the shallow groundwater monitoring wells were above the respective DW GCC. The reported PFOS concentrations for the groundwater samples from 4 of the shallow monitoring wells were above the GSI GCC for PFOS.

8.0 REFERENCES

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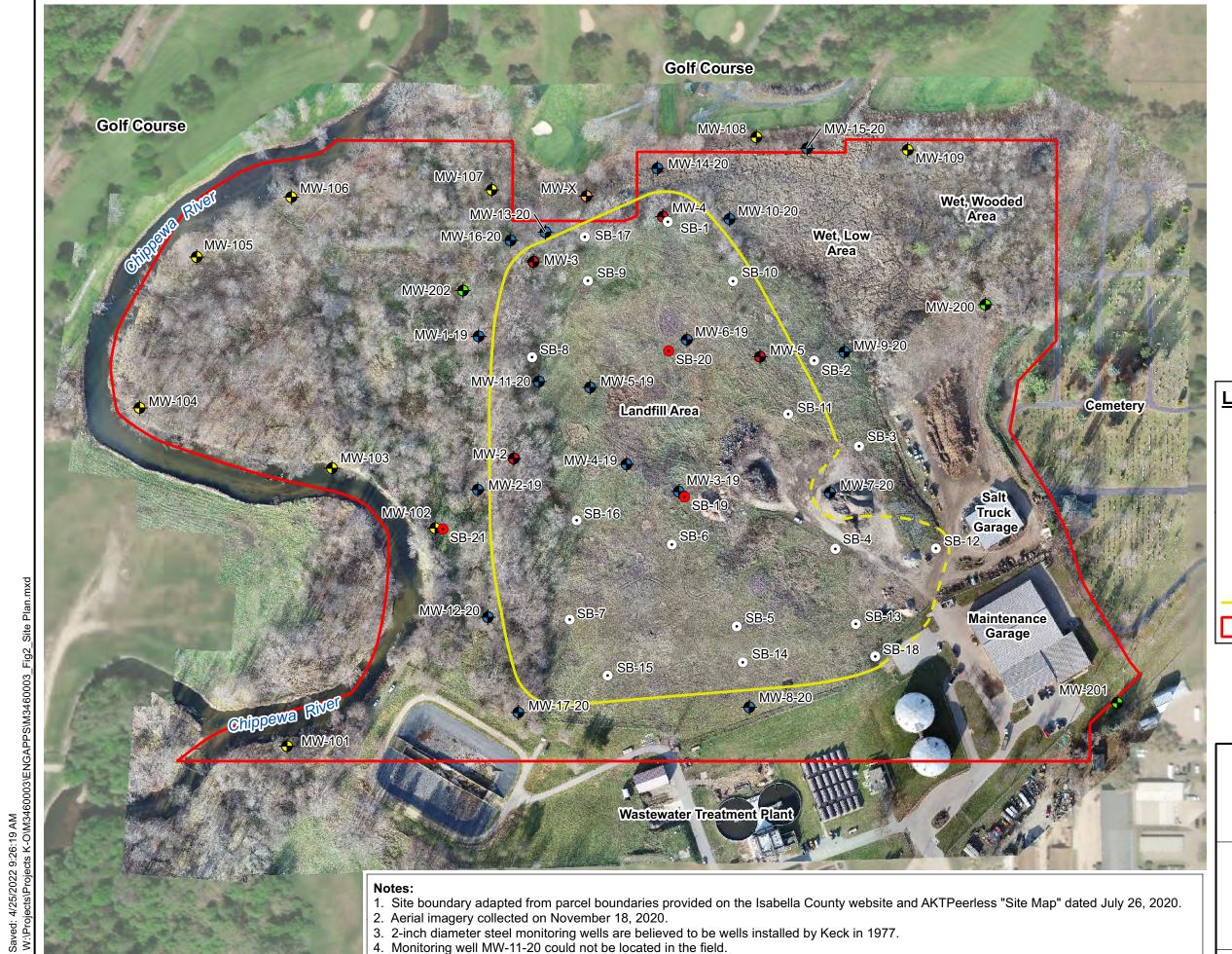
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FIGURES





- Soil Boring Location MSG (May 2021)
- Soil Boring Location MSG (April 2022)
- PVC Monitoring Well MSG (Nov. 2020)
- PVC Monitoring Well -- MSG (April 2022)
- PVC Monitoring Well AKT (2019-2020)
- Steel Monitoring Well Keck (1977)
- Monitoring Well Undocumented Origin
- Approximate Extent of Buried Refuse

 Site Boundary (Approximate)

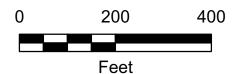




FIGURE 2

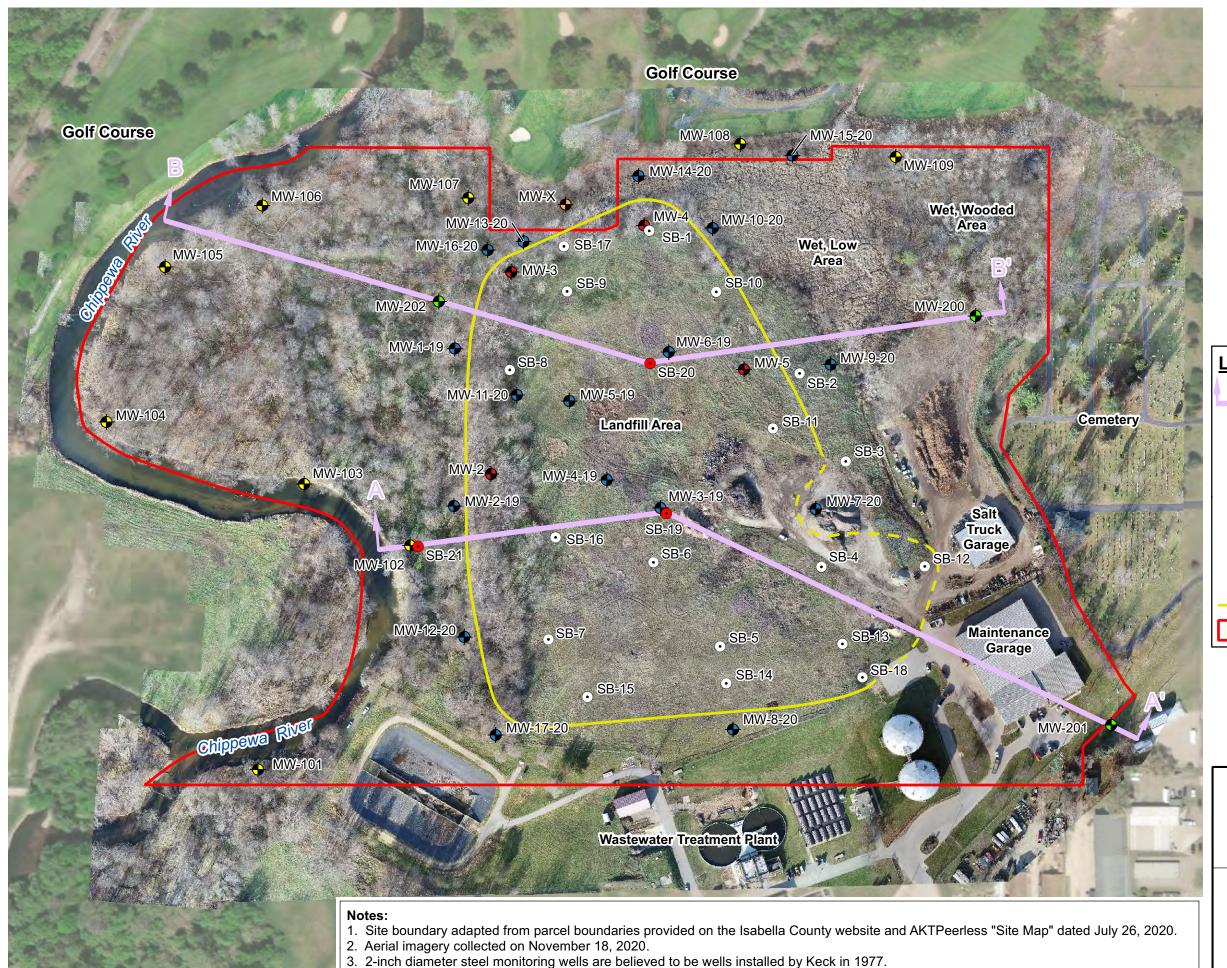
Site Map

1301-1303 North Franklin Street Mount Pleasant, Isabella County, MI

DATE DRAWN BY DESIGNED BY PROJECT NO. 4/20/22 CJB DJA M3460003

Date Saved: 11/30/2020 4:53:10 PM

Date Saved: 11/30/2020 4:54:08 PM



4. Monitoring well MW-11-20 could not be located in the field.



Geologic Profile Location and Orientation

Soil Boring Location - MSG (May 2021)

Soil Boring Location - MSG (April 2022)

PVC Monitoring Well - MSG (Nov. 2020)

PVC Monitoring Well -- MSG (April 2022)

PVC Monitoring Well - AKT (2019-2020)

Steel Monitoring Well - Keck (1977)

Monitoring Well - Undocumented Origin

Approximate Extent of Buried Refuse

Site Boundary (Approximate)

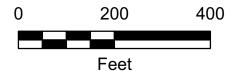




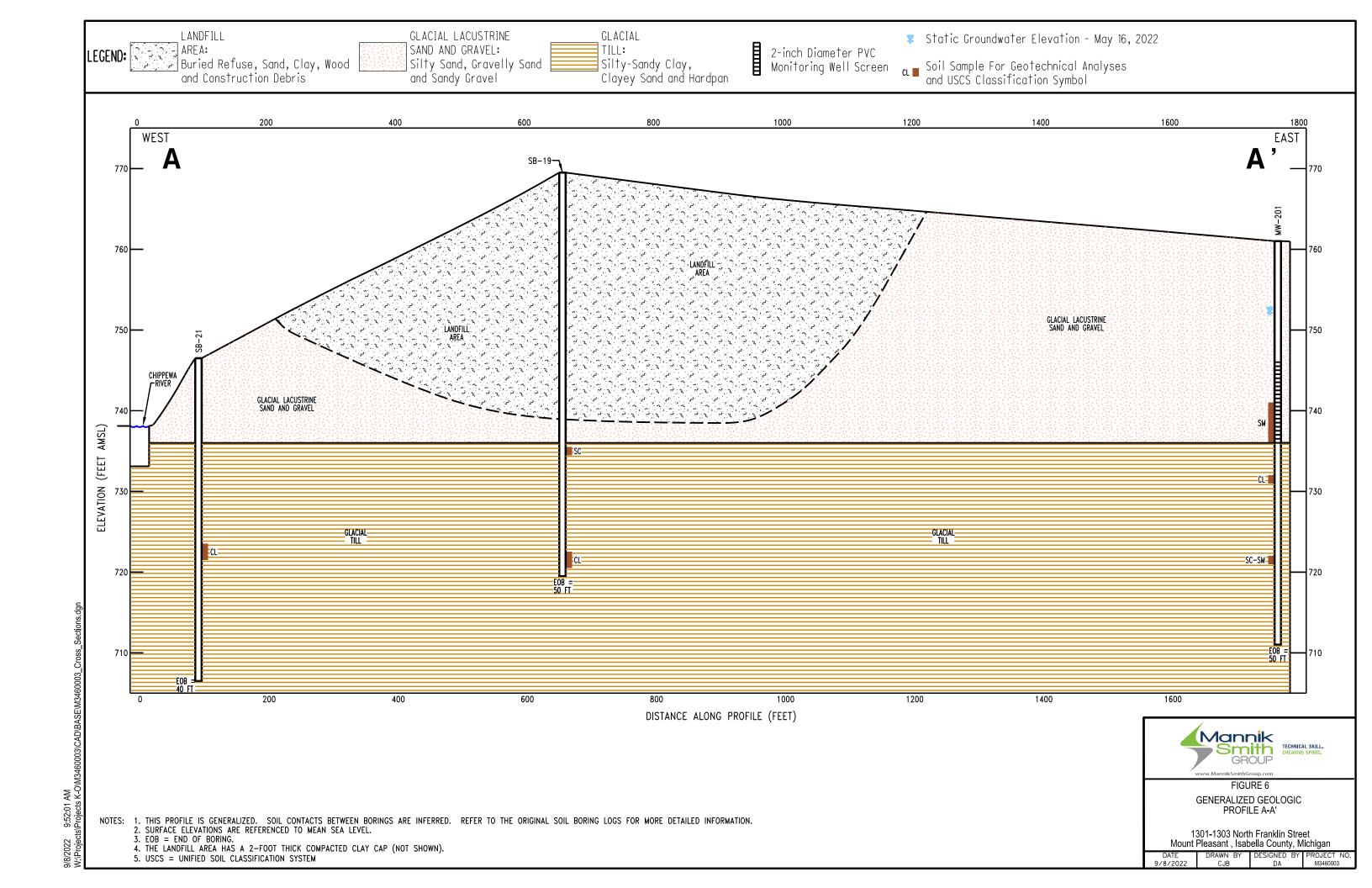
FIGURE 5

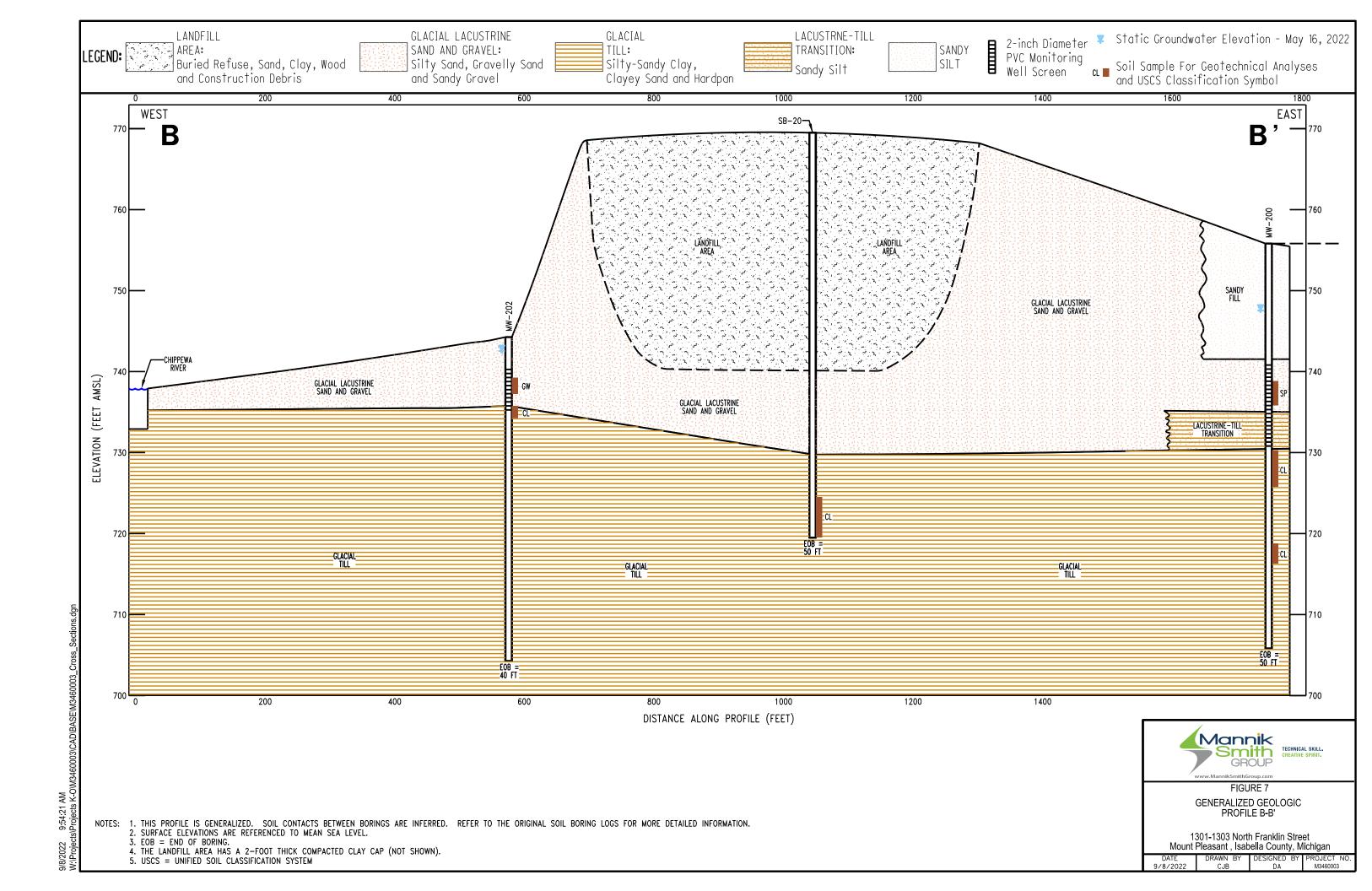
Geologic Profile Location Map

1301-1303 North Franklin Street Mount Pleasant, Isabella County, MI

DATE PROJECT NO. DRAWN BY DESIGNED BY 8/31/22 CJB M3460003

8/31/2022 10:30:21 AM ents/Projects K-O\M3460003\ENGAPI







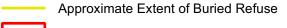
Legend

- Soil Boring Location MSG (May 2021)
- Soil Boring Location MSG (April 2022)
- PVC Monitoring Well MSG (Nov. 2020)
- PVC Monitoring Well -- MSG (April 2022)
- PVC Monitoring Well AKT (2019-2020)
- Steel Monitoring Well Keck (1977)
- Monitoring Well Undocumented Origin

Groundwater Flow Path and Velocity

Groundwater Elevation Contour (in feet)

* MW-7-20 not used for groundwater elevation contouring



Site Boundary (Approximate)

- 1. Site boundary adapted from parcel boundaries provided on the Isabella County website and AKTPeerless "Site Map" dated July 26, 2020.
- 2. Site Aerial imagery collected on November 18, 2020 by the Mannik & Smith Group.



1 inch = 200 feet

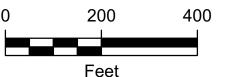


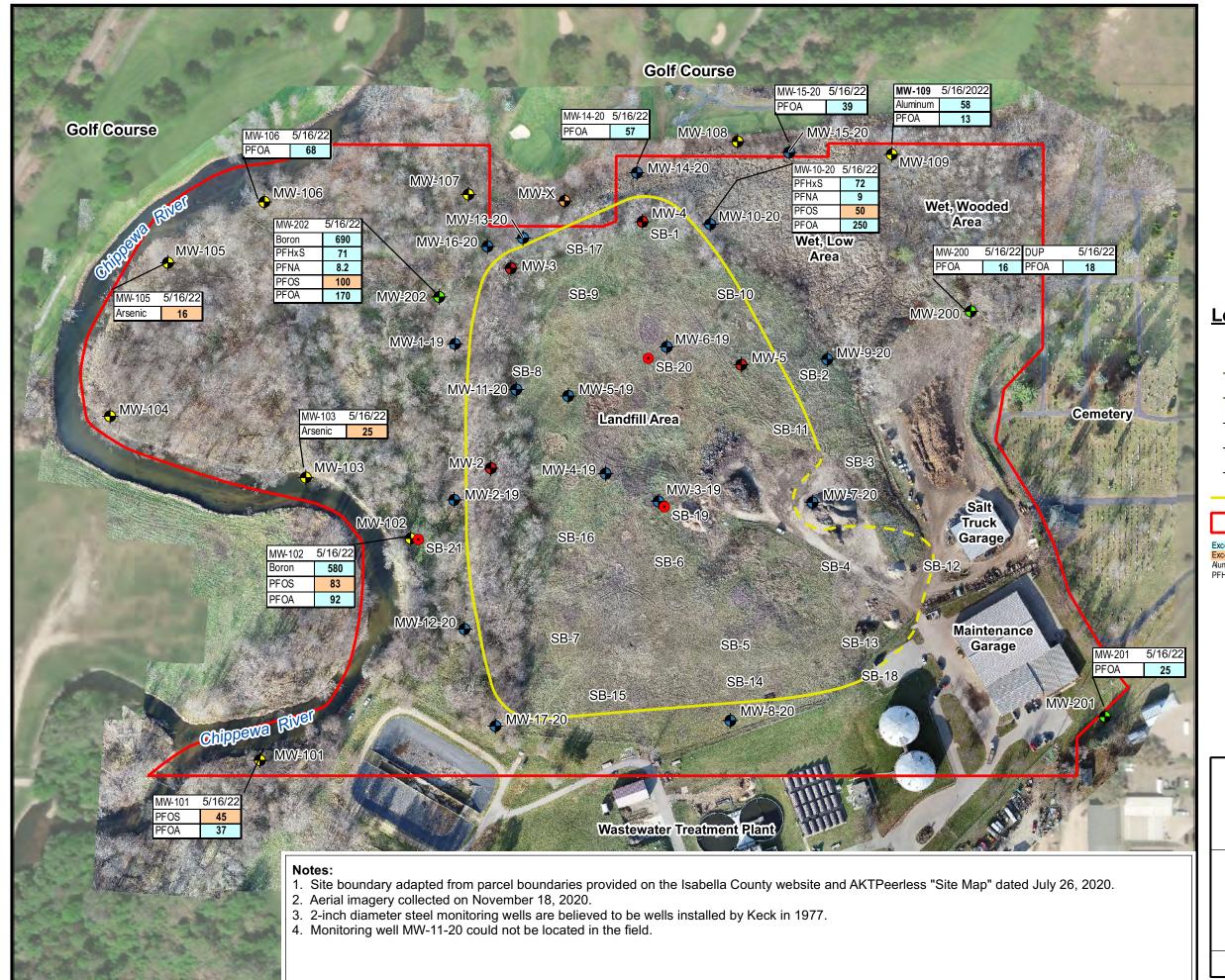


FIGURE 8

Groundwater Elevation Contour Map - May 16, 2022

1301-1303 North Franklin Street Mount Pleasant, Isabella County, MI

DATE DESIGNED BY PROJECT NO. DRAWN BY 9/6/2022 JRO M3460003





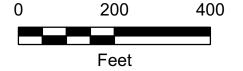
Legend

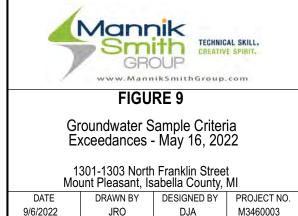
- Soil Boring Location MSG (April 2022)
- PVC Monitoring Well MSG (Nov. 2020)
- PVC Monitoring Well -- MSG (April 2022)
- PVC Monitoring Well AKT (2019-2020)
- Steel Monitoring Well Keck (1977)
- Monitoring Well Undocumented Origin

Approximate Extent of Buried Refuse

Site Boundary (Approximate)

Exceeds Generic Drinking Water Criteria (DWC)
Exceeds Generic DWC and GSIC
Aluminum, Arsenic and Boron results expressed in µg/L
PFHxS, PFOS, PFNA, and PFOA results expressed in ng/L





TABLES

Table 1 Monitoring Well Information Former Mt. Pleasant Landfill Mt. Pleasant, Michigan

Well ID	Northing (US State Plane - 1988)	Easting (US State Plane - 1988)	Top of Casing Elevation (feet above msl)	Ground Surface Elevation (feet above msl)	Screen Length (feet)	Total Depth of Well from Ground Surface (feet)	Date	Depth to Water (from TOC)	Groundwater Elevation (feet)	Comments
							11/23/2020	5.19	737.88	1-inch diameter PVC well installed by MSG in November 2020
MW-101	771233.3	13013986.4	743.07	739.6	4.5	4.5	4/27/2021	5.40	737.67	
							5/7/2021 5/16/2022	5.22 3.76	737.85 739.31	
							11/23/2020	8.50	740.16	1-inch diameter PVC well installed by MSG in November 2020
MW-102	771701.2	13014294.6	748.66	746.3	5	7.0	4/27/2021	7.95	740.71	
					_		5/7/2021	8.11	740.55	
							5/16/2022 11/23/2020	6.87 2.20	741.79 738.33	1-inch diameter PVC well installed by MSG in November 2020
							4/27/2021	3.32	737.21	1-inch dialiteter PVC well historied by W3G in November 2020
MW-103	771835.9	13014079.0	740.53	738.6	2	4.5	5/7/2021	3.11	737.42	
							5/16/2022	2.00	738.53	
							11/23/2020	7.06	737.42	1-inch diameter PVC well installed by MSG in November 2020
MW-104	771953.6	13013657.9	744.48	741.2	3	4.5	4/27/2021 5/7/2021	7.36 7.20	737.12 737.28	
							5/16/2022	5.79	738.69	
							11/23/2020	6.34	737.18	1-inch diameter PVC well installed by MSG in November 2020
MW-105	772287.1	13013780.9	743.52	739.4	3	4.0	4/27/2021	6.57	736.95	
							5/7/2021	6.43	737.09	
							5/16/2022 11/23/2020	4.94 7.46	738.58 736.79	1-inch diameter PVC well installed by MSG in November 2020
							4/27/2021	7.73	736.52	1-inch danieter PVC weirinstalled by W.SG in November 2020
MW-106	772407.6	13013987.7	744.25	740.5	5	6.0	5/7/2021	7.50	736.75	
							5/16/2022	6.21	738.04	
					_		11/23/2020	7.39	740.46	1-inch diameter PVC well installed by MSG in November 2020
MW-107	772432.6	13014416.2	747.85	745.9	5	8.0	4/27/2021	5.51	742.34	
							5/16/2022 11/23/2020	5.02 8.34	742.83 743.62	1-inch diameter PVC well installed by MSG in November 2020
			25.0				4/27/2021	7.94	743.02	1-inch diameter PVC weit installed by W3G in November 2020
MW-108	772535.6	13014982.4	751.96	750.8	5	8.5	5/7/2021	8.00	743.96	
							5/16/2022	7.70	744.26	
							11/23/2020	4.65	744.39	1-inch diameter PVC well installed by MSG in November 2020
MW-109	772508.7	13015306.9	749.04	746.1	3.5	5.0	4/27/2021 5/7/2021	4.71 4.63	744.33 744.41	
							5/16/2022	4.03	744.41	
							UTULULL	1.2.2	711.02	2-inch diameter PVC well installed by MSG in April 2022
MW-200	772179.7	13015473	759.04	756.0	10	25.0	5/16/2022	11.50	747.54	
MW-201	771328	13015755	764.12	761.1	10	25.0	5/16/2022	12.02	752.10	2-inch diameter PVC well installed by MSG in April 2022
										2-inch diameter PVC well installed by MSG in April 2022
MW-202	772211.3	13014355	746.85	744.2	5	9.0	5/16/2022	4.26	742.59	
							4/27/2021	7.64	742.10	1-inch diameter PVC well installed by AKT in June 2019
MW-1-19	772110.0	13014388.0	749.74	745.4	10	7.0	5/16/2022	6.76	742.10	Filled diameter FVC well installed by AKT in June 2019
MW-2-19	771782.6	13014386.0	749.49	745.2	5	7.0	4/27/2021	6.34	743.15	1-inch diameter PVC well installed by AKT in June 2019
							5/16/2022	5.20	744.29	1-inch dimater PVC well installed by AKT in 2019 - no well log - well depth from field measurements
MW-3-19	771778.7	13014817.0	773.77	771.5	5	12.4	4/27/2021	11.07	762.70	
MW-4-19	771837.3	13014705.0	775.91	774.5	5	28.0	4/27/2021	16.60	759.31	1-inch diameter PVC well installed by AKT in June 2019
MW-5-19	772000.9	13014626.0	778.92	775.6	5	28.0	4/27/2021	22.40	756.52	1-inch diameter PVC well installed by AKT in December 2019
MW-6-19	772103.1	13014834.0	773.43	767.9	5	28.0	4/27/2021	14.00	759.43	1-inch diameter PVC well installed by AKT in December 2019
MW-7-20	771776.7	13015740.0	769.72	767.5	5	12.0	4/27/2021	13.51	756.21	1-inch diameter PVC well installed by AKT in February 2020
WW-7-20	771770.7	13013740.0	707.72	707.3	,	12.0	5/16/2022	12.66	757.06	1-inch diameter PVC well installed by AKT in February 2020
MW-8-20	771318.1	13014967.0	770.60	765.4	5	28.0	4/27/2021	19.14	751.46	
MM 0 00	770077.5	13015171.0	755.00	750.0	-	10.0	4/27/2021	7.47	748.43	1-inch diameter PVC well installed by AKT in February 2020
MW-9-20	772077.1	130151/1.0	755.90	753.9	5	12.0	5/7/2021 5/16/2022	7.88 6.59	748.02 749.31	
							4/27/2021	5.36	745.29	1-inch diameter PVC well installed by AKT in February 2020
MW-10-20	772361.2	13014925.0	750.65	746.7	5	12.0	5/7/2021	5.38	745.27	**************************************
							5/16/2022	5.29	745.36	1-inch diameter PVC well installed by AKT in February 2020. This well could not be located.
MW-11-20	NF	NF	NF	NF	NF	NF	NF	NF	NF	
MW-12-20	771510.2	13014408.0	750.08	746.2	5	7.0	4/27/2021	6.50	6.50	1-inch diameter PVC well installed by AKT in February 2020
	_						5/16/2022 11/23/2020	5.39 5.15	744.69 744.17	1-inch diameter PVC well installed by AKT in February 2020
MW-13-20	772332.5	13014531.0	749.32	745.6	5	7.0	4/27/2021	6.09	743.23	Princia diamona i vo woii instalicu by AKT III February 2020
							11/23/2020	7.00	744.27	PVC well installed by AKT in April 2020. 2-inch diameter PVC riser pipe visible at the ground surface
MW-14-20	772469.6	13014771.0	751.27	746.2	5	7.0	4/27/2021	6.65	744.62	
					_		5/7/2021	6.67	744.60	
							5/16/2022 11/23/2020	6.22 5.43	745.05 744.30	PVC well installed by AKT in April 2020. 2-inch diameter PVC riser pipe visible at the ground surface
					_		4/27/2021	5.43	744.51	. Vo won installing by Arch in April 2020. Zimon dialifects if Voltsel pipe visible at the ground surface
MW-15-20	772512.5	13015091.0	749.73	745.5	5	7.0	5/7/2021	5.25	744.48	
							5/16/2022	5.01	744.72	
			200		_		11/23/2020	7.22	742.89	1-inch diameter PVC well installed by AKT in April 2020
MW-16-20	772314.9	13014456.0	750.11	746.3	5	7.0	4/27/2021	7.07	743.04	
							5/16/2022 4/27/2021	6.52 8.99	743.59 744.25	1-inch diameter PVC well installed by AKT in April 2020
MW-17-20	771306.4	13014473.0	753.24	752.7	5	7.0	5/16/2022	7.29	745.95	Finan diameter FVC well installed by AKT III April 2020
										a.
MW-X	772410.2	13014619.0	749.48	746.1	ND	6.4	4/27/2021	4.87	744.61	1-inch diamater PVC well of undocumented origin - no well log - well depth from field measurements

Notes: NF = Well could not be located TOC = Feet from Top of Casing. msl = Mean Sea Level

Table 2 Groundwater Sample Analytical Data - Residential Criteria 1301-1303 North Franklin Street

Mount Pleasant, Isabella County, MI

		Detected Volatile O	Organic Compounds (VOCs)	Detected Semi-Volatile Organic Compounds (SVOCs)		Detecte	ed Metals (Diss	olved)		Detected PFAS Compounds (ng/L)										
GROUNDWATER: Part 201 Generic F December 21,											ic Acid (PFBS)	(PFBA)	nic Acid (PFHpS)	ід (РЕНрА)	iic Acid (PFHxS)	J (PFHxA)	d (PFNA)	c Acid (PFOS)	(PFOA)	ld (PFPeA)
Units: micrograms/li											<u>je</u>	Acid	ig I	. Aci	Įų.	Acic	Acid	foni	Acid	Aci
Cini. initing union	(Pg-)	Ace lone	СМоговепzene (I)	Ветхаіде туде	Aluminum	Arsenic	Barium	Boron	Copper (B)	Nickel (B)	Perfluorobutanesul	Perfluorobutanoic /	Perfluoroheptanesı	Perfluoroheptanoic	Perfluorohexanesu	Perfluorohexanoic	Perfluorononanoic	Perfluorooctanesul	Perfluorooctanoic /	Perfluoropentanolo
CAS Number		67-64-1	108907	100-52-7	7429-90-5	7440-38-2	7440-39-3	7440-42-8	7440-50-8	7440020	375-73-5	375-22-4	375-92-8	375-85-9	355-46-4	307-24-4	375-95-1	1763-23-1	335-67-1 2706	91-4 2706-90-3
Drinking Water Criteria		730	100 (A)	NA	50(V)	10 (A)	2,000 (A)	500(F)		100 (A)	420	NA	NA	NA	51	400,000	6(A)	16(A)	8(A) N	
Groundwater Surface Water Interface Crite	. ()	1,700	25	NA	NA	10	670 (G)	7,200(X)	13 (G)	73	NA	NA	NA	NA	NA	NA	NA	12(X)	12,000(X) N	
Groundwater Volatilization to Indoor Air Inf	nalation Criteria	1.0E+09 (D,S)	2.10E+05	NA	NLV	NLV	NLV	NLV	NLV	NLV	NA	NA	NA	NA	NA	NA	NA	NLV		A NA
Water Solubility		1.0E+09	4.7E+05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3100		A NA
Flammability & Explosivity Screening Level	,	1.5E+07	1.6E+05	NA	ID	ID	ID	ID	ID	ID	NA	NA	NA	NA	NA	NA	NA	NA	NA N	A NA
SAMPLE ID	SAMPLE DATE																			
MW-101	11/23/2020	<10	<1.0	<1.0	<10	<5.0	75	240	<5.0	ND	<4.8	6.2	<4.8	7.2	45	5.2	<4.8	28	28 6.	
MW-101	5/7/2021	<10	<1.0	<1.0	<10	<5.0	92	280	<5.0	ND	<4.8	<4.8	<4.8	<4.8	24	<4.8	<4.8	26	11 <4	
MW-101	5/16/2022	<10	<1.0	<4.0	15	<5.0	97	300	<5.0	ND	6.5	15	<4.8	8.6	51	8.2	<4.8	45	37 <4	
MW-102	11/23/2020	<10	<1.0	<1.0	<10	<5.0	170	650	<5.0	ND	14	27	6.5	48	60	46	<5.1	56	120 3	
MW-102	5/7/2021	25	<1.0	<1.0	11	<5.0	140	730	<5.0	ND	26	20	<4.9	22	35	29	<4.9	53	60 2	
MW-102	5/16/2022	<20	<1.0	<4.0	<10	5.4		580	<5.0	ND	27	31	6.0	32	50	38	<4.8	83	92 3	
MW-103	11/23/2020	<10	<1.0	<1.0	12	30	38	150	<5.0	ND	6.2	30	<4.5	6.4	<4.5	13	<4.5	<1.8	3.4 <4	
MW-103	5/7/2021	<10	<1.0	<1.0	38	33	41	160	<5.0	ND	7.1	36	<4.7	6.6	<4.7	16	<4.7	<1.9	3.8 <4	
MW-103	5/16/2022	<10	<1.0	<3.8	<10	25	57	160	<5.0	ND	7.3	40	<4.9	6.9	<4.9	19	<4.9	<1.9	4.8 <4	
MW-104	11/23/2020	<10	<1.0	<1.0	<10	<5.0		22	<5.0	ND	<4.6	16	<4.6	<4.6	<4.6	<4.6	<4.6	2.5	3.4 <4	
DUP-1 (MW-104)	11/23/2020	<10	<1.0	<1.0	<10	<5.0	53	23	<5.0	ND	<4.6	12	<4.6	<4.6	<4.6	<4.6	<4.6	<1.9	2.3 <4	
MW-104	5/7/2021	<10	<1.0	<1.0	<10	<5.0	76	25	<5.0	ND	<5.1	5.4	<5.1	<5.1	<5.1	<5.1	<5.1	<2.0	<2.0 <5	
MW-104	5/16/2022	<10	<1.0	<4.1	29	<5.0	86	25	<5.0	ND	<4.9	13	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9 <4	
MW-105	11/23/2020	11	<1.0	2.2	25	44	190	22	<5.0	ND	7.2	69	<5.0	5.6	<5.0	9.9	<5.0	<2.0	6.5 <5	
MW-105	5/7/2021	<10	<1.0 <1.0	<1.0	<10	47	160	<20	<5.0	ND ND	<5.5	27	< 5.5	< 5.5	< 5.5	<5.5	<5.5	<2.2 <4.8	2.8 <5 5.8 <4	
MW-105	5/16/2022	<10	·	<3.9	<10	16	140	28	<5	ND	11	65	<4.8	<4.8	<4.8	5.3	<4.8			
MW-106	11/23/2020	<10	<1.0	<1.0	<10	<5.0		280	<5.0	ND	11	67	<4.8	13	13	14	<4.8	6.5	26 1	
MW-106 MW-106	5/7/2021 5/16/2022	<10 <10	<1.0 <1.0	<1.0 <3.7	38 11	<5.0 <5	85 74	380 420	<5.0 <5.0	ND ND	17 35	96 270	<4.6 <5	18 25	26 29	14 28	<4.6 <5	14 12	67 1 68 1	
MW-106	11/23/2020	<10	<1.0	<3.7	<10	<5 <5.0	79	220	<5.0 <5.0	ND ND	35 11	11	<5. <4.6	10	26	7.1	<5 <4.6	13	31 1	
MW-108	11/23/2020	<10 <10	<1.0	<1.0 <1.0	110	<5.0 <5.0	230	190	<5.0 <5.0	ND	8.4	11	<4.0	7.4	25	8.4	<4.0	5.5	14 7.	
MW-108	5/7/2021	<10 <10	<1.0	<1.0 NS	NS	<5.0 NS	NS NS	NS NS	<5.0 NS	ND ND	8.4 NS	NS	<4.7 NS	NS NS	NS NS	NS	<4.7 NS	NS NS	NS N	
MW-108	11/23/2020	<10 <10	<1.0	NS <1.0	<10	<5.0	240	93	<5.0	ND	6.4	11	<4.5	<4.5	11	<4.5	<4.5	3.8	15 <4	
MW-109	5/7/2021	<10 <10	<1.0	<1.0	19	<5.0 <5.0	150	100	<5.0	ND	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	2.5	6 <5	
MW-109	5/16/2022	<10	<1.0	<3.6	58	<5.0	190	130	<5.0	<5.0	5.8	30	<4.9	<4.9	6.4	<4.9	<4.9	5.8	13 <4	
MW- 200	5/16/2022	<10	<1.0	<3.9	32	9.6	300	110	<5.0	ND	6.1	9	<4.6	5	15	<4.6	<4.6	3.2	16 <4	
DUP (MW- 200)	5/16/2022	<10	<1.0	<3.8	34	10	290	110	<5.0	<5.0	5.8	8.1	<4.7	<4.7	15	5.4	<4.7	<4.7	18 5.	
MW- 201	5/16/2022	<10	<1.0	<3.8	<10	<5.0	120	88	<5.0	ND	17	10	<4.9	7.4	19	5.4	<4.9	<4.9	25 5.	
MW- 202	5/16/2022	<10	6.1	<3.7	15	<5.0	380	690	<5.0	5.6	22	470	7.5	45	71	38	8.2	100	170 1	
MW-9-20	5/7/2021	<10	<1.0	NS	NS	NS	NS	NS	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS N	
MW-10-20	5/7/2021	<10	<1.0	<1.0	120	<5.0		580	<5.0	ND	15	25	<4.9	28	51	25	5.2	46	100 1	
DUP-1 (MW-10-20)	5/7/2021	<10	<1.0	<1.0	240	<5.0	340	570	<5.0	ND	14	26	<4.6	29	59	25	5.2	45	99 1	5 13
MW-10-20	5/16/2022	<10	<1.0	<3.9	46	<5.0	270	460	<5.0	<5.0	13	44	7	51	72	37	9	50	250 2) 22
MW-13-20	11/23/2020	NS	NS	<1.0	<10	<5.0	140	280	< 5.0	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS N	S NS
MW-14-20	11/23/2020	NS NS	NS	<1.0	12	<5.0	120	230	<5.0	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS N	S NS
MW-14-20	5/7/2021	<10	<1.0	<1.0	160	<5.0	97	110	<5.0	ND	8.2	16	<5.2	9.5	26	13	<5.2	12	27 6.	2 7.2
MW-14-20	5/16/2022	<10	<1.0	<4.2	29	<5.0	140	110	<5.0	<5.0	7.2	30	<5.2	16	28	13	<5.2	11	57 6.	5 10
MW-15-20	11/23/2020	NS	NS	<1.0	<10	<5.0	250	160	5.2	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS N	S NS
MW-15-20	5/7/2021	<10	<1.0	<1.0	210	<5.0	250	130	<5.0	ND	7.6	11	<4.9	6.7	18	8.9	<4.9	6.5	10 <4	.9 5.8
MW-15-20	5/16/2022	<10	<1.0	<3.8	19	<5.0	180	94	<5.0	<5.0	9.3	40	<4.7	12	32	13	<4.9	7.1	39 5.	5 17
MW-16-20	11/23/2020	NS	NS	<1.0	49	< 5.0	540	800	< 5.0	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS N	S NS

Notes:

Bold indicates concentration reported at or above laboratory reporting limit.

Exceeds Generic Groundwater Surface Water Interface Criteria (GSI)

Exceeds Dearnic Groundwater Surface Water Interface Criteria (GSI)

Exceeds DW and GSI

ND = Not Detected at or above laboratory reporting limit

NS = Not Sampled or Not Analyzed

NA = No Criteria Established

ng/L= Nanograms per liter

ID= Insufficient data to develop criterion

NLV= Not likely to volalitize under most conditions

PCBs were not detected in the Nov. 2020. May 2021, or May 2022 groundwater samples analyzed for PCBs.

The GSI values for Barium, Copper, and Nickle were calculated using the EGLE spreadsheet for calculating GSI cleanup criteria. The values presented are for surface water bodies protected as a drinking water source. A water hardness value of 150 milligrams per liter as CaCo3 was used for the calculations.

Notes in parentheses and standard abbreviations from EGLE Part 201 Resource Materials Table 1. Groundwater: Residential and Non Residential Part 201 Generic Cleanup Criteria and Screening Levels (December 21, 2020) and R299.49. Foolnotes for Generic Cleanup Criteria Tables (December 21, 2020)

Table 3 Groundwater Sample Analytical Data- Nonresidential Criteria 1301-1303 North Franklin Street Mount Pleasant, Isabella County, MI

Page	1	OI	1	

		Detected Volatile Organic Compounds (VOCs) Detected Semi-Volatile Organic Compounds (SVOCs)					Detected Metals (Dissolved)						Detected PFAS Compounds (ng/L)									
		Detected Volatile Orga	inic compounts (vocs)	Detected Senii-Volatile Organic Compounds (SVOCs)		Detect	ed Wetais (Dis	30iveu)			1_		(Sd		(S)	TTAS COMPO	unus (ng/L)			(S)		
											PFBS)		(PFH	(Ac	(PFHX:	txA)	~	PF0S)		(PFPe	€	
GROUNDWATER: Part 201 Generic N											Acid ((PFBA)	Acid	P.H.	Acid	(PFIX	PF NA	Acid (PFOA.	: Acid	(PFP _e	
December 21											읃	9	on ic	Acid	nic Si) pi	99	윤	g) Pi	onic.	cid	
Units: micrograms/	/liter (µg/L)		<u> </u>								SE SE	. Ac	sault	ic A	Sulfc	C A	ic Ac	읔	: Ac	senif	ic A	
) e	Ф							nes	noi	ane	auc	ane	anoi	anoi	nes	jou	ane	auc	
			nzei	hyd	_				æ	_	pnta	puta	hep	hep	hex	hex	6	octa	octa	ben	ben	
		ane ane	ope	alde	<u>=</u>	.2	Ε	_	er (£	(B)	loro	loro	100	oro	loro	oro	0.0	000	100	loro	100	
		cetc	thor.	enz	Ē	rser	arin	lo lo	ddo;	licke	erff	er#	erll	eull	eull	erfl	erll	erll	erlli	er¶r	er#	
CAS Number			108907	100-52-7	7429-90-5	7440-38-2	7440-39-3	7440-42-8	7440-50-8	7440020	375-73-5	375-22-4	375-92-8	375-85-9	355-46-4	307-24-4	375-95-1	1763-23-1	335-67-1	2706-91-4	2706-90-3	
Drinking Water Criteria		2100	100 (A)	NA	50(V)	10 (A)	2,000 (A)	500(F)	1,000 (E)	100 (A)	420	NA	NA NA	NA	51	400,000			8(A)	NA	NA NA	
Groundwater Surface Water Interface Crite	eria (GSI)	1,700	25	NA	NA	10	670 (G)	7,200(X)	13 (G)	73	NA	NA	NA	NA	NA	NA	NA	12(X) 1	12,000(X)	NA	NA	
Groundwater Volatilization to Indoor Air Inf	halation Criteria	1.0E+09 (D,S)	4.7E+5 (S)	NA	NLV	NLV	NLV	NLV	NLV	NLV	NA	NA	NA	NA	NA	NA	NA	NLV	ID	NA	NA	
Water Solubility		1.0E+09	4.7E+05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		9.50E+09	NA	NA	
Flammability & Explosivity Screening Leve	_	1.5E+07	1.6E+05	NA	ID	ID	ID	ID	ID	ID	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SAMPLE ID	SAMPLE DATE	40	.10	4.0	40		70	1 240		ND	1	T / 2	.40	7.0	1 45	I [2]	.40	20	20 1	/1	.40	
MW-101 MW-101	11/23/2020 5/7/2021	<10 <10	<1.0 <1.0	<1.0 <1.0	<10 <10	<5.0 <5.0	75 92	240 280	<5.0 <5.0	ND ND	<4.8 <4.8	6.2 <4.8	<4.8 <4.8	7.2 <4.8	45 24	5.2 <4.8	<4.8 <4.8	28	28 11	6.1 <4.8	<4.8 <4.8	
MW-101	5/1/2021	<10 <10	<1.0	<1.0	<10 15	<5.0 <5.0	92	300	<5.0 <5.0	ND ND	<4.8 6.5	<4.8 15	<4.8	8.6	51 51	8.2	<4.8	45	37	<4.8	5.8	
MW-101	11/23/2020	<10 <10	<1.0	<4.0 <1.0	<10	<5.0 <5.0	170	650	<5.0 <5.0	ND ND	14	27	6.5	48	60	46	<4.8 <5.1	56	120	<4.8 31	25	
MW-102	5/7/2021	25	<1.0	<1.0	11	<5.0	140	730	<5.0	ND	26	20	<4.9	22	35	29	<4.9	53	60	23	12	
MW-102	5/16/2022	<20	<1.0	<4.0	<10	5.4		580	<5.0	ND	27	31	6.0	32	50	38	<4.8	83	92	31	15	
MW-103	11/23/2020	<10	<1.0	<1.0	12	30	38	150	<5.0	ND	6.2	30	<4.5	6.4	<4.5	13	<4.5	<1.8	3.4	<4.5	4.9	
MW-103	5/7/2021	<10	<1.0	<1.0	38	33	41	160	<5.0	ND	7.1	36	<4.7	6.6	<4.7	16	<4.7	<1.9	3.8	<4.7	5.0	
MW-103	5/16/2022	<10	<1.0	<3.8	<10	25	57	160	<5.0	ND	7.3	40	<4.9	6.9	<4.9	19	<4.9	<1.9	4.8	<4.9	7.2	
MW-104	11/23/2020	<10	<1.0	<1.0	<10	<5.0	70	22	<5.0	ND	<4.6	16	<4.6	<4.6	<4.6	<4.6	<4.6	2.5	3.4	<4.6	<4.6	
DUP-1 (MW-104) MW-104	11/23/2020	<10	<1.0 <1.0	<1.0	<10	<5.0	53	23	<5.0	ND	<4.6	12	<4.6	<4.6	<4.6 <5.1	<4.6	<4.6	<1.9	2.3	<4.6	<4.6 <5.1	
MW-104	5/7/2021 5/16/2022	<10 <10	<1.0	<1.0 <4.1	<10 29	<5.0 <5.0	76 86	25 25	<5.0	ND ND	<5.1 <4.9	5.4 13.0	<5.1 <4.9	<5.1 <4.9	<4.9	<5.1 <4.9	<5.1 <4.9	<2.0	<2.0	<5.1 <4.9	<4.9	
MW-105	11/23/2020	11	<1.0	2.2	25	44	190	22	<5.0	ND	7.2	69	<5.0	5.6	<5.0	9.9	<5.0	<2.0	6.5	<5.0	17	
MW-105	5/7/2021	<10	<1.0	<1.0	<10	47	160	<20	<5.0	ND	<5.5	27	<5.5	<5.5	<5.5	<5.5	<5.5	<2.2	2.8	<5.5	<5.5	
MW-105	5/16/2022	<10	<1.0	<3.9	<10	16	140	28	<5	ND	11	65	<4.8	<4.8	<4.8	5.3	<4.8	<4.8	5.8	<4.8	11	
MW-106	11/23/2020	<10	<1.0	<1.0	<10	<5.0	54	280	<5.0	ND	11	67	<4.8	13	13	14	<4.8	6.5	26	12	4.8	
MW-106	5/7/2021	<10	<1.0	<1.0	38	<5.0	85	380	<5.0	ND	17	96	<4.6	18	26	14	<4.6	14	67	13	5.0	
MW-106	5/16/2022	<10	<1.0	<3.7	11	<5	74	420	<5.0	ND	35	270	<5	25	29	28	<5	12	68	18	11.0	
MW-107 MW-108	11/23/2020 11/23/2020	<10 <10	<1.0 <1.0	<1.0 <1.0	<10 13	<5.0 <5.0	79 230	220 190	<5.0 <5.0	ND ND	11 8.4	11 11	<4.6 <4.7	7.4	26 25	7.1 8.4	<4.6 <4.7	13 5.5	31 14	16 7.0	<4.6 5.8	
MW-108	5/7/2021	<10	<1.0	<1.0 NS	NS NS	<5.0 NS	NS NS	NS	<5.0	ND	NS	NS	NS	NS	NS NS	NS	NS	NS NS	NS	NS	NS	
MW-109	11/23/2020	<10	<1.0	<1.0	<10	<5.0	240	93	<5.0	ND	6.4	11	<4.5	<4.5	11	<4.5	<4.5	3.8	15	<4.5	<4.5	
MW-109	5/7/2021	<10	<1.0	<1.0	19	<5.0	150	100	<5.0	ND	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	2.5	6	<5.1	<5.1	
MW-109	5/16/2022	<10	<1.0	<3.6	58	<5.0	190	130	<5.0	<5.0	5.8	30	<4.9	<4.9	6.4	<4.9	<4.9	5.8	13	<4.9	<4.9	
MW- 200	5/16/2022	<10	<1.0	<3.9	32	9.6	300	110	<5.0	ND	6.1	9	<4.6	5	15	<4.6	<4.6	3.2	16	<4.6	<4.6	
DUP (MW- 200)	5/16/2022	<10	<1.0	<3.8	34	9.8	290	110	<5.0	<5.0	5.8	8.1	<4.7	<4.7	15	5.4	<4.7	<4.7	18	5.7	<4.7	
MW- 201 MW- 202	5/16/2022	<10	<1.0	<3.8	<10 15	<5.0	120	88	<5.0	ND E 4	17	10 470	<4.9	7.4 45	19 71	5.4 38	<4.9 8.2	<4.9 100	25 170	5.8 19	<4.9 12	
MW-9-20	5/16/2022 5/7/2021	<10 <10	6.1 <1.0	<3.7 NS	NS NS	<5.0 NS	380 NS	690 NS	<5.0 NS	5.6 ND	NS NS	NS.	7.5 NS	NS NS	NS.	NS.	NS.	NS.	NS.	NS NS	NS	
MW-10-20	5/7/2021	<10	<1.0	<1.0	120	<5.0	340	580	<5.0	ND	15	25	<4.9	28	51	25	5.2	46	100	14	14	
DUP-1 (MW-10-20)	5/7/2021	<10	<1.0	<1.0	240	<5.0	340	570	<5.0	ND	14	26	<4.6	29	59	25	5.2	45	99	15	13	
MW-10-20	5/16/2022	<10	<1.0	<3.9	46	<5.0	270	460	<5.0	<5.0	13	44	7	51	72	37	9	50	250	20	22	
MW-13-20	11/23/2020	NS	NS	<1.0	<10	<5.0	140	280	<5.0	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW-14-20	11/23/2020	NS	NS	<1.0	12	<5.0	120	230	<5.0	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW-14-20	5/7/2021	<10	<1.0	<1.0	160	<5.0	97	110	<5.0	ND .E.O	8.2	16	<5.2	9.5	26	13	<5.2	12	27	6.2	7.2	
MW-14-20 MW-15-20	5/16/2022	<10 NS	<1.0 NS	<4.2 <1.0	29 <10	<5.0 <5.0	140	110 160	<5.0	<5.0 ND	7.2 NS	30 NS	<5.2 NS	16 NS	28 NS	NS NS	<5.2 NS	NS NS	57 NS	6.5 NS	10 NS	
MW-15-20 MW-15-20	11/23/2020 5/7/2021	NS <10	NS <1.0	<1.0 <1.0	210	<5.0 <5.0	250 250	130	5.2 <5.0	ND ND	7.6	NS 11	<4.9	6.7	18	8.9	<4.9	6.5	10	NS <4.9	5.8	
MW-15-20 MW-15-20	5/16/2022	<10 <10	<1.0	<3.8	19	<5.0 <5.0	180	94	<5.0	<5.0	9.3	40	<4.7	12	32	13	<7.0	7.1	39	5.5	17	
		NS	NS.	<1.0	49		540	800	<5.0	<5.0	NS	NS				NS			NS		NS	

Notes:

Bold indicates concentration reported at or above laboratory reporting limit.

Exceeds Generic Drinking Water Criteria (DW)

Exceeds Generic Groundwater Surface Water Interface Criteria (GSI)

Exceeds Applicable Groundwater Vapor Intrusion screening levels

Exceeds Applicable Groundwater Vapor Intrusion screening levels

Exceeds SSI Final Acute Value (FAV), also exceeds others

NS = Not Sampled or Not Inahalyzed

NA = No Criteria Established

ng/L = Nanograms per liter

ID = Insufficient data to develop criterion

NLV= Not likely to volatilize under most conditions

PCBs were not detected in the Nov. 2020, May 2021, or May 2022 groundwater samples analyzed for PCBs.

The GSI values for Barium, Copper and Nickle were calculated using the EGLE spreadsheet for calculating GSI cleanup criteria. The values presented are for surface water bodies protected as a drinking water source. A water hardness value of 150 milligrams per liter as CaCo3 was used for the calculations.

Notes in parentheses and standard abbreviations from EGLE Part 201 Resource Materials Table 1. Groundwater: Residential and Non Residential Part 201 Generic Cleanup Criteria and Screening Levels (December 21, 2020) and R299, 49 Foolnotes for Generic Cleanup Criteria Tables (December 21, 2020)

Dissolved Nickle was detected in the groundwater sample collected from MW-202 on May 16th 2022

Table 4 Groundwater Flow Velocity Calculations - May 16, 2022 Former Mt. Pleasant Landfill - Mt. Pleasant, Michigan

Date	Flow Path	Dh (ft)	DI (ft)	Hydraulic Gradient Dh/ Dl	Average Conductivity, K (ft/day)	Estimated Effective Porosity, n	Calculated Groundwater Flow Velocity (ft/day)
May 16, 2022	Α	10.0	1460	0.0068	137.2	0.3	3.1
May 16, 2022	В	13.0	1980	0.0066	137.2	0.3	3.0
May 16, 2022	С	7.0	1120	0.0063	137.2	0.3	2.9

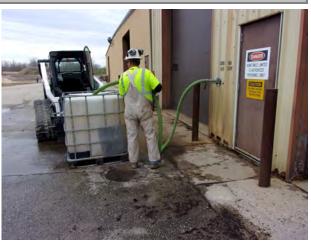
Notes:

- 1. Hydraulic Conductivity (K) based on site-specific grain size distribution test data
- 2. Dh = Change in groundwater elevation (measured along the groundwater flow paths identified on Figure 8).
- 3. DI = Lateral distance along flow path (measured along the flow groundwater paths identified on Figure 8).
- 4. Velocity = (Dh/Dl) K / n
- 5. Static groundwater levels measaured by MSG personnel on May 16, 2022

APPENDIX A PHOTO LOG



Boart Longyear LS 250 Minisonic Drill Rig (4/11/2022).



Rotosonic drilling potable water supply at Mt. Pleasant vehicle maintenance garage (4/11/2022).



Rotosonic drilling at MW-201 (4/11/2022).



Contact of gravelly lacustrine sand (right) and fine grained lacustrine sand (left) at 8 feet bgs at MW-201 (4/11/2022).



Contact of gravelly lacustrine sand (left) and fine grained lacustrine sand (right) at 8 feet bgs at MW-201 (4/11/2022).



Drilling and retrieving soil core at MW-201 (4/11/2022).





Till clay from 25-30 feet bgs at MW-201 (4/11/2022).



Till clay from 25-30 feet bgs at MW-201 (4/11/2022).



Till clay from 25-30 feet bgs at MW-201 (4/11/2022).



Soil cores from 0-30 feet bgs at MW-201 (4/11/2022). Zero feet bgs is at top right. 30 feet bgs is at bottom left.



Hardpan-like till clay at 35 feet bgs at MW-201 (4/11/2022).



Hardpan-like till clay at 40 feet bgs at MW-201 (4/11/2022).





Hardpan-like till clay at 40 feet bgs at MW-201 (4/11/2022).



Hardpan-like till clay at 40 feet bgs at MW-201 (4/11/2022).



25-30 feet bgs (top) and 35-40 feet bgs (bottom) till clay soil cores from MW-201 (4/11/2022).



Till clay from 42-50 feet bgs at MW-201 (4/11/2022).



30-35 feet $\,$ bgs (top) and 40-45 feet bgs (bottom) till clay soil $\,$ cores from MW-201 (4/11/2022).



MW-200 location prior to drilling (4/12/2022).





Lacustrine sand from 15.5-20 feet bgs at MW-200 (4/12/2022).



Rotosonic drilling and soil core retrieval at MW-200 (4/12/2022).



Till clay from 25.5-30 feet bgs at MW-200 (4/12/2022).



Soil core retrieval at MW-200 (4/12/2022).



Hardpan-like till clay from 33-35 feet bgs at MW-200 (4/12/2022).



Hardpan-like till clay from 35-39.5 feet bgs at MW-200 (4/12/2022).





Hardpan-like till clay from 35-39.5 feet bgs at MW-200 (4/12/2022).



Hardpan-like till clay from 35-39.5 feet bgs at MW-200 (4/12/2022).



Till clay from 40-45 feet bgs at MW-200 (4/12/2022).



Hardpan-like till clay from 47-50 feet bgs at MW-200 (4/12/2022).



SB-20 boring location prior to drilling (4/12/2022).



Clay cap (right) and top of refuse (left) at 1.5-3 feet bgs at SB-20 (4/12/2022).





Refuse from 5-10 feet bgs at SB-20 (4/12/2022).



Base of refuse and top of lacustrine sand at 29-30 feet bgs at SB-20 (4/12/2022).



Lacustrine sand at 38 feet bgs at SB-20(4/12/2022).



Very hard till clay from 40-44.5 feet bgs at SB-20 (4/12/2022).



Hardpan-like till clay from 45-50 feet bgs at SB-20 (4/12/2022).



Hardpan-like till clay from 45-50 feet bgs at SB-20 (4/12/2022).





Setting up the rotosonic drill rig at the SB-19 boring location (4/12/2022).



Clay cap (right) and top of refuse (left) from 1.5-2.5 feet bgs at SB-19 (4/12/2022).



Refuse and wood from 5-10 feet bgs at SB-19 (4/12/2022).



Fill sand and underlying refuse from 17-20 feet bgs at SB-19 (4/12/2022).



Refuse from 10-15 feet bgs at SB-19 (4/12/2022).



Lacustrine gravelly sand from 30-32 feet bgs at SB-19 (4/12/2022).





Lacustrine gravelly sand/very hard till clay contact at 33.5 feet bgs at SB-19 (4/12/2022).



Very hard till clay from 35-40 feet bgs at SB-19 (4/12/2022).



Very hard till clayey sand-sandy clay from 35-40 feet bgs at SB-19 (4/12/2022).



Very hard till clay from 40-50 feet bgs at SB-19 (4/12/2022).



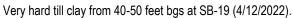
Very hard till clay from 40-50 feet bgs at SB-19 (4/12/2022).



Very hard till clay from 40-50 feet bgs at SB-19 (4/12/2022).









Tracking through woods to MW-202 location (4/12/2022).



Tracking through woods to MW-202 location (4/12/2022).



Drilling at MW-202 location (4/12/2022).



Lacustrine sandy gravel from 5-7.7 feet bgs at MW-202 (4/12/2022).



Contact of lacustrine sandy gravel (left) and clayey silt (right) at 7.7 feet bgs at MW-202 (4/12/2022).





Very hard till clay from 8.5-10 feet bgs at MW-202 (4/12/2022).



Very hard till clay from 10-15 feet bgs at MW-202 (4/12/2022).



Very hard till clay at 10 feet bgs at MW-202 (4/12/2022).



MW-202 soil cores from 0-30 feet bgs (4/12/2022). Zero feet bgs at top left. 30 feet bgs at lower right.



Very hard till clay from 35-40 feet bgs at MW-202 (4/12/2022).



MW-202 soil cores from 20-40 feet bgs (4/12/2022). 20 feet bgs at top left. 40 feet bgs at lower right.





Wooded area around MW-202 (4/13/2022).



Wooded area around MW-202 (4/13/2022).



Wooded area around MW-202 (4/13/2022).



Tracking to SB-21 boring location (4/13/2022)



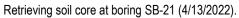
Drilling at SB-21 (4/13/2022).



Lacustrine sandy gravel at 10 feet bgs at SB-21 (4/13/2022).









Very hard till clay from 15-20 feet bgs at SB-21 (4/13/2022).



Very hard till clay from 15-20 feet bgs at SB-21 (4/13/2022).



Very hard till clay from 15-20 feet bgs at SB-21 (4/13/2022).



Very hard till clay from 20-25 feet bgs at SB-21 (4/13/2022).



Hardpan-like till clay from 25-30 feet bgs at SB-21 (4/13/2022).





Very hard till clay from 20-25 feet bgs at SB-21 (4/13/2022).



Hardpan-like till clay from 25-30 feet bgs at SB-21 (4/13/2022).



Hardpan-like till clay from 30-35 feet bgs at SB-21 (4/13/2022).



Hardpan-like till clay from 30-35 feet bgs at SB-21 (4/13/2022).



Till clay from 35-40 feet bgs (bottom), 25-30 feet bgs (middle), and 15-20 feet bgs (top) at SB-21 (4/13/2022).



Containerized soil cores containing refuse from boring SB-20 (4/14/2022).





Containerized cores containing refuse from boring SB-19 (4/14/2022).



Monitoring well MW-202 (4/14/2022).



Monitoring well MW-200 (4/14/2022).



Monitoring well MW-201 (4/14/2022).



Lacustrine gravelly sand soil sample from 17-20 feet bgs at MW-200 (4/16/2022).



Lacustrine silty sand soil sample from 20-24 feet bgs at MW-201 (4/16/2022).





Lacustrine sandy gravel soil sample from 5-7 feet bgs at MW-202 (4/16/2022).



Lacustrine sandy gravel soil sample from 5-7 feet bgs at MW-202 (4/16/2022).



Till clay soil sample from 25.5-30 feet bgs at MW-200 (4/16/2022).



Till clay soil sample from 25.5-30 feet bgs at MW-200 (4/16/2022).



Till clay soil sample from 25.5-30 feet bgs at MW-200 (4/16/2022).



Till clay soil sample from 37-39.5 feet bgs at MW-200 (4/16/2022).





Till clay soil sample from 37-39.5 feet bgs at MW-200 (4/16/2022).



Till clay soil sample from 29-30 feet bgs at MW-201 (4/16/2022).



Hardpan-like till soil sample (silty-clayey sand) from 39-40 feet bgs at MW-201 (4/16/2022).



Till clay soil sample from 8.5-10 feet bgs at MW-202 (4/16/2022).



Till clay soil sample from 8.5-10 feet bgs at MW-202 (4/16/2022).



Till clay soil sample from 8.5-10 feet bgs at MW-202 (4/16/2022).





Very hard till soil sample (clayey sand) from 34-35 feet bgs at SB-19 (4/16/2022).



Very hard till soil sample (clayey sand) from 34-35 feet bgs at SB-19 (4/16/2022).



Till clay soil sample from 47-49 feet bgs at SB-19 (4/16/2022).



Till clay soil sample from 47-49 feet bgs at SB-19 (4/16/2022).



Till clay soil sample from 45-50 feet bgs at SB-20 (4/16/2022).



Till clay soil sample from 45-50 feet bgs at SB-20 (4/16/2022).





Till clay soil sample from 45-50 feet bgs at SB-20 (4/16/2022).



Till clay soil sample from 23-25 feet bgs at SB-21 (4/16/2022).



Till clay soil sample from 23-25 feet bgs at SB-21 $\,$ (4/16/2022).



Till clay soil sample from 23-25 feet bgs at SB-21 (4/16/2022).



APPENDIX B
BORING AND MONITORING WELL LOGS

PAGE 1 OF 2



The Mannik & Smith Group, Inc. 2365 Haggerty Road South, Canton, MI 48188 ph: (734) 397-3100 fax: (734) 397-3131 www.manniksmithgroup.com

CLIENT City of Mt. Pleasant, MI PROJECT NAME Former Mt Pleasant Landfill RAP Implementation PROJECT NUMBER M3460003 PROJECT LOCATION Mt. Pleasant, MI DATE STARTED 4/12/22 __ COMPLETED <u>4/12/22</u> BORING DIAMETER: 6 inches **DRILLING CONTRACTOR** Cascade Drilling **SURVEY COORDINATES:** 772,179.7 N; 13,015,473.0 E (USSP MI South) TOP OF CASING ELEV.: 759.04 feet NAD83 DRILLING METHOD Rotosonic LOGGED BY DJA CHECKED BY ☐ GROUND WATER ENCOUNTERED DURING DRILLING: 9 FEET BGS NOTES **▼ WATER LEVEL AFTER DRILLING**: N/A SAMPLE TYPE NUMBER LABORATORY SAMPLE ELEVATION (NAD83) RECOVERY (FEET) PID (ppm) GRAPHIC LOG DEPTH DEPTH (FEET) (FEET) MATERIAL DESCRIPTION **REMARKS** WELL DIAGRAM Above-Ground Protective BORINGWELL LOG (PID) - GINT STD US LAB, GDT - 9/6/22 09:54 - W.\PROJECTS\PROJECTS K-O\M3460003\ADMINIDRILLING\BORING LOGS\M34600002 BORING LOGS\M34600002 Surface Elev. = 756 NAD83 0 Concrete Pad
 Brown to Dark Brown SAND and Clayey Sand, trace-little Gravel and Sand for Drainage Wood, moist (FILL) SC 5.0 Bentonite Chips 5.5 750.5 Brown to Dark Brown SAND and Clayey Sand, little-some Wood, little Gravel, moist (FILL) 5.0 Wet Concrete Rubble From 9-9.5 Ft. 10 bgs 2" Diameter PVC Riser Filter Sand 15 15.0 Gray Silty fine SAND, trace Gravel, 7.5 wet (Lacustrine Sand) Gray Gravelly SAND, trace-little Silt, Ω. wet (Lacustrine Sand) Oxidized Orange-Brown From Ø 15.5-16.7 Ft. bgs 0 Soil Sample MW-200, 17-20 (SP) Ø 2" Diameter 10-Slot PVC 20 0 Screen 21.0 735.0 Gray Sandy SILT, trace Clay, wet (Lacustrine-Till transition) SC 4 9.5 25.5 730.5 Gray Silty CLAY, trace Sand, moist (Till Clay) Soil Sample MW-200, 25.5-30 (CL) ■ Bentonite Chips

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	CLIE	NT City	of Mt.	Pleas	sant, M	II	PROJECT NAME Former Mt Pleasant Landfill RAP Implementation						
	PRO.	JECT NU	MBER	R _M34	460003	3	PROJECT LOCATION Mt. Pleasant, MI						
1	DATE	START	ED _4	/12/22	2	COMPLETED 4/12/22	BOR	ING DI	AMETI	ER: 6 inches			
						cade Drilling		VEY C	OORDI	INATES: 772,179.7	N; 13,015,473.0 E (USSP MI South)		
	DRIL	LING ME	THOD	Rot	osonic			OF CA	SING	ELEV.: 759.04 feet	NAD83		
	LOG	GED BY	DJA			CHECKED BY	oxtimes Gr	OUND	WATE	R ENCOUNTERED	DURING DRILLING: 9 FEET BGS		
		ES								AFTER DRILLING:			
ł									LABORATORY SAMPLE				
GPJ	S DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	ELEVATION (NAD83)	WELL DIAGRAM					
CEVZ.						Gray Silty CLAY, trace Sand, moist							
JGS/M346000Z BURING LUGS R	 35	SC 5	9.0		33.0	(Till Clay) (continued) Gray Silty-Sandy CLAY, trace Gravel, dry-moist (Hardpan-like till)	723.0						
JJEC I S R-U(Mis400003MDMIINIDRIELIINGIDORING EO	40	SC.				Till Clay from 39.5-47 ft bgs				Soil Sample MW-200, 37-39.5 (CL)	⋖ Bentonite Chips		
9/6/22 U9:54 - W:\PROJECTS\PRO	50	SC 6	9.1		50.0	Hardpan-like till from 47-50 ft bgs Bottom of borehole at 50.0 feet.	706.0						
INV BURING/WELL LUG (PIU) - GIINT OTU US LAU.GUT -						Bottom of poreniole at 30.0 feet.							

PAGE 1 OF 2



The Mannik & Smith Group, Inc. 2365 Haggerty Road South, Canton, MI 48188 ph: (734) 397-3100 fax: (734) 397-3131

www.manniksmithgroup.com CLIENT City of Mt. Pleasant, MI PROJECT NAME Former Mt Pleasant Landfill RAP Implementation PROJECT NUMBER M3460003 PROJECT LOCATION Mt. Pleasant, MI DATE STARTED 4/11/22 __ COMPLETED _4/12/22 **BORING DIAMETER:** 6 inches **DRILLING CONTRACTOR** Cascade Drilling **SURVEY COORDINATES:** 771,328.0 N; 13,015,755.0 E (USSP MI South) TOP OF CASING ELEV.: 764.12 feet NAD83 DRILLING METHOD Rotosonic LOGGED BY DJA CHECKED BY ☐ GROUND WATER ENCOUNTERED DURING DRILLING: 10 FEET BGS NOTES **▼ WATER LEVEL AFTER DRILLING**: N/A SAMPLE TYPE NUMBER LABORATORY SAMPLE ELEVATION (NAD83) PID (ppm) RECOVERY (FEET) GRAPHIC LOG DEPTH DEPTH (FEET) (FEET) MATERIAL DESCRIPTION **REMARKS** WELL DIAGRAM Above-Ground Protective BORINGWELL LOG (PID) - GINT STD US LAB, GDT - 9/6/22 09:54 - W.\PROJECTS\PROJECTS K-O\M3460003\ADMINIDRILLING\BORING LOGS\M34600002 BORING LOGS\M34600002 Surface Elev. = 761.1 NAD83 0 Concrete Pad
 TOPSOIL Sand for Drainage 1.5 759.6 Brown Silty SAND, trace-little Gravel, moist (Lacustrine Sand) SC 5.0 Bentonite Chips 5.0 753.1 Tan Silty Fine SAND, moist (Lacustrine Sand) 10 10.0 🗸 751.1 2" Diameter PVC Riser Brown Silty SAND, occasional Gravelly pockets, wet (Lacustrine Sand) Filter Sand 15 10.0 18.0 743.1 Light Grayish-Brown Silty Fine SĂND, tráce Gravel, weť (Lacustrine 2" Diameter 10-Slot PVC 20 Screen Soil Sample MW-201, 20-24 (SM) 736.6 Gray Silty CLAY, trace Sand, trace SC 4 10.0 Gravel, moist (Till Clay) Soil Sample ■ Bentonite Chips MW-201, 29-30 (CL)

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CLIE	NT City	of Mt	. Pleas	sant, M	II	PROJECT NAME Former Mt Pleasant Landfill RAP Implementation								
PRO.	JECT NU	JMBEF	R _M34	460003	3	PROJECT LOCATION Mt. Pleasant, MI								
DATE	START	ED _4	/11/22	2	COMPLETED 4/12/22	BOR	ING DI	AMET	ER: 6 inches					
DRIL	LING CO	NTRA	CTOR	Cas	cade Drilling	SUR	VEY C	OORD	INATES: 771,328.0	N; 13,015,755.0 E (USSP MI South)				
DRIL	LING ME	THOE	Rot	osonic					ELEV.: 764.12 feet					
LOG	GED BY	DJA			CHECKED BY									
NOTI	ES					▼ WATER LEVEL AFTER DRILLING: N/A								
DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	ELEVATION (NAD83)	PID (ppm)	WELL DIAGRAM						
					Gray Silty CLAY, trace Sand, trace Gravel, moist (Till Clay) (continued)									
35	SC 5	10.0		38.5	Hardpan-like till from 34.9-38.5 ft bgs Gray Silty-Clayey SAND, trace	722.6								
40				42.0	Gravel, dry (Hardpan-like till) Gray Silty CLAY, some Sand,	719.1		\times	Soil Sample MW-201, 39-40 (SC-SM)	≺ Bentonite Chips				
45	SC 6	10.0			trace-little Gravel, moist (Till Clay)									
50				50.0	Bottom of borehole at 50.0 feet.	711.1								

PAGE 1 OF 2



The Mannik & Smith Group, Inc. 2365 Haggerty Road South, Canton, MI 48188 ph: (734) 397-3100 fax: (734) 397-3131

www.manniksmithgroup.com CLIENT City of Mt. Pleasant, MI PROJECT NAME Former Mt Pleasant Landfill RAP Implementation PROJECT NUMBER M3460003 PROJECT LOCATION Mt. Pleasant, MI DATE STARTED 4/12/22 **COMPLETED** 4/13/22 BORING DIAMETER: 6 inches **DRILLING CONTRACTOR** Cascade Drilling **SURVEY COORDINATES:** 772,211.3 N; 13,014,355.0 E (USSP MI South) DRILLING METHOD Rotosonic TOP OF CASING ELEV.: 746.85 feet NAD83 LOGGED BY DJA CHECKED BY ☐ GROUND WATER ENCOUNTERED DURING DRILLING: 5 FEET BGS **NOTES ▼ WATER LEVEL AFTER DRILLING**: N/A SAMPLE TYPE NUMBER LABORATORY SAMPLE ELEVATION (NAD83) RECOVERY (FEET) PID (ppm) GRAPHIC LOG DEPTH DEPTH (FEET) (FEET) MATERIAL DESCRIPTION **REMARKS** WELL DIAGRAM Above-Ground Protective BORINGWELL LOG (PID) - GINT STD US LAB, GDT - 9/6/22 09:54 - W.\PROJECTS\PROJECTS K-O\M3460003\ADMINIDRILLING\BORING LOGS\M34600002 BORING LOGS\M34600002 Surface Elev. = 744.2 NAD83 0 Concrete Pad TOPSOIL 1.0 743.2 Sand for Drainage Dark Brown Organic Sandy CLAY, moist 2" Diameter PVC Riser SC 2.0 Bentonite Chips 740.2 Brown Silty Fine SAND, trace Gravel, 5.0 ☑ moist 739.2 Gray Sandy GRAVEL, wet (Lacustrine Gravel) Soil Sample Filter Sand MW-202, 5-7 2" Diameter 10-Slot PVC (GW) Screen Ö SC 2 736.5 4.8 Gray Clayey SILT, moist 8.5 735.7 Gray Sandy CLAY, some Silt, Soil Sample trace-little Gravel, moist (Very Hard MW-202, 8.5-10 10 Till Clay) (CL) 15 8.0 20 Bentonite Chips SC 9.0

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19	CLIE	NT City	of Mt.	Pleas	ant, M	II									
L	PROJ	IECT NU	MBER	M34	160003	3	PROJECT LOCATION Mt. Pleasant, MI								
	DATE	START	ED _4	/12/22		COMPLETED 4/13/22	BOR	ING DI	AMETE	ER: 6 inches					
	ORILI	LING CO	NTRA	CTOR	Cas	cade Drilling	SUR	VEY C	OORDI	INATES: 772,211.3 I	N; 13,014,355.0 E (USSP MI South)				
	DRILI	LING ME	THOD	Rote	osonic		ТОР	OF CA	SING I	ELEV.: 746.85 feet	NAD83				
ŀ	OGC	SED BY	DJA			CHECKED BY	$oxedsymbol{oxed}$ ground water encountered during drilling: <u>5 Feet BGS</u>								
ŀ	NOTE	S					<u>▼</u> WATER LEVEL AFTER DRILLING: N/A								
r		III													
,	O (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	ELEVATION (NAD83)	PID (ppm)	LABORATORY SAMPLE	REMARKS	WELL DIAGRAM				
RILLING/BORING LOGS/M340002 BORING LOGS KEVZ	35 40	SC 5	10.0		40.0	Gray Sandy CLAY, some Silt, trace-little Gravel, moist (Very Hard Till Clay) (continued) Bottom of borehole at 40.0 feet.	704.2				■ Bentonite Chips				



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CLIEN	NT Cit	y of Mt	. Pleas	sant, MI	l Pi	ROJE	CT NA	ME _	Former	Mt Pleasant Landfill RAP Implementation			
PROJ	ECT N	UMBEF	R _M3	460003	PI	PROJECT LOCATION Mt. Pleasant, MI							
DATE	STAR	TED <u>4</u>	/12/22	2	COMPLETED <u>4/12/22</u> B	BORING DIAMETER: 6 inches							
DRILL	ING C	ONTRA	CTOR	Casc	cade Drilling Si	URVE	Y CO	ORDIN	ATES:	772,079.6 N; 13,014,794.0 E (USSP MI South)			
DRILL	ING M	ETHOD	Rot_	osonic	G	<u> </u>							
LOGG	SED BY	/ DJA			CHECKED BY $ar{ar{ar{ar{ar{ar{ar{ar{ar{ar{$	$\underline{\hspace{0.1in}}$ $\underline{\hspace{0.1in}}$ GROUND WATER ENCOUNTERED DURING DRILLING: Not Encountered							
NOTE	S				T	WATE	R LE	VEL A	FTER D	RILLING: N/A			
	ш								>				
O (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION		ELEVATION (NAD83)	PID (ppm)	LABORATORY SAMPLE	REMARKS			
					Brown Silty CLAY, trace-little Sand, trace								
					Gravel, moist (Clay Cap)								
	sc			2.0	Brown, Gray and Black SAND, Clay, Grav	vel	767.5						
	1	3.0			Wood, Refuse (FILL)	vci,							
5													
. –													
	sc	4.0											
	2	1.0											
10			\bowtie										
15	sc 3	7.5											
. –													
20			+										
25	90												
10 15 20 25 30	SC 4	5.0											
				1									
]													
30				30.0			739.5						



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- •	CLIE	NT City	of Mt.	Pleas	sant, M	<u> </u>	PROJE	ECT NA	AME _	Former	Mt Pleasant Landfill RAP Implementation			
L	PRO.	IECT NU	MBER	R _M34	460003	3	PROJECT LOCATION Mt. Pleasant, MI							
П	DATE	START	ED 4	/12/22	2	COMPLETED 4/12/22	BORIN	IG DIA	METEF	R : _6 in	ches			
- 1	DRIL	LING CO	NTRA	CTOR	Caso	cade Drilling	SURVE	EY CO	ORDIN	ATES:_	772,079.6 N; 13,014,794.0 E (USSP MI South)			
I	DRIL	LING ME	THOD	Rote	osonic		GROU	ND SU	RFACE	E ELEV	.: 769.5 feet NAD83			
- 1	LOGO	SED BY	DJA			CHECKED BY	$oxed{oxed}$ GRO	UND V	VATER	ENCO	UNTERED DURING DRILLING: Not Encountered			
- I	NOTE	s					▼ WATER LEVEL AFTER DRILLING: N/A							
F		111												
	OEPIH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION		ELEVATION (NAD83)	PID (ppm)	LABORATORY SAMPLE	REMARKS			
	30			0		Gray, Gravelly SAND, moist (Lacustri	ne							
LING/BORING LOGS/M3460002 BORING LOGS REV2.G	- 35 - - - 40	SC 5	10.0		33.5	Sand) Gray Clayey Sand-Sandy Clay, some trace Gravel, moist (Very Hard Till Cla	Silt, ay)	736.0			Soil Sample SB-19, 34-35 (SC)			
:55 - W:/PROJECTS/PROJECTS K-OM3460003/ADMIN/DRILL	45	SC 6	8.5		50.0			719.5			Soil Sample SB-19, 47-49 (CL)			
ENV BORING LOG (PID) - GINT STD US LAB.GDT - 9/6/22 09:55 - W:PROJECTS\PROJ	50				1 50.0	Bottom of borehole at 50.0 feet	t.	719.5						



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PROJ DATE	IECT I	NUME	3ER	M34	160003	-								
DATE					100000		PROJECT NAME Former Mt Pleasant Landfill RAP Implementation PROJECT LOCATION Mt. Pleasant, MI							
	STAF	RTED	4/	12/22		COMPLETED _4/12/22 E	BORING DIAMETER: _6 inches							
DRILL	LING	CONT	ΓRA	CTOR	Caso	ade Drilling S	SURVEY COORDINATES: 771,767.6 N; 13,014,829.0 E (USSP MI South)							
DRILL	LING I	IETH	HOD	Rote	osonic									
LOGG	SED B	Y _D	JA			CHECKED BY $ar{ar{ar{ar{ar{ar{ar{ar{ar{ar{$	$\underline{igspace 2}$ ground water encountered during drilling: Not Encountered							
NOTE	s						▼ WATER LEVEL AFTER DRILLING: N/A							
						_								
DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY	(FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION		ELEVATION (NAD83)	PID (ppm)	LABORATORY SAMPLE	REMARKS			
0						Brown Sllty CLAY, tarce-little Sand, trace	е							
						Gravel, moist (Clay Cap)								
	S				2.0	Brown, Gray and Black SAND, Clay, Gra	avel .	767.5						
	1		2.8	\ggg		Wood, Refuse (FILL)	avei,							
▁				XXX										
5				\ggg										
5 10 10 20 25 30 30				\ggg										
				>>>										
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10				XXX										
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				XXX										
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				XXX										
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				XXX										
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	4	7	7.5	XXX										
				XXX										
{				XXX										
				\ggg										
▁▕				\ggg	29.2			740.3						
30				, ****	30.0	Gray Gravelly SAND (Lacustrine Sand)		739.5						



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CLIENT City of Mt. Pleasant, MI PROJECT NAME Former Mt Pleasant Landfill RAP Implementation								ementation								
	PRO.	IECT NU	MBER	R _M3	460003	3	PROJE	CT LC	CATIC	ON <u>Mt.</u>	Pleasant, MI					
	DATE	START	ED 4	/12/22	2	COMPLETED 4/12/22	BORIN	G DIA	METER	R: _6 in	ches					
	DRIL	LING CO	NTRA	CTOF	Case	cade Drilling	SURVEY COORDINATES: 771,767.6 N; 13,014,829.0 E (USSP MI South)									
	DRIL	LING ME	THOD	Rot_	osonic		GROUND SURFACE ELEV.: 769.5 feet NAD83									
	LOGO	SED BY	DJA			CHECKED BY	$ar{igspace}$ GRO	UND V	VATER	ENCO	UNTERED DURING DRILLING:	Not Encountered				
	NOTE	s					▼ WAT	ER LE	VEL A	FTER D	RILLING: N/A					
ŀ										Ι.						
	0 (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION		ELEVATION (NAD83)	PID (ppm)	LABORATORY SAMPLE	REMARKS					
ENV BORING LOG (PID) - GINT STD US LAB.GDT - 9/6/22 09:55 - W.PROJECTS/PROJECTS K-OM3460003/ADMINIDRILLING/BORING LOGS/M3460002 BORING LOGS REV2.GPJ	30	WYS SC 5	8.2		37.0 40.0 44.5	Brown Silty Fine SAND, moist (Lacust Sand) Brown Silty Fine SAND with Silt lense moist (Lacustrine Sand) Gray Silty CLAY, some Sand, little Grad Sands (Very Hard Till Clay) Gray Sandy CLAY, some Silt, trace Gary-moist (Hardpan-like Till)	avel,	732.5 729.5 725.0	н.	JAC TO THE TOTAL T	Soil Sample SB-20, 45-50 (CL)					
ENV BORIN																



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CLIEN	JT C:+	y of Mt	Dloor		.manniksmithgroup.com ıı	PROJECT NAME Former Mt Pleasant Landfill RAP Implementation							
		<u>y or mit</u> UMBEF								Pleasant, MI			
		TED _4											
						SURVEY COORDINATES: 771,699.5 N; 13,014,311.0 E (USSP MI South)							
		ETHO											
LOGG	ED BY	DJA			CHECKED BY	$ar{ar{ar{ar{ar{ar{ar{ar{ar{ar{$							
NOTE	s					WATER LEVEL AFTER DRILLING: N/A N/A							
DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION		ELEVATION (NAD83)	PID (ppm)	LABORATORY SAMPLE	REMARKS			
0			74 1×. 77	0.0	TOPSOIL		746.0						
				1.0	Light Brown Clayey SILT, moist	/	745.5 744.8						
	sc		1.7	Brown Silty SAND, moist Brown Clayey SAND, trace Gravel and	/	744.0							
	1	3.0		3.0	Wood, moist		743.5						
- 4					Light Brown Silty CLAY, trace Sand, mo	DIST							
5					<u> </u>								
					Becomes wet at 5 Ft. bgs								
				7.0			739.5						
	SC 2	3.0	0 0		Gray Sandy GRAVEL, wet (Lacustrine Gravel)								
			0. ()		Siavoly								
10			Ø										
10_			0										
)										
				12.0	Gray Sandy CLAY, some Silt, trace Gra		734.5						
					moist (Very Hard Till Clay)	,							
15	SC 3	9.5											
4													
1													
20													
1													
1													
									X	Soil Sample SB-21, 23-25 (CL)			
25	SC 4	10.0			Becomes Hardpan-like till at 25 Ft. bgs				\vdash				
-					20001100 Harapari-into tili at 20 i t. bys								
. 4													
. 4													
30				30.0			716.5						



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	CLIE	NT City	of Mt.	Pleas	ant, M	I	PROJECT NAME Former Mt Pleasant Landfill RAP Implementation								
	PRO.	JECT NU	MBER	M34	60003	3	PROJE	CT LC	CATIC	N <u>Mt.</u>	Pleasant, MI				
	DATE	STARTI	ED 4	/13/22		COMPLETED _4/13/22	BORIN	G DIA	METER	R: _6 in	ches				
	DRIL	LING CO	NTRA	CTOR	Caso	cade Drilling	SURVE	Y CO	ORDIN	ATES:_	771,699.5 N; 13,014,311.0 E (USSP MI South)				
	DRIL	LING ME	THOD	Rote	sonic		GROU	ND SU	RFACE	ELEV.	: _746.5 feet NAD83				
	LOG	GED BY	DJA			CHECKED BY	$oxed{igstyle \Box}$ GRO	UND V	VATER	ENCO	UNTERED DURING DRILLING: 5 FEET BGS				
	NOTE	ES													
	⊗ DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION		ELEVATION (NAD83)	PID (ppm)	LABORATORY SAMPLE	REMARKS				
ENV BORING LOG (PID) - GINT STD US LAB.GDT - 9/6/22 09:55 - W:\PROJECTS\PROJECTS (+O)M3460003ADMIN\DRILLING\BORING LOGS\M3460002 BORING LOGS REV2.GPJ		SC 5	10.0		40.0	Gray Sandy CLAY, some Silt, trace G moist (Hardpan-like till) Bottom of borehole at 40.0 fee		706.5							

APPENDIX C FIELD SAMPLING FORMS

Smith GREATIVE SPIRIT.	SAMPLE LOCATION: MW-101
DATE: 1/0/ DI	PROJECT #: M3460003 SITE NAME: MT. PLEASANT LAND FILL
PERSONNEL: DA PH	SITE ADDRESS: 1303 N. FRANKLIN
OBSERVERS:	_ SITE CONDITIONS:
DEPTH OF WELL:	DEPTH TO WATER LEVEL: 3.76 TOC
SCREEN LENGTH:	WELL DIAMETER:
TUBING TYPE: HDPE	CASING TYPE: PVC
MONITORING EQUIPMENT: HDPE TUB	ING, PERISMUTIC PUMP, HORIBA

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph +/- 0.1	ORP (mV)	COND. (mS/cm) +/- 3%	TURB. (NTU) ² +/- 10%	DO (mg/L) ¹ +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1992	4.12	58.9	6.88	-21	1,47	46,1	9.46			
1443	4.14	55.6	6.92	-33	1,58	48.5	3.99			
1448	4.17	54.8	6,94	-38	1,59	3,3	3.17			
1451	4.20	54.7	6.42	-40	1.57	0.9	2.86			
1454	4,21	5413	6.90	-41	1,59	0.0	2,76			
1457										
1500										

SAMPLE ID: MW- 10/		
SAMPLE DATE: 5-16-77		
SAMPLE TIME: 1500		
Notes:		

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

Smith GROUP TECHNICAL SKILL. GREATIVE SPIRIT.	SAMPLE LOCATION: MW-102
DATE: 5/16/22	PROJECT #: M3460003
PERSONNEL: UNP, JUG OBSERVERS:	SITE ADDRESS: 1303 N. FRANKLIN SITE CONDITIONS:
	DEPTH TO WATER LEVEL: 6.87
SCREEN LENGTH:	WELL DIAMETER:
TUBING TYPE: HDPE TO MONITORING EQUIPMENT: HDPE TO	_ CASING TYPE: PVC 11BING, PERISTAUTIC PUMP, HORIGA

TIME	WATER LEVEL (<0,3 feet once	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES
stabilized)	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)		
1431	6.87	53.2	7.39	75	2.07	516	9.22		200	
1434		50.4	7.24	34	2.33	89.3	5.42			
1437		49.7	7.24	-4	2.39	41.0	3.79			
1446		48.5	7.22	-37	7.43	33.1	269			
1443		48.1	7.21	-44	245	22.4	238			
1446		40,1	7.20	-48	2.46	18.3	2.24			
1449										
1452										
MSS										
1458	1									
1501										

SAMPLE ID: Wes -107
SAMPLE DATE: SILLO/22
SAMPLE TIME: 1446
Notes: Began Ruging @ 1428
Supoblamed but couldn't fit taking & WLM in Prc
3

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

 $^{^{2}}$ - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

Smith GROUP TECHNICAL SKILL. CREATIVE SPIRIT.	SAMPLE LOCATION: MW-103
DATE: 516122	PROJECT #: M3460003
PERSONNEL: LMR, TOG	SITE NAME: MT. PLEASANT LAND FILL SITE ADDRESS: 1303 N. FRANKLIN
OBSERVERS:	SITE CONDITIONS:
DEPTH OF WELL:	DEPTH TO WATER LEVEL: 22001
SCREEN LENGTH:	WELL DIAMETER:
TUBING TYPE: HDPE	CASING TYPE: PVC
MONITORING EQUIPMENT: HOPE TV	BING, PERSTRUTIC PUMP, HORIBA

TIME	WATER LEVEL (<0.3 feet once	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES
stabilized)	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)		
233	2.42'	62.0	7.14	-4	1.59	175	13.20	5	200	
1236	2.10	57.1	7.28	-10	1.15	522	6.92			
1239	2.11	56.4	7.42	1	1.08	53.8	605			
1242	2.11	54.4	735	-8	1.24	44.3	4.83			
1245	2.11	54.3	7.31	-13	1.33	47.7	3.14			
1248	2111	54.2	7.28	-16	1.51	48.4	233			
1251										
1254										
1257										
1300										

SAMPLE ID: MW-103
SAMPLE DATE: 5/16/22
SAMPLE TIME: 1249
Notes: Been Proman 12:30
Hyo meter mer Roma w/ fubing - SO will leave WL constant
after fral pumping measurement
1 40% founding greater than 0.5 mg/l is the poly

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

Mannik Smith GROUP	SAMPLE LOCATION: MW-104
DATE: 5 / 10 / L	PROJECT #: M3460003 SITE NAME: MT. PLEASANT LAND FILL
PERSONNEL: DA PH OBSERVERS:	SITE ADDRESS: 1303 N. FRANKLIN SITE CONDITIONS:
DEPTH OF WELL:	DEPTH TO WATER LEVEL: 5.79
SCREEN LENGTH: TUBING TYPE:	WELL DIAMETER: CASING TYPE: PVC
MONITORING EQUIPMENT: HOPE TVE	ING, PERISTALTIC PUMP, HORIGA

TIME	WATER LEVEL (<0.3 feet once	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES
	stabilized)	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)	
1249	5,61	53.9	7,09	13	0.852	21.5	9.86			
1252	5.81	81.5	7,01	-26	6841	0.0	4.49			
1255	5.82	50.6	6.99	40	0.844	0.0	3.77			
1258	5.82	50.3	6.98	-45	0.646	0.0	3,56			
1301	5,62	50,5	6.97	-49	0.848	0.0	3,40			
1304										
1307										
				1 1						

SAMPLE ID:		
SAMPLE DATE: 5-16-22		
SAMPLE TIME: 1302		
Notes:		

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

Mannik Smith GROUP	TECHNICAL SKILL. CREATIVE SPIRIT.	AMPLE LOCATION: $MW - 105$
DATE: 5/10/2000	S	ROJECT#: M3460003 TE NAME: MT. PLEASANT LAND FILL
PERSONNEL: DA/PH		TE ADDRESS: 1303 N. FRANKLIN
OBSERVERS:		TE CONDITIONS:
DEPTH OF WELL:	D	EPTH TO WATER LEVEL: 4,94 / TOC
SCREEN LENGTH: TUBING TYPE:HDPE		ASING TYPE: PVC
MONITORING EQUIPMENT:	HDPE TVB	ASING TYPE: PVC INC. PERISTALTIC PUMP HORIBA

TIME	WATER LEVEL (<0.3 feet once	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE (ml/min)	NOTES
	stabilized)	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)		
1324	5.33	60.9	7,15	-49	0.837	51.7	4.38		7200	
1327	5,38	62.3	7.07	-69	0.855	26.7	2.62			
1330	5,38	59.5	7.07	-77	1,19	15.0	7.70			
1333	5,38	58.5	7,05	-81	1,28	10.6	2.61			
1336	5,41	56.2	7,03	-84	1,33	9.0	2.51			
1339		5812	7,03	-85	1,34	8.5	2,45			
1342										

SAMPLE ID: MW-105	
SAMPLE DATE: 5-16-22	
SAMPLE TIME: 1342	
Notes:	_
	_

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

Smith GROUP	SAMPLE LOCATION: MW-106
DATE: 5/16/22	PROJECT #: M3460003
	SITE NAME: MT. PLEASANT LANDFILL
PERSONNEL: WC, 306	SITE ADDRESS: 1303 N. FRANKLIN
OBSERVERS:	SITE CONDITIONS: 720/ Survey
DEPTH OF WELL:	DEPTH TO WATER LEVEL: (250 C. Z(/
SCREEN LENGTH:	WELL DIAMETER:
TUBING TYPE: HDPE	CASING TYPE: PVC
MONITORING EQUIPMENT: HDPE TUBE	NG PERISTALTIC PUMP, HORIBA

TIME	ME WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES
Stabilized)	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)		
1338	6.26	53.4	7.37	51	1.84	42.4	5.67		200	
1341	6.27	53.0	7.37	7	1.75	30.8	3.14			
1344	6.24'	527	7.36	-18	170	24.2	271			
1347	6.26'	52.8	7.35	-Z8	1.69	20.8	244			
1350	6.26	52.8	7.34	-37	1.69	18.7	2.33			
1353										
1356										
1359										
1402										

SAMPLE ID: MW-166			
SAMPLE DATE: S/16/22			
SAMPLE TIME: 14/0			
Notes: Been Rusing a	1335		
0 0 0			

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

Mannik Smith GROUP	SAMPLE LOCATION: MW- (OK
DATE: _5/16/22	PROJECT #: M3460003
PERSONNEL: JOG, LITTP OBSERVERS:	SITE ADDRESS: 1303 N. FRANKLIN SITE CONDITIONS: 72°/ SURVEY
DEPTH OF WELL:	DEPTH TO WATER LEVEL: 7-70 TOC
SCREEN LENGTH: TUBING TYPE:HDPE	WELL DIAMETER:
MONITORING EQUIPMENT: HDPE TVB	NE, PERISTAUTIC PUMP, HORIBA

TIME		(<0.3 feet once	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES
stabilized)	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)		
653	8.24	51.4	7.13	4	1.95	580	3.97	Q.10		
(056	0.85	47.0	7.11	33	2.32	397	5.81	6.20		
1059	4.60	48.0	7-10	58	7.43	366	4.91	4-36		
	1									

SAMPLE ID: MW-108	
SAMPLE DATE: 5/16/22	
SAMPLE TIME:	
Notes: Began Puring @ 10:50 1050	
well paper by @ 10:58	

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

 $^{^{2}}$ - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

1	<u> </u>		SITE ADDR	ESS: /303					
L: TH: H DPE			DEPTH TO WELL DIAM CASING TY	WATER LEVEL METER: 'PE:	4.7			I WATE	ER QUALITY MO
WATER LEVEL (<0.3 feet once	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME	PUMP	NOTES
stabilized)	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)	NOTES
	16.4	6.04		7,700					
	15.3	6,42	- 1	1188					
	12.9	6,55	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
	12.7	6,64		886					
	-								
	L:HDPE QUIPMENT: WATER LEVEL (<0.3 feet once	UIPMENT: D/5P05A8 WATER LEVEL (<0.3 feet once stabilized) 1/6 1 4 1/5 . 3 1/2 . 9	L:	DEPTH TO WELL DIAM CASING TY QUIPMENT: D/5P05A846 HDPE BAILE WATER LEVEL (<0.3 feet once stabilized) +/- 3% +/- 0.1 -/6 14 -/6 04 -/5 , 3 -/6 142 -/2 19 -/5 55	DEPTH TO WATER LEVEL WELL DIAMETER: H DPE CASING TYPE: COND. (mS/cm) 16.3 6.42 7,700 15.3 6.42 /188 12.9 6.55 945	DEPTH TO WATER LEVEL: 4, 7. TH: WELL DIAMETER:	DEPTH TO WATER LEVEL: 4.72 8. TH:	DEPTH TO WATER LEVEL: 4.72 BTOC TH: WELL DIAMETER: CASING TYPE: QUIPMENT: D/5P05A846 HDPE BAINER, NYLON ROPE, NETRAMETER WATER LEVEL (<0.3 feet once stabilized) +/- 3% +/- 0.1 +/- 10 mV +/- 3% +/- 10% +/- 10% (Gallons) 16.4 6.04 7,700 15.3 6.42 //88 12.9 6.55 945	DEPTH TO WATER LEVEL: 4.72 BTOC WELL DIAMETER:

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

 $^{^{2}}$ - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

Smith GROUP	SAMPLE LOCATION: MW-200
TE: K / / / / / / / / / / / / / / / / / /	PROJECT #: M3460003
no lou	SITE NAME: MT. PLEASANT LANDFILL
RSONNEL: UR PH	SITE ADDRESS: 1303 N. FRANKLIN
SERVERS:	SITE CONDITIONS:
PTH OF WELL:	DEPTH TO WATER LEVEL: 11,50 TOC
REEN LENGTH:	WELL DIAMETER:
IBING TYPE: HDPE	CASING TYPE: PVC

TIME		TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES
stabilized)	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)		
1536	11,70	59,6	8,13	-147	2.80	155	8,31		2200	
1539	11.68	56.3	7,62	-159	2,16	143	3.30			
1543	11.69	57.6	7,29	-129	1,90	123	2.67			
1545	11.68	57,4	7,19	-117	1.84	123	7.47			
1548	11,68	57,3	7.14	-112	1,80	103	2,32			
1551	11,68	57,4	7.12	-110	1,78	81,3	7,23			

SAMPLE ID:	MW-200		
SAMPLE DATE:	5-16-2022		
SAMPLE TIME:_	1555	0 (-11	11. 100
Notes:	DUT + FIELD	BLANK COLLECTED	AT MU-LOO

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

Smith GREATIVE SPIRIT.	SAMPLE LOCATION: MW-201
DATE: 1 16 177	PROJECT #: M3460003 SITE NAME: MT. PLEASANT LAND FILL
PERSONNEL: NG POH	SITE ADDRESS: 1303 N. FRANKLIN
OBSERVERS:	SITE CONDITIONS:
DEPTH OF WELL: SCREEN LENGTH:	WELL DIAMETER: 2"
TUBING TYPE: HDPE	CASING TYPE: PVC
MONITORING EQUIPMENT: HOPE TOOM	NG, PERISTRUTIC PUMP, HORIBA

TIME	WATER LEVEL (<0.3 feet once	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES
stabilized)	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)		
160	57.6	57.6	7.19	-197	1.61	76.1	9.16	4.1		
1624	17.15	53.3	7.32	-288	1.46	9.2	3.36	Ø. 5		
1627	12.15	57.7	7.24	-345	1.45	5.6	7.67	Ø.5		
1630	12.15	52.6	7.74	-360	1.45	3.3	7.55	0.6		
1633	12.15	57.5	7.30	-385	1.44	1.4	7.44	0.7		
1636	12:15	52:1	7.33	-400	1.44	1.2	7.39	8.8		
1639	17.15	57.1	7.36	-428	1.44	0.4	2.36	0.9		
				67						

SAMPLE ID: MW ZOL		
SAMPLE DATE: 5/16/22		
SAMPLE TIME: 1645		
Notes:		
Sapre @ 1645		

^{1 - 10%} for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

Smith GREATIVE SPIRIT.	SAMPLE LOCATION: MW- 252
DATE: 5/16/22	PROJECT #: M3460003
	SITE NAME: MT. PLEASANT LAND FILL
PERSONNEL: DIMP, JOG	SITE ADDRESS: 1303 N. FRANKLIN
OBSERVERS:	SITE CONDITIONS: 720/Sunny
DEPTH OF WELL:	DEPTH TO WATER LEVEL: 4.26
SCREEN LENGTH:	WELL DIAMETER: 2"
TUBING TYPE: HDPE	CASING TYPE: PVC
MONITORING EQUIPMENT: HPIE TUB	ING, PERISTALTIC PUMP, HORIGA

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (F)°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES
stabilized)	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)		
1126	4.30	54.5	7.03	213	2.42	383	8,07		200	
1129	4.30	51-7	6.91	161	2.53	171	7.56			
1132	4.28	50.9	6.88	9	2.65	97.5	5.13			
1135	4.29	50.7	6.89	-29	2.68	73.6	3.65			
1138	4.29	50.7	6.89	-45	2.69	49.6	2.77			
1141	4.29	50:5	6.90	-51	2-71	39.7	2.89			
1144					\cap					
1147				/						
1150										
	7									

SAMPLE ID: YW - 202	
SAMPLE DATE: S/16/22	
SAMPLE TIME: 1145	
Notes: Becan Pursine @ 1723	
3	

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

 $^{^{2}}$ - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

Smith GROUP TECHNICAL SKILL. GROUP	SAMPLE LOCATION: MW-9-20
DATE: 5/16/22	PROJECT#: M3460003
	SITE NAME: MT. PLEASANT LAND FILE SITE ADDRESS: 1303 N. FRANKLIN
PERSONNEL: TO G	SITE ADDRESS: 1303 N. FRANKLIN
OBSERVERS:	SITE CONDITIONS: 71% Sunve
DEPTH OF WELL:	DEPTH TO WATER LEVEL: 6.59
SCREEN LENGTH:	WELL DIAMETER:
TUBING TYPE: HDPE	CASING TYPE: PVC
MONITORING EQUIPMENT: HDPE TYON	NG PERISTALTIC PUMP, HORIGA

TIME WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES	
	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10% +/-	+/- 10%	(Gallons)	(ml/min)		
15:12		52.4	7.27	-41	1.23	98.1	4.57		200	
1515		53.1	7.31	-40	1.24	88.5	5.08			
1518										
1521 1524										
1524										
1527		- 11								
1530						-				
1533										
1536										
1539										

SAMPLE ID: MW-9-ZO
SAMPLE DATE: SILGIZZ
SAMPLE TIME:
Notes: Began Russing @ 15:10
west dr @ 1516

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

 $^{^{2}}$ - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

Smith GROUP TECHNICAL SKILL. GREATIVE SPIRIT.	SAMPLE LOCATION: MW-10-20
DATE: 5/16/702	PROJECT #: M3460003
PERSONNEL: UMP, JOG	SITE NAME: MT. PLEASANT LANDFILL SITE ADDRESS: 1303 N. FRANKLIN
OBSERVERS:	_ SITE CONDITIONS: _70°/Sunny
DEPTH OF WELL:	DEPTH TO WATER LEVEL: 5.29
SCREEN LENGTH:	WELL DIAMETER:
TUBING TYPE: HDPE	CASING TYPE: PVC
MONITORING EQUIPMENT: HDPE TO	BING, PERISTALTIC PUMP, HORIBA

TIME	WATER LEVEL (<0.3 feet once	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES
stabilized)	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)		
1532	5.71'	54.5	7.30	-28	1.43	297	8.91		200	
1535	5.68'	51.1	7.31	-46	1.98	208	5.14			
1538	5.67	50.1	7.35	-68	2.14	138	2.78			
1541	5.67	49.7	7.34	-78	215	80.5	2.13			
1544	5.68'	49.5	7.33	-83	216	51.4	1.94			
1547	5.691	49,1	7.32	-87	217	38.6	1.84			
1550	5,691	48.9	7.32	-89	2.17	31.6	1.75			
1553	5.691	48.8	7.31	-92	2.18	28.7	1.71			
1556										
1559										
1602										
	61									

SAMPLE ID: 10-26	
SAMPLE DATE: 5/16/22	
SAMPLE TIME: 1553	
Notes: Began Pureng @ 1530	
3 - 3]	

 $^{^{1}}$ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

 $^{^2}$ - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

	annik Smith GROUE	CREATIVE SPI	RILL. RIT.	SAMPLE LO	OCATION: N	1w-1	4-20				
ATE: 5 /	16 1 27	m		PROJECT #	M346	0003					
	1	0		SITE NAME	MT. F	LEASA	NT LAN	OFILL			
PERSONNEL: DA/HP			SITE NAME: MT. PLEASANT LAND FILL SITE ADDRESS: 1303 N. FRANKLIN								
BSERVERS:	1'			SITE COND	ITIONS:						
CREEN LEN	ELL: GTH: : HDPE EQUIPMENT:		E TUBI	WELL DIAM	WATER LEVEL METER: PE: PVC PSTADI COND.			0.	ZZ A		
TIME	(<0,3 feet once stabilized)	TEMP. (*F/*C)	Pn	ORP (mV)	(mS/cm)	(NTU) ²	(mg/L) ¹	PURGED	RATE	NOTES	
	stabilized)	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)		
						11 1010	1, 10,0				
035	6.78	55.7	7.07	-49	1.82	196	20.66		220		
035	6.69			-49	1	196	20.66		220		
035	6.69	55.7 56.1 55.3	7.07	-94	1.80	101	7.01		220		
1041	669	56.1		-94 -105	1	196	20.66 7.01 5.00		220		
035 038 1041 1044		56.1		-94	1.80	196 180 179 195	7.01 5.00 4.09		220		
1041	6.70	56.1 55.3 54.5	7.19 7.15 7.13	-94 -105 -108	1.80	196	20.66 7.01 5.00		220		

SAMPLE ID:	MW-14-20
SAMPLE DATE:_	5-16-22
SAMPLE TIME:_	055

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

Notes:

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

Mannik Smith GROUP	TECHNICAL SKILL. CREATIVE SPIRIT.	SAMPLE LOCATION: MW-15-20
DATE: 5 / 6 / D		PROJECT#: <u>M3460003</u>
PERSONNEL: AUG		SITE NAME: MT. PLEASANT LAND FILL SITE ADDRESS: 1303 N. FRANKLIN
OBSERVERS:		SITE CONDITIONS:
DEPTH OF WELL:		DEPTH TO WATER LEVEL: 5.4/
SCREEN LENGTH:		WELL DIAMETER:
TUBING TYPE: HDPE		CASING TYPE: PVC
MONITORING EQUIPMENT:	HOPE TUDI	NG, PERISTRUTIC PUMP, HORIBA

TIME	WATER LEVEL (<0.3 feet once	TEMP. (Ff°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES
	stabilized)	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)	
0957	5.36	51.5	7-69	178	1.59	रिक	6-21	0.10		
1004	5.34	57.00	7.04	27	1.58	279	4.40	0.10		
1443	5.34 5.34	57.7	7.47	-17	1.57	239	3.48	4.30		
1946	5.34	53.3	7.42	-25	1.57	269	3,15	4.40		
1409	5.34	53.6	702	-24	1.59	184	2.98	Ø.50		
1012	5.35	53.8	742	-32	1.63	109	7.85	0.66		
	11	F. T. T.								

SAMPLE ID: NU 15-20			
SAMPLE DATE: 6/6/2			
SAMPLE TIME: 1025			
Notes: Stitul pure	@ 9:56		
DEAS Smale	l @ 1030		

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

 $^{^{2}}$ - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

SONNEL:	<u>16 20</u> 22 <u>D</u> A			PROJECT #: M3460003 SITE NAME: FORMER MT. PIONSANT LAND FILL SITE ADDRESS: SITE CONDITIONS:								
REEN LEN	ELL: GTH: :: EQUIPMENT:	2		WELL DIAME	Water Level Eter: Pe:		<u>'</u>					
	WATER LEVEL	TEMP (95/90)	Dh	ORP (mV)	COND.	TURB.	DO	VOLUME	PUMP			
TIME	(<0.3 feet once	TEMP. (°F/°C)	Ph	ORP (IIIV)	(mS/cm)	(NTU) ²	(mg/L) ¹	PURGED	RATE	NOTES		
TIME		+/- 3%	+/- 0.1	+/- 10 mV	(mS/cm) +/- 3%	(NTU) ² +/- 10%	(mg/L) ¹ +/- 10%			NOTES		
TIME	(<0.3 feet once	1 2 2 2 2 2	0.00	- V-00-7				PURGED	RATE	NOTES		
TIME	(<0.3 feet once	1 2 2 2 2 2	0.00	- V-00-7				PURGED	RATE	NOTES		
TIME	(<0.3 feet once	1 2 2 2 2 2	0.00	- V-00-7				PURGED	RATE	NOTES		

SAMPLE II	D:						
SAMPLE D	ATE:						
SAMPLE T	IME:						
Notes:	STATIC	WATER	LEVEL	ONLY-NO	GROUNDWATER	SAMPLE	Collected.

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

 $^{^{2}}$ - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

TE: 5	DA	A.M.		SITE NAME:	: <u>M3460</u> : <u>Former</u> :Ess: :Itions:	MT. PIE	ASANT	LANDF	111	
REEN LEN BING TYPE	ELL: GTH: E: EQUIPMENT:			WELL DIAM	WATER LEVE ETER: PE:	_	6'			
TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES
	Stabilized)	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)	
	1							-		
			-							
		4								
IPLE DATE IPLE TIME:	TATIC WAT		L ONL	Y-NO	GROWN	DWATER	Spryp	ue (a)	VICTED.	

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

SONNEL	DA	A.M.		PROJECT #: M3460003 SITE NAME: FORMER MT. PLASANT LAND FILL SITE ADDRESS: SITE CONDITIONS:								
REEN LEN BING TYPE	ELL: GTH: E: EQUIPMENT:	- -		WELL DIAM	WATER LEVEI ETER: PE:		<u>, </u>					
TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES		
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)			
	4											
IPLE ID:												
IPLE DATE												

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

 $^{^{2}}$ - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

			SITE NAME:	ESS:	MT. PIE	ASANT	LANDF	ill	
тн:	20 20		WELL DIAMI CASING TYP	ETER: PE:	_	<u>'</u>		0	
WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES
	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallotts)	(minimi)	
							A 1		
- (QUIPMENT: WATER LEVEL (<0.3 feet once stabilized)	CUIPMENT: WATER LEVEL (<0.3 feet once stabilized) TEMP. (°F/°C) +/- 3%	QUIPMENT: WATER LEVEL (<0.3 feet once stabilized) +/- 3% +/- 0.1	SITE ADDRESSITE CONDICTION SITE CONDICTION SITE ADDRESSITE CONDICTION SITE ADDRESSITE	SITE ADDRESS:	SITE ADDRESS:	SITE ADDRESS:	SITE ADDRESS:	DEPTH TO WATER LEVEL:

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

ERSONNEL:	DA	A.M.		PROJECT #: M3460003 SITE NAME: FORMER MT. PIERSANT LANDFILL SITE ADDRESS: SITE CONDITIONS:								
REEN LEN	ELL: GTH: : EQUIPMENT:	4		WELL DIAMI	WATER LEVEI ETER: PE:		. /					
TIME	WATER LEVEL (<0,3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ² +/- 10%	DO (mg/L) ¹ +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES		

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

 $^{^2}$ - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

TE: 5 1/6 202 RSONNEL: DA SERVERS:	2 A.M.		PROJECT #: M3460003 SITE NAME: FORMER MT. PICASANT LAND FILL SITE ADDRESS: SITE CONDITIONS:							
PTH OF WELL: REEN LENGTH: BING TYPE: INITORING EQUIPMENT:	_		WELL DIAM	WATER LEVE ETER: PE:		2 ′		4		
TIME WATER LEV (<0.3 feet onc stabilized)	12.111.(17.0)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES	
	+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)		

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

ERSONNEL BSERVERS	: DA :			SITE NAME: SITE ADDRI _ SITE CONDI	ESS:	MT. P10		LANDF	14L	
REEN LEN BING TYPE	GTH:E:EQUIPMENT:	_		WELL DIAM	ETER:		<u>/</u>			
TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV)	COND. (mS/cm) +/- 3%	TURB. (NTU) ² +/- 10%	DO (mg/L) ¹ +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
									4-1-5	
				7						
		7								

^{1 - 10%} for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

 $^{^{2}}$ - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

ERSONNEL	DA			SITE NAME	: <u>M3466</u> : <u>Former</u> :Ess: :ITIONS:	MT. PIE	ASANT	LANDF	144	
REEN LEN	ELL: GTH: EQUIPMENT:	_		WELL DIAM	WATER LEVE ETER: PE:		4			
TIME	WATER LEVEL (<0.3 feet once stabilized)	(Ph	ORP (mV)	COND, (mS/cm)	TURB. (NTU) ²	DO (mg/L) ¹	VOLUME PURGED	PUMP RATE	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%	(Gallons)	(ml/min)	
				1						
IPLE DATE:	- - ATIC WATE	_	174.50							

^{1 - 10%} for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

 $^{^{2}}$ - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

APPENDIX D
LABORATORY ANALYTICAL REPORT (GROUNDWATER)



01-Jun-2022

Dave Adler
The Mannik & Smith Group, Inc.
2365 Haggerty Road South
Suite 100
Canton, MI 48188

Re: Former Mount Pleasant Landfill Work Order: 22051511

Dear Dave,

ALS Environmental received 16 samples on 17-May-2022 11:50 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 143.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Julienn Williams

Julienn C. Wille

Julienn Williams Project Manager

Report of Laboratory Analysis

Certificate No: MI: 0022

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 🎾

ALS Group, USA

Date: 01-Jun-22

Client: The Mannik & Smith Group, Inc.

Project: Former Mount Pleasant Landfill

Work Order: 22051511

Work Order Sample Summary

Lab Samp ID Client Sample ID	Matrix <u>Tag Number</u>	Collection Date	Date Received Hold
22051511-01 MW-101	Groundwater	5/16/2022 15:00	5/17/2022 23:50
22051511-02 MW-102	Groundwater	5/16/2022 14:46	5/17/2022 23:50
22051511-03 MW-103	Groundwater	5/16/2022 12:49	5/17/2022 23:50
22051511-04 MW-104	Groundwater	5/16/2022 13:02	5/17/2022 23:50
22051511-05 MW-105	Groundwater	5/16/2022 13:42	5/17/2022 23:50
22051511-06 MW-106	Groundwater	5/16/2022 14:10	5/17/2022 23:50
22051511-07 MW-200	Groundwater	5/16/2022 15:55	5/17/2022 23:50
22051511-08 MW-201	Groundwater	5/16/2022 16:45	5/17/2022 23:50
22051511-09 MW-202	Groundwater	5/16/2022 11:45	5/17/2022 23:50
22051511-10 MW-10-20	Groundwater	5/16/2022 15:53	5/17/2022 23:50
22051511-11 MW-14-20	Groundwater	5/16/2022 10:55	5/17/2022 23:50
22051511-12 MW-15-20	Groundwater	5/16/2022 10:25	5/17/2022 23:50
22051511-13 Field Blank	Groundwater	5/16/2022 15:45	5/17/2022 23:50
22051511-14 DUP	Groundwater	5/16/2022	5/17/2022 23:50
22051511-15 Trip Blank	Water	5/16/2022	5/17/2022 23:50
22051511-16 MW-109	Groundwater	5/16/2022	5/17/2022 23:50

ALS Group, USA Date: 01-Jun-22

Client: The Mannik & Smith Group, Inc.

Project: Former Mount Pleasant Landfill

ACRONIVACE TO

Project: Former Mount Pleasant Landfill
WorkOrder: 22051511

ACRONYMS, UNITS

ALS Group, USA

Date: 01-Jun-22

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
В	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
Н	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n ND	Analyte accreditation is not offered
ND O	Not Detected at the Reporting Limit Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.
Acronym	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III
Units Reported	d Description
μg/L	Micrograms per Liter
mg/L	Milligrams per Liter
ng/L	Nanograms per Liter

Client: The Mannik & Smith Group, Inc.

Project: Former Mount Pleasant Landfill

Work Order: 22051511

Case Narrative

The attached "Sample Receipt Checklist" documents the date of receipt, status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. A copy of the laboratory's scope of accreditation is available upon request.

Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting.

Any flags on MS/MSD samples not addressed in this narrative are unrelated to samples in this report.

With the following exceptions, all sample analyses achieved analytical criteria.

Batch 196707, Method E537 Mod, Sample MW-15-20 (22051511-12E): EIS01: 13C2-PFHxDA_IS failed low.

Batch 196606, Method E537 Mod, Sample MW-102 (22051511-02E): The extracted internal standard response was outside recovery criteria with high bias; sample results may exhibit bias. 13C-4 2-FTS IS, 13C2-6 2-FTS IS

Batch 196606, Method E537 Mod, Sample MW-105 (22051511-05E): One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed. 13C2-FtS 4:2

Batch 196707, Method E537 Mod, Sample MW-201 (22051511-08E): The extracted internal standard response was outside recovery criteria with low bias; sample results may exhibit bias. d3-N-MeFOSAA_IS

Batch 196707, Method E537 Mod, Sample MW-201 (22051511-08E): One or more surrogate recoveries were below the lower control limits. The sample results may be biased low. d3-N-MeFOSAA

Batch 196707, Method E537 Mod, Sample MW-202 (22051511-09E): The extracted internal

Client: The Mannik & Smith Group, Inc.

Project: Former Mount Pleasant Landfill

Work Order: 22051511

standard response was outside recovery criteria with low bias; sample results may exhibit bias. d7-N-MeFOSE IS

Batch 196707, Method E537 Mod, Sample MW-202 (22051511-09E): The extracted internal standard response was outside recovery criteria with high bias; sample results may exhibit bias. 13C-4_2-FTS_IS, 13C2-6_2-FTS_IS

Batch 196707, Method E537 Mod, Sample MW-10-20 (22051511-10E): The extracted internal standard response was outside recovery criteria with low bias; sample results may exhibit bias. d5-N-EtFOSAA_IS, 13C-FOSA_IS, d7-N-MeFOSE_IS

Batch 196707, Method E537 Mod, Sample MW-10-20 (22051511-10E): The extracted internal standard response was outside recovery criteria with high bias; sample results may exhibit bias. 13C-4_2-FTS_IS

Batch 196707, Method E537 Mod, Sample MW-14-20 (22051511-11E): The extracted internal standard response was outside recovery criteria with high bias; sample results may exhibit bias. 13C-4_2-FTS_IS

Batch 196707, Method E537 Mod, Sample MW-15-20 (22051511-12E): The Continuing Calibration Verification did not meet method acceptance criteria for the following analytes, results are to be considered estimated: d3-N-MeFOSAA (target passes in CCV)

Batch 196707, Method E537 Mod, Sample MW-15-20 (22051511-12E): The extracted internal standard response was outside recovery criteria with low bias; sample results may exhibit bias. d3-N-MeFOSAA_IS, d5-N-EtFOSAA_IS, d5-NEtFOSA_IS, d9-EtFOSE_IS, d7-N-MeFOSE_IS, 13C-PFTeDA_IS

Batch 196707, Method E537 Mod, Sample Field Blank (22051511-13A): The Continuing Calibration Verification did not meet method acceptance criteria for the following analytes, results are to be considered estimated: d3-N-MeFOSAA (target passes in CCV)

Batch 196707, Method E537 Mod, Sample Field Blank (22051511-13A): The extracted internal standard response was outside recovery criteria with low bias; sample results may exhibit bias. d5-N-EtFOSAA IS, 13C-FOSA IS, d7-N-MeFOSE IS

Batch 196707, Method E537 Mod, Sample DUP (22051511-14E): The Continuing Calibration Verification did not meet acceptance criteria with high bias, however, the sample results were non-detect for the following analytes: 11Cl-Pf3OUdS, FTS 10:2

Batch 196707, Method E537 Mod, Sample DUP (22051511-14E): The extracted internal standard response was outside recovery criteria with low bias; sample results may exhibit

Case Narrative

Client: The Mannik & Smith Group, Inc.

Project: Former Mount Pleasant Landfill Case Narrative

Work Order: 22051511

bias. d3-N-MeFOSAA_IS, 13C-PFUnDA_IS, d5-N-EtFOSAA_IS, 13C-FOSA_IS, 13C-PFDoA_IS, d7-N-MeFOSE_IS

Batch 196707, Method E537 Mod, Sample DUP (22051511-14E): One or more surrogate recoveries were below the lower control limits. The sample results may be biased low. d3-N-MeFOSAA

Batch 196707, Method E537 Mod, Sample MW-109 (22051511-16E): The extracted internal standard response was outside recovery criteria with low bias; sample results may exhibit bias. d3-N-MeFOSAA_IS, d5-N-EtFOSAA_IS, 13C-FOSA_IS, 13C-PFDoA_IS, d7-N-MeFOSE_IS, 13C-PFTeDA_IS

Batch 196624, Method SW846 8270D, Sample SLCSDW1-196624: The RPD between the LCS and LCSD was outside of the control limit. The sample results should be considered estimated for this analyte: 2,4-Dinitrophenol

Batch 196747, Method SW6020B, Sample 22051511-01DMS: The MS recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: Al, Zn

Batch 196747, Method SW6020B, Sample 22051511-01DMSD: The RPD between the MS and MSD was outside of the control limit. The corresponding result should be considered estimated for this compound: Al, Zn

Case Narrative Page 3 of 3

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-101Lab ID: 22051511-01

Collection Date: 5/16/2022 03:00 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			SW8082	4	Prep: SW3511 5/20/22 16:59	Analyst: RM
Aroclor 1016	NE)	0.20	μg/L	1	5/21/2022 05:26 AM
Aroclor 1221	NE)	0.20	μg/L	1	5/21/2022 05:26 AM
Aroclor 1232	NE)	0.20	μg/L	1	5/21/2022 05:26 AM
Aroclor 1242	NE)	0.20	μg/L	1	5/21/2022 05:26 AM
Aroclor 1248	ND)	0.20	μg/L	1	5/21/2022 05:26 AM
Aroclor 1254	ND)	0.20	μg/L	1	5/21/2022 05:26 AM
Aroclor 1260	NE)	0.20	μg/L	1	5/21/2022 05:26 AM
Aroclor 1262	NE)	0.20	μg/L	1	5/21/2022 05:26 AM
Aroclor 1268	NE)	0.20	μg/L	1	5/21/2022 05:26 AM
PCBs, Total	ND)	0.20	μg/L	1	5/21/2022 05:26 AM
Surr: Decachlorobiphenyl	102	?	42-153	%REC	1	5/21/2022 05:26 AM
Surr: Tetrachloro-m-xylene	88.9)	48-127	%REC	1	5/21/2022 05:26 AM
MERCURY BY CVAA (DISSOLVED)			SW7470	4	Prep: SW7470 5/19/22 11:03	Analyst: EJC
Mercury	ND)	0.00020	mg/L	1	5/19/2022 12:29 PM
METALS BY ICP-MS (DISSOLVED)			SW6020E	3	Prep: SW3015A 5/23/22 17:14	Analyst: STP
Aluminum	0.015	i	0.010	mg/L	1	5/23/2022 07:10 PM
Antimony	NE)	0.0050	mg/L	1	5/23/2022 07:10 PM
Arsenic	NE)	0.0050	mg/L	1	5/23/2022 07:10 PM
Barium	0.097	,	0.0050	mg/L	1	5/23/2022 07:10 PM
Beryllium	NE)	0.0020	mg/L	1	5/23/2022 07:10 PM
Boron	0.30)	0.020	mg/L	1	5/23/2022 07:10 PM
Cadmium	NE)	0.0020	mg/L	1	5/23/2022 07:10 PM
Chromium	NE)	0.0050	mg/L	1	5/23/2022 07:10 PM
Copper	NE)	0.0050	mg/L	1	5/23/2022 07:10 PM
Lead	NE)	0.0050	mg/L	1	5/23/2022 07:10 PM
Nickel	NE)	0.0050	mg/L	1	5/23/2022 07:10 PM
Selenium	NE)	0.0050	mg/L	1	5/23/2022 07:10 PM
Silver	NE)	0.0050	mg/L	1	5/23/2022 07:10 PM
Thallium	NE)	0.0050	mg/L	1	5/23/2022 07:10 PM
Zinc	NE)	0.010	mg/L	1	5/23/2022 07:10 PM
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/20/22 18:04	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	NE)	4.8	ng/L	1	5/27/2022 03:30 PM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	NE)	4.8	ng/L	1	5/27/2022 03:30 PM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	NE)	4.8	ng/L	1	5/27/2022 03:30 PM
Perfluorobutanesulfonic Acid (PFBS)	6.5	i	4.8	ng/L	1	5/27/2022 03:30 PM
Perfluorobutanoic Acid (PFBA)	15	i	4.8	ng/L	1	5/27/2022 03:30 PM
Perfluorodecanesulfonic Acid (PFDS)	NE)	4.8	_	1	5/27/2022 03:30 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-101Lab ID: 22051511-01

Collection Date: 5/16/2022 03:00 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Perfluorodecanoic Acid (PFDA)	ND		4.8	ng/L	1	5/27/2022 03:30 PM
Perfluorododecanoic Acid (PFDoA)	ND		4.8	ng/L	1	5/27/2022 03:30 PM
Perfluoroheptanesulfonic Acid (PFHpS)	ND		4.8	ng/L	1	5/27/2022 03:30 PM
Perfluoroheptanoic Acid (PFHpA)	8.6		4.8	ng/L	1	5/27/2022 03:30 PM
Perfluorohexanesulfonic Acid (PFHxS)	51		4.8	ng/L	1	5/27/2022 03:30 PM
Perfluorohexanoic Acid (PFHxA)	8.2		4.8	ng/L	1	5/27/2022 03:30 PM
Perfluorononanesulfonic Acid (PFNS)	ND		4.8	ng/L	1	5/27/2022 03:30 PM
Perfluorononanoic Acid (PFNA)	ND		4.8	ng/L	1	5/27/2022 03:30 PM
Perfluorooctanesulfonamide (PFOSA)	ND		4.8	ng/L	1	5/27/2022 03:30 PM
Perfluorooctanesulfonic Acid (PFOS)	45		1.9	ng/L	1	5/27/2022 03:30 PM
Perfluorooctanoic Acid (PFOA)	37		1.9	ng/L	1	5/27/2022 03:30 PM
Perfluoropentanesulfonic Acid (PFPeS)	ND		4.8	ng/L	1	5/27/2022 03:30 PM
Perfluoropentanoic Acid (PFPeA)	5.8		4.8	ng/L	1	5/27/2022 03:30 PM
Perfluorotetradecanoic Acid (PFTeA)	ND		4.8	ng/L	1	5/27/2022 03:30 PM
Perfluorotridecanoic Acid (PFTriA)	ND		4.8	ng/L	1	5/27/2022 03:30 PM
Perfluoroundecanoic Acid (PFUnA)	ND		4.8	ng/L	1	5/27/2022 03:30 PM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		4.8	ng/L	1	5/27/2022 03:30 PM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		4.8	ng/L	1	5/27/2022 03:30 PM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		4.8	ng/L	1	5/27/2022 03:30 PM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		4.8	ng/L	1	5/27/2022 03:30 PM
11CI-Pf3OUdS	ND		4.8	ng/L	1	5/27/2022 03:30 PM
9CI-PF3ONS	ND		4.8	ng/L	1	5/27/2022 03:30 PM
Surr: 13C2-FtS 4:2	108	!	50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C2-FtS 6:2	96.0)	50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C2-FtS 8:2	74.6	i	50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C2-PFDA	62.9)	50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C2-PFDoA	53.3	!	50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C2-PFHxA	82.2		50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C2-PFTeA	82.0)	50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C2-PFUnA	67.2		50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C3-HFPO-DA	54.2		50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C3-PFBS	76.2		50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C4-PFBA	70.9)	50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C4-PFHpA	58.1		50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C4-PFOA	66.5		50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C4-PFOS	71.9		50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C5-PFNA	73.6		50-150	%REC	1	5/27/2022 03:30 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-101Lab ID: 22051511-01

Collection Date: 5/16/2022 03:00 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C5-PFPeA	73.7	•	50-150	%REC	1	5/27/2022 03:30 PM
Surr: 13C8-FOSA	69.6		50-150	%REC	1	5/27/2022 03:30 PM
Surr: 1802-PFHxS	67.8		50-150	%REC	1	5/27/2022 03:30 PM
Surr: d5-N-EtFOSAA	59.6		50-150	%REC	1	5/27/2022 03:30 PM
Surr: d3-N-MeFOSAA	63.8		50-150	%REC	1	5/27/2022 03:30 PM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8	270D	Prep: SW3510 5/20/22 14:40	Analyst: EE
1,1`-Biphenyl	ND		20	μg/L	1	5/20/2022 07:41 PM
2,4,5-Trichlorophenol	ND		20	μg/L	1	5/20/2022 07:41 PM
2,4,6-Trichlorophenol	ND		20	μg/L	1	5/20/2022 07:41 PM
2,4-Dichlorophenol	ND		20	μg/L	1	5/20/2022 07:41 PM
2,4-Dimethylphenol	ND		20	μg/L	1	5/20/2022 07:41 PM
2,4-Dinitrophenol	ND		20	μg/L	1	5/20/2022 07:41 PM
2,4-Dinitrotoluene	ND		20	μg/L	1	5/20/2022 07:41 PM
2,6-Dinitrotoluene	ND		20	μg/L	1	5/20/2022 07:41 PM
2-Chloronaphthalene	ND		20	μg/L	1	5/20/2022 07:41 PM
2-Chlorophenol	ND		20	μg/L	1	5/20/2022 07:41 PM
2-Methylnaphthalene	ND		20	μg/L	1	5/20/2022 07:41 PM
2-Methylphenol	ND		20	μg/L	1	5/20/2022 07:41 PM
2-Nitroaniline	ND		20	μg/L	1	5/20/2022 07:41 PM
2-Nitrophenol	ND		20	μg/L	1	5/20/2022 07:41 PM
3&4-Methylphenol	ND		20	μg/L	1	5/20/2022 07:41 PM
3,3'-Dichlorobenzidine	ND		20	μg/L	1	5/20/2022 07:41 PM
3-Nitroaniline	ND		20	μg/L	1	5/20/2022 07:41 PM
4,6-Dinitro-2-methylphenol	ND		20	μg/L	1	5/20/2022 07:41 PM
4-Bromophenyl phenyl ether	ND		20	μg/L	1	5/20/2022 07:41 PM
4-Chloro-3-methylphenol	ND		20	μg/L	1	5/20/2022 07:41 PM
4-Chloroaniline	ND		20	μg/L	1	5/20/2022 07:41 PM
4-Chlorophenyl phenyl ether	ND		20	μg/L	1	5/20/2022 07:41 PM
4-Nitroaniline	ND		20	μg/L	1	5/20/2022 07:41 PM
4-Nitrophenol	ND		20	μg/L	1	5/20/2022 07:41 PM
Acenaphthene	ND		20	μg/L	1	5/20/2022 07:41 PM
Acenaphthylene	ND		20	μg/L	1	5/20/2022 07:41 PM
Acetophenone	ND		4.0	μg/L	1	5/20/2022 07:41 PM
Anthracene	ND		20	μg/L	1	5/20/2022 07:41 PM
Atrazine	ND		4.0	μg/L	1	5/20/2022 07:41 PM
Benzaldehyde	ND		4.0	μg/L	1	5/20/2022 07:41 PM
Benzo(a)anthracene	ND		20	μg/L	1	5/20/2022 07:41 PM
Benzo(a)pyrene	ND		20	μg/L	1	5/20/2022 07:41 PM
Benzo(b)fluoranthene	ND		20	μg/L	1	5/20/2022 07:41 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-101Lab ID: 22051511-01

Collection Date: 5/16/2022 03:00 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	NE)	20	μg/L	1	5/20/2022 07:41 PM
Benzo(k)fluoranthene	NE)	20	μg/L	1	5/20/2022 07:41 PM
Bis(2-chloroethoxy)methane	NE)	20	μg/L	1	5/20/2022 07:41 PM
Bis(2-chloroethyl)ether	NE)	20	μg/L	1	5/20/2022 07:41 PM
Bis(2-chloroisopropyl)ether	NE)	20	μg/L	1	5/20/2022 07:41 PM
Bis(2-ethylhexyl)phthalate	NE)	20	μg/L	1	5/20/2022 07:41 PM
Butyl benzyl phthalate	NE)	20	μg/L	1	5/20/2022 07:41 PM
Caprolactam	NE)	40	μg/L	1	5/20/2022 07:41 PM
Carbazole	NE)	20	μg/L	1	5/20/2022 07:41 PM
Chrysene	NE)	20	μg/L	1	5/20/2022 07:41 PM
Dibenzo(a,h)anthracene	NE)	20	μg/L	1	5/20/2022 07:41 PM
Dibenzofuran	NE)	20	μg/L	1	5/20/2022 07:41 PM
Diethyl phthalate	NE)	20	μg/L	1	5/20/2022 07:41 PM
Dimethyl phthalate	NE)	20	μg/L	1	5/20/2022 07:41 PM
Di-n-butyl phthalate	NE)	20	μg/L	1	5/20/2022 07:41 PM
Di-n-octyl phthalate	NE)	20	μg/L	1	5/20/2022 07:41 PM
Fluoranthene	NE)	20	μg/L	1	5/20/2022 07:41 PM
Fluorene	NE)	20	μg/L	1	5/20/2022 07:41 PM
Hexachlorobenzene	NE)	20	μg/L	1	5/20/2022 07:41 PM
Hexachlorobutadiene	NE)	20	μg/L	1	5/20/2022 07:41 PM
Hexachlorocyclopentadiene	NE)	20	μg/L	1	5/20/2022 07:41 PM
Hexachloroethane	NE)	20	μg/L	1	5/20/2022 07:41 PM
Indeno(1,2,3-cd)pyrene	NE)	20	μg/L	1	5/20/2022 07:41 PM
Isophorone	NE)	20	μg/L	1	5/20/2022 07:41 PM
Naphthalene	NE)	20	μg/L	1	5/20/2022 07:41 PM
Nitrobenzene	NE)	20	μg/L	1	5/20/2022 07:41 PM
N-Nitrosodi-n-propylamine	NE)	20	μg/L	1	5/20/2022 07:41 PM
N-Nitrosodiphenylamine	NE)	20	μg/L	1	5/20/2022 07:41 PM
Pentachlorophenol	NE)	20	μg/L	1	5/20/2022 07:41 PM
Phenanthrene	NE)	20	μg/L	1	5/20/2022 07:41 PM
Phenol	NE)	20	μg/L	1	5/20/2022 07:41 PM
Pyrene	NE)	20	μg/L	1	5/20/2022 07:41 PM
Surr: 2,4,6-Tribromophenol	68.5	5	27-83	%REC	1	5/20/2022 07:41 PM
Surr: 2-Fluorobiphenyl	61.3	3	26-79	%REC	1	5/20/2022 07:41 PM
Surr: 2-Fluorophenol	41.4	4	13-56	%REC	1	5/20/2022 07:41 PM
Surr: 4-Terphenyl-d14	80.4	4	43-106	%REC	1	5/20/2022 07:41 PM
Surr: Nitrobenzene-d5	62.0)	29-80	%REC	1	5/20/2022 07:41 PM
Surr: Phenol-d6	29.2	2	10-35	%REC	1	5/20/2022 07:41 PM

VOLATILE ORGANIC COMPOUNDS SW8260C Analyst: MF

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-101Lab ID: 22051511-01

Collection Date: 5/16/2022 03:00 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,1-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
1,1,2,2-Tetrachloroethane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
1,1,2-Trichlorotrifluoroethane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
1,1-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
1,1-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 12:06 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:06 AM
1,2-Dibromo-3-chloropropane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
1,2-Dibromoethane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:06 AM
1,2-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:06 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:06 AM
2-Butanone	ND	5.0	μg/L	1	5/20/2022 12:06 AM
2-Hexanone	ND	5.0	μg/L	1	5/20/2022 12:06 AM
4-Methyl-2-pentanone	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Acetone	ND	10	μg/L	1	5/20/2022 12:06 AM
Benzene	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Bromodichloromethane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Bromoform	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Bromomethane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Carbon disulfide	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Carbon tetrachloride	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Chlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Chloroethane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Chloroform	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Chloromethane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
cis-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 12:06 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Cyclohexane	ND	2.0	μg/L	1	5/20/2022 12:06 AM
Dibromochloromethane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Ethylbenzene	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Isopropylbenzene	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Methyl acetate	ND	2.0	μg/L	1	5/20/2022 12:06 AM
Methyl tert-butyl ether	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Methylcyclohexane	ND	1.0	μg/L	1	5/20/2022 12:06 AM
Methylene chloride	ND	5.0	μg/L	1	5/20/2022 12:06 AM
Styrene	ND	1.0	μg/L	1	5/20/2022 12:06 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-101Lab ID: 22051511-01

Collection Date: 5/16/2022 03:00 PM Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND		1.0	μg/L	1	5/20/2022 12:06 AM
Toluene	ND		1.0	μg/L	1	5/20/2022 12:06 AM
trans-1,2-Dichloroethene	ND		1.0	μg/L	1	5/20/2022 12:06 AM
trans-1,3-Dichloropropene	ND		1.0	μg/L	1	5/20/2022 12:06 AM
Trichloroethene	ND		1.0	μg/L	1	5/20/2022 12:06 AM
Trichlorofluoromethane	ND		1.0	μg/L	1	5/20/2022 12:06 AM
Vinyl chloride	ND		1.0	μg/L	1	5/20/2022 12:06 AM
Xylenes, Total	ND		3.0	μg/L	1	5/20/2022 12:06 AM
Surr: 1,2-Dichloroethane-d4	102		75-120	%REC	1	5/20/2022 12:06 AM
Surr: 4-Bromofluorobenzene	87.2	87.2		%REC	1	5/20/2022 12:06 AM
Surr: Dibromofluoromethane	107		85-115	%REC	1	5/20/2022 12:06 AM
Surr: Toluene-d8	100		85-110	%REC	1	5/20/2022 12:06 AM

Date: 01-Jun-2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order:22051511Sample ID:MW-102Lab ID:22051511-02

Collection Date: 5/16/2022 02:46 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			SW8082	4	Prep: SW3511 5/20/22 16:59	Analyst: RM
Aroclor 1016	ND		0.20	μg/L	1	5/21/2022 05:39 AM
Aroclor 1221	ND		0.20	μg/L	1	5/21/2022 05:39 AM
Aroclor 1232	ND		0.20	μg/L	1	5/21/2022 05:39 AM
Aroclor 1242	ND		0.20	μg/L	1	5/21/2022 05:39 AM
Aroclor 1248	ND		0.20	μg/L	1	5/21/2022 05:39 AM
Aroclor 1254	ND		0.20	μg/L	1	5/21/2022 05:39 AM
Aroclor 1260	ND		0.20	μg/L	1	5/21/2022 05:39 AM
Aroclor 1262	ND		0.20	μg/L	1	5/21/2022 05:39 AM
Aroclor 1268	ND		0.20	μg/L	1	5/21/2022 05:39 AM
PCBs, Total	ND		0.20	μg/L	1	5/21/2022 05:39 AM
Surr: Decachlorobiphenyl	73.3	}	42-153	%REC	1	5/21/2022 05:39 AM
Surr: Tetrachloro-m-xylene	85.3	}	48-127	%REC	1	5/21/2022 05:39 AM
MERCURY BY CVAA (DISSOLVED)			SW7470	4	Prep: SW7470 5/19/22 11:03	Analyst: EJC
Mercury	ND		0.00020	mg/L	1	5/19/2022 12:31 PM
METALS BY ICP-MS (DISSOLVED)			SW6020E	3	Prep: SW3015A 5/23/22 17:14	Analyst: STP
Aluminum	ND		0.010	mg/L	1	5/23/2022 07:15 PM
Antimony	ND		0.0050	mg/L	1	5/23/2022 07:15 PM
Arsenic	0.0054		0.0050	mg/L	1	5/23/2022 07:15 PM
Barium	0.18	}	0.0050	mg/L	1	5/23/2022 07:15 PM
Beryllium	ND		0.0020	mg/L	1	5/23/2022 07:15 PM
Boron	0.58	}	0.020	mg/L	1	5/23/2022 07:15 PM
Cadmium	ND		0.0020	mg/L	1	5/23/2022 07:15 PM
Chromium	ND		0.0050	mg/L	1	5/23/2022 07:15 PM
Copper	ND		0.0050	mg/L	1	5/23/2022 07:15 PM
Lead	ND		0.0050	mg/L	1	5/23/2022 07:15 PM
Nickel	ND		0.0050	mg/L	1	5/23/2022 07:15 PM
Selenium	ND		0.0050	mg/L	1	5/23/2022 07:15 PM
Silver	ND		0.0050	mg/L	1	5/23/2022 07:15 PM
Thallium	ND		0.0050	mg/L	1	5/23/2022 07:15 PM
Zinc	ND		0.010	mg/L	1	5/25/2022 04:55 PM
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/20/22 18:04	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	ND		4.8	ng/L	1	5/25/2022 04:56 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND		4.8	ng/L	1	5/25/2022 04:56 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluorobutanesulfonic Acid (PFBS)	27	•	4.8	ng/L	1	5/25/2022 04:56 AM
Perfluorobutanoic Acid (PFBA)	31		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluorodecanesulfonic Acid (PFDS)	ND		4.8		1	5/25/2022 04:56 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-102Lab ID: 22051511-02

Collection Date: 5/16/2022 02:46 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Perfluorodecanoic Acid (PFDA)	ND		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluorododecanoic Acid (PFDoA)	ND		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluoroheptanesulfonic Acid (PFHpS)	6.0		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluoroheptanoic Acid (PFHpA)	32		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluorohexanesulfonic Acid (PFHxS)	50		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluorohexanoic Acid (PFHxA)	38		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluorononanesulfonic Acid (PFNS)	ND		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluorononanoic Acid (PFNA)	ND		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluorooctanesulfonamide (PFOSA)	ND		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluorooctanesulfonic Acid (PFOS)	83		1.9	ng/L	1	5/25/2022 04:56 AM
Perfluorooctanoic Acid (PFOA)	92		1.9	ng/L	1	5/25/2022 04:56 AM
Perfluoropentanesulfonic Acid (PFPeS)	31		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluoropentanoic Acid (PFPeA)	15		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluorotridecanoic Acid (PFTriA)	ND		4.8	ng/L	1	5/25/2022 04:56 AM
Perfluoroundecanoic Acid (PFUnA)	ND		4.8	ng/L	1	5/25/2022 04:56 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		4.8	ng/L	1	5/25/2022 04:56 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		4.8	ng/L	1	5/25/2022 04:56 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		4.8	ng/L	1	5/25/2022 04:56 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		4.8	ng/L	1	5/25/2022 04:56 AM
11CI-Pf3OUdS	ND		4.8	ng/L	1	5/25/2022 04:56 AM
9CI-PF3ONS	ND		4.8	ng/L	1	5/25/2022 04:56 AM
Surr: 13C2-FtS 4:2	284	S	50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C2-FtS 6:2	264	S	50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C2-FtS 8:2	139		50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C2-PFDA	77.8		50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C2-PFDoA	74.0		50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C2-PFHxA	76.1		50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C2-PFTeA	91.4		50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C2-PFUnA	68.3		50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C3-HFPO-DA	62.2		50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C3-PFBS	68.7		50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C4-PFBA	72.6		50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C4-PFHpA	75.5		50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C4-PFOA	86.1		50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C4-PFOS	70.8		50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C5-PFNA	77.1		50-150	%REC	1	5/25/2022 04:56 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-102Lab ID: 22051511-02

Collection Date: 5/16/2022 02:46 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C5-PFPeA	69.4	!	50-150	%REC	1	5/25/2022 04:56 AM
Surr: 13C8-FOSA	62.0)	50-150	%REC	1	5/25/2022 04:56 AM
Surr: 1802-PFHxS	59.4	!	50-150	%REC	1	5/25/2022 04:56 AM
Surr: d5-N-EtFOSAA	84.6	;	50-150	%REC	1	5/25/2022 04:56 AM
Surr: d3-N-MeFOSAA	84.1		50-150	%REC	1	5/25/2022 04:56 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8	270D	Prep: SW3510 5/20/22 14:40	Analyst: EE
1,1`-Biphenyl	ND		21	μg/L	1	5/20/2022 08:02 PM
2,4,5-Trichlorophenol	ND		21	μg/L	1	5/20/2022 08:02 PM
2,4,6-Trichlorophenol	ND		21	μg/L	1	5/20/2022 08:02 PM
2,4-Dichlorophenol	ND		21	μg/L	1	5/20/2022 08:02 PM
2,4-Dimethylphenol	ND		21	μg/L	1	5/20/2022 08:02 PM
2,4-Dinitrophenol	ND		21	μg/L	1	5/20/2022 08:02 PM
2,4-Dinitrotoluene	ND		21	μg/L	1	5/20/2022 08:02 PM
2,6-Dinitrotoluene	ND		21	μg/L	1	5/20/2022 08:02 PM
2-Chloronaphthalene	ND		21	μg/L	1	5/20/2022 08:02 PM
2-Chlorophenol	ND		21	μg/L	1	5/20/2022 08:02 PM
2-Methylnaphthalene	ND		21	μg/L	1	5/20/2022 08:02 PM
2-Methylphenol	ND		21	μg/L	1	5/20/2022 08:02 PM
2-Nitroaniline	ND		21	μg/L	1	5/20/2022 08:02 PM
2-Nitrophenol	ND		21	μg/L	1	5/20/2022 08:02 PM
3&4-Methylphenol	ND		21	μg/L	1	5/20/2022 08:02 PM
3,3'-Dichlorobenzidine	ND		21	μg/L	1	5/20/2022 08:02 PM
3-Nitroaniline	ND		21	μg/L	1	5/20/2022 08:02 PM
4,6-Dinitro-2-methylphenol	ND		21	μg/L	1	5/20/2022 08:02 PM
4-Bromophenyl phenyl ether	ND)	21	μg/L	1	5/20/2022 08:02 PM
4-Chloro-3-methylphenol	ND)	21	μg/L	1	5/20/2022 08:02 PM
4-Chloroaniline	ND)	21	μg/L	1	5/20/2022 08:02 PM
4-Chlorophenyl phenyl ether	ND)	21	μg/L	1	5/20/2022 08:02 PM
4-Nitroaniline	ND)	21	μg/L	1	5/20/2022 08:02 PM
4-Nitrophenol	ND)	21	μg/L	1	5/20/2022 08:02 PM
Acenaphthene	ND)	21	μg/L	1	5/20/2022 08:02 PM
Acenaphthylene	ND		21	μg/L	1	5/20/2022 08:02 PM
Acetophenone	ND		4.1	μg/L	1	5/20/2022 08:02 PM
Anthracene	ND		21	μg/L	1	5/20/2022 08:02 PM
Atrazine	ND		4.1	μg/L	1	5/20/2022 08:02 PM
Benzaldehyde	ND		4.1	μg/L	1	5/20/2022 08:02 PM
Benzo(a)anthracene	ND		21	μg/L	1	5/20/2022 08:02 PM
Benzo(a)pyrene	ND		21	μg/L	1	5/20/2022 08:02 PM
Benzo(b)fluoranthene	ND		21	μg/L	1	5/20/2022 08:02 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-102Lab ID: 22051511-02

Collection Date: 5/16/2022 02:46 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	ND		21	μg/L	1	5/20/2022 08:02 PM
Benzo(k)fluoranthene	ND		21	μg/L	1	5/20/2022 08:02 PM
Bis(2-chloroethoxy)methane	ND		21	μg/L	1	5/20/2022 08:02 PM
Bis(2-chloroethyl)ether	ND		21	μg/L	1	5/20/2022 08:02 PM
Bis(2-chloroisopropyl)ether	ND		21	μg/L	1	5/20/2022 08:02 PM
Bis(2-ethylhexyl)phthalate	ND		21	μg/L	1	5/20/2022 08:02 PM
Butyl benzyl phthalate	ND		21	μg/L	1	5/20/2022 08:02 PM
Caprolactam	ND		41	μg/L	1	5/20/2022 08:02 PM
Carbazole	ND		21	μg/L	1	5/20/2022 08:02 PM
Chrysene	ND		21	μg/L	1	5/20/2022 08:02 PM
Dibenzo(a,h)anthracene	ND		21	μg/L	1	5/20/2022 08:02 PM
Dibenzofuran	ND		21	μg/L	1	5/20/2022 08:02 PM
Diethyl phthalate	ND		21	μg/L	1	5/20/2022 08:02 PM
Dimethyl phthalate	ND		21	μg/L	1	5/20/2022 08:02 PM
Di-n-butyl phthalate	ND		21	μg/L	1	5/20/2022 08:02 PM
Di-n-octyl phthalate	ND		21	μg/L	1	5/20/2022 08:02 PM
Fluoranthene	ND		21	μg/L	1	5/20/2022 08:02 PM
Fluorene	ND		21	μg/L	1	5/20/2022 08:02 PM
Hexachlorobenzene	ND		21	μg/L	1	5/20/2022 08:02 PM
Hexachlorobutadiene	ND		21	μg/L	1	5/20/2022 08:02 PM
Hexachlorocyclopentadiene	ND		21	μg/L	1	5/20/2022 08:02 PM
Hexachloroethane	ND		21	μg/L	1	5/20/2022 08:02 PM
Indeno(1,2,3-cd)pyrene	ND		21	μg/L	1	5/20/2022 08:02 PM
Isophorone	ND		21	μg/L	1	5/20/2022 08:02 PM
Naphthalene	ND		21	μg/L	1	5/20/2022 08:02 PM
Nitrobenzene	ND		21	μg/L	1	5/20/2022 08:02 PM
N-Nitrosodi-n-propylamine	ND		21	μg/L	1	5/20/2022 08:02 PM
N-Nitrosodiphenylamine	ND		21	μg/L	1	5/20/2022 08:02 PM
Pentachlorophenol	ND		21	μg/L	1	5/20/2022 08:02 PM
Phenanthrene	ND		21	μg/L	1	5/20/2022 08:02 PM
Phenol	ND		21	μg/L	1	5/20/2022 08:02 PM
Pyrene	ND		21	μg/L	1	5/20/2022 08:02 PM
Surr: 2,4,6-Tribromophenol	73.4	!	27-83	%REC	1	5/20/2022 08:02 PM
Surr: 2-Fluorobiphenyl	62.8	}	26-79	%REC	1	5/20/2022 08:02 PM
Surr: 2-Fluorophenol	41.7	•	13-56	%REC	1	5/20/2022 08:02 PM
Surr: 4-Terphenyl-d14	85.7	•	43-106	%REC	1	5/20/2022 08:02 PM
Surr: Nitrobenzene-d5	64.0)	29-80	%REC	1	5/20/2022 08:02 PM
Surr: Phenol-d6	27.4	!	10-35	%REC	1	5/20/2022 08:02 PM

VOLATILE ORGANIC COMPOUNDS SW8260C Analyst: MF

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-102Lab ID: 22051511-02

Collection Date: 5/16/2022 02:46 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Report Qual Limit	Units	Dilution Factor	Date Analyzed
1,1,1-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
1,1,2,2-Tetrachloroethane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
1,1,2-Trichlorotrifluoroethane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
1,1-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
1,1-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
1,2-Dibromo-3-chloropropane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
1,2-Dibromoethane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
1,2-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
2-Butanone	ND	5.0	μg/L	1	5/20/2022 12:24 AM
2-Hexanone	ND	5.0	μg/L	1	5/20/2022 12:24 AM
4-Methyl-2-pentanone	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Acetone	ND	10	μg/L	1	5/20/2022 12:24 AM
Benzene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Bromodichloromethane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Bromoform	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Bromomethane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Carbon disulfide	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Carbon tetrachloride	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Chlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Chloroethane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Chloroform	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Chloromethane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
cis-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Cyclohexane	ND	2.0	μg/L	1	5/20/2022 12:24 AM
Dibromochloromethane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Ethylbenzene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Isopropylbenzene	ND	1.0		1	5/20/2022 12:24 AM
Methyl acetate	ND	2.0		1	5/20/2022 12:24 AM
Methyl tert-butyl ether	ND	1.0	. 0	1	5/20/2022 12:24 AM
Methylcyclohexane	ND	1.0		1	5/20/2022 12:24 AM
Methylene chloride	ND	5.0	μg/L	1	5/20/2022 12:24 AM
Styrene	ND	1.0	μg/L	1	5/20/2022 12:24 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-102Lab ID: 22051511-02

Collection Date: 5/16/2022 02:46 PM Matrix: GROUNDWATER

Analyses	Result Qua	Report al Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Toluene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
trans-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Trichloroethene	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Vinyl chloride	ND	1.0	μg/L	1	5/20/2022 12:24 AM
Xylenes, Total	ND	3.0	μg/L	1	5/20/2022 12:24 AM
Surr: 1,2-Dichloroethane-d4	106	75-120	%REC	1	5/20/2022 12:24 AM
Surr: 4-Bromofluorobenzene	95.6	80-110	%REC	1	5/20/2022 12:24 AM
Surr: Dibromofluoromethane	101	85-115	%REC	1	5/20/2022 12:24 AM
Surr: Toluene-d8	103	85-110	%REC	1	5/20/2022 12:24 AM

Date: 01-Jun-2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-103Lab ID: 22051511-03

Collection Date: 5/16/2022 12:49 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			SW8082	4	Prep: SW3511 5/20/22 16:59	Analyst: RM
Aroclor 1016	ND	ı	0.20	μg/L	1	5/21/2022 05:52 AM
Aroclor 1221	ND	ı	0.20	μg/L	1	5/21/2022 05:52 AM
Aroclor 1232	ND	ı	0.20	μg/L	1	5/21/2022 05:52 AM
Aroclor 1242	ND	ı	0.20	μg/L	1	5/21/2022 05:52 AM
Aroclor 1248	ND	ı	0.20	μg/L	1	5/21/2022 05:52 AM
Aroclor 1254	ND	ı	0.20	μg/L	1	5/21/2022 05:52 AM
Aroclor 1260	ND	ı	0.20	μg/L	1	5/21/2022 05:52 AM
Aroclor 1262	ND	ı	0.20	μg/L	1	5/21/2022 05:52 AM
Aroclor 1268	ND	ı	0.20	μg/L	1	5/21/2022 05:52 AM
PCBs, Total	ND	ı	0.20	μg/L	1	5/21/2022 05:52 AM
Surr: Decachlorobiphenyl	111	,	42-153	%REC	1	5/21/2022 05:52 AM
Surr: Tetrachloro-m-xylene	92.1	1	48-127	%REC	1	5/21/2022 05:52 AM
MERCURY BY CVAA (DISSOLVED)			SW7470	4	Prep: SW7470 5/19/22 11:03	Analyst: EJC
Mercury	ND	ı	0.00020	mg/L	1	5/19/2022 12:33 PM
METALS BY ICP-MS (DISSOLVED)			SW6020E	3	Prep: SW3015A 5/23/22 17:14	Analyst: STP
Aluminum	ND	ı	0.010	mg/L	1	5/23/2022 07:20 PM
Antimony	ND	ı	0.0050	mg/L	1	5/23/2022 07:20 PM
Arsenic	0.025	1	0.0050	mg/L	1	5/23/2022 07:20 PM
Barium	0.057	•	0.0050	mg/L	1	5/23/2022 07:20 PM
Beryllium	ND)	0.0020	mg/L	1	5/23/2022 07:20 PM
Boron	0.16	i	0.020	mg/L	1	5/23/2022 07:20 PM
Cadmium	ND)	0.0020	mg/L	1	5/23/2022 07:20 PM
Chromium	ND)	0.0050	mg/L	1	5/23/2022 07:20 PM
Copper	ND)	0.0050	mg/L	1	5/23/2022 07:20 PM
Lead	ND)	0.0050	mg/L	1	5/23/2022 07:20 PM
Nickel	ND)	0.0050	mg/L	1	5/23/2022 07:20 PM
Selenium	ND)	0.0050	mg/L	1	5/23/2022 07:20 PM
Silver	ND)	0.0050	mg/L	1	5/23/2022 07:20 PM
Thallium	ND)	0.0050	mg/L	1	5/23/2022 07:20 PM
Zinc	ND)	0.010	mg/L	1	5/23/2022 07:20 PM
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/20/22 18:04	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	ND	ı	4.9	ng/L	1	5/25/2022 05:04 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND	ı	4.9	ng/L	1	5/25/2022 05:04 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND	ı	4.9	ng/L	1	5/25/2022 05:04 AM
Perfluorobutanesulfonic Acid (PFBS)	7.3	;	4.9		1	5/25/2022 05:04 AM
Perfluorobutanoic Acid (PFBA)	40)	4.9	ng/L	1	5/25/2022 05:04 AM
Perfluorodecanesulfonic Acid (PFDS)	ND	ı	4.9	ng/L	1	5/25/2022 05:04 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-103Lab ID: 22051511-03

Collection Date: 5/16/2022 12:49 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Perfluorodecanoic Acid (PFDA)	ND		4.9	ng/L	1	5/25/2022 05:04 AM
Perfluorododecanoic Acid (PFDoA)	ND		4.9	ng/L	1	5/25/2022 05:04 AM
Perfluoroheptanesulfonic Acid (PFHpS)	ND		4.9	ng/L	1	5/25/2022 05:04 AM
Perfluoroheptanoic Acid (PFHpA)	6.9		4.9	ng/L	1	5/25/2022 05:04 AM
Perfluorohexanesulfonic Acid (PFHxS)	ND		4.9	ng/L	1	5/25/2022 05:04 AM
Perfluorohexanoic Acid (PFHxA)	19		4.9	ng/L	1	5/25/2022 05:04 AM
Perfluorononanesulfonic Acid (PFNS)	ND		4.9	ng/L	1	5/25/2022 05:04 AM
Perfluorononanoic Acid (PFNA)	ND		4.9	ng/L	1	5/25/2022 05:04 AM
Perfluorooctanesulfonamide (PFOSA)	ND		4.9	ng/L	1	5/25/2022 05:04 AM
Perfluorooctanesulfonic Acid (PFOS)	ND		1.9	ng/L	1	5/25/2022 05:04 AM
Perfluorooctanoic Acid (PFOA)	4.8		1.9	ng/L	1	5/25/2022 05:04 AM
Perfluoropentanesulfonic Acid (PFPeS)	ND		4.9	ng/L	1	5/25/2022 05:04 AM
Perfluoropentanoic Acid (PFPeA)	7.2		4.9	ng/L	1	5/25/2022 05:04 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		4.9	ng/L	1	5/25/2022 05:04 AM
Perfluorotridecanoic Acid (PFTriA)	ND		4.9	ng/L	1	5/25/2022 05:04 AM
Perfluoroundecanoic Acid (PFUnA)	ND		4.9	ng/L	1	5/25/2022 05:04 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		4.9	ng/L	1	5/25/2022 05:04 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		4.9	ng/L	1	5/25/2022 05:04 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		4.9	ng/L	1	5/25/2022 05:04 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		4.9	ng/L	1	5/25/2022 05:04 AM
11CI-Pf3OUdS	ND		4.9	ng/L	1	5/25/2022 05:04 AM
9CI-PF3ONS	ND		4.9	ng/L	1	5/25/2022 05:04 AM
Surr: 13C2-FtS 4:2	124		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C2-FtS 6:2	89.3		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C2-FtS 8:2	115		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C2-PFDA	71.3		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C2-PFDoA	64.4		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C2-PFHxA	65.5		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C2-PFTeA	76.5		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C2-PFUnA	95.3		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C3-HFPO-DA	58.6		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C3-PFBS	77.0		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C4-PFBA	81.2		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C4-PFHpA	102		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C4-PFOA	98.0		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C4-PFOS	70.1		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C5-PFNA	96.2		50-150	%REC	1	5/25/2022 05:04 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-103Lab ID: 22051511-03

Collection Date: 5/16/2022 12:49 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C5-PFPeA	73.9		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 13C8-FOSA	87.8		50-150	%REC	1	5/25/2022 05:04 AM
Surr: 1802-PFHxS	84.7		50-150	%REC	1	5/25/2022 05:04 AM
Surr: d5-N-EtFOSAA	123		50-150	%REC	1	5/25/2022 05:04 AM
Surr: d3-N-MeFOSAA	68.1		50-150	%REC	1	5/25/2022 05:04 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8	270D	Prep: SW3510 5/20/22 14:40	Analyst: EE
1,1`-Biphenyl	ND		19	μg/L	1	5/20/2022 08:23 PM
2,4,5-Trichlorophenol	ND		19	μg/L	1	5/20/2022 08:23 PM
2,4,6-Trichlorophenol	ND		19	μg/L	1	5/20/2022 08:23 PM
2,4-Dichlorophenol	ND		19	μg/L	1	5/20/2022 08:23 PM
2,4-Dimethylphenol	ND		19	μg/L	1	5/20/2022 08:23 PM
2,4-Dinitrophenol	ND		19	μg/L	1	5/20/2022 08:23 PM
2,4-Dinitrotoluene	ND		19	μg/L	1	5/20/2022 08:23 PM
2,6-Dinitrotoluene	ND		19	μg/L	1	5/20/2022 08:23 PM
2-Chloronaphthalene	ND		19	μg/L	1	5/20/2022 08:23 PM
2-Chlorophenol	ND		19	μg/L	1	5/20/2022 08:23 PM
2-Methylnaphthalene	ND		19	μg/L	1	5/20/2022 08:23 PM
2-Methylphenol	ND		19	μg/L	1	5/20/2022 08:23 PM
2-Nitroaniline	ND		19	μg/L	1	5/20/2022 08:23 PM
2-Nitrophenol	ND		19	μg/L	1	5/20/2022 08:23 PM
3&4-Methylphenol	ND		19	μg/L	1	5/20/2022 08:23 PM
3,3'-Dichlorobenzidine	ND		19	μg/L	1	5/20/2022 08:23 PM
3-Nitroaniline	ND		19	μg/L	1	5/20/2022 08:23 PM
4,6-Dinitro-2-methylphenol	ND		19	μg/L	1	5/20/2022 08:23 PM
4-Bromophenyl phenyl ether	ND		19	μg/L	1	5/20/2022 08:23 PM
4-Chloro-3-methylphenol	ND		19	μg/L	1	5/20/2022 08:23 PM
4-Chloroaniline	ND		19	μg/L	1	5/20/2022 08:23 PM
4-Chlorophenyl phenyl ether	ND		19	μg/L	1	5/20/2022 08:23 PM
4-Nitroaniline	ND		19	μg/L	1	5/20/2022 08:23 PM
4-Nitrophenol	ND		19	μg/L	1	5/20/2022 08:23 PM
Acenaphthene	ND		19	μg/L	1	5/20/2022 08:23 PM
Acenaphthylene	ND		19	μg/L	1	5/20/2022 08:23 PM
Acetophenone	ND		3.8	μg/L	1	5/20/2022 08:23 PM
Anthracene	ND		19	μg/L	1	5/20/2022 08:23 PM
Atrazine	ND		3.8	μg/L	1	5/20/2022 08:23 PM
Benzaldehyde	ND		3.8	μg/L	1	5/20/2022 08:23 PM
Benzo(a)anthracene	ND		19	μg/L	1	5/20/2022 08:23 PM
Benzo(a)pyrene	ND		19	μg/L	1	5/20/2022 08:23 PM
Benzo(b)fluoranthene	ND		19	μg/L	1	5/20/2022 08:23 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-103Lab ID: 22051511-03

Collection Date: 5/16/2022 12:49 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	ND		19	μg/L	1	5/20/2022 08:23 PM
Benzo(k)fluoranthene	ND		19	μg/L	1	5/20/2022 08:23 PM
Bis(2-chloroethoxy)methane	ND		19	μg/L	1	5/20/2022 08:23 PM
Bis(2-chloroethyl)ether	ND		19	μg/L	1	5/20/2022 08:23 PM
Bis(2-chloroisopropyl)ether	ND		19	μg/L	1	5/20/2022 08:23 PM
Bis(2-ethylhexyl)phthalate	ND		19	μg/L	1	5/20/2022 08:23 PM
Butyl benzyl phthalate	ND		19	μg/L	1	5/20/2022 08:23 PM
Caprolactam	ND		38	μg/L	1	5/20/2022 08:23 PM
Carbazole	ND		19	μg/L	1	5/20/2022 08:23 PM
Chrysene	ND		19	μg/L	1	5/20/2022 08:23 PM
Dibenzo(a,h)anthracene	ND		19	μg/L	1	5/20/2022 08:23 PM
Dibenzofuran	ND		19	μg/L	1	5/20/2022 08:23 PM
Diethyl phthalate	ND		19	μg/L	1	5/20/2022 08:23 PM
Dimethyl phthalate	ND		19	μg/L	1	5/20/2022 08:23 PM
Di-n-butyl phthalate	ND		19	μg/L	1	5/20/2022 08:23 PM
Di-n-octyl phthalate	ND		19	μg/L	1	5/20/2022 08:23 PM
Fluoranthene	ND		19	μg/L	1	5/20/2022 08:23 PM
Fluorene	ND		19	μg/L	1	5/20/2022 08:23 PM
Hexachlorobenzene	ND		19	μg/L	1	5/20/2022 08:23 PM
Hexachlorobutadiene	ND		19	μg/L	1	5/20/2022 08:23 PM
Hexachlorocyclopentadiene	ND		19	μg/L	1	5/20/2022 08:23 PM
Hexachloroethane	ND		19	μg/L	1	5/20/2022 08:23 PM
Indeno(1,2,3-cd)pyrene	ND		19	μg/L	1	5/20/2022 08:23 PM
Isophorone	ND		19	μg/L	1	5/20/2022 08:23 PM
Naphthalene	ND		19	μg/L	1	5/20/2022 08:23 PM
Nitrobenzene	ND		19	μg/L	1	5/20/2022 08:23 PM
N-Nitrosodi-n-propylamine	ND		19	μg/L	1	5/20/2022 08:23 PM
N-Nitrosodiphenylamine	ND		19	μg/L	1	5/20/2022 08:23 PM
Pentachlorophenol	ND		19	μg/L	1	5/20/2022 08:23 PM
Phenanthrene	ND		19	μg/L	1	5/20/2022 08:23 PM
Phenol	ND		19	μg/L	1	5/20/2022 08:23 PM
Pyrene	ND		19	μg/L	1	5/20/2022 08:23 PM
Surr: 2,4,6-Tribromophenol	71.4		27-83	%REC	1	5/20/2022 08:23 PM
Surr: 2-Fluorobiphenyl	64.3		26-79	%REC	1	5/20/2022 08:23 PM
Surr: 2-Fluorophenol	42.6		13-56	%REC	1	5/20/2022 08:23 PM
Surr: 4-Terphenyl-d14	77.2		43-106	%REC	1	5/20/2022 08:23 PM
Surr: Nitrobenzene-d5	62.4		29-80	%REC	1	5/20/2022 08:23 PM
Surr: Phenol-d6	28.3		10-35	%REC	1	5/20/2022 08:23 PM
			01110000	_		

VOLATILE ORGANIC COMPOUNDS SW8260C Analyst: MF

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-103Lab ID: 22051511-03

Collection Date: 5/16/2022 12:49 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result Q	Report ual Limit	Units	Dilution Factor	Date Analyzed
1,1,1-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
1,1,2,2-Tetrachloroethane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
1,1,2-Trichlorotrifluoroethane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
1,1-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
1,1-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
1,2-Dibromo-3-chloropropane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
1,2-Dibromoethane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
1,2-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
2-Butanone	ND	5.0	μg/L	1	5/20/2022 12:43 AM
2-Hexanone	ND	5.0	μg/L	1	5/20/2022 12:43 AM
4-Methyl-2-pentanone	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Acetone	ND	10	μg/L	1	5/20/2022 12:43 AM
Benzene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Bromodichloromethane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Bromoform	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Bromomethane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Carbon disulfide	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Carbon tetrachloride	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Chlorobenzene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Chloroethane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Chloroform	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Chloromethane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
cis-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Cyclohexane	ND	2.0	μg/L	1	5/20/2022 12:43 AM
Dibromochloromethane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Ethylbenzene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Isopropylbenzene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Methyl acetate	ND	2.0	μg/L	1	5/20/2022 12:43 AM
Methyl tert-butyl ether	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Methylcyclohexane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Methylene chloride	ND	5.0	μg/L	1	5/20/2022 12:43 AM
Styrene	ND	1.0	μg/L μg/L	1	5/20/2022 12:43 AM

Client: The Mannik & Smith Group, Inc.

Project: Former Mount Pleasant Landfill Work Order: 22051511

Sample ID: MW-103 **Lab ID:** 22051511-03

Collection Date: 5/16/2022 12:49 PM Matrix: GROUNDWATER

Analyses	Result Qu	Report ual Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Toluene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
trans-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Trichloroethene	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Vinyl chloride	ND	1.0	μg/L	1	5/20/2022 12:43 AM
Xylenes, Total	ND	3.0	μg/L	1	5/20/2022 12:43 AM
Surr: 1,2-Dichloroethane-d4	98.2	75-120	%REC	1	5/20/2022 12:43 AM
Surr: 4-Bromofluorobenzene	98.0	80-110	%REC	1	5/20/2022 12:43 AM
Surr: Dibromofluoromethane	105	85-115	%REC	1	5/20/2022 12:43 AM
Surr: Toluene-d8	107	85-110	%REC	1	5/20/2022 12:43 AM

Date: 01-Jun-2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order:22051511Sample ID:MW-104Lab ID:22051511-04

Collection Date: 5/16/2022 01:02 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			SW8082	4	Prep: SW3511 5/20/22 16:59	Analyst: RM
Aroclor 1016	ND		0.20	μg/L	1	5/21/2022 06:04 AM
Aroclor 1221	ND		0.20	μg/L	1	5/21/2022 06:04 AM
Aroclor 1232	ND		0.20	μg/L	1	5/21/2022 06:04 AM
Aroclor 1242	ND		0.20	μg/L	1	5/21/2022 06:04 AM
Aroclor 1248	ND		0.20	μg/L	1	5/21/2022 06:04 AM
Aroclor 1254	ND		0.20	μg/L	1	5/21/2022 06:04 AM
Aroclor 1260	ND		0.20	μg/L	1	5/21/2022 06:04 AM
Aroclor 1262	ND		0.20	μg/L	1	5/21/2022 06:04 AM
Aroclor 1268	ND		0.20	μg/L	1	5/21/2022 06:04 AM
PCBs, Total	ND		0.20	μg/L	1	5/21/2022 06:04 AM
Surr: Decachlorobiphenyl	99.1		42-153	%REC	1	5/21/2022 06:04 AM
Surr: Tetrachloro-m-xylene	91.4		48-127	%REC	1	5/21/2022 06:04 AM
MERCURY BY CVAA (DISSOLVED)			SW7470	4	Prep: SW7470 5/19/22 11:03	Analyst: EJC
Mercury	ND		0.00020	mg/L	1	5/19/2022 12:34 PM
METALS BY ICP-MS (DISSOLVED)			SW6020E	3	Prep: SW3015A 5/23/22 17:14	Analyst: STP
Aluminum	0.029		0.010	mg/L	1	5/23/2022 07:22 PM
Antimony	ND		0.0050	mg/L	1	5/23/2022 07:22 PM
Arsenic	ND		0.0050	mg/L	1	5/23/2022 07:22 PM
Barium	0.086		0.0050	mg/L	1	5/23/2022 07:22 PM
Beryllium	ND		0.0020	mg/L	1	5/23/2022 07:22 PM
Boron	0.025		0.020	mg/L	1	5/23/2022 07:22 PM
Cadmium	ND		0.0020	mg/L	1	5/23/2022 07:22 PM
Chromium	ND		0.0050	mg/L	1	5/23/2022 07:22 PM
Copper	ND		0.0050	mg/L	1	5/23/2022 07:22 PM
Lead	ND		0.0050	mg/L	1	5/23/2022 07:22 PM
Nickel	ND		0.0050	mg/L	1	5/23/2022 07:22 PM
Selenium	ND		0.0050	mg/L	1	5/23/2022 07:22 PM
Silver	ND		0.0050	mg/L	1	5/23/2022 07:22 PM
Thallium	ND		0.0050	mg/L	1	5/23/2022 07:22 PM
Zinc	ND		0.010	mg/L	1	5/25/2022 04:57 PM
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/20/22 18:04	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluorobutanesulfonic Acid (PFBS)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluorobutanoic Acid (PFBA)	13		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluorodecanesulfonic Acid (PFDS)	ND		4.9		1	5/25/2022 05:13 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-104Lab ID: 22051511-04

Collection Date: 5/16/2022 01:02 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Perfluorodecanoic Acid (PFDA)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluorododecanoic Acid (PFDoA)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluoroheptanesulfonic Acid (PFHpS)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluoroheptanoic Acid (PFHpA)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluorohexanesulfonic Acid (PFHxS)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluorohexanoic Acid (PFHxA)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluorononanesulfonic Acid (PFNS)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluorononanoic Acid (PFNA)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluorooctanesulfonamide (PFOSA)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluorooctanesulfonic Acid (PFOS)	ND		2.0	ng/L	1	5/25/2022 05:13 AM
Perfluorooctanoic Acid (PFOA)	ND		2.0	ng/L	1	5/25/2022 05:13 AM
Perfluoropentanesulfonic Acid (PFPeS)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluoropentanoic Acid (PFPeA)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluorotridecanoic Acid (PFTriA)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Perfluoroundecanoic Acid (PFUnA)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		4.9	ng/L	1	5/25/2022 05:13 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		4.9	ng/L	1	5/25/2022 05:13 AM
11CI-Pf3OUdS	ND		4.9	ng/L	1	5/25/2022 05:13 AM
9CI-PF3ONS	ND		4.9	ng/L	1	5/25/2022 05:13 AM
Surr: 13C2-FtS 4:2	112		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C2-FtS 6:2	108		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C2-FtS 8:2	115		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C2-PFDA	86.9		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C2-PFDoA	81.4		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C2-PFHxA	87.9		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C2-PFTeA	88.7		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C2-PFUnA	96.5		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C3-HFPO-DA	81.3		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C3-PFBS	84.5		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C4-PFBA	95.8		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C4-PFHpA	94.4		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C4-PFOA	96.6		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C4-PFOS	85.8		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C5-PFNA	117		50-150	%REC	1	5/25/2022 05:13 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-104Lab ID: 22051511-04

Collection Date: 5/16/2022 01:02 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C5-PFPeA	91.5		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 13C8-FOSA	121		50-150	%REC	1	5/25/2022 05:13 AM
Surr: 1802-PFHxS	109		50-150	%REC	1	5/25/2022 05:13 AM
Surr: d5-N-EtFOSAA	129		50-150	%REC	1	5/25/2022 05:13 AM
Surr: d3-N-MeFOSAA	92.0		50-150	%REC	1	5/25/2022 05:13 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8	270D	Prep: SW3510 5/20/22 14:40	Analyst: EE
1,1`-Biphenyl	ND		20	μg/L	1	5/20/2022 08:43 PM
2,4,5-Trichlorophenol	ND		20	μg/L	1	5/20/2022 08:43 PM
2,4,6-Trichlorophenol	ND		20	μg/L	1	5/20/2022 08:43 PM
2,4-Dichlorophenol	ND		20	μg/L	1	5/20/2022 08:43 PM
2,4-Dimethylphenol	ND		20	μg/L	1	5/20/2022 08:43 PM
2,4-Dinitrophenol	ND		20	μg/L	1	5/20/2022 08:43 PM
2,4-Dinitrotoluene	ND		20	μg/L	1	5/20/2022 08:43 PM
2,6-Dinitrotoluene	ND		20	μg/L	1	5/20/2022 08:43 PM
2-Chloronaphthalene	ND		20	μg/L	1	5/20/2022 08:43 PM
2-Chlorophenol	ND		20	μg/L	1	5/20/2022 08:43 PM
2-Methylnaphthalene	ND		20	μg/L	1	5/20/2022 08:43 PM
2-Methylphenol	ND		20	μg/L	1	5/20/2022 08:43 PM
2-Nitroaniline	ND		20	μg/L	1	5/20/2022 08:43 PM
2-Nitrophenol	ND		20	μg/L	1	5/20/2022 08:43 PM
3&4-Methylphenol	ND		20	μg/L	1	5/20/2022 08:43 PM
3,3'-Dichlorobenzidine	ND		20	μg/L	1	5/20/2022 08:43 PM
3-Nitroaniline	ND		20	μg/L	1	5/20/2022 08:43 PM
4,6-Dinitro-2-methylphenol	ND		20	μg/L	1	5/20/2022 08:43 PM
4-Bromophenyl phenyl ether	ND		20	μg/L	1	5/20/2022 08:43 PM
4-Chloro-3-methylphenol	ND		20	μg/L	1	5/20/2022 08:43 PM
4-Chloroaniline	ND		20	μg/L	1	5/20/2022 08:43 PM
4-Chlorophenyl phenyl ether	ND		20	μg/L	1	5/20/2022 08:43 PM
4-Nitroaniline	ND		20	μg/L	1	5/20/2022 08:43 PM
4-Nitrophenol	ND		20	μg/L	1	5/20/2022 08:43 PM
Acenaphthene	ND		20	μg/L	1	5/20/2022 08:43 PM
Acenaphthylene	ND		20	μg/L	1	5/20/2022 08:43 PM
Acetophenone	ND		4.1	μg/L	1	5/20/2022 08:43 PM
Anthracene	ND		20	μg/L	1	5/20/2022 08:43 PM
Atrazine	ND		4.1	μg/L	1	5/20/2022 08:43 PM
Benzaldehyde	ND		4.1	μg/L	1	5/20/2022 08:43 PM
Benzo(a)anthracene	ND		20	μg/L	1	5/20/2022 08:43 PM
Benzo(a)pyrene	ND		20	μg/L	1	5/20/2022 08:43 PM
Benzo(b)fluoranthene	ND		20	μg/L	1	5/20/2022 08:43 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-104Lab ID: 22051511-04

Collection Date: 5/16/2022 01:02 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	NE)	20	μg/L	1	5/20/2022 08:43 PM
Benzo(k)fluoranthene	NE)	20	μg/L	1	5/20/2022 08:43 PM
Bis(2-chloroethoxy)methane	NE)	20	μg/L	1	5/20/2022 08:43 PM
Bis(2-chloroethyl)ether	NE)	20	μg/L	1	5/20/2022 08:43 PM
Bis(2-chloroisopropyl)ether	NE)	20	μg/L	1	5/20/2022 08:43 PM
Bis(2-ethylhexyl)phthalate	NE)	20	μg/L	1	5/20/2022 08:43 PM
Butyl benzyl phthalate	NE)	20	μg/L	1	5/20/2022 08:43 PM
Caprolactam	NE)	41	μg/L	1	5/20/2022 08:43 PM
Carbazole	NE)	20	μg/L	1	5/20/2022 08:43 PM
Chrysene	NE)	20	μg/L	1	5/20/2022 08:43 PM
Dibenzo(a,h)anthracene	NE)	20	μg/L	1	5/20/2022 08:43 PM
Dibenzofuran	NE)	20	μg/L	1	5/20/2022 08:43 PM
Diethyl phthalate	NE)	20	μg/L	1	5/20/2022 08:43 PM
Dimethyl phthalate	NE)	20	μg/L	1	5/20/2022 08:43 PM
Di-n-butyl phthalate	NE)	20	μg/L	1	5/20/2022 08:43 PM
Di-n-octyl phthalate	NE)	20	μg/L	1	5/20/2022 08:43 PM
Fluoranthene	NE)	20	μg/L	1	5/20/2022 08:43 PM
Fluorene	NE)	20	μg/L	1	5/20/2022 08:43 PM
Hexachlorobenzene	NE)	20	μg/L	1	5/20/2022 08:43 PM
Hexachlorobutadiene	NE)	20	μg/L	1	5/20/2022 08:43 PM
Hexachlorocyclopentadiene	NE)	20	μg/L	1	5/20/2022 08:43 PM
Hexachloroethane	NE)	20	μg/L	1	5/20/2022 08:43 PM
Indeno(1,2,3-cd)pyrene	NE)	20	μg/L	1	5/20/2022 08:43 PM
Isophorone	NE)	20	μg/L	1	5/20/2022 08:43 PM
Naphthalene	NE		20	μg/L	1	5/20/2022 08:43 PM
Nitrobenzene	NE)	20	μg/L	1	5/20/2022 08:43 PM
N-Nitrosodi-n-propylamine	NE		20	μg/L	1	5/20/2022 08:43 PM
N-Nitrosodiphenylamine	NE)	20	μg/L	1	5/20/2022 08:43 PM
Pentachlorophenol	NE		20	μg/L	1	5/20/2022 08:43 PM
Phenanthrene	NE		20	μg/L	1	5/20/2022 08:43 PM
Phenol	NE		20	μg/L	1	5/20/2022 08:43 PM
Pyrene	NE		20	μg/L	1	5/20/2022 08:43 PM
Surr: 2,4,6-Tribromophenol	63.4		27-83	%REC	1	5/20/2022 08:43 PM
Surr: 2-Fluorobiphenyl	61.9		26-79	%REC	1	5/20/2022 08:43 PM
Surr: 2-Fluorophenol	38.7		13-56	%REC	1	5/20/2022 08:43 PM
Surr: 4-Terphenyl-d14	75.3		43-106	%REC	1	5/20/2022 08:43 PM
Surr: Nitrobenzene-d5	60.6		29-80	%REC	1	5/20/2022 08:43 PM
Surr: Phenol-d6	25.6		10-35	%REC	1	5/20/2022 08:43 PM

VOLATILE ORGANIC COMPOUNDS SW8260C Analyst: MF

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-104Lab ID: 22051511-04

Collection Date: 5/16/2022 01:02 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,1-Trichloroethane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
1,1,2,2-Tetrachloroethane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
1,1,2-Trichloroethane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
1,1,2-Trichlorotrifluoroethane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
1,1-Dichloroethane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
1,1-Dichloroethene	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
1,2,4-Trichlorobenzene	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
1,2-Dibromo-3-chloropropane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
1,2-Dibromoethane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
1,2-Dichlorobenzene	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
1,2-Dichloroethane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
1,2-Dichloropropane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
1,3-Dichlorobenzene	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
1,4-Dichlorobenzene	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
2-Butanone	NE)	5.0	μg/L	1	5/20/2022 01:01 AM
2-Hexanone	NE)	5.0	μg/L	1	5/20/2022 01:01 AM
4-Methyl-2-pentanone	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
Acetone	NE)	10	μg/L	1	5/20/2022 01:01 AM
Benzene	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
Bromodichloromethane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
Bromoform	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
Bromomethane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
Carbon disulfide	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
Carbon tetrachloride	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
Chlorobenzene	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
Chloroethane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
Chloroform	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
Chloromethane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
cis-1,2-Dichloroethene	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
cis-1,3-Dichloropropene	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
Cyclohexane	NE)	2.0	μg/L	1	5/20/2022 01:01 AM
Dibromochloromethane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
Dichlorodifluoromethane	NE)	1.0	μg/L	1	5/20/2022 01:01 AM
Ethylbenzene	NE		1.0	μg/L	1	5/20/2022 01:01 AM
Isopropylbenzene	NE		1.0	μg/L	1	5/20/2022 01:01 AM
Methyl acetate	NE		2.0	μg/L	1	5/20/2022 01:01 AM
Methyl tert-butyl ether	NE		1.0	μg/L	1	5/20/2022 01:01 AM
Methylcyclohexane	NE		1.0	μg/L	1	5/20/2022 01:01 AM
Methylene chloride	NE		5.0	μg/L	1	5/20/2022 01:01 AM
Styrene	NE		1.0	μg/L	1	5/20/2022 01:01 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-104Lab ID: 22051511-04

Collection Date: 5/16/2022 01:02 PM Matrix: GROUNDWATER

Analyses	Result	Report Qual Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND	1.0	μg/L	1	5/20/2022 01:01 AM
Toluene	ND	1.0	μg/L	1	5/20/2022 01:01 AM
trans-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 01:01 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 01:01 AM
Trichloroethene	ND	1.0	μg/L	1	5/20/2022 01:01 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	5/20/2022 01:01 AM
Vinyl chloride	ND	1.0	μg/L	1	5/20/2022 01:01 AM
Xylenes, Total	ND	3.0	μg/L	1	5/20/2022 01:01 AM
Surr: 1,2-Dichloroethane-d4	100	75-120	%REC	1	5/20/2022 01:01 AM
Surr: 4-Bromofluorobenzene	90.6	80-110	%REC	1	5/20/2022 01:01 AM
Surr: Dibromofluoromethane	102	85-115	%REC	1	5/20/2022 01:01 AM
Surr: Toluene-d8	97.2	85-110	%REC	1	5/20/2022 01:01 AM

Date: 01-Jun-2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-105Lab ID: 22051511-05

Collection Date: 5/16/2022 01:42 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			SW8082	4	Prep: SW3511 5/20/22 16:59	Analyst: RM
Aroclor 1016	ND		0.20	μg/L	1	5/21/2022 06:17 AM
Aroclor 1221	ND		0.20	μg/L	1	5/21/2022 06:17 AM
Aroclor 1232	ND		0.20	μg/L	1	5/21/2022 06:17 AM
Aroclor 1242	ND		0.20	μg/L	1	5/21/2022 06:17 AM
Aroclor 1248	ND		0.20	μg/L	1	5/21/2022 06:17 AM
Aroclor 1254	ND		0.20	μg/L	1	5/21/2022 06:17 AM
Aroclor 1260	ND		0.20	μg/L	1	5/21/2022 06:17 AM
Aroclor 1262	ND		0.20	μg/L	1	5/21/2022 06:17 AM
Aroclor 1268	ND		0.20	μg/L	1	5/21/2022 06:17 AM
PCBs, Total	ND		0.20	μg/L	1	5/21/2022 06:17 AM
Surr: Decachlorobiphenyl	89.3	}	42-153	%REC	1	5/21/2022 06:17 AM
Surr: Tetrachloro-m-xylene	89.0)	48-127	%REC	1	5/21/2022 06:17 AM
MERCURY BY CVAA (DISSOLVED)			SW7470	4	Prep: SW7470 5/19/22 11:03	Analyst: EJC
Mercury	ND		0.00020	mg/L	1	5/19/2022 12:36 PM
METALS BY ICP-MS (DISSOLVED)			SW6020E	3	Prep: SW3015A 5/23/22 17:14	Analyst: STP
Aluminum	ND		0.010	mg/L	1	5/23/2022 07:23 PM
Antimony	ND		0.0050	mg/L	1	5/23/2022 07:23 PM
Arsenic	0.016		0.0050	mg/L	1	5/23/2022 07:23 PM
Barium	0.14		0.0050	mg/L	1	5/23/2022 07:23 PM
Beryllium	ND		0.0020	mg/L	1	5/23/2022 07:23 PM
Boron	0.028		0.020	mg/L	1	5/23/2022 07:23 PM
Cadmium	ND		0.0020	mg/L	1	5/23/2022 07:23 PM
Chromium	ND		0.0050	mg/L	1	5/23/2022 07:23 PM
Copper	ND		0.0050	mg/L	1	5/23/2022 07:23 PM
Lead	ND		0.0050	mg/L	1	5/23/2022 07:23 PM
Nickel	ND		0.0050	mg/L	1	5/23/2022 07:23 PM
Selenium	ND		0.0050	mg/L	1	5/23/2022 07:23 PM
Silver	ND		0.0050	mg/L	1	5/23/2022 07:23 PM
Thallium	ND		0.0050	mg/L	1	5/23/2022 07:23 PM
Zinc	ND		0.010	mg/L	1	5/23/2022 07:23 PM
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/20/22 18:04	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluorobutanesulfonic Acid (PFBS)	11		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluorobutanoic Acid (PFBA)	65		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluorodecanesulfonic Acid (PFDS)	ND		4.8	ng/L	1	5/25/2022 05:21 AM

Client: The Mannik & Smith Group, Inc.

Project: Former Mount Pleasant Landfill **Work Order:** 22051511

Sample ID: MW-105 **Lab ID:** 22051511-05

Collection Date: 5/16/2022 01:42 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Perfluorodecanoic Acid (PFDA)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluorododecanoic Acid (PFDoA)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluoroheptanesulfonic Acid (PFHpS)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluoroheptanoic Acid (PFHpA)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluorohexanesulfonic Acid (PFHxS)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluorohexanoic Acid (PFHxA)	5.3		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluorononanesulfonic Acid (PFNS)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluorononanoic Acid (PFNA)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluorooctanesulfonamide (PFOSA)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluorooctanesulfonic Acid (PFOS)	ND		1.9	ng/L	1	5/25/2022 05:21 AM
Perfluorooctanoic Acid (PFOA)	5.8		1.9	ng/L	1	5/25/2022 05:21 AM
Perfluoropentanesulfonic Acid (PFPeS)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluoropentanoic Acid (PFPeA)	11		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluorotridecanoic Acid (PFTriA)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Perfluoroundecanoic Acid (PFUnA)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		4.8	ng/L	1	5/25/2022 05:21 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		4.8	ng/L	1	5/25/2022 05:21 AM
11CI-Pf3OUdS	ND		4.8	ng/L	1	5/25/2022 05:21 AM
9CI-PF3ONS	ND		4.8	ng/L	1	5/25/2022 05:21 AM
Surr: 13C2-FtS 4:2	171	S	50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C2-FtS 6:2	130		50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C2-FtS 8:2	113		50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C2-PFDA	90.1		50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C2-PFDoA	89.6		50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C2-PFHxA	104		50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C2-PFTeA	92.0		50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C2-PFUnA	91.1		50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C3-HFPO-DA	97.1		50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C3-PFBS	87.8		50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C4-PFBA	104		50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C4-PFHpA	87.6		50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C4-PFOA	92.6		50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C4-PFOS	91.3		50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C5-PFNA	110		50-150	%REC	1	5/25/2022 05:21 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-105Lab ID: 22051511-05

Collection Date: 5/16/2022 01:42 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C5-PFPeA	97.0	1	50-150	%REC	1	5/25/2022 05:21 AM
Surr: 13C8-FOSA	98.1		50-150	%REC	1	5/25/2022 05:21 AM
Surr: 1802-PFHxS	93.7	•	50-150	%REC	1	5/25/2022 05:21 AM
Surr: d5-N-EtFOSAA	118	!	50-150	%REC	1	5/25/2022 05:21 AM
Surr: d3-N-MeFOSAA	95.2		50-150	%REC	1	5/25/2022 05:21 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8	270D	Prep: SW3510 5/20/22 14:40	Analyst: EE
1,1`-Biphenyl	ND		19	μg/L	1	5/20/2022 09:04 PM
2,4,5-Trichlorophenol	ND		19	μg/L	1	5/20/2022 09:04 PM
2,4,6-Trichlorophenol	ND		19	μg/L	1	5/20/2022 09:04 PM
2,4-Dichlorophenol	ND		19	μg/L	1	5/20/2022 09:04 PM
2,4-Dimethylphenol	ND		19	μg/L	1	5/20/2022 09:04 PM
2,4-Dinitrophenol	ND		19	μg/L	1	5/20/2022 09:04 PM
2,4-Dinitrotoluene	ND		19	μg/L	1	5/20/2022 09:04 PM
2,6-Dinitrotoluene	ND		19	μg/L	1	5/20/2022 09:04 PM
2-Chloronaphthalene	ND		19	μg/L	1	5/20/2022 09:04 PM
2-Chlorophenol	ND		19	μg/L	1	5/20/2022 09:04 PM
2-Methylnaphthalene	ND		19	μg/L	1	5/20/2022 09:04 PM
2-Methylphenol	ND		19	μg/L	1	5/20/2022 09:04 PM
2-Nitroaniline	ND		19	μg/L	1	5/20/2022 09:04 PM
2-Nitrophenol	ND		19	μg/L	1	5/20/2022 09:04 PM
3&4-Methylphenol	ND		19	μg/L	1	5/20/2022 09:04 PM
3,3'-Dichlorobenzidine	ND		19	μg/L	1	5/20/2022 09:04 PM
3-Nitroaniline	ND		19	μg/L	1	5/20/2022 09:04 PM
4,6-Dinitro-2-methylphenol	ND		19	μg/L	1	5/20/2022 09:04 PM
4-Bromophenyl phenyl ether	ND		19	μg/L	1	5/20/2022 09:04 PM
4-Chloro-3-methylphenol	ND		19	μg/L	1	5/20/2022 09:04 PM
4-Chloroaniline	ND		19	μg/L	1	5/20/2022 09:04 PM
4-Chlorophenyl phenyl ether	ND		19	μg/L	1	5/20/2022 09:04 PM
4-Nitroaniline	ND		19	μg/L	1	5/20/2022 09:04 PM
4-Nitrophenol	ND		19	μg/L	1	5/20/2022 09:04 PM
Acenaphthene	ND		19	μg/L	1	5/20/2022 09:04 PM
Acenaphthylene	ND		19	μg/L	1	5/20/2022 09:04 PM
Acetophenone	ND		3.9	μg/L	1	5/20/2022 09:04 PM
Anthracene	ND		19	μg/L	1	5/20/2022 09:04 PM
Atrazine	ND		3.9	μg/L	1	5/20/2022 09:04 PM
Benzaldehyde	ND		3.9	μg/L	1	5/20/2022 09:04 PM
Benzo(a)anthracene	ND		19	μg/L	1	5/20/2022 09:04 PM
Benzo(a)pyrene	ND		19	μg/L	1	5/20/2022 09:04 PM
Benzo(b)fluoranthene	ND		19	μg/L	1	5/20/2022 09:04 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-105Lab ID: 22051511-05

Collection Date: 5/16/2022 01:42 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	ND		19	μg/L	1	5/20/2022 09:04 PM
Benzo(k)fluoranthene	ND		19	μg/L	1	5/20/2022 09:04 PM
Bis(2-chloroethoxy)methane	ND		19	μg/L	1	5/20/2022 09:04 PM
Bis(2-chloroethyl)ether	ND		19	μg/L	1	5/20/2022 09:04 PM
Bis(2-chloroisopropyl)ether	ND		19	μg/L	1	5/20/2022 09:04 PM
Bis(2-ethylhexyl)phthalate	ND		19	μg/L	1	5/20/2022 09:04 PM
Butyl benzyl phthalate	ND		19	μg/L	1	5/20/2022 09:04 PM
Caprolactam	ND		39	μg/L	1	5/20/2022 09:04 PM
Carbazole	ND		19	μg/L	1	5/20/2022 09:04 PM
Chrysene	ND		19	μg/L	1	5/20/2022 09:04 PM
Dibenzo(a,h)anthracene	ND		19	μg/L	1	5/20/2022 09:04 PM
Dibenzofuran	ND		19	μg/L	1	5/20/2022 09:04 PM
Diethyl phthalate	ND		19	μg/L	1	5/20/2022 09:04 PM
Dimethyl phthalate	ND		19	μg/L	1	5/20/2022 09:04 PM
Di-n-butyl phthalate	ND		19	μg/L	1	5/20/2022 09:04 PM
Di-n-octyl phthalate	ND		19	μg/L	1	5/20/2022 09:04 PM
Fluoranthene	ND		19	μg/L	1	5/20/2022 09:04 PM
Fluorene	ND		19	μg/L	1	5/20/2022 09:04 PM
Hexachlorobenzene	ND		19	μg/L	1	5/20/2022 09:04 PM
Hexachlorobutadiene	ND		19	μg/L	1	5/20/2022 09:04 PM
Hexachlorocyclopentadiene	ND		19	μg/L	1	5/20/2022 09:04 PM
Hexachloroethane	ND		19	μg/L	1	5/20/2022 09:04 PM
Indeno(1,2,3-cd)pyrene	ND		19	μg/L	1	5/20/2022 09:04 PM
Isophorone	ND		19	μg/L	1	5/20/2022 09:04 PM
Naphthalene	ND		19	μg/L	1	5/20/2022 09:04 PM
Nitrobenzene	ND		19	μg/L	1	5/20/2022 09:04 PM
N-Nitrosodi-n-propylamine	ND		19	μg/L	1	5/20/2022 09:04 PM
N-Nitrosodiphenylamine	ND		19	μg/L	1	5/20/2022 09:04 PM
Pentachlorophenol	ND		19	μg/L	1	5/20/2022 09:04 PM
Phenanthrene	ND		19	μg/L	1	5/20/2022 09:04 PM
Phenol	ND		19	μg/L	1	5/20/2022 09:04 PM
Pyrene	ND		19	μg/L	1	5/20/2022 09:04 PM
Surr: 2,4,6-Tribromophenol	70.6		27-83	%REC	1	5/20/2022 09:04 PM
Surr: 2-Fluorobiphenyl	64.3		26-79	%REC	1	5/20/2022 09:04 PM
Surr: 2-Fluorophenol	39.6		13-56	%REC	1	5/20/2022 09:04 PM
Surr: 4-Terphenyl-d14	79.5		43-106	%REC	1	5/20/2022 09:04 PM
Surr: Nitrobenzene-d5	64.9		29-80	%REC	1	5/20/2022 09:04 PM
Surr: Phenol-d6	27.0		10-35	%REC	1	5/20/2022 09:04 PM
VOL 450 5 000 4100 001100			01110000	_		

VOLATILE ORGANIC COMPOUNDS SW8260C Analyst: MF

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-105Lab ID: 22051511-05

Collection Date: 5/16/2022 01:42 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result Qu	Report Ial Limit	Units	Dilution Factor	Date Analyzed
1,1,1-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
1,1,2,2-Tetrachloroethane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
1,1,2-Trichlorotrifluoroethane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
1,1-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
1,1-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
1,2-Dibromo-3-chloropropane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
1,2-Dibromoethane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
1,2-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
2-Butanone	ND	5.0	μg/L	1	5/20/2022 01:19 AM
2-Hexanone	ND	5.0	μg/L	1	5/20/2022 01:19 AM
4-Methyl-2-pentanone	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Acetone	ND	10	μg/L	1	5/20/2022 01:19 AM
Benzene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Bromodichloromethane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Bromoform	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Bromomethane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Carbon disulfide	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Carbon tetrachloride	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Chlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Chloroethane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Chloroform	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Chloromethane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
cis-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Cyclohexane	ND	2.0	μg/L	1	5/20/2022 01:19 AM
Dibromochloromethane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Ethylbenzene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Isopropylbenzene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Methyl acetate	ND	2.0	μg/L	1	5/20/2022 01:19 AM
Methyl tert-butyl ether	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Methylcyclohexane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Methylene chloride	ND	5.0	μg/L	1	5/20/2022 01:19 AM
Styrene	ND	1.0	μg/L μg/L	1	5/20/2022 01:19 AM

Client: The Mannik & Smith Group, Inc.

Project: Former Mount Pleasant Landfill Work Order: 22051511

Sample ID: MW-105 **Lab ID:** 22051511-05

Collection Date: 5/16/2022 01:42 PM Matrix: GROUNDWATER

Analyses	Result Q	Report ual Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Toluene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
trans-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Trichloroethene	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Vinyl chloride	ND	1.0	μg/L	1	5/20/2022 01:19 AM
Xylenes, Total	ND	3.0	μg/L	1	5/20/2022 01:19 AM
Surr: 1,2-Dichloroethane-d4	99.4	75-120	%REC	1	5/20/2022 01:19 AM
Surr: 4-Bromofluorobenzene	89.4	80-110	%REC	1	5/20/2022 01:19 AM
Surr: Dibromofluoromethane	98.6	85-115	%REC	1	5/20/2022 01:19 AM
Surr: Toluene-d8	104	85-110	%REC	1	5/20/2022 01:19 AM

Date: 01-Jun-2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-106Lab ID: 22051511-06

Collection Date: 5/16/2022 02:10 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			SW8082	4	Prep: SW3511 5/20/22 16:59	Analyst: RM
Aroclor 1016	ND		0.20	μg/L	1	5/21/2022 06:30 AM
Aroclor 1221	ND		0.20	μg/L	1	5/21/2022 06:30 AM
Aroclor 1232	ND		0.20	μg/L	1	5/21/2022 06:30 AM
Aroclor 1242	ND		0.20	μg/L	1	5/21/2022 06:30 AM
Aroclor 1248	ND		0.20	μg/L	1	5/21/2022 06:30 AM
Aroclor 1254	ND		0.20	μg/L	1	5/21/2022 06:30 AM
Aroclor 1260	ND		0.20	μg/L	1	5/21/2022 06:30 AM
Aroclor 1262	ND		0.20	μg/L	1	5/21/2022 06:30 AM
Aroclor 1268	ND		0.20	μg/L	1	5/21/2022 06:30 AM
PCBs, Total	ND		0.20	μg/L	1	5/21/2022 06:30 AM
Surr: Decachlorobiphenyl	106	;	42-153	%REC	1	5/21/2022 06:30 AM
Surr: Tetrachloro-m-xylene	91.8	}	48-127	%REC	1	5/21/2022 06:30 AM
MERCURY BY CVAA (DISSOLVED)			SW7470	4	Prep: SW7470 5/19/22 11:03	Analyst: EJC
Mercury	ND		0.00020	mg/L	1	5/19/2022 12:38 PM
METALS BY ICP-MS (DISSOLVED)			SW6020E	3	Prep: SW3015A 5/23/22 17:14	Analyst: STP
Aluminum	0.011		0.010	mg/L	1	5/23/2022 07:25 PM
Antimony	ND		0.0050	mg/L	1	5/23/2022 07:25 PM
Arsenic	ND		0.0050	mg/L	1	5/23/2022 07:25 PM
Barium	0.074		0.0050	mg/L	1	5/23/2022 07:25 PM
Beryllium	ND		0.0020	mg/L	1	5/23/2022 07:25 PM
Boron	0.42		0.020	mg/L	1	5/23/2022 07:25 PM
Cadmium	ND		0.0020	mg/L	1	5/23/2022 07:25 PM
Chromium	ND		0.0050	mg/L	1	5/23/2022 07:25 PM
Copper	ND		0.0050	mg/L	1	5/23/2022 07:25 PM
Lead	ND		0.0050	mg/L	1	5/23/2022 07:25 PM
Nickel	ND		0.0050	mg/L	1	5/23/2022 07:25 PM
Selenium	ND		0.0050	mg/L	1	5/23/2022 07:25 PM
Silver	ND		0.0050	mg/L	1	5/23/2022 07:25 PM
Thallium	ND		0.0050	mg/L	1	5/23/2022 07:25 PM
Zinc	ND		0.010	mg/L	1	5/25/2022 04:58 PM
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/20/22 18:04	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	ND		5.0	ng/L	1	5/25/2022 05:29 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND		5.0	ng/L	1	5/25/2022 05:29 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluorobutanesulfonic Acid (PFBS)	35		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluorobutanoic Acid (PFBA)	270		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluorodecanesulfonic Acid (PFDS)	ND		5.0		1	5/25/2022 05:29 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-106Lab ID: 22051511-06

Collection Date: 5/16/2022 02:10 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Perfluorodecanoic Acid (PFDA)	ND		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluorododecanoic Acid (PFDoA)	ND		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluoroheptanesulfonic Acid (PFHpS)	ND		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluoroheptanoic Acid (PFHpA)	25		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluorohexanesulfonic Acid (PFHxS)	29		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluorohexanoic Acid (PFHxA)	28		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluorononanesulfonic Acid (PFNS)	ND		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluorononanoic Acid (PFNA)	ND		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluorooctanesulfonic Acid (PFOS)	12		2.0	ng/L	1	5/25/2022 05:29 AM
Perfluorooctanoic Acid (PFOA)	68		2.0	ng/L	1	5/25/2022 05:29 AM
Perfluoropentanesulfonic Acid (PFPeS)	18		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluoropentanoic Acid (PFPeA)	11		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluorotridecanoic Acid (PFTriA)	ND		5.0	ng/L	1	5/25/2022 05:29 AM
Perfluoroundecanoic Acid (PFUnA)	ND		5.0	ng/L	1	5/25/2022 05:29 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		5.0	ng/L	1	5/25/2022 05:29 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		5.0	ng/L	1	5/25/2022 05:29 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		5.0	ng/L	1	5/25/2022 05:29 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		5.0	ng/L	1	5/25/2022 05:29 AM
11CI-Pf3OUdS	ND		5.0	ng/L	1	5/25/2022 05:29 AM
9CI-PF3ONS	ND		5.0	ng/L	1	5/25/2022 05:29 AM
Surr: 13C2-FtS 4:2	181	S	50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C2-FtS 6:2	138		50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C2-FtS 8:2	121		50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C2-PFDA	88.3		50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C2-PFDoA	81.5		50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C2-PFHxA	97.4		50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C2-PFTeA	98.1		50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C2-PFUnA	90.5		50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C3-HFPO-DA	96.1		50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C3-PFBS	85.7		50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C4-PFBA	95.3		50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C4-PFHpA	83.5		50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C4-PFOA	85.8		50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C4-PFOS	87.4		50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C5-PFNA	102		50-150	%REC	1	5/25/2022 05:29 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-106Lab ID: 22051511-06

Collection Date: 5/16/2022 02:10 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C5-PFPeA	92.2)	50-150	%REC	1	5/25/2022 05:29 AM
Surr: 13C8-FOSA	96.5	5	50-150	%REC	1	5/25/2022 05:29 AM
Surr: 1802-PFHxS	79.0)	50-150	%REC	1	5/25/2022 05:29 AM
Surr: d5-N-EtFOSAA	108	}	50-150	%REC	1	5/25/2022 05:29 AM
Surr: d3-N-MeFOSAA	95.8	}	50-150	%REC	1	5/25/2022 05:29 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8	270D	Prep: SW3510 5/20/22 14:40	Analyst: EE
1,1`-Biphenyl	ND	ı	19	μg/L	1	5/20/2022 09:25 PM
2,4,5-Trichlorophenol	ND	ı	19	μg/L	1	5/20/2022 09:25 PM
2,4,6-Trichlorophenol	ND)	19	μg/L	1	5/20/2022 09:25 PM
2,4-Dichlorophenol	ND)	19	μg/L	1	5/20/2022 09:25 PM
2,4-Dimethylphenol	ND)	19	μg/L	1	5/20/2022 09:25 PM
2,4-Dinitrophenol	ND)	19	μg/L	1	5/20/2022 09:25 PM
2,4-Dinitrotoluene	ND)	19	μg/L	1	5/20/2022 09:25 PM
2,6-Dinitrotoluene	ND)	19	μg/L	1	5/20/2022 09:25 PM
2-Chloronaphthalene	ND)	19	μg/L	1	5/20/2022 09:25 PM
2-Chlorophenol	ND)	19	μg/L	1	5/20/2022 09:25 PM
2-Methylnaphthalene	ND)	19	μg/L	1	5/20/2022 09:25 PM
2-Methylphenol	ND)	19	μg/L	1	5/20/2022 09:25 PM
2-Nitroaniline	ND)	19	μg/L	1	5/20/2022 09:25 PM
2-Nitrophenol	ND)	19	μg/L	1	5/20/2022 09:25 PM
3&4-Methylphenol	ND)	19	μg/L	1	5/20/2022 09:25 PM
3,3'-Dichlorobenzidine	ND)	19	μg/L	1	5/20/2022 09:25 PM
3-Nitroaniline	ND)	19	μg/L	1	5/20/2022 09:25 PM
4,6-Dinitro-2-methylphenol	ND)	19	μg/L	1	5/20/2022 09:25 PM
4-Bromophenyl phenyl ether	ND)	19	μg/L	1	5/20/2022 09:25 PM
4-Chloro-3-methylphenol	ND)	19	μg/L	1	5/20/2022 09:25 PM
4-Chloroaniline	ND)	19	μg/L	1	5/20/2022 09:25 PM
4-Chlorophenyl phenyl ether	ND)	19	μg/L	1	5/20/2022 09:25 PM
4-Nitroaniline	ND)	19	μg/L	1	5/20/2022 09:25 PM
4-Nitrophenol	ND)	19	μg/L	1	5/20/2022 09:25 PM
Acenaphthene	ND)	19	μg/L	1	5/20/2022 09:25 PM
Acenaphthylene	ND	ı	19	μg/L	1	5/20/2022 09:25 PM
Acetophenone	ND	ı	3.7	μg/L	1	5/20/2022 09:25 PM
Anthracene	ND	ı	19	μg/L	1	5/20/2022 09:25 PM
Atrazine	ND	ı	3.7	μg/L	1	5/20/2022 09:25 PM
Benzaldehyde	ND	ı	3.7	μg/L	1	5/20/2022 09:25 PM
Benzo(a)anthracene	ND	ı	19	μg/L	1	5/20/2022 09:25 PM
Benzo(a)pyrene	ND)	19	μg/L	1	5/20/2022 09:25 PM
Benzo(b)fluoranthene	ND)	19	μg/L	1	5/20/2022 09:25 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-106Lab ID: 22051511-06

Collection Date: 5/16/2022 02:10 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	NE)	19	μg/L	1	5/20/2022 09:25 PM
Benzo(k)fluoranthene	ND)	19	μg/L	1	5/20/2022 09:25 PM
Bis(2-chloroethoxy)methane	ND)	19	μg/L	1	5/20/2022 09:25 PM
Bis(2-chloroethyl)ether	ND)	19	μg/L	1	5/20/2022 09:25 PM
Bis(2-chloroisopropyl)ether	ND)	19	μg/L	1	5/20/2022 09:25 PM
Bis(2-ethylhexyl)phthalate	ND)	19	μg/L	1	5/20/2022 09:25 PM
Butyl benzyl phthalate	ND)	19	μg/L	1	5/20/2022 09:25 PM
Caprolactam	ND)	37	μg/L	1	5/20/2022 09:25 PM
Carbazole	ND)	19	μg/L	1	5/20/2022 09:25 PM
Chrysene	NE)	19	μg/L	1	5/20/2022 09:25 PM
Dibenzo(a,h)anthracene	NE)	19	μg/L	1	5/20/2022 09:25 PM
Dibenzofuran	NE)	19	μg/L	1	5/20/2022 09:25 PM
Diethyl phthalate	NE)	19	μg/L	1	5/20/2022 09:25 PM
Dimethyl phthalate	NE)	19	μg/L	1	5/20/2022 09:25 PM
Di-n-butyl phthalate	NE)	19	μg/L	1	5/20/2022 09:25 PM
Di-n-octyl phthalate	NE)	19	μg/L	1	5/20/2022 09:25 PM
Fluoranthene	NE)	19	μg/L	1	5/20/2022 09:25 PM
Fluorene	NE)	19	μg/L	1	5/20/2022 09:25 PM
Hexachlorobenzene	NE)	19	μg/L	1	5/20/2022 09:25 PM
Hexachlorobutadiene	NE)	19	μg/L	1	5/20/2022 09:25 PM
Hexachlorocyclopentadiene	NE)	19	μg/L	1	5/20/2022 09:25 PM
Hexachloroethane	NE)	19	μg/L	1	5/20/2022 09:25 PM
Indeno(1,2,3-cd)pyrene	NE)	19	μg/L	1	5/20/2022 09:25 PM
Isophorone	NE)	19	μg/L	1	5/20/2022 09:25 PM
Naphthalene	NE)	19	μg/L	1	5/20/2022 09:25 PM
Nitrobenzene	ND)	19	μg/L	1	5/20/2022 09:25 PM
N-Nitrosodi-n-propylamine	ND)	19	μg/L	1	5/20/2022 09:25 PM
N-Nitrosodiphenylamine	ND)	19	μg/L	1	5/20/2022 09:25 PM
Pentachlorophenol	NE)	19	μg/L	1	5/20/2022 09:25 PM
Phenanthrene	NE)	19	μg/L	1	5/20/2022 09:25 PM
Phenol	NE)	19	μg/L	1	5/20/2022 09:25 PM
Pyrene	NE)	19	μg/L	1	5/20/2022 09:25 PM
Surr: 2,4,6-Tribromophenol	68.1	1	27-83	%REC	1	5/20/2022 09:25 PM
Surr: 2-Fluorobiphenyl	63.4	1	26-79	%REC	1	5/20/2022 09:25 PM
Surr: 2-Fluorophenol	42.2	2	13-56	%REC	1	5/20/2022 09:25 PM
Surr: 4-Terphenyl-d14	83.0)	43-106	%REC	1	5/20/2022 09:25 PM
Surr: Nitrobenzene-d5	63.2	2	29-80	%REC	1	5/20/2022 09:25 PM
Surr: Phenol-d6	27.8		10-35	%REC	1	5/20/2022 09:25 PM

VOLATILE ORGANIC COMPOUNDS SW8260C Analyst: MF

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-106Lab ID: 22051511-06

Collection Date: 5/16/2022 02:10 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result Qu	Report ual Limit	Units	Dilution Factor	Date Analyzed
1,1,1-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
1,1,2,2-Tetrachloroethane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
1,1,2-Trichlorotrifluoroethane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
1,1-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
1,1-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
1,2-Dibromo-3-chloropropane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
1,2-Dibromoethane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
1,2-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
2-Butanone	ND	5.0	μg/L	1	5/20/2022 01:38 AM
2-Hexanone	ND	5.0	μg/L	1	5/20/2022 01:38 AM
4-Methyl-2-pentanone	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Acetone	ND	10	μg/L	1	5/20/2022 01:38 AM
Benzene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Bromodichloromethane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Bromoform	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Bromomethane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Carbon disulfide	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Carbon tetrachloride	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Chlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Chloroethane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Chloroform	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Chloromethane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
cis-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Cyclohexane	ND	2.0	μg/L	1	5/20/2022 01:38 AM
Dibromochloromethane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Ethylbenzene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Isopropylbenzene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Methyl acetate	ND	2.0	μg/L	1	5/20/2022 01:38 AM
Methyl tert-butyl ether	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Methylcyclohexane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Methylene chloride	ND	5.0	μg/L	1	5/20/2022 01:38 AM
Styrene	ND	1.0	μg/L μg/L	1	5/20/2022 01:38 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-106Lab ID: 22051511-06

Collection Date: 5/16/2022 02:10 PM Matrix: GROUNDWATER

Analyses	Result	Report Qual Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Toluene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
trans-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Trichloroethene	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Vinyl chloride	ND	1.0	μg/L	1	5/20/2022 01:38 AM
Xylenes, Total	ND	3.0	μg/L	1	5/20/2022 01:38 AM
Surr: 1,2-Dichloroethane-d4	95.1	75-120	%REC	1	5/20/2022 01:38 AM
Surr: 4-Bromofluorobenzene	90.6	80-110	%REC	1	5/20/2022 01:38 AM
Surr: Dibromofluoromethane	100	85-115	%REC	1	5/20/2022 01:38 AM
Surr: Toluene-d8	100	85-110	%REC	1	5/20/2022 01:38 AM

Date: 01-Jun-2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order:22051511Sample ID:MW-200Lab ID:22051511-07

Collection Date: 5/16/2022 03:55 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			SW8082	4	Prep: SW3511 5/20/22 16:59	Analyst: RM
Aroclor 1016	ND		0.20	μg/L	1	5/21/2022 06:43 AM
Aroclor 1221	ND		0.20	μg/L	1	5/21/2022 06:43 AM
Aroclor 1232	ND		0.20	μg/L	1	5/21/2022 06:43 AM
Aroclor 1242	ND		0.20	μg/L	1	5/21/2022 06:43 AM
Aroclor 1248	ND		0.20	μg/L	1	5/21/2022 06:43 AM
Aroclor 1254	ND		0.20	μg/L	1	5/21/2022 06:43 AM
Aroclor 1260	ND		0.20	μg/L	1	5/21/2022 06:43 AM
Aroclor 1262	ND		0.20	μg/L	1	5/21/2022 06:43 AM
Aroclor 1268	ND		0.20	μg/L	1	5/21/2022 06:43 AM
PCBs, Total	ND		0.20	μg/L	1	5/21/2022 06:43 AM
Surr: Decachlorobiphenyl	93.1		42-153	%REC	1	5/21/2022 06:43 AM
Surr: Tetrachloro-m-xylene	90.1		48-127	%REC	1	5/21/2022 06:43 AM
MERCURY BY CVAA (DISSOLVED)			SW7470	4	Prep: SW7470 5/19/22 11:03	Analyst: EJC
Mercury	ND		0.00020	mg/L	1	5/19/2022 12:40 PM
METALS BY ICP-MS (DISSOLVED)			SW6020E	3	Prep: SW3015A 5/23/22 17:14	Analyst: STP
Aluminum	0.032		0.010	mg/L	1	5/23/2022 07:27 PM
Antimony	ND		0.0050	mg/L	1	5/23/2022 07:27 PM
Arsenic	0.0096		0.0050	mg/L	1	5/23/2022 07:27 PM
Barium	0.30		0.0050	mg/L	1	5/23/2022 07:27 PM
Beryllium	ND		0.0020	mg/L	1	5/23/2022 07:27 PM
Boron	0.11		0.020	mg/L	1	5/23/2022 07:27 PM
Cadmium	ND		0.0020	mg/L	1	5/23/2022 07:27 PM
Chromium	ND		0.0050	mg/L	1	5/23/2022 07:27 PM
Copper	ND		0.0050	mg/L	1	5/23/2022 07:27 PM
Lead	ND		0.0050	mg/L	1	5/23/2022 07:27 PM
Nickel	ND		0.0050	mg/L	1	5/23/2022 07:27 PM
Selenium	ND		0.0050	mg/L	1	5/23/2022 07:27 PM
Silver	ND		0.0050	mg/L	1	5/23/2022 07:27 PM
Thallium	ND		0.0050	mg/L	1	5/23/2022 07:27 PM
Zinc	ND		0.010	mg/L	1	5/25/2022 05:00 PM
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/20/22 18:04	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	ND		4.6	ng/L	1	5/25/2022 05:37 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND		4.6	ng/L	1	5/25/2022 05:37 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND		4.6	ng/L	1	5/25/2022 05:37 AM
Perfluorobutanesulfonic Acid (PFBS)	6.1		4.6		1	5/25/2022 05:37 AM
Perfluorobutanoic Acid (PFBA)	9.0		4.6	ng/L	1	5/25/2022 05:37 AM
Perfluorodecanesulfonic Acid (PFDS)	ND		4.6		1	5/25/2022 05:37 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-200Lab ID: 22051511-07

Collection Date: 5/16/2022 03:55 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Perfluorodecanoic Acid (PFDA)	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
Perfluorododecanoic Acid (PFDoA)	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
Perfluoroheptanesulfonic Acid (PFHpS)	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
Perfluoroheptanoic Acid (PFHpA)	5.0)	4.6	ng/L	1	5/25/2022 05:37 AM
Perfluorohexanesulfonic Acid (PFHxS)	15	;	4.6	ng/L	1	5/25/2022 05:37 AM
Perfluorohexanoic Acid (PFHxA)	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
Perfluorononanesulfonic Acid (PFNS)	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
Perfluorononanoic Acid (PFNA)	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
Perfluorooctanesulfonamide (PFOSA)	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
Perfluorooctanesulfonic Acid (PFOS)	3.2	!	1.9	ng/L	1	5/25/2022 05:37 AM
Perfluorooctanoic Acid (PFOA)	16	;	1.9	ng/L	1	5/25/2022 05:37 AM
Perfluoropentanesulfonic Acid (PFPeS)	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
Perfluoropentanoic Acid (PFPeA)	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
Perfluorotetradecanoic Acid (PFTeA)	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
Perfluorotridecanoic Acid (PFTriA)	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
Perfluoroundecanoic Acid (PFUnA)	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1	4.6	ng/L	1	5/25/2022 05:37 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND	1	4.6	ng/L	1	5/25/2022 05:37 AM
11CI-Pf3OUdS	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
9CI-PF3ONS	ND	ı	4.6	ng/L	1	5/25/2022 05:37 AM
Surr: 13C2-FtS 4:2	99.2	•	50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C2-FtS 6:2	109)	50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C2-FtS 8:2	125	5	50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C2-PFDA	85.6	;	50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C2-PFDoA	73.5	5	50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C2-PFHxA	95.3	}	50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C2-PFTeA	88.7	,	50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C2-PFUnA	80.6	;	50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C3-HFPO-DA	95.1		50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C3-PFBS	84.5	5	50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C4-PFBA	92.3		50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C4-PFHpA	78.6		50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C4-PFOA	82.1		50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C4-PFOS	86.3		50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C5-PFNA	94.9		50-150	%REC	1	5/25/2022 05:37 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-200Lab ID: 22051511-07

Collection Date: 5/16/2022 03:55 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C5-PFPeA	86.5		50-150	%REC	1	5/25/2022 05:37 AM
Surr: 13C8-FOSA	76.6		50-150	%REC	1	5/25/2022 05:37 AM
Surr: 1802-PFHxS	81.2		50-150	%REC	1	5/25/2022 05:37 AM
Surr: d5-N-EtFOSAA	99.8		50-150	%REC	1	5/25/2022 05:37 AM
Surr: d3-N-MeFOSAA	87.6		50-150	%REC	1	5/25/2022 05:37 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8	270D	Prep: SW3510 5/20/22 14:40	Analyst: EE
1,1`-Biphenyl	ND		20	μg/L	1	5/20/2022 09:45 PM
2,4,5-Trichlorophenol	ND		20	μg/L	1	5/20/2022 09:45 PM
2,4,6-Trichlorophenol	ND		20	μg/L	1	5/20/2022 09:45 PM
2,4-Dichlorophenol	ND		20	μg/L	1	5/20/2022 09:45 PM
2,4-Dimethylphenol	ND		20	μg/L	1	5/20/2022 09:45 PM
2,4-Dinitrophenol	ND		20	μg/L	1	5/20/2022 09:45 PM
2,4-Dinitrotoluene	ND		20	μg/L	1	5/20/2022 09:45 PM
2,6-Dinitrotoluene	ND		20	μg/L	1	5/20/2022 09:45 PM
2-Chloronaphthalene	ND		20	μg/L	1	5/20/2022 09:45 PM
2-Chlorophenol	ND		20	μg/L	1	5/20/2022 09:45 PM
2-Methylnaphthalene	ND		20	μg/L	1	5/20/2022 09:45 PM
2-Methylphenol	ND		20	μg/L	1	5/20/2022 09:45 PM
2-Nitroaniline	ND		20	μg/L	1	5/20/2022 09:45 PM
2-Nitrophenol	ND		20	μg/L	1	5/20/2022 09:45 PM
3&4-Methylphenol	ND		20	μg/L	1	5/20/2022 09:45 PM
3,3'-Dichlorobenzidine	ND		20	μg/L	1	5/20/2022 09:45 PM
3-Nitroaniline	ND		20	μg/L	1	5/20/2022 09:45 PM
4,6-Dinitro-2-methylphenol	ND		20	μg/L	1	5/20/2022 09:45 PM
4-Bromophenyl phenyl ether	ND		20	μg/L	1	5/20/2022 09:45 PM
4-Chloro-3-methylphenol	ND		20	μg/L	1	5/20/2022 09:45 PM
4-Chloroaniline	ND		20	μg/L	1	5/20/2022 09:45 PM
4-Chlorophenyl phenyl ether	ND		20	μg/L	1	5/20/2022 09:45 PM
4-Nitroaniline	ND		20	μg/L	1	5/20/2022 09:45 PM
4-Nitrophenol	ND		20	μg/L	1	5/20/2022 09:45 PM
Acenaphthene	ND		20	μg/L	1	5/20/2022 09:45 PM
Acenaphthylene	ND		20	μg/L	1	5/20/2022 09:45 PM
Acetophenone	ND		3.9	μg/L	1	5/20/2022 09:45 PM
Anthracene	ND		20	μg/L	1	5/20/2022 09:45 PM
Atrazine	ND		3.9	μg/L	1	5/20/2022 09:45 PM
Benzaldehyde	ND		3.9	μg/L	1	5/20/2022 09:45 PM
Benzo(a)anthracene	ND		20	μg/L	1	5/20/2022 09:45 PM
Benzo(a)pyrene	ND		20	μg/L	1	5/20/2022 09:45 PM
Benzo(b)fluoranthene	ND		20	μg/L	1	5/20/2022 09:45 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-200Lab ID: 22051511-07

Collection Date: 5/16/2022 03:55 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	ND		20	μg/L	1	5/20/2022 09:45 PM
Benzo(k)fluoranthene	ND		20	μg/L	1	5/20/2022 09:45 PM
Bis(2-chloroethoxy)methane	ND		20	μg/L	1	5/20/2022 09:45 PM
Bis(2-chloroethyl)ether	ND		20	μg/L	1	5/20/2022 09:45 PM
Bis(2-chloroisopropyl)ether	ND		20	μg/L	1	5/20/2022 09:45 PM
Bis(2-ethylhexyl)phthalate	ND		20	μg/L	1	5/20/2022 09:45 PM
Butyl benzyl phthalate	ND		20	μg/L	1	5/20/2022 09:45 PM
Caprolactam	ND		39	μg/L	1	5/20/2022 09:45 PM
Carbazole	ND		20	μg/L	1	5/20/2022 09:45 PM
Chrysene	ND		20	μg/L	1	5/20/2022 09:45 PM
Dibenzo(a,h)anthracene	ND		20	μg/L	1	5/20/2022 09:45 PM
Dibenzofuran	ND		20	μg/L	1	5/20/2022 09:45 PM
Diethyl phthalate	ND		20	μg/L	1	5/20/2022 09:45 PM
Dimethyl phthalate	ND		20	μg/L	1	5/20/2022 09:45 PM
Di-n-butyl phthalate	ND		20	μg/L	1	5/20/2022 09:45 PM
Di-n-octyl phthalate	ND		20	μg/L	1	5/20/2022 09:45 PM
Fluoranthene	ND		20	μg/L	1	5/20/2022 09:45 PM
Fluorene	ND		20	μg/L	1	5/20/2022 09:45 PM
Hexachlorobenzene	ND		20	μg/L	1	5/20/2022 09:45 PM
Hexachlorobutadiene	ND		20	μg/L	1	5/20/2022 09:45 PM
Hexachlorocyclopentadiene	ND		20	μg/L	1	5/20/2022 09:45 PM
Hexachloroethane	ND		20	μg/L	1	5/20/2022 09:45 PM
Indeno(1,2,3-cd)pyrene	ND		20	μg/L	1	5/20/2022 09:45 PM
Isophorone	ND		20	μg/L	1	5/20/2022 09:45 PM
Naphthalene	ND		20	μg/L	1	5/20/2022 09:45 PM
Nitrobenzene	ND		20	μg/L	1	5/20/2022 09:45 PM
N-Nitrosodi-n-propylamine	ND		20	μg/L	1	5/20/2022 09:45 PM
N-Nitrosodiphenylamine	ND		20	μg/L	1	5/20/2022 09:45 PM
Pentachlorophenol	ND		20	μg/L	1	5/20/2022 09:45 PM
Phenanthrene	ND		20	μg/L	1	5/20/2022 09:45 PM
Phenol	ND		20	μg/L	1	5/20/2022 09:45 PM
Pyrene	ND		20	μg/L	1	5/20/2022 09:45 PM
Surr: 2,4,6-Tribromophenol	62.8		27-83	%REC	1	5/20/2022 09:45 PM
Surr: 2-Fluorobiphenyl	61.1		26-79	%REC	1	5/20/2022 09:45 PM
Surr: 2-Fluorophenol	43.7	•	13-56	%REC	1	5/20/2022 09:45 PM
Surr: 4-Terphenyl-d14	71.8		43-106	%REC	1	5/20/2022 09:45 PM
Surr: Nitrobenzene-d5	61.4		29-80	%REC	1	5/20/2022 09:45 PM
Surr: Phenol-d6	28.7		10-35	%REC	1	5/20/2022 09:45 PM
VOL 450 5 000 4100 00400000000			01110000	_		

VOLATILE ORGANIC COMPOUNDS SW8260C Analyst: MF

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-200Lab ID: 22051511-07

Collection Date: 5/16/2022 03:55 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Report Qual Limit	Units	Dilution Factor	Date Analyzed
1,1,1-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
1,1,2,2-Tetrachloroethane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
1,1,2-Trichlorotrifluoroethane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
1,1-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
1,1-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
1,2-Dibromo-3-chloropropane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
1,2-Dibromoethane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
1,2-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
2-Butanone	ND	5.0	μg/L	1	5/20/2022 01:56 AM
2-Hexanone	ND	5.0	μg/L	1	5/20/2022 01:56 AM
4-Methyl-2-pentanone	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Acetone	ND	10	μg/L	1	5/20/2022 01:56 AM
Benzene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Bromodichloromethane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Bromoform	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Bromomethane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Carbon disulfide	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Carbon tetrachloride	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Chlorobenzene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Chloroethane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Chloroform	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Chloromethane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
cis-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Cyclohexane	ND	2.0	μg/L	1	5/20/2022 01:56 AM
Dibromochloromethane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Ethylbenzene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Isopropylbenzene	ND	1.0		1	5/20/2022 01:56 AM
Methyl acetate	ND	2.0	μg/L	1	5/20/2022 01:56 AM
Methyl tert-butyl ether	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Methylcyclohexane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Methylene chloride	ND	5.0	μg/L	1	5/20/2022 01:56 AM
Styrene	ND	1.0	μg/L	1	5/20/2022 01:56 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-200Lab ID: 22051511-07

Collection Date: 5/16/2022 03:55 PM Matrix: GROUNDWATER

Analyses	Result Q	Report Qual Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Toluene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
trans-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Trichloroethene	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Vinyl chloride	ND	1.0	μg/L	1	5/20/2022 01:56 AM
Xylenes, Total	ND	3.0	μg/L	1	5/20/2022 01:56 AM
Surr: 1,2-Dichloroethane-d4	100	75-120	%REC	1	5/20/2022 01:56 AM
Surr: 4-Bromofluorobenzene	88.8	80-110	%REC	1	5/20/2022 01:56 AM
Surr: Dibromofluoromethane	104	85-115	%REC	1	5/20/2022 01:56 AM
Surr: Toluene-d8	97.2	85-110	%REC	1	5/20/2022 01:56 AM

Date: 01-Jun-2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-201Lab ID: 22051511-08

Collection Date: 5/16/2022 04:45 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			SW8082	4	Prep: SW3511 5/20/22 16:59	Analyst: RM
Aroclor 1016	ND)	0.20	μg/L	1	5/21/2022 06:56 AM
Aroclor 1221	ND)	0.20	μg/L	1	5/21/2022 06:56 AM
Aroclor 1232	ND)	0.20	μg/L	1	5/21/2022 06:56 AM
Aroclor 1242	ND)	0.20	μg/L	1	5/21/2022 06:56 AM
Aroclor 1248	ND)	0.20	μg/L	1	5/21/2022 06:56 AM
Aroclor 1254	ND)	0.20	μg/L	1	5/21/2022 06:56 AM
Aroclor 1260	ND)	0.20	μg/L	1	5/21/2022 06:56 AM
Aroclor 1262	ND)	0.20	μg/L	1	5/21/2022 06:56 AM
Aroclor 1268	ND)	0.20	μg/L	1	5/21/2022 06:56 AM
PCBs, Total	ND)	0.20	μg/L	1	5/21/2022 06:56 AM
Surr: Decachlorobiphenyl	112	?	42-153	%REC	1	5/21/2022 06:56 AM
Surr: Tetrachloro-m-xylene	96.4	1	48-127	%REC	1	5/21/2022 06:56 AM
MERCURY BY CVAA (DISSOLVED)			SW7470	4	Prep: SW7470 5/19/22 11:03	Analyst: EJC
Mercury	ND)	0.00020	mg/L	1	5/19/2022 12:42 PM
METALS BY ICP-MS (DISSOLVED)			SW6020E	3	Prep: SW3015A 5/23/22 17:14	Analyst: STP
Aluminum	ND)	0.010	mg/L	1	5/23/2022 07:28 PM
Antimony	ND)	0.0050	mg/L	1	5/23/2022 07:28 PM
Arsenic	ND)	0.0050	mg/L	1	5/23/2022 07:28 PM
Barium	0.12	2	0.0050	mg/L	1	5/23/2022 07:28 PM
Beryllium	ND)	0.0020	mg/L	1	5/23/2022 07:28 PM
Boron	0.088	3	0.020	mg/L	1	5/23/2022 07:28 PM
Cadmium	ND)	0.0020	mg/L	1	5/23/2022 07:28 PM
Chromium	ND)	0.0050	mg/L	1	5/23/2022 07:28 PM
Copper	ND)	0.0050	mg/L	1	5/23/2022 07:28 PM
Lead	ND)	0.0050	mg/L	1	5/23/2022 07:28 PM
Nickel	ND)	0.0050	mg/L	1	5/23/2022 07:28 PM
Selenium	ND)	0.0050	mg/L	1	5/23/2022 07:28 PM
Silver	ND)	0.0050	mg/L	1	5/23/2022 07:28 PM
Thallium	ND)	0.0050	mg/L	1	5/23/2022 07:28 PM
Zinc	ND)	0.010	mg/L	1	5/23/2022 07:28 PM
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/23/22 17:15	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	ND)	4.9	ng/L	1	5/25/2022 08:15 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND)	4.9	ng/L	1	5/25/2022 08:15 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND)	4.9	ng/L	1	5/25/2022 08:15 AM
Perfluorobutanesulfonic Acid (PFBS)	17	,	4.9	ng/L	1	5/25/2022 08:15 AM
Perfluorobutanoic Acid (PFBA)	10)	4.9	ng/L	1	5/25/2022 08:15 AM
Perfluorodecanesulfonic Acid (PFDS)	ND)	4.9	ng/L	1	5/25/2022 08:15 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-201Lab ID: 22051511-08

Collection Date: 5/16/2022 04:45 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Perfluorodecanoic Acid (PFDA)	ND		4.9	ng/L	1	5/25/2022 08:15 AM
Perfluorododecanoic Acid (PFDoA)	ND		4.9	ng/L	1	5/25/2022 08:15 AM
Perfluoroheptanesulfonic Acid (PFHpS)	ND		4.9	ng/L	1	5/25/2022 08:15 AM
Perfluoroheptanoic Acid (PFHpA)	7.4		4.9	ng/L	1	5/25/2022 08:15 AM
Perfluorohexanesulfonic Acid (PFHxS)	19		4.9	ng/L	1	5/25/2022 08:15 AM
Perfluorohexanoic Acid (PFHxA)	5.4		4.9	ng/L	1	5/25/2022 08:15 AM
Perfluorononanesulfonic Acid (PFNS)	ND		4.9	ng/L	1	5/25/2022 08:15 AM
Perfluorononanoic Acid (PFNA)	ND		4.9	ng/L	1	5/25/2022 08:15 AM
Perfluorooctanesulfonamide (PFOSA)	ND		4.9	ng/L	1	5/25/2022 08:15 AM
Perfluorooctanesulfonic Acid (PFOS)	ND		2.0	ng/L	1	5/25/2022 08:15 AM
Perfluorooctanoic Acid (PFOA)	25		2.0	ng/L	1	5/25/2022 08:15 AM
Perfluoropentanesulfonic Acid (PFPeS)	5.8		4.9	ng/L	1	5/25/2022 08:15 AM
Perfluoropentanoic Acid (PFPeA)	ND		4.9	ng/L	1	5/25/2022 08:15 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		4.9	ng/L	1	5/25/2022 08:15 AM
Perfluorotridecanoic Acid (PFTriA)	ND		4.9	ng/L	1	5/25/2022 08:15 AM
Perfluoroundecanoic Acid (PFUnA)	ND		4.9	ng/L	1	5/25/2022 08:15 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		4.9	ng/L	1	5/25/2022 08:15 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		4.9	ng/L	1	5/25/2022 08:15 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		4.9	ng/L	1	5/25/2022 08:15 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		4.9	ng/L	1	5/25/2022 08:15 AM
11CI-Pf3OUdS	ND		4.9	ng/L	1	5/25/2022 08:15 AM
9CI-PF3ONS	ND		4.9	ng/L	1	5/25/2022 08:15 AM
Surr: 13C2-FtS 4:2	91.9		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C2-FtS 6:2	83.2		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C2-FtS 8:2	70.6		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C2-PFDA	61.0		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C2-PFDoA	55.6		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C2-PFHxA	68.5		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C2-PFTeA	73.8		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C2-PFUnA	87.0		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C3-HFPO-DA	71.3		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C3-PFBS	93.8		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C4-PFBA	91.1		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C4-PFHpA	105		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C4-PFOA	94.0		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C4-PFOS	75.6		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C5-PFNA	86.4		50-150	%REC	1	5/25/2022 08:15 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-201Lab ID: 22051511-08

Collection Date: 5/16/2022 04:45 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C5-PFPeA	83.3		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 13C8-FOSA	80.6		50-150	%REC	1	5/25/2022 08:15 AM
Surr: 1802-PFHxS	93.5		50-150	%REC	1	5/25/2022 08:15 AM
Surr: d5-N-EtFOSAA	81.1		50-150	%REC	1	5/25/2022 08:15 AM
Surr: d3-N-MeFOSAA	47.2	S	50-150	%REC	1	5/25/2022 08:15 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8	270D	Prep: SW3510 5/20/22 14:40	Analyst: EE
1,1`-Biphenyl	ND		19	μg/L	1	5/20/2022 10:06 PM
2,4,5-Trichlorophenol	ND		19	μg/L	1	5/20/2022 10:06 PM
2,4,6-Trichlorophenol	ND		19	μg/L	1	5/20/2022 10:06 PM
2,4-Dichlorophenol	ND		19	μg/L	1	5/20/2022 10:06 PM
2,4-Dimethylphenol	ND		19	μg/L	1	5/20/2022 10:06 PM
2,4-Dinitrophenol	ND		19	μg/L	1	5/20/2022 10:06 PM
2,4-Dinitrotoluene	ND		19	μg/L	1	5/20/2022 10:06 PM
2,6-Dinitrotoluene	ND		19	μg/L	1	5/20/2022 10:06 PM
2-Chloronaphthalene	ND		19	μg/L	1	5/20/2022 10:06 PM
2-Chlorophenol	ND		19	μg/L	1	5/20/2022 10:06 PM
2-Methylnaphthalene	ND		19	μg/L	1	5/20/2022 10:06 PM
2-Methylphenol	ND		19	μg/L	1	5/20/2022 10:06 PM
2-Nitroaniline	ND		19	μg/L	1	5/20/2022 10:06 PM
2-Nitrophenol	ND		19	μg/L	1	5/20/2022 10:06 PM
3&4-Methylphenol	ND		19	μg/L	1	5/20/2022 10:06 PM
3,3'-Dichlorobenzidine	ND		19	μg/L	1	5/20/2022 10:06 PM
3-Nitroaniline	ND		19	μg/L	1	5/20/2022 10:06 PM
4,6-Dinitro-2-methylphenol	ND		19	μg/L	1	5/20/2022 10:06 PM
4-Bromophenyl phenyl ether	ND		19	μg/L	1	5/20/2022 10:06 PM
4-Chloro-3-methylphenol	ND		19	μg/L	1	5/20/2022 10:06 PM
4-Chloroaniline	ND		19	μg/L	1	5/20/2022 10:06 PM
4-Chlorophenyl phenyl ether	ND		19	μg/L	1	5/20/2022 10:06 PM
4-Nitroaniline	ND		19	μg/L	1	5/20/2022 10:06 PM
4-Nitrophenol	ND		19	μg/L	1	5/20/2022 10:06 PM
Acenaphthene	ND		19	μg/L	1	5/20/2022 10:06 PM
Acenaphthylene	ND		19	μg/L	1	5/20/2022 10:06 PM
Acetophenone	ND		3.8	μg/L	1	5/20/2022 10:06 PM
Anthracene	ND		19	μg/L	1	5/20/2022 10:06 PM
Atrazine	ND		3.8	μg/L	1	5/20/2022 10:06 PM
Benzaldehyde	ND		3.8	μg/L	1	5/20/2022 10:06 PM
Benzo(a)anthracene	ND		19	μg/L	1	5/20/2022 10:06 PM
Benzo(a)pyrene	ND		19	μg/L	1	5/20/2022 10:06 PM
Benzo(b)fluoranthene	ND		19	μg/L	1	5/20/2022 10:06 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-201Lab ID: 22051511-08

Collection Date: 5/16/2022 04:45 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	ND		19	μg/L	1	5/20/2022 10:06 PM
Benzo(k)fluoranthene	ND		19	μg/L	1	5/20/2022 10:06 PM
Bis(2-chloroethoxy)methane	ND		19	μg/L	1	5/20/2022 10:06 PM
Bis(2-chloroethyl)ether	ND		19	μg/L	1	5/20/2022 10:06 PM
Bis(2-chloroisopropyl)ether	ND		19	μg/L	1	5/20/2022 10:06 PM
Bis(2-ethylhexyl)phthalate	ND		19	μg/L	1	5/20/2022 10:06 PM
Butyl benzyl phthalate	ND		19	μg/L	1	5/20/2022 10:06 PM
Caprolactam	ND		38	μg/L	1	5/20/2022 10:06 PM
Carbazole	ND		19	μg/L	1	5/20/2022 10:06 PM
Chrysene	ND		19	μg/L	1	5/20/2022 10:06 PM
Dibenzo(a,h)anthracene	ND		19	μg/L	1	5/20/2022 10:06 PM
Dibenzofuran	ND		19	μg/L	1	5/20/2022 10:06 PM
Diethyl phthalate	ND		19	μg/L	1	5/20/2022 10:06 PM
Dimethyl phthalate	ND		19	μg/L	1	5/20/2022 10:06 PM
Di-n-butyl phthalate	ND		19	μg/L	1	5/20/2022 10:06 PM
Di-n-octyl phthalate	ND		19	μg/L	1	5/20/2022 10:06 PM
Fluoranthene	ND		19	μg/L	1	5/20/2022 10:06 PM
Fluorene	ND		19	μg/L	1	5/20/2022 10:06 PM
Hexachlorobenzene	ND		19	μg/L	1	5/20/2022 10:06 PM
Hexachlorobutadiene	ND		19	μg/L	1	5/20/2022 10:06 PM
Hexachlorocyclopentadiene	ND		19	μg/L	1	5/20/2022 10:06 PM
Hexachloroethane	ND		19	μg/L	1	5/20/2022 10:06 PM
Indeno(1,2,3-cd)pyrene	ND		19	μg/L	1	5/20/2022 10:06 PM
Isophorone	ND		19	μg/L	1	5/20/2022 10:06 PM
Naphthalene	ND		19	μg/L	1	5/20/2022 10:06 PM
Nitrobenzene	ND		19	μg/L	1	5/20/2022 10:06 PM
N-Nitrosodi-n-propylamine	ND		19	μg/L	1	5/20/2022 10:06 PM
N-Nitrosodiphenylamine	ND		19	μg/L	1	5/20/2022 10:06 PM
Pentachlorophenol	ND		19	μg/L	1	5/20/2022 10:06 PM
Phenanthrene	ND		19	μg/L	1	5/20/2022 10:06 PM
Phenol	ND		19	μg/L	1	5/20/2022 10:06 PM
Pyrene	ND		19	μg/L	1	5/20/2022 10:06 PM
Surr: 2,4,6-Tribromophenol	68.7	•	27-83	%REC	1	5/20/2022 10:06 PM
Surr: 2-Fluorobiphenyl	67.6	;	26-79	%REC	1	5/20/2022 10:06 PM
Surr: 2-Fluorophenol	46.8	1	13-56	%REC	1	5/20/2022 10:06 PM
Surr: 4-Terphenyl-d14	79.6	;	43-106	%REC	1	5/20/2022 10:06 PM
Surr: Nitrobenzene-d5	67.2		29-80	%REC	1	5/20/2022 10:06 PM
Surr: Phenol-d6	30.9	•	10-35	%REC	1	5/20/2022 10:06 PM
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VOLATILE ORGANIC COMPOUNDS SW8260C Analyst: HJ

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-201Lab ID: 22051511-08

Collection Date: 5/16/2022 04:45 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Report Qual Limit	Units	Dilution Factor	Date Analyzed
1,1,1-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
1,1,2,2-Tetrachloroethane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
1,1,2-Trichlorotrifluoroethane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
1,1-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
1,1-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 02:41 PM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	5/20/2022 02:41 PM
1,2-Dibromo-3-chloropropane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
1,2-Dibromoethane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 02:41 PM
1,2-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
1,2-Dichloropropane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 02:41 PM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 02:41 PM
2-Butanone	ND	5.0	μg/L	1	5/20/2022 02:41 PM
2-Hexanone	ND	5.0	μg/L	1	5/20/2022 02:41 PM
4-Methyl-2-pentanone	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Acetone	ND	10	μg/L	1	5/20/2022 02:41 PM
Benzene	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Bromodichloromethane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Bromoform	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Bromomethane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Carbon disulfide	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Carbon tetrachloride	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Chlorobenzene	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Chloroethane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Chloroform	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Chloromethane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
cis-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 02:41 PM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Cyclohexane	ND	2.0	μg/L	1	5/20/2022 02:41 PM
Dibromochloromethane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Dichlorodifluoromethane	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Ethylbenzene	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Isopropylbenzene	ND	1.0		1	5/20/2022 02:41 PM
Methyl acetate	ND	2.0	μg/L	1	5/20/2022 02:41 PM
Methyl tert-butyl ether	ND	1.0	μg/L	1	5/20/2022 02:41 PM
Methylcyclohexane	ND	1.0		1	5/20/2022 02:41 PM
Methylene chloride	ND	5.0	μg/L	1	5/20/2022 02:41 PM
Styrene	ND	1.0	μg/L	1	5/20/2022 02:41 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-201Lab ID: 22051511-08

Collection Date: 5/16/2022 04:45 PM Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND		1.0	μg/L	1	5/20/2022 02:41 PM
Toluene	ND		1.0	μg/L	1	5/20/2022 02:41 PM
trans-1,2-Dichloroethene	ND		1.0	μg/L	1	5/20/2022 02:41 PM
trans-1,3-Dichloropropene	ND	ND		μg/L	1	5/20/2022 02:41 PM
Trichloroethene	ND	ND		μg/L	1	5/20/2022 02:41 PM
Trichlorofluoromethane	ND		1.0	μg/L	1	5/20/2022 02:41 PM
Vinyl chloride	ND		1.0	μg/L	1	5/20/2022 02:41 PM
Xylenes, Total	ND		3.0	μg/L	1	5/20/2022 02:41 PM
Surr: 1,2-Dichloroethane-d4	104		75-120	%REC	1	5/20/2022 02:41 PM
Surr: 4-Bromofluorobenzene	93.2		80-110	%REC	1	5/20/2022 02:41 PM
Surr: Dibromofluoromethane	99.4		85-115	%REC	1	5/20/2022 02:41 PM
Surr: Toluene-d8	98.6		85-110	%REC	1	5/20/2022 02:41 PM

Date: 01-Jun-2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-202Lab ID: 22051511-09

Collection Date: 5/16/2022 11:45 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			SW8082	4	Prep: SW3511 5/20/22 16:59	Analyst: RM
Aroclor 1016	ND		0.20	μg/L	1	5/21/2022 07:08 AM
Aroclor 1221	ND		0.20	μg/L	1	5/21/2022 07:08 AM
Aroclor 1232	ND		0.20	μg/L	1	5/21/2022 07:08 AM
Aroclor 1242	ND		0.20	μg/L	1	5/21/2022 07:08 AM
Aroclor 1248	ND		0.20	μg/L	1	5/21/2022 07:08 AM
Aroclor 1254	ND		0.20	μg/L	1	5/21/2022 07:08 AM
Aroclor 1260	ND		0.20	μg/L	1	5/21/2022 07:08 AM
Aroclor 1262	ND		0.20	μg/L	1	5/21/2022 07:08 AM
Aroclor 1268	ND		0.20	μg/L	1	5/21/2022 07:08 AM
PCBs, Total	ND		0.20	μg/L	1	5/21/2022 07:08 AM
Surr: Decachlorobiphenyl	59.0)	42-153	%REC	1	5/21/2022 07:08 AM
Surr: Tetrachloro-m-xylene	84.5	i	48-127	%REC	1	5/21/2022 07:08 AM
MERCURY BY CVAA (DISSOLVED)			SW7470	A	Prep: SW7470 5/19/22 11:03	Analyst: EJC
Mercury	ND		0.00020	mg/L	1	5/19/2022 12:43 PM
METALS BY ICP-MS (DISSOLVED)			SW6020E	3	Prep: SW3015A 5/23/22 17:14	Analyst: STP
Aluminum	0.015		0.010	mg/L	1	5/23/2022 07:30 PM
Antimony	ND		0.0050	mg/L	1	5/23/2022 07:30 PM
Arsenic	ND		0.0050	mg/L	1	5/23/2022 07:30 PM
Barium	0.38		0.0050	mg/L	1	5/23/2022 07:30 PM
Beryllium	ND		0.0020	mg/L	1	5/23/2022 07:30 PM
Boron	0.69		0.020	mg/L	1	5/23/2022 07:30 PM
Cadmium	ND		0.0020	mg/L	1	5/23/2022 07:30 PM
Chromium	ND		0.0050	mg/L	1	5/23/2022 07:30 PM
Copper	ND		0.0050	mg/L	1	5/23/2022 07:30 PM
Lead	ND		0.0050	mg/L	1	5/23/2022 07:30 PM
Nickel	0.0056		0.0050	mg/L	1	5/23/2022 07:30 PM
Selenium	ND		0.0050	mg/L	1	5/23/2022 07:30 PM
Silver	ND		0.0050	mg/L	1	5/23/2022 07:30 PM
Thallium	ND		0.0050	mg/L	1	5/23/2022 07:30 PM
Zinc	ND		0.010	mg/L	1	5/23/2022 07:30 PM
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/23/22 17:15	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	ND		5.1	ng/L	1	5/25/2022 08:23 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND		5.1	ng/L	1	5/25/2022 08:23 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluorobutanesulfonic Acid (PFBS)	22		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluorobutanoic Acid (PFBA)	470		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluorodecanesulfonic Acid (PFDS)	ND		5.1	ng/L	1	5/25/2022 08:23 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-202Lab ID: 22051511-09

Collection Date: 5/16/2022 11:45 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Perfluorodecanoic Acid (PFDA)	ND		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluorododecanoic Acid (PFDoA)	ND		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluoroheptanesulfonic Acid (PFHpS)	7.5		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluoroheptanoic Acid (PFHpA)	45		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluorohexanesulfonic Acid (PFHxS)	71		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluorohexanoic Acid (PFHxA)	38		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluorononanesulfonic Acid (PFNS)	ND		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluorononanoic Acid (PFNA)	8.2		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluorooctanesulfonamide (PFOSA)	ND		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluorooctanesulfonic Acid (PFOS)	100		2.0	ng/L	1	5/25/2022 08:23 AM
Perfluorooctanoic Acid (PFOA)	170		2.0	ng/L	1	5/25/2022 08:23 AM
Perfluoropentanesulfonic Acid (PFPeS)	19		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluoropentanoic Acid (PFPeA)	12		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluorotridecanoic Acid (PFTriA)	ND		5.1	ng/L	1	5/25/2022 08:23 AM
Perfluoroundecanoic Acid (PFUnA)	ND		5.1	ng/L	1	5/25/2022 08:23 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		5.1	ng/L	1	5/25/2022 08:23 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		5.1	ng/L	1	5/25/2022 08:23 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		5.1	ng/L	1	5/25/2022 08:23 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		5.1	ng/L	1	5/25/2022 08:23 AM
11CI-Pf3OUdS	ND		5.1	ng/L	1	5/25/2022 08:23 AM
9CI-PF3ONS	ND		5.1	ng/L	1	5/25/2022 08:23 AM
Surr: 13C2-FtS 4:2	325	S	50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C2-FtS 6:2	357	S	50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C2-FtS 8:2	133		50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C2-PFDA	80.9		50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C2-PFDoA	74.2		50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C2-PFHxA	78.6		50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C2-PFTeA	86.0		50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C2-PFUnA	77.9		50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C3-HFPO-DA	72.6		50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C3-PFBS	71.7		50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C4-PFBA	83.3		50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C4-PFHpA	74.2		50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C4-PFOA	90.0		50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C4-PFOS	79.1		50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C5-PFNA	108		50-150	%REC	1	5/25/2022 08:23 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-202Lab ID: 22051511-09

Collection Date: 5/16/2022 11:45 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C5-PFPeA	74.1		50-150	%REC	1	5/25/2022 08:23 AM
Surr: 13C8-FOSA	72.6		50-150	%REC	1	5/25/2022 08:23 AM
Surr: 1802-PFHxS	78.7		50-150	%REC	1	5/25/2022 08:23 AM
Surr: d5-N-EtFOSAA	71.1		50-150	%REC	1	5/25/2022 08:23 AM
Surr: d3-N-MeFOSAA	63.0		50-150	%REC	1	5/25/2022 08:23 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8	270D	Prep: SW3510 5/20/22 14:40	Analyst: EE
1,1`-Biphenyl	ND		19	μg/L	1	5/20/2022 10:26 PM
2,4,5-Trichlorophenol	ND		19	μg/L	1	5/20/2022 10:26 PM
2,4,6-Trichlorophenol	ND		19	μg/L	1	5/20/2022 10:26 PM
2,4-Dichlorophenol	ND		19	μg/L	1	5/20/2022 10:26 PM
2,4-Dimethylphenol	ND		19	μg/L	1	5/20/2022 10:26 PM
2,4-Dinitrophenol	ND		19	μg/L	1	5/20/2022 10:26 PM
2,4-Dinitrotoluene	ND		19	μg/L	1	5/20/2022 10:26 PM
2,6-Dinitrotoluene	ND		19	μg/L	1	5/20/2022 10:26 PM
2-Chloronaphthalene	ND		19	μg/L	1	5/20/2022 10:26 PM
2-Chlorophenol	ND		19	μg/L	1	5/20/2022 10:26 PM
2-Methylnaphthalene	ND		19	μg/L	1	5/20/2022 10:26 PM
2-Methylphenol	ND		19	μg/L	1	5/20/2022 10:26 PM
2-Nitroaniline	ND		19	μg/L	1	5/20/2022 10:26 PM
2-Nitrophenol	ND		19	μg/L	1	5/20/2022 10:26 PM
3&4-Methylphenol	ND		19	μg/L	1	5/20/2022 10:26 PM
3,3'-Dichlorobenzidine	ND		19	μg/L	1	5/20/2022 10:26 PM
3-Nitroaniline	ND		19	μg/L	1	5/20/2022 10:26 PM
4,6-Dinitro-2-methylphenol	ND		19	μg/L	1	5/20/2022 10:26 PM
4-Bromophenyl phenyl ether	ND		19	μg/L	1	5/20/2022 10:26 PM
4-Chloro-3-methylphenol	ND		19	μg/L	1	5/20/2022 10:26 PM
4-Chloroaniline	ND		19	μg/L	1	5/20/2022 10:26 PM
4-Chlorophenyl phenyl ether	ND		19	μg/L	1	5/20/2022 10:26 PM
4-Nitroaniline	ND		19	μg/L	1	5/20/2022 10:26 PM
4-Nitrophenol	ND		19	μg/L	1	5/20/2022 10:26 PM
Acenaphthene	ND		19	μg/L	1	5/20/2022 10:26 PM
Acenaphthylene	ND		19	μg/L	1	5/20/2022 10:26 PM
Acetophenone	ND		3.7	μg/L	1	5/20/2022 10:26 PM
Anthracene	ND		19	μg/L	1	5/20/2022 10:26 PM
Atrazine	ND		3.7	μg/L	1	5/20/2022 10:26 PM
Benzaldehyde	ND		3.7	μg/L	1	5/20/2022 10:26 PM
Benzo(a)anthracene	ND		19	μg/L	1	5/20/2022 10:26 PM
Benzo(a)pyrene	ND		19	μg/L	1	5/20/2022 10:26 PM
Benzo(b)fluoranthene	ND		19	μg/L	1	5/20/2022 10:26 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-202Lab ID: 22051511-09

Collection Date: 5/16/2022 11:45 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	ND		19	μg/L	1	5/20/2022 10:26 PM
Benzo(k)fluoranthene	ND		19	μg/L	1	5/20/2022 10:26 PM
Bis(2-chloroethoxy)methane	ND		19	μg/L	1	5/20/2022 10:26 PM
Bis(2-chloroethyl)ether	ND		19	μg/L	1	5/20/2022 10:26 PM
Bis(2-chloroisopropyl)ether	ND		19	μg/L	1	5/20/2022 10:26 PM
Bis(2-ethylhexyl)phthalate	ND		19	μg/L	1	5/20/2022 10:26 PM
Butyl benzyl phthalate	ND		19	μg/L	1	5/20/2022 10:26 PM
Caprolactam	ND		37	μg/L	1	5/20/2022 10:26 PM
Carbazole	ND		19	μg/L	1	5/20/2022 10:26 PM
Chrysene	ND		19	μg/L	1	5/20/2022 10:26 PM
Dibenzo(a,h)anthracene	ND		19	μg/L	1	5/20/2022 10:26 PM
Dibenzofuran	ND		19	μg/L	1	5/20/2022 10:26 PM
Diethyl phthalate	ND		19	μg/L	1	5/20/2022 10:26 PM
Dimethyl phthalate	ND		19	μg/L	1	5/20/2022 10:26 PM
Di-n-butyl phthalate	ND		19	μg/L	1	5/20/2022 10:26 PM
Di-n-octyl phthalate	ND		19	μg/L	1	5/20/2022 10:26 PM
Fluoranthene	ND		19	μg/L	1	5/20/2022 10:26 PM
Fluorene	ND		19	μg/L	1	5/20/2022 10:26 PM
Hexachlorobenzene	ND		19	μg/L	1	5/20/2022 10:26 PM
Hexachlorobutadiene	ND		19	μg/L	1	5/20/2022 10:26 PM
Hexachlorocyclopentadiene	ND		19	μg/L	1	5/20/2022 10:26 PM
Hexachloroethane	ND		19	μg/L	1	5/20/2022 10:26 PM
Indeno(1,2,3-cd)pyrene	ND		19	μg/L	1	5/20/2022 10:26 PM
Isophorone	ND		19	μg/L	1	5/20/2022 10:26 PM
Naphthalene	ND		19	μg/L	1	5/20/2022 10:26 PM
Nitrobenzene	ND		19	μg/L	1	5/20/2022 10:26 PM
N-Nitrosodi-n-propylamine	ND		19	μg/L	1	5/20/2022 10:26 PM
N-Nitrosodiphenylamine	ND		19	μg/L	1	5/20/2022 10:26 PM
Pentachlorophenol	ND		19	μg/L	1	5/20/2022 10:26 PM
Phenanthrene	ND		19	μg/L	1	5/20/2022 10:26 PM
Phenol	ND		19	μg/L	1	5/20/2022 10:26 PM
Pyrene	ND		19	μg/L	1	5/20/2022 10:26 PM
Surr: 2,4,6-Tribromophenol	71.7	•	27-83	%REC	1	5/20/2022 10:26 PM
Surr: 2-Fluorobiphenyl	61.4	!	26-79	%REC	1	5/20/2022 10:26 PM
Surr: 2-Fluorophenol	36.4	!	13-56	%REC	1	5/20/2022 10:26 PM
Surr: 4-Terphenyl-d14	82.1		43-106	%REC	1	5/20/2022 10:26 PM
Surr: Nitrobenzene-d5	57.4	!	29-80	%REC	1	5/20/2022 10:26 PM
Surr: Phenol-d6	24.2		10-35	%REC	1	5/20/2022 10:26 PM
				_		

VOLATILE ORGANIC COMPOUNDS SW8260C Analyst: MF

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-202Lab ID: 22051511-09

Collection Date: 5/16/2022 11:45 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Report Qual Limit	Units	Dilution Factor	Date Analyzed
1,1,1-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
1,1,2,2-Tetrachloroethane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
1,1,2-Trichlorotrifluoroethane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
1,1-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
1,1-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 02:33 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	5/20/2022 02:33 AM
1,2-Dibromo-3-chloropropane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
1,2-Dibromoethane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 02:33 AM
1,2-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 02:33 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 02:33 AM
2-Butanone	ND	5.0	μg/L	1	5/20/2022 02:33 AM
2-Hexanone	ND	5.0	μg/L	1	5/20/2022 02:33 AM
4-Methyl-2-pentanone	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Acetone	ND	10	μg/L	1	5/20/2022 02:33 AM
Benzene	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Bromodichloromethane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Bromoform	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Bromomethane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Carbon disulfide	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Carbon tetrachloride	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Chlorobenzene	6.1	1.0	μg/L	1	5/20/2022 02:33 AM
Chloroethane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Chloroform	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Chloromethane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
cis-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 02:33 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Cyclohexane	ND	2.0	μg/L	1	5/20/2022 02:33 AM
Dibromochloromethane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Ethylbenzene	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Isopropylbenzene	ND	1.0		1	5/20/2022 02:33 AM
Methyl acetate	ND	2.0	μg/L	1	5/20/2022 02:33 AM
Methyl tert-butyl ether	ND	1.0		1	5/20/2022 02:33 AM
Methylcyclohexane	ND	1.0		1	5/20/2022 02:33 AM
Methylene chloride	ND	5.0		1	5/20/2022 02:33 AM
Styrene	ND	1.0	μg/L	1	5/20/2022 02:33 AM

Client: The Mannik & Smith Group, Inc.

Project: Former Mount Pleasant Landfill Work Order: 22051511

Sample ID: MW-202 **Lab ID:** 22051511-09

Collection Date: 5/16/2022 11:45 AM Matrix: GROUNDWATER

Analyses	Result Qua	Report al Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Toluene	ND	1.0	μg/L	1	5/20/2022 02:33 AM
trans-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 02:33 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Trichloroethene	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Vinyl chloride	ND	1.0	μg/L	1	5/20/2022 02:33 AM
Xylenes, Total	ND	3.0	μg/L	1	5/20/2022 02:33 AM
Surr: 1,2-Dichloroethane-d4	99.0	75-120	%REC	1	5/20/2022 02:33 AM
Surr: 4-Bromofluorobenzene	89.5	80-110	%REC	1	5/20/2022 02:33 AM
Surr: Dibromofluoromethane	102	85-115	%REC	1	5/20/2022 02:33 AM
Surr: Toluene-d8	99.4	85-110	%REC	1	5/20/2022 02:33 AM

Date: 01-Jun-2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-10-20Lab ID: 22051511-10

Collection Date: 5/16/2022 03:53 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			SW8082	4	Prep: SW3511 5/20/22 16:59	Analyst: RM
Aroclor 1016	ND	ı	0.20	μg/L	1	5/21/2022 07:47 AM
Aroclor 1221	ND	ı	0.20	μg/L	1	5/21/2022 07:47 AM
Aroclor 1232	ND	ı	0.20	μg/L	1	5/21/2022 07:47 AM
Aroclor 1242	ND	ı	0.20	μg/L	1	5/21/2022 07:47 AM
Aroclor 1248	ND	ı	0.20	μg/L	1	5/21/2022 07:47 AM
Aroclor 1254	ND	ı	0.20	μg/L	1	5/21/2022 07:47 AM
Aroclor 1260	ND	ı	0.20	μg/L	1	5/21/2022 07:47 AM
Aroclor 1262	ND	ı	0.20	μg/L	1	5/21/2022 07:47 AM
Aroclor 1268	ND	ı	0.20	μg/L	1	5/21/2022 07:47 AM
PCBs, Total	ND	ı	0.20	μg/L	1	5/21/2022 07:47 AM
Surr: Decachlorobiphenyl	68.1	,	42-153	%REC	1	5/21/2022 07:47 AM
Surr: Tetrachloro-m-xylene	86.5	5	48-127	%REC	1	5/21/2022 07:47 AM
MERCURY BY CVAA (DISSOLVED)			SW7470	4	Prep: SW7470 5/19/22 11:03	Analyst: EJC
Mercury	ND	ı	0.00020	mg/L	1	5/19/2022 12:45 PM
METALS BY ICP-MS (DISSOLVED)			SW6020E	3	Prep: SW3015A 5/23/22 17:14	Analyst: STP
Aluminum	0.046	i	0.010	mg/L	1	5/23/2022 07:32 PM
Antimony	ND	ı	0.0050	mg/L	1	5/23/2022 07:32 PM
Arsenic	ND)	0.0050	mg/L	1	5/23/2022 07:32 PM
Barium	0.27	•	0.0050	mg/L	1	5/23/2022 07:32 PM
Beryllium	ND)	0.0020	mg/L	1	5/23/2022 07:32 PM
Boron	0.46	i	0.020	mg/L	1	5/23/2022 07:32 PM
Cadmium	ND)	0.0020	mg/L	1	5/23/2022 07:32 PM
Chromium	ND)	0.0050	mg/L	1	5/23/2022 07:32 PM
Copper	ND)	0.0050	mg/L	1	5/23/2022 07:32 PM
Lead	ND)	0.0050	mg/L	1	5/23/2022 07:32 PM
Nickel	ND)	0.0050	mg/L	1	5/23/2022 07:32 PM
Selenium	ND)	0.0050	mg/L	1	5/23/2022 07:32 PM
Silver	ND)	0.0050	mg/L	1	5/23/2022 07:32 PM
Thallium	ND)	0.0050	mg/L	1	5/23/2022 07:32 PM
Zinc	ND)	0.010	mg/L	1	5/25/2022 05:02 PM
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/23/22 17:15	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	ND	ı	5.1	ng/L	1	5/25/2022 08:32 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND	ı	5.1	ng/L	1	5/25/2022 08:32 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND	ı	5.1	ng/L	1	5/25/2022 08:32 AM
Perfluorobutanesulfonic Acid (PFBS)	13	1	5.1	ng/L	1	5/25/2022 08:32 AM
Perfluorobutanoic Acid (PFBA)	44		5.1	ng/L	1	5/25/2022 08:32 AM
Perfluorodecanesulfonic Acid (PFDS)	ND	ı	5.1		1	5/25/2022 08:32 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-10-20Lab ID: 22051511-10

Collection Date: 5/16/2022 03:53 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Perfluorodecanoic Acid (PFDA)	ND		5.1	ng/L	1	5/25/2022 08:32 AM
Perfluorododecanoic Acid (PFDoA)	ND		5.1	ng/L	1	5/25/2022 08:32 AM
Perfluoroheptanesulfonic Acid (PFHpS)	7.0		5.1	ng/L	1	5/25/2022 08:32 AM
Perfluoroheptanoic Acid (PFHpA)	51		5.1	ng/L	1	5/25/2022 08:32 AM
Perfluorohexanesulfonic Acid (PFHxS)	72		5.1	ng/L	1	5/25/2022 08:32 AM
Perfluorohexanoic Acid (PFHxA)	37		5.1	ng/L	1	5/25/2022 08:32 AM
Perfluorononanesulfonic Acid (PFNS)	ND		5.1	ng/L	1	5/25/2022 08:32 AM
Perfluorononanoic Acid (PFNA)	9.0		5.1	ng/L	1	5/25/2022 08:32 AM
Perfluorooctanesulfonamide (PFOSA)	ND		5.1	ng/L	1	5/25/2022 08:32 AM
Perfluorooctanesulfonic Acid (PFOS)	50		2.0	ng/L	1	5/25/2022 08:32 AM
Perfluorooctanoic Acid (PFOA)	250		2.0	ng/L	1	5/25/2022 08:32 AM
Perfluoropentanesulfonic Acid (PFPeS)	20		5.1	ng/L	1	5/25/2022 08:32 AM
Perfluoropentanoic Acid (PFPeA)	22		5.1	ng/L	1	5/25/2022 08:32 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		5.1	ng/L	1	5/25/2022 08:32 AM
Perfluorotridecanoic Acid (PFTriA)	ND		5.1	ng/L	1	5/25/2022 08:32 AM
Perfluoroundecanoic Acid (PFUnA)	ND		5.1	ng/L	1	5/25/2022 08:32 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		5.1	ng/L	1	5/25/2022 08:32 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		5.1	ng/L	1	5/25/2022 08:32 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		5.1	ng/L	1	5/25/2022 08:32 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		5.1	ng/L	1	5/25/2022 08:32 AM
11CI-Pf3OUdS	ND		5.1	ng/L	1	5/25/2022 08:32 AM
9CI-PF3ONS	ND		5.1	ng/L	1	5/25/2022 08:32 AM
Surr: 13C2-FtS 4:2	285	S	50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C2-FtS 6:2	198	S	50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C2-FtS 8:2	86.9)	50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C2-PFDA	74.5	i	50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C2-PFDoA	74.3	}	50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C2-PFHxA	104	!	50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C2-PFTeA	78.9)	50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C2-PFUnA	73.8	;	50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C3-HFPO-DA	97.6	;	50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C3-PFBS	90.0)	50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C4-PFBA	103		50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C4-PFHpA	89.3	:	50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C4-PFOA	94.4	!	50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C4-PFOS	84.6		50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C5-PFNA	92.9		50-150	%REC	1	5/25/2022 08:32 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-10-20Lab ID: 22051511-10

Collection Date: 5/16/2022 03:53 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C5-PFPeA	92.9		50-150	%REC	1	5/25/2022 08:32 AM
Surr: 13C8-FOSA	74.0		50-150	%REC	1	5/25/2022 08:32 AM
Surr: 1802-PFHxS	87.9		50-150	%REC	1	5/25/2022 08:32 AM
Surr: d5-N-EtFOSAA	63.8		50-150	%REC	1	5/25/2022 08:32 AM
Surr: d3-N-MeFOSAA	60.0		50-150	%REC	1	5/25/2022 08:32 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8	270D	Prep: SW3510 5/20/22 14:40	Analyst: EE
1,1`-Biphenyl	ND		20	μg/L	1	5/20/2022 10:47 PM
2,4,5-Trichlorophenol	ND		20	μg/L	1	5/20/2022 10:47 PM
2,4,6-Trichlorophenol	ND		20	μg/L	1	5/20/2022 10:47 PM
2,4-Dichlorophenol	ND		20	μg/L	1	5/20/2022 10:47 PM
2,4-Dimethylphenol	ND		20	μg/L	1	5/20/2022 10:47 PM
2,4-Dinitrophenol	ND		20	μg/L	1	5/20/2022 10:47 PM
2,4-Dinitrotoluene	ND		20	μg/L	1	5/20/2022 10:47 PM
2,6-Dinitrotoluene	ND		20	μg/L	1	5/20/2022 10:47 PM
2-Chloronaphthalene	ND		20	μg/L	1	5/20/2022 10:47 PM
2-Chlorophenol	ND		20	μg/L	1	5/20/2022 10:47 PM
2-Methylnaphthalene	ND		20	μg/L	1	5/20/2022 10:47 PM
2-Methylphenol	ND		20	μg/L	1	5/20/2022 10:47 PM
2-Nitroaniline	ND		20	μg/L	1	5/20/2022 10:47 PM
2-Nitrophenol	ND		20	μg/L	1	5/20/2022 10:47 PM
3&4-Methylphenol	ND		20	μg/L	1	5/20/2022 10:47 PM
3,3'-Dichlorobenzidine	ND		20	μg/L	1	5/20/2022 10:47 PM
3-Nitroaniline	ND		20	μg/L	1	5/20/2022 10:47 PM
4,6-Dinitro-2-methylphenol	ND		20	μg/L	1	5/20/2022 10:47 PM
4-Bromophenyl phenyl ether	ND		20	μg/L	1	5/20/2022 10:47 PM
4-Chloro-3-methylphenol	ND		20	μg/L	1	5/20/2022 10:47 PM
4-Chloroaniline	ND		20	μg/L	1	5/20/2022 10:47 PM
4-Chlorophenyl phenyl ether	ND		20	μg/L	1	5/20/2022 10:47 PM
4-Nitroaniline	ND		20	μg/L	1	5/20/2022 10:47 PM
4-Nitrophenol	ND		20	μg/L	1	5/20/2022 10:47 PM
Acenaphthene	ND		20	μg/L	1	5/20/2022 10:47 PM
Acenaphthylene	ND		20	μg/L	1	5/20/2022 10:47 PM
Acetophenone	ND		3.9	μg/L	1	5/20/2022 10:47 PM
Anthracene	ND		20	μg/L	1	5/20/2022 10:47 PM
Atrazine	ND		3.9	μg/L	1	5/20/2022 10:47 PM
Benzaldehyde	ND		3.9	μg/L	1	5/20/2022 10:47 PM
Benzo(a)anthracene	ND		20	μg/L	1	5/20/2022 10:47 PM
Benzo(a)pyrene	ND		20	μg/L	1	5/20/2022 10:47 PM
Benzo(b)fluoranthene	ND		20	μg/L	1	5/20/2022 10:47 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-10-20Lab ID: 22051511-10

Collection Date: 5/16/2022 03:53 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	ND		20	μg/L	1	5/20/2022 10:47 PM
Benzo(k)fluoranthene	ND		20	μg/L	1	5/20/2022 10:47 PM
Bis(2-chloroethoxy)methane	ND		20	μg/L	1	5/20/2022 10:47 PM
Bis(2-chloroethyl)ether	ND		20	μg/L	1	5/20/2022 10:47 PM
Bis(2-chloroisopropyl)ether	ND		20	μg/L	1	5/20/2022 10:47 PM
Bis(2-ethylhexyl)phthalate	ND		20	μg/L	1	5/20/2022 10:47 PM
Butyl benzyl phthalate	ND		20	μg/L	1	5/20/2022 10:47 PM
Caprolactam	ND		39	μg/L	1	5/20/2022 10:47 PM
Carbazole	ND		20	μg/L	1	5/20/2022 10:47 PM
Chrysene	ND		20	μg/L	1	5/20/2022 10:47 PM
Dibenzo(a,h)anthracene	ND		20	μg/L	1	5/20/2022 10:47 PM
Dibenzofuran	ND		20	μg/L	1	5/20/2022 10:47 PM
Diethyl phthalate	ND		20	μg/L	1	5/20/2022 10:47 PM
Dimethyl phthalate	ND		20	μg/L	1	5/20/2022 10:47 PM
Di-n-butyl phthalate	ND		20	μg/L	1	5/20/2022 10:47 PM
Di-n-octyl phthalate	ND		20	μg/L	1	5/20/2022 10:47 PM
Fluoranthene	ND		20	μg/L	1	5/20/2022 10:47 PM
Fluorene	ND		20	μg/L	1	5/20/2022 10:47 PM
Hexachlorobenzene	ND		20	μg/L	1	5/20/2022 10:47 PM
Hexachlorobutadiene	ND		20	μg/L	1	5/20/2022 10:47 PM
Hexachlorocyclopentadiene	ND		20	μg/L	1	5/20/2022 10:47 PM
Hexachloroethane	ND		20	μg/L	1	5/20/2022 10:47 PM
Indeno(1,2,3-cd)pyrene	ND		20	μg/L	1	5/20/2022 10:47 PM
Isophorone	ND		20	μg/L	1	5/20/2022 10:47 PM
Naphthalene	ND		20	μg/L	1	5/20/2022 10:47 PM
Nitrobenzene	ND		20	μg/L	1	5/20/2022 10:47 PM
N-Nitrosodi-n-propylamine	ND		20	μg/L	1	5/20/2022 10:47 PM
N-Nitrosodiphenylamine	ND		20	μg/L	1	5/20/2022 10:47 PM
Pentachlorophenol	ND		20	μg/L	1	5/20/2022 10:47 PM
Phenanthrene	ND		20	μg/L	1	5/20/2022 10:47 PM
Phenol	ND		20	μg/L	1	5/20/2022 10:47 PM
Pyrene	ND		20	μg/L	1	5/20/2022 10:47 PM
Surr: 2,4,6-Tribromophenol	75.5	i	27-83	%REC	1	5/20/2022 10:47 PM
Surr: 2-Fluorobiphenyl	73.2		26-79	%REC	1	5/20/2022 10:47 PM
Surr: 2-Fluorophenol	46.2		13-56	%REC	1	5/20/2022 10:47 PM
Surr: 4-Terphenyl-d14	86.2		43-106	%REC	1	5/20/2022 10:47 PM
Surr: Nitrobenzene-d5	72.0		29-80	%REC	1	5/20/2022 10:47 PM
Surr: Phenol-d6	30.6		10-35	%REC	1	5/20/2022 10:47 PM
			011/0000	_		

VOLATILE ORGANIC COMPOUNDS SW8260C Analyst: MF

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-10-20Lab ID: 22051511-10

Collection Date: 5/16/2022 03:53 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,1-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
1,1,2,2-Tetrachloroethane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
1,1,2-Trichlorotrifluoroethane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
1,1-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
1,1-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
1,2-Dibromo-3-chloropropane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
1,2-Dibromoethane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
1,2-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
2-Butanone	ND	5.0	μg/L	1	5/20/2022 02:51 AM
2-Hexanone	ND	5.0	μg/L	1	5/20/2022 02:51 AM
4-Methyl-2-pentanone	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Acetone	ND	10	μg/L	1	5/20/2022 02:51 AM
Benzene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Bromodichloromethane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Bromoform	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Bromomethane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Carbon disulfide	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Carbon tetrachloride	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Chlorobenzene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Chloroethane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Chloroform	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Chloromethane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
cis-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Cyclohexane	ND	2.0	μg/L	1	5/20/2022 02:51 AM
Dibromochloromethane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Ethylbenzene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Isopropylbenzene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Methyl acetate	ND	2.0		1	5/20/2022 02:51 AM
Methyl tert-butyl ether	ND	1.0		1	5/20/2022 02:51 AM
Methylcyclohexane	ND	1.0		1	5/20/2022 02:51 AM
Methylene chloride	ND	5.0		1	5/20/2022 02:51 AM
Styrene	ND	1.0	μg/L μg/L	1	5/20/2022 02:51 AM

Client: The Mannik & Smith Group, Inc.

Project: Former Mount Pleasant Landfill Work Order: 22051511

Sample ID: MW-10-20 **Lab ID:** 22051511-10

Collection Date: 5/16/2022 03:53 PM Matrix: GROUNDWATER

Analyses	Result Qu	Report ıal Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Toluene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
trans-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Trichloroethene	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Vinyl chloride	ND	1.0	μg/L	1	5/20/2022 02:51 AM
Xylenes, Total	ND	3.0	μg/L	1	5/20/2022 02:51 AM
Surr: 1,2-Dichloroethane-d4	98.4	75-120	%REC	1	5/20/2022 02:51 AM
Surr: 4-Bromofluorobenzene	87.4	80-110	%REC	1	5/20/2022 02:51 AM
Surr: Dibromofluoromethane	104	85-115	%REC	1	5/20/2022 02:51 AM
Surr: Toluene-d8	96.6	85-110	%REC	1	5/20/2022 02:51 AM

Date: 01-Jun-2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-14-20Lab ID: 22051511-11

Collection Date: 5/16/2022 10:55 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			SW8082	4	Prep: SW3511 5/20/22 16:59	Analyst: RM
Aroclor 1016	ND	ı	0.20	μg/L	1	5/21/2022 08:00 AM
Aroclor 1221	ND	ı	0.20	μg/L	1	5/21/2022 08:00 AM
Aroclor 1232	ND	ı	0.20	μg/L	1	5/21/2022 08:00 AM
Aroclor 1242	ND	ı	0.20	μg/L	1	5/21/2022 08:00 AM
Aroclor 1248	ND	ı	0.20	μg/L	1	5/21/2022 08:00 AM
Aroclor 1254	ND	ı	0.20	μg/L	1	5/21/2022 08:00 AM
Aroclor 1260	ND	ı	0.20	μg/L	1	5/21/2022 08:00 AM
Aroclor 1262	ND	ı	0.20	μg/L	1	5/21/2022 08:00 AM
Aroclor 1268	ND	ı	0.20	μg/L	1	5/21/2022 08:00 AM
PCBs, Total	ND	ı	0.20	μg/L	1	5/21/2022 08:00 AM
Surr: Decachlorobiphenyl	83.1	,	42-153	%REC	1	5/21/2022 08:00 AM
Surr: Tetrachloro-m-xylene	83.6	3	48-127	%REC	1	5/21/2022 08:00 AM
MERCURY BY CVAA (DISSOLVED)			SW7470	Δ.	Prep: SW7470 5/19/22 11:03	Analyst: EJC
Mercury	ND	١	0.00020	mg/L	1	5/19/2022 12:52 PM
METALS BY ICP-MS (DISSOLVED)			SW6020E	3	Prep: SW3015A 5/23/22 17:14	Analyst: STP
Aluminum	0.029)	0.010	mg/L	1	5/23/2022 07:34 PM
Antimony	ND	ı	0.0050	mg/L	1	5/23/2022 07:34 PM
Arsenic	ND)	0.0050	mg/L	1	5/23/2022 07:34 PM
Barium	0.14		0.0050	mg/L	1	5/23/2022 07:34 PM
Beryllium	ND)	0.0020	mg/L	1	5/23/2022 07:34 PM
Boron	0.11		0.020	mg/L	1	5/23/2022 07:34 PM
Cadmium	ND)	0.0020	mg/L	1	5/23/2022 07:34 PM
Chromium	ND)	0.0050	mg/L	1	5/23/2022 07:34 PM
Copper	ND)	0.0050	mg/L	1	5/23/2022 07:34 PM
Lead	ND)	0.0050	mg/L	1	5/23/2022 07:34 PM
Nickel	ND)	0.0050	mg/L	1	5/23/2022 07:34 PM
Selenium	ND)	0.0050	mg/L	1	5/23/2022 07:34 PM
Silver	ND)	0.0050	mg/L	1	5/23/2022 07:34 PM
Thallium	ND)	0.0050	mg/L	1	5/23/2022 07:34 PM
Zinc	ND)	0.010	mg/L	1	5/25/2022 05:03 PM
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/23/22 17:15	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	ND	ı	5.2	ng/L	1	5/25/2022 08:40 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND	ı	5.2	ng/L	1	5/25/2022 08:40 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND	ı	5.2	ng/L	1	5/25/2022 08:40 AM
Perfluorobutanesulfonic Acid (PFBS)	7.2	!	5.2	ng/L	1	5/25/2022 08:40 AM
Perfluorobutanoic Acid (PFBA)	30)	5.2	ng/L	1	5/25/2022 08:40 AM
Perfluorodecanesulfonic Acid (PFDS)	ND	ı	5.2	ng/L	1	5/25/2022 08:40 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-14-20Lab ID: 22051511-11

Collection Date: 5/16/2022 10:55 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Perfluorodecanoic Acid (PFDA)	ND		5.2	ng/L	1	5/25/2022 08:40 AM
Perfluorododecanoic Acid (PFDoA)	ND		5.2	ng/L	1	5/25/2022 08:40 AM
Perfluoroheptanesulfonic Acid (PFHpS)	ND		5.2	ng/L	1	5/25/2022 08:40 AM
Perfluoroheptanoic Acid (PFHpA)	16		5.2	ng/L	1	5/25/2022 08:40 AM
Perfluorohexanesulfonic Acid (PFHxS)	28		5.2	ng/L	1	5/25/2022 08:40 AM
Perfluorohexanoic Acid (PFHxA)	13		5.2	ng/L	1	5/25/2022 08:40 AM
Perfluorononanesulfonic Acid (PFNS)	ND		5.2	ng/L	1	5/25/2022 08:40 AM
Perfluorononanoic Acid (PFNA)	ND		5.2	ng/L	1	5/25/2022 08:40 AM
Perfluorooctanesulfonamide (PFOSA)	ND		5.2	ng/L	1	5/25/2022 08:40 AM
Perfluorooctanesulfonic Acid (PFOS)	11		2.1	ng/L	1	5/25/2022 08:40 AM
Perfluorooctanoic Acid (PFOA)	57		2.1	ng/L	1	5/25/2022 08:40 AM
Perfluoropentanesulfonic Acid (PFPeS)	6.5		5.2	ng/L	1	5/25/2022 08:40 AM
Perfluoropentanoic Acid (PFPeA)	10		5.2	ng/L	1	5/25/2022 08:40 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		5.2	ng/L	1	5/25/2022 08:40 AM
Perfluorotridecanoic Acid (PFTriA)	ND		5.2	ng/L	1	5/25/2022 08:40 AM
Perfluoroundecanoic Acid (PFUnA)	ND		5.2	ng/L	1	5/25/2022 08:40 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		5.2	ng/L	1	5/25/2022 08:40 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		5.2	ng/L	1	5/25/2022 08:40 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		5.2	ng/L	1	5/25/2022 08:40 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		5.2	ng/L	1	5/25/2022 08:40 AM
11CI-Pf3OUdS	ND		5.2	ng/L	1	5/25/2022 08:40 AM
9CI-PF3ONS	ND		5.2	ng/L	1	5/25/2022 08:40 AM
Surr: 13C2-FtS 4:2	325	S	50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C2-FtS 6:2	195	S	50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C2-FtS 8:2	98.9		50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C2-PFDA	88.6		50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C2-PFDoA	83.5		50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C2-PFHxA	119		50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C2-PFTeA	90.7		50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C2-PFUnA	90.6		50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C3-HFPO-DA	108		50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C3-PFBS	102		50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C4-PFBA	118		50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C4-PFHpA	101		50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C4-PFOA	102		50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C4-PFOS	99.8		50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C5-PFNA	111		50-150	%REC	1	5/25/2022 08:40 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order:22051511Sample ID:MW-14-20Lab ID:22051511-11

Collection Date: 5/16/2022 10:55 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C5-PFPeA	106		50-150	%REC	1	5/25/2022 08:40 AM
Surr: 13C8-FOSA	97.4	!	50-150	%REC	1	5/25/2022 08:40 AM
Surr: 1802-PFHxS	112	1	50-150	%REC	1	5/25/2022 08:40 AM
Surr: d5-N-EtFOSAA	91.9)	50-150	%REC	1	5/25/2022 08:40 AM
Surr: d3-N-MeFOSAA	70.9)	50-150	%REC	1	5/25/2022 08:40 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8	270D	Prep: SW3510 5/20/22 14:40	Analyst: EE
1,1`-Biphenyl	ND		21	μg/L	1	5/20/2022 11:08 PM
2,4,5-Trichlorophenol	ND		21	μg/L	1	5/20/2022 11:08 PM
2,4,6-Trichlorophenol	ND		21	μg/L	1	5/20/2022 11:08 PM
2,4-Dichlorophenol	ND		21	μg/L	1	5/20/2022 11:08 PM
2,4-Dimethylphenol	ND		21	μg/L	1	5/20/2022 11:08 PM
2,4-Dinitrophenol	ND		21	μg/L	1	5/20/2022 11:08 PM
2,4-Dinitrotoluene	ND		21	μg/L	1	5/20/2022 11:08 PM
2,6-Dinitrotoluene	ND		21	μg/L	1	5/20/2022 11:08 PM
2-Chloronaphthalene	ND		21	μg/L	1	5/20/2022 11:08 PM
2-Chlorophenol	ND		21	μg/L	1	5/20/2022 11:08 PM
2-Methylnaphthalene	ND		21	μg/L	1	5/20/2022 11:08 PM
2-Methylphenol	ND		21	μg/L	1	5/20/2022 11:08 PM
2-Nitroaniline	ND		21	μg/L	1	5/20/2022 11:08 PM
2-Nitrophenol	ND		21	μg/L	1	5/20/2022 11:08 PM
3&4-Methylphenol	ND		21	μg/L	1	5/20/2022 11:08 PM
3,3'-Dichlorobenzidine	ND		21	μg/L	1	5/20/2022 11:08 PM
3-Nitroaniline	ND		21	μg/L	1	5/20/2022 11:08 PM
4,6-Dinitro-2-methylphenol	ND		21	μg/L	1	5/20/2022 11:08 PM
4-Bromophenyl phenyl ether	ND	1	21	μg/L	1	5/20/2022 11:08 PM
4-Chloro-3-methylphenol	ND	1	21	μg/L	1	5/20/2022 11:08 PM
4-Chloroaniline	ND	1	21	μg/L	1	5/20/2022 11:08 PM
4-Chlorophenyl phenyl ether	ND	1	21	μg/L	1	5/20/2022 11:08 PM
4-Nitroaniline	ND	1	21	μg/L	1	5/20/2022 11:08 PM
4-Nitrophenol	ND	1	21	μg/L	1	5/20/2022 11:08 PM
Acenaphthene	ND	1	21	μg/L	1	5/20/2022 11:08 PM
Acenaphthylene	ND		21	μg/L	1	5/20/2022 11:08 PM
Acetophenone	ND		4.2	μg/L	1	5/20/2022 11:08 PM
Anthracene	ND		21	μg/L	1	5/20/2022 11:08 PM
Atrazine	ND		4.2	μg/L	1	5/20/2022 11:08 PM
Benzaldehyde	ND		4.2	μg/L	1	5/20/2022 11:08 PM
Benzo(a)anthracene	ND		21	μg/L	1	5/20/2022 11:08 PM
Benzo(a)pyrene	ND		21	μg/L	1	5/20/2022 11:08 PM
Benzo(b)fluoranthene	ND		21	μg/L	1	5/20/2022 11:08 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-14-20Lab ID: 22051511-11

Collection Date: 5/16/2022 10:55 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	ND		21	μg/L	1	5/20/2022 11:08 PM
Benzo(k)fluoranthene	ND		21	μg/L	1	5/20/2022 11:08 PM
Bis(2-chloroethoxy)methane	ND		21	μg/L	1	5/20/2022 11:08 PM
Bis(2-chloroethyl)ether	ND		21	μg/L	1	5/20/2022 11:08 PM
Bis(2-chloroisopropyl)ether	ND		21	μg/L	1	5/20/2022 11:08 PM
Bis(2-ethylhexyl)phthalate	ND		21	μg/L	1	5/20/2022 11:08 PM
Butyl benzyl phthalate	ND		21	μg/L	1	5/20/2022 11:08 PM
Caprolactam	ND		42	μg/L	1	5/20/2022 11:08 PM
Carbazole	ND		21	μg/L	1	5/20/2022 11:08 PM
Chrysene	ND		21	μg/L	1	5/20/2022 11:08 PM
Dibenzo(a,h)anthracene	ND		21	μg/L	1	5/20/2022 11:08 PM
Dibenzofuran	ND		21	μg/L	1	5/20/2022 11:08 PM
Diethyl phthalate	ND		21	μg/L	1	5/20/2022 11:08 PM
Dimethyl phthalate	ND		21	μg/L	1	5/20/2022 11:08 PM
Di-n-butyl phthalate	ND		21	μg/L	1	5/20/2022 11:08 PM
Di-n-octyl phthalate	ND		21	μg/L	1	5/20/2022 11:08 PM
Fluoranthene	ND		21	μg/L	1	5/20/2022 11:08 PM
Fluorene	ND		21	μg/L	1	5/20/2022 11:08 PM
Hexachlorobenzene	ND	1	21	μg/L	1	5/20/2022 11:08 PM
Hexachlorobutadiene	ND	1	21	μg/L	1	5/20/2022 11:08 PM
Hexachlorocyclopentadiene	ND	1	21	μg/L	1	5/20/2022 11:08 PM
Hexachloroethane	ND	1	21	μg/L	1	5/20/2022 11:08 PM
Indeno(1,2,3-cd)pyrene	ND	1	21	μg/L	1	5/20/2022 11:08 PM
Isophorone	ND	1	21	μg/L	1	5/20/2022 11:08 PM
Naphthalene	ND	1	21	μg/L	1	5/20/2022 11:08 PM
Nitrobenzene	ND		21	μg/L	1	5/20/2022 11:08 PM
N-Nitrosodi-n-propylamine	ND		21	μg/L	1	5/20/2022 11:08 PM
N-Nitrosodiphenylamine	ND		21	μg/L	1	5/20/2022 11:08 PM
Pentachlorophenol	ND		21	μg/L	1	5/20/2022 11:08 PM
Phenanthrene	ND		21	μg/L	1	5/20/2022 11:08 PM
Phenol	ND		21	μg/L	1	5/20/2022 11:08 PM
Pyrene	ND		21	μg/L	1	5/20/2022 11:08 PM
Surr: 2,4,6-Tribromophenol	77.7	•	27-83	%REC	1	5/20/2022 11:08 PM
Surr: 2-Fluorobiphenyl	71.8	}	26-79	%REC	1	5/20/2022 11:08 PM
Surr: 2-Fluorophenol	42.7	•	13-56	%REC	1	5/20/2022 11:08 PM
Surr: 4-Terphenyl-d14	89.0)	43-106	%REC	1	5/20/2022 11:08 PM
Surr: Nitrobenzene-d5	67.4	!	29-80	%REC	1	5/20/2022 11:08 PM
Surr: Phenol-d6	28.7	•	10-35	%REC	1	5/20/2022 11:08 PM
VOL 4711 7 000 41110 001400111100			011/0000			

VOLATILE ORGANIC COMPOUNDS SW8260C Analyst: MF

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-14-20Lab ID: 22051511-11

Collection Date: 5/16/2022 10:55 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result Qu	Report ual Limit	Units	Dilution Factor	Date Analyzed
1,1,1-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
1,1,2,2-Tetrachloroethane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
1,1,2-Trichlorotrifluoroethane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
1,1-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
1,1-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
1,2-Dibromo-3-chloropropane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
1,2-Dibromoethane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
1,2-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
2-Butanone	ND	5.0	μg/L	1	5/20/2022 03:10 AM
2-Hexanone	ND	5.0	μg/L	1	5/20/2022 03:10 AM
4-Methyl-2-pentanone	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Acetone	ND	10	μg/L	1	5/20/2022 03:10 AM
Benzene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Bromodichloromethane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Bromoform	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Bromomethane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Carbon disulfide	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Carbon tetrachloride	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Chlorobenzene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Chloroethane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Chloroform	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Chloromethane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
cis-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Cyclohexane	ND	2.0	μg/L	1	5/20/2022 03:10 AM
Dibromochloromethane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Ethylbenzene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Isopropylbenzene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Methyl acetate	ND	2.0	μg/L	1	5/20/2022 03:10 AM
Methyl tert-butyl ether	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Methylcyclohexane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Methylene chloride	ND	5.0	μg/L	1	5/20/2022 03:10 AM
Styrene	ND	1.0	μg/L μg/L	1	5/20/2022 03:10 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-14-20Lab ID: 22051511-11

Collection Date: 5/16/2022 10:55 AM Matrix: GROUNDWATER

Analyses	Result Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Toluene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
trans-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Trichloroethene	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Vinyl chloride	ND	1.0	μg/L	1	5/20/2022 03:10 AM
Xylenes, Total	ND	3.0	μg/L	1	5/20/2022 03:10 AM
Surr: 1,2-Dichloroethane-d4	101	75-120	%REC	1	5/20/2022 03:10 AM
Surr: 4-Bromofluorobenzene	91.7	80-110	%REC	1	5/20/2022 03:10 AM
Surr: Dibromofluoromethane	105	85-115	%REC	1	5/20/2022 03:10 AM
Surr: Toluene-d8	100	85-110	%REC	1	5/20/2022 03:10 AM

Date: 01-Jun-2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order:22051511Sample ID:MW-15-20Lab ID:22051511-12

Collection Date: 5/16/2022 10:25 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			SW8082	4	Prep: SW3511 5/20/22 16:59	Analyst: RM
Aroclor 1016	ND		0.20	μg/L	1	5/21/2022 08:12 AM
Aroclor 1221	ND		0.20	μg/L	1	5/21/2022 08:12 AM
Aroclor 1232	ND		0.20	μg/L	1	5/21/2022 08:12 AM
Aroclor 1242	ND		0.20	μg/L	1	5/21/2022 08:12 AM
Aroclor 1248	ND		0.20	μg/L	1	5/21/2022 08:12 AM
Aroclor 1254	ND		0.20	μg/L	1	5/21/2022 08:12 AM
Aroclor 1260	ND		0.20	μg/L	1	5/21/2022 08:12 AM
Aroclor 1262	ND		0.20	μg/L	1	5/21/2022 08:12 AM
Aroclor 1268	ND		0.20	μg/L	1	5/21/2022 08:12 AM
PCBs, Total	ND		0.20	μg/L	1	5/21/2022 08:12 AM
Surr: Decachlorobiphenyl	98.1		42-153	%REC	1	5/21/2022 08:12 AM
Surr: Tetrachloro-m-xylene	91.7	•	48-127	%REC	1	5/21/2022 08:12 AM
MERCURY BY CVAA (DISSOLVED)			SW7470	4	Prep: SW7470 5/19/22 11:03	Analyst: EJC
Mercury	ND		0.00020	mg/L	1	5/19/2022 12:54 PM
METALS BY ICP-MS (DISSOLVED)			SW6020E	3	Prep: SW3015A 5/23/22 17:14	Analyst: STP
Aluminum	0.019		0.010	mg/L	1	5/23/2022 07:35 PM
Antimony	ND		0.0050	mg/L	1	5/23/2022 07:35 PM
Arsenic	ND		0.0050	mg/L	1	5/23/2022 07:35 PM
Barium	0.18	}	0.0050	mg/L	1	5/23/2022 07:35 PM
Beryllium	ND		0.0020	mg/L	1	5/23/2022 07:35 PM
Boron	0.094		0.020	mg/L	1	5/23/2022 07:35 PM
Cadmium	ND		0.0020	mg/L	1	5/23/2022 07:35 PM
Chromium	ND		0.0050	mg/L	1	5/23/2022 07:35 PM
Copper	ND		0.0050	mg/L	1	5/23/2022 07:35 PM
Lead	ND		0.0050	mg/L	1	5/23/2022 07:35 PM
Nickel	ND		0.0050	mg/L	1	5/23/2022 07:35 PM
Selenium	ND		0.0050	mg/L	1	5/23/2022 07:35 PM
Silver	ND		0.0050	mg/L	1	5/23/2022 07:35 PM
Thallium	ND		0.0050	mg/L	1	5/23/2022 07:35 PM
Zinc	ND		0.010	mg/L	1	5/23/2022 07:35 PM
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/23/22 17:15	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	ND		4.7	ng/L	1	5/25/2022 08:48 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND		4.7	ng/L	1	5/25/2022 08:48 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND		4.7		1	5/25/2022 08:48 AM
Perfluorobutanesulfonic Acid (PFBS)	9.3		4.7	ng/L	1	5/25/2022 08:48 AM
Perfluorobutanoic Acid (PFBA)	40)	4.7	ng/L	1	5/25/2022 08:48 AM
Perfluorodecanesulfonic Acid (PFDS)	ND		4.7	ng/L	1	5/25/2022 08:48 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-15-20Lab ID: 22051511-12

Collection Date: 5/16/2022 10:25 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Perfluorodecanoic Acid (PFDA)	ND		4.7	ng/L	1	5/25/2022 08:48 AM
Perfluorododecanoic Acid (PFDoA)	ND		4.7	ng/L	1	5/25/2022 08:48 AM
Perfluoroheptanesulfonic Acid (PFHpS)	ND		4.7	ng/L	1	5/25/2022 08:48 AM
Perfluoroheptanoic Acid (PFHpA)	12		4.7	ng/L	1	5/25/2022 08:48 AM
Perfluorohexanesulfonic Acid (PFHxS)	32		4.7	ng/L	1	5/25/2022 08:48 AM
Perfluorohexanoic Acid (PFHxA)	13		4.7	ng/L	1	5/25/2022 08:48 AM
Perfluorononanesulfonic Acid (PFNS)	ND		4.7	ng/L	1	5/25/2022 08:48 AM
Perfluorononanoic Acid (PFNA)	ND		4.7	ng/L	1	5/25/2022 08:48 AM
Perfluorooctanesulfonamide (PFOSA)	ND		4.7	ng/L	1	5/25/2022 08:48 AM
Perfluorooctanesulfonic Acid (PFOS)	7.1		1.9	ng/L	1	5/25/2022 08:48 AM
Perfluorooctanoic Acid (PFOA)	39		1.9	ng/L	1	5/25/2022 08:48 AM
Perfluoropentanesulfonic Acid (PFPeS)	5.5		4.7	ng/L	1	5/25/2022 08:48 AM
Perfluoropentanoic Acid (PFPeA)	17		4.7	ng/L	1	5/25/2022 08:48 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		4.7	ng/L	1	5/25/2022 08:48 AM
Perfluorotridecanoic Acid (PFTriA)	ND		4.7	ng/L	1	5/25/2022 08:48 AM
Perfluoroundecanoic Acid (PFUnA)	ND		4.7	ng/L	1	5/25/2022 08:48 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		4.7	ng/L	1	5/25/2022 08:48 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		4.7	ng/L	1	5/25/2022 08:48 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		4.7	ng/L	1	5/25/2022 08:48 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		4.7	ng/L	1	5/25/2022 08:48 AM
11CI-Pf3OUdS	ND		4.7	ng/L	1	5/25/2022 08:48 AM
9CI-PF3ONS	ND		4.7	ng/L	1	5/25/2022 08:48 AM
Surr: 13C2-FtS 4:2	206	S	50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C2-FtS 6:2	134		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C2-FtS 8:2	86.0		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C2-PFDA	84.3		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C2-PFDoA	76.7		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C2-PFHxA	114		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C2-PFTeA	70.3		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C2-PFUnA	91.2		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C3-HFPO-DA	99.6		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C3-PFBS	103		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C4-PFBA	128		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C4-PFHpA	103		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C4-PFOA	106		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C4-PFOS	97.2		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C5-PFNA	126		50-150	%REC	1	5/25/2022 08:48 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-15-20Lab ID: 22051511-12

Collection Date: 5/16/2022 10:25 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C5-PFPeA	113		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 13C8-FOSA	101		50-150	%REC	1	5/25/2022 08:48 AM
Surr: 1802-PFHxS	130	1	50-150	%REC	1	5/25/2022 08:48 AM
Surr: d5-N-EtFOSAA	87.0	1	50-150	%REC	1	5/25/2022 08:48 AM
Surr: d3-N-MeFOSAA	61.5		50-150	%REC	1	5/25/2022 08:48 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8	270D	Prep: SW3510 5/20/22 14:40	Analyst: EE
1,1`-Biphenyl	ND		19	μg/L	1	5/20/2022 11:28 PM
2,4,5-Trichlorophenol	ND		19	μg/L	1	5/20/2022 11:28 PM
2,4,6-Trichlorophenol	ND		19	μg/L	1	5/20/2022 11:28 PM
2,4-Dichlorophenol	ND		19	μg/L	1	5/20/2022 11:28 PM
2,4-Dimethylphenol	ND		19	μg/L	1	5/20/2022 11:28 PM
2,4-Dinitrophenol	ND		19	μg/L	1	5/20/2022 11:28 PM
2,4-Dinitrotoluene	ND		19	μg/L	1	5/20/2022 11:28 PM
2,6-Dinitrotoluene	ND		19	μg/L	1	5/20/2022 11:28 PM
2-Chloronaphthalene	ND		19	μg/L	1	5/20/2022 11:28 PM
2-Chlorophenol	ND		19	μg/L	1	5/20/2022 11:28 PM
2-Methylnaphthalene	ND		19	μg/L	1	5/20/2022 11:28 PM
2-Methylphenol	ND		19	μg/L	1	5/20/2022 11:28 PM
2-Nitroaniline	ND		19	μg/L	1	5/20/2022 11:28 PM
2-Nitrophenol	ND		19	μg/L	1	5/20/2022 11:28 PM
3&4-Methylphenol	ND		19	μg/L	1	5/20/2022 11:28 PM
3,3'-Dichlorobenzidine	ND		19	μg/L	1	5/20/2022 11:28 PM
3-Nitroaniline	ND		19	μg/L	1	5/20/2022 11:28 PM
4,6-Dinitro-2-methylphenol	ND		19	μg/L	1	5/20/2022 11:28 PM
4-Bromophenyl phenyl ether	ND		19	μg/L	1	5/20/2022 11:28 PM
4-Chloro-3-methylphenol	ND		19	μg/L	1	5/20/2022 11:28 PM
4-Chloroaniline	ND		19	μg/L	1	5/20/2022 11:28 PM
4-Chlorophenyl phenyl ether	ND		19	μg/L	1	5/20/2022 11:28 PM
4-Nitroaniline	ND		19	μg/L	1	5/20/2022 11:28 PM
4-Nitrophenol	ND		19	μg/L	1	5/20/2022 11:28 PM
Acenaphthene	ND		19	μg/L	1	5/20/2022 11:28 PM
Acenaphthylene	ND		19	μg/L	1	5/20/2022 11:28 PM
Acetophenone	ND		3.8	μg/L	1	5/20/2022 11:28 PM
Anthracene	ND		19	μg/L	1	5/20/2022 11:28 PM
Atrazine	ND		3.8	μg/L	1	5/20/2022 11:28 PM
Benzaldehyde	ND		3.8	μg/L	1	5/20/2022 11:28 PM
Benzo(a)anthracene	ND		19	μg/L	1	5/20/2022 11:28 PM
Benzo(a)pyrene	ND		19	μg/L	1	5/20/2022 11:28 PM
Benzo(b)fluoranthene	ND		19	μg/L	1	5/20/2022 11:28 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-15-20Lab ID: 22051511-12

Collection Date: 5/16/2022 10:25 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	ND		19	μg/L	1	5/20/2022 11:28 PM
Benzo(k)fluoranthene	ND		19	μg/L	1	5/20/2022 11:28 PM
Bis(2-chloroethoxy)methane	ND		19	μg/L	1	5/20/2022 11:28 PM
Bis(2-chloroethyl)ether	ND		19	μg/L	1	5/20/2022 11:28 PM
Bis(2-chloroisopropyl)ether	ND		19	μg/L	1	5/20/2022 11:28 PM
Bis(2-ethylhexyl)phthalate	ND		19	μg/L	1	5/20/2022 11:28 PM
Butyl benzyl phthalate	ND		19	μg/L	1	5/20/2022 11:28 PM
Caprolactam	ND		38	μg/L	1	5/20/2022 11:28 PM
Carbazole	ND		19	μg/L	1	5/20/2022 11:28 PM
Chrysene	ND		19	μg/L	1	5/20/2022 11:28 PM
Dibenzo(a,h)anthracene	ND		19	μg/L	1	5/20/2022 11:28 PM
Dibenzofuran	ND		19	μg/L	1	5/20/2022 11:28 PM
Diethyl phthalate	ND		19	μg/L	1	5/20/2022 11:28 PM
Dimethyl phthalate	ND		19	μg/L	1	5/20/2022 11:28 PM
Di-n-butyl phthalate	ND		19	μg/L	1	5/20/2022 11:28 PM
Di-n-octyl phthalate	ND		19	μg/L	1	5/20/2022 11:28 PM
Fluoranthene	ND		19	μg/L	1	5/20/2022 11:28 PM
Fluorene	ND		19	μg/L	1	5/20/2022 11:28 PM
Hexachlorobenzene	ND		19	μg/L	1	5/20/2022 11:28 PM
Hexachlorobutadiene	ND		19	μg/L	1	5/20/2022 11:28 PM
Hexachlorocyclopentadiene	ND		19	μg/L	1	5/20/2022 11:28 PM
Hexachloroethane	ND		19	μg/L	1	5/20/2022 11:28 PM
Indeno(1,2,3-cd)pyrene	ND		19	μg/L	1	5/20/2022 11:28 PM
Isophorone	ND		19	μg/L	1	5/20/2022 11:28 PM
Naphthalene	ND		19	μg/L	1	5/20/2022 11:28 PM
Nitrobenzene	ND		19	μg/L	1	5/20/2022 11:28 PM
N-Nitrosodi-n-propylamine	ND		19	μg/L	1	5/20/2022 11:28 PM
N-Nitrosodiphenylamine	ND		19	μg/L	1	5/20/2022 11:28 PM
Pentachlorophenol	ND		19	μg/L	1	5/20/2022 11:28 PM
Phenanthrene	ND		19	μg/L	1	5/20/2022 11:28 PM
Phenol	ND		19	μg/L	1	5/20/2022 11:28 PM
Pyrene	ND		19	μg/L	1	5/20/2022 11:28 PM
Surr: 2,4,6-Tribromophenol	73.0)	27-83	%REC	1	5/20/2022 11:28 PM
Surr: 2-Fluorobiphenyl	73.0		26-79	%REC	1	5/20/2022 11:28 PM
Surr: 2-Fluorophenol	45.2		13-56	%REC	1	5/20/2022 11:28 PM
Surr: 4-Terphenyl-d14	88.1		43-106	%REC	1	5/20/2022 11:28 PM
Surr: Nitrobenzene-d5	69.6		29-80	%REC	1	5/20/2022 11:28 PM
Surr: Phenol-d6	30.2		10-35	%REC	1	5/20/2022 11:28 PM
			01110000	_		

VOLATILE ORGANIC COMPOUNDS SW8260C Analyst: MF

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-15-20Lab ID: 22051511-12

Collection Date: 5/16/2022 10:25 AM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,1-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
1,1,2,2-Tetrachloroethane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
1,1,2-Trichlorotrifluoroethane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
1,1-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
1,1-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
1,2-Dibromo-3-chloropropane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
1,2-Dibromoethane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
1,2-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
2-Butanone	ND	5.0	μg/L	1	5/20/2022 03:28 AM
2-Hexanone	ND	5.0	μg/L	1	5/20/2022 03:28 AM
4-Methyl-2-pentanone	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Acetone	ND	10	μg/L	1	5/20/2022 03:28 AM
Benzene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Bromodichloromethane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Bromoform	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Bromomethane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Carbon disulfide	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Carbon tetrachloride	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Chlorobenzene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Chloroethane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Chloroform	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Chloromethane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
cis-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Cyclohexane	ND	2.0	μg/L	1	5/20/2022 03:28 AM
Dibromochloromethane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Ethylbenzene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Isopropylbenzene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Methyl acetate	ND	2.0	μg/L	1	5/20/2022 03:28 AM
Methyl tert-butyl ether	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Methylcyclohexane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Methylene chloride	ND	5.0	μg/L	1	5/20/2022 03:28 AM
Styrene	ND	1.0	μg/L	1	5/20/2022 03:28 AM

Client: The Mannik & Smith Group, Inc.

Project: Former Mount Pleasant Landfill **Work Order:** 22051511

Sample ID: MW-15-20 **Lab ID:** 22051511-12

Collection Date: 5/16/2022 10:25 AM Matrix: GROUNDWATER

Analyses	Result Qu	Report al Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Toluene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
trans-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Trichloroethene	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Vinyl chloride	ND	1.0	μg/L	1	5/20/2022 03:28 AM
Xylenes, Total	ND	3.0	μg/L	1	5/20/2022 03:28 AM
Surr: 1,2-Dichloroethane-d4	99.5	75-120	%REC	1	5/20/2022 03:28 AM
Surr: 4-Bromofluorobenzene	94.2	80-110	%REC	1	5/20/2022 03:28 AM
Surr: Dibromofluoromethane	103	85-115	%REC	1	5/20/2022 03:28 AM
Surr: Toluene-d8	101	85-110	%REC	1	5/20/2022 03:28 AM

Date: 01-Jun-2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:Field BlankLab ID: 22051511-13

Collection Date: 5/16/2022 03:45 PM Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/23/22 17:15	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluorobutanesulfonic Acid (PFBS)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluorobutanoic Acid (PFBA)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluorodecanesulfonic Acid (PFDS)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluorodecanoic Acid (PFDA)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluorododecanoic Acid (PFDoA)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluoroheptanesulfonic Acid (PFHpS)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluoroheptanoic Acid (PFHpA)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluorohexanesulfonic Acid (PFHxS)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluorohexanoic Acid (PFHxA)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluorononanesulfonic Acid (PFNS)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluorononanoic Acid (PFNA)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluorooctanesulfonamide (PFOSA)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluorooctanesulfonic Acid (PFOS)	ND		2.0	ng/L	1	5/25/2022 08:56 AM
Perfluorooctanoic Acid (PFOA)	ND		2.0	ng/L	1	5/25/2022 08:56 AM
Perfluoropentanesulfonic Acid (PFPeS)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluoropentanoic Acid (PFPeA)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluorotridecanoic Acid (PFTriA)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Perfluoroundecanoic Acid (PFUnA)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		4.9	ng/L	1	5/25/2022 08:56 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		4.9	ng/L	1	5/25/2022 08:56 AM
11CI-Pf3OUdS	ND		4.9	ng/L	1	5/25/2022 08:56 AM
9CI-PF3ONS	ND		4.9	ng/L	1	5/25/2022 08:56 AM
Surr: 13C2-FtS 4:2	94.9)	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C2-FtS 6:2	96.8	!	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C2-FtS 8:2	98.2		50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C2-PFDA	96.7	•	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C2-PFDoA	95.8	!	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C2-PFHxA	108	!	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C2-PFTeA	99.3	!	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C2-PFUnA	92.6	;	50-150	%REC	1	5/25/2022 08:56 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:Field BlankLab ID: 22051511-13

Collection Date: 5/16/2022 03:45 PM Matrix: GROUNDWATER

nalyses	Result Qu	Report ual Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C3-HFPO-DA	100	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C3-PFBS	102	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C4-PFBA	108	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C4-PFHpA	89.5	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C4-PFOA	93.7	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C4-PFOS	103	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C5-PFNA	89.0	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C5-PFPeA	95.1	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 13C8-FOSA	73.9	50-150	%REC	1	5/25/2022 08:56 AM
Surr: 1802-PFHxS	84.1	50-150	%REC	1	5/25/2022 08:56 AM
Surr: d5-N-EtFOSAA	70.2	50-150	%REC	1	5/25/2022 08:56 AM
Surr: d3-N-MeFOSAA	74.4	50-150	%REC	1	5/25/2022 08:56 AM

Date: 01-Jun-2022

Collection Date: 5/16/2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order:22051511Sample ID:DUPLab ID:22051511-14

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			SW8082	4	Prep: SW3511 5/20/22 16:59	Analyst: RM
Aroclor 1016	ND		0.20	μg/L	1	5/21/2022 08:25 AM
Aroclor 1221	ND		0.20	μg/L	1	5/21/2022 08:25 AM
Aroclor 1232	ND		0.20	μg/L	1	5/21/2022 08:25 AM
Aroclor 1242	ND		0.20	μg/L	1	5/21/2022 08:25 AM
Aroclor 1248	ND		0.20	μg/L	1	5/21/2022 08:25 AM
Aroclor 1254	ND		0.20	μg/L	1	5/21/2022 08:25 AM
Aroclor 1260	ND		0.20	μg/L	1	5/21/2022 08:25 AM
Aroclor 1262	ND		0.20	μg/L	1	5/21/2022 08:25 AM
Aroclor 1268	ND		0.20	μg/L	1	5/21/2022 08:25 AM
PCBs, Total	ND		0.20	μg/L	1	5/21/2022 08:25 AM
Surr: Decachlorobiphenyl	97.0	1	42-153	%REC	1	5/21/2022 08:25 AM
Surr: Tetrachloro-m-xylene	92.2		48-127	%REC	1	5/21/2022 08:25 AM
MERCURY BY CVAA (DISSOLVED)			SW7470	A	Prep: SW7470 5/19/22 11:03	Analyst: EJC
Mercury	ND		0.00020	mg/L	1	5/19/2022 12:56 PM
METALS BY ICP-MS (DISSOLVED)			SW6020E	3	Prep: SW3015A 5/23/22 17:14	Analyst: STP
Aluminum	0.034		0.010	mg/L	1	5/23/2022 07:40 PM
Antimony	ND		0.0050	mg/L	1	5/23/2022 07:40 PM
Arsenic	0.0098		0.0050	mg/L	1	5/23/2022 07:40 PM
Barium	0.29		0.0050	mg/L	1	5/23/2022 07:40 PM
Beryllium	ND		0.0020	mg/L	1	5/23/2022 07:40 PM
Boron	0.11		0.020	mg/L	1	5/23/2022 07:40 PM
Cadmium	ND		0.0020	mg/L	1	5/23/2022 07:40 PM
Chromium	ND		0.0050	mg/L	1	5/23/2022 07:40 PM
Copper	ND		0.0050	mg/L	1	5/23/2022 07:40 PM
Lead	ND		0.0050	mg/L	1	5/23/2022 07:40 PM
Nickel	ND		0.0050	mg/L	1	5/23/2022 07:40 PM
Selenium	ND		0.0050	mg/L	1	5/23/2022 07:40 PM
Silver	ND		0.0050	mg/L	1	5/23/2022 07:40 PM
Thallium	ND		0.0050	mg/L	1	5/23/2022 07:40 PM
Zinc	ND		0.010	mg/L	1	5/25/2022 05:05 PM
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/23/22 17:15	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluorobutanesulfonic Acid (PFBS)	5.8		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluorobutanoic Acid (PFBA)	8.1		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluorodecanesulfonic Acid (PFDS)	ND		4.7	ng/L	1	5/25/2022 09:05 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Date: 01-Jun-2022

Matrix: GROUNDWATER

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order:22051511Sample ID:DUPLab ID:22051511-14

Collection Date: 5/16/2022 Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Perfluorodecanoic Acid (PFDA)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluorododecanoic Acid (PFDoA)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluoroheptanesulfonic Acid (PFHpS)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluoroheptanoic Acid (PFHpA)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluorohexanesulfonic Acid (PFHxS)	15		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluorohexanoic Acid (PFHxA)	5.4		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluorononanesulfonic Acid (PFNS)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluorononanoic Acid (PFNA)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluorooctanesulfonamide (PFOSA)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluorooctanesulfonic Acid (PFOS)	ND		1.9	ng/L	1	5/25/2022 09:05 AM
Perfluorooctanoic Acid (PFOA)	18		1.9	ng/L	1	5/25/2022 09:05 AM
Perfluoropentanesulfonic Acid (PFPeS)	5.7		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluoropentanoic Acid (PFPeA)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluorotridecanoic Acid (PFTriA)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Perfluoroundecanoic Acid (PFUnA)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		4.7	ng/L	1	5/25/2022 09:05 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		4.7	ng/L	1	5/25/2022 09:05 AM
11CI-Pf3OUdS	ND		4.7	ng/L	1	5/25/2022 09:05 AM
9CI-PF3ONS	ND		4.7	ng/L	1	5/25/2022 09:05 AM
Surr: 13C2-FtS 4:2	80.4		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C2-FtS 6:2	73.5		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C2-FtS 8:2	91.3		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C2-PFDA	68.5		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C2-PFDoA	55.2		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C2-PFHxA	71.6		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C2-PFTeA	74.7		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C2-PFUnA	62.8		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C3-HFPO-DA	73.6		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C3-PFBS	90.7		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C4-PFBA	82.9		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C4-PFHpA	89.3		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C4-PFOA	81.2		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C4-PFOS	67.0		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C5-PFNA	65.7		50-150	%REC	1	5/25/2022 09:05 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order:22051511Sample ID:DUPLab ID:22051511-14

Collection Date: 5/16/2022 Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C5-PFPeA	85.1		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 13C8-FOSA	56.5		50-150	%REC	1	5/25/2022 09:05 AM
Surr: 1802-PFHxS	68.1		50-150	%REC	1	5/25/2022 09:05 AM
Surr: d5-N-EtFOSAA	53.6		50-150	%REC	1	5/25/2022 09:05 AM
Surr: d3-N-MeFOSAA	47.0	S	50-150	%REC	1	5/25/2022 09:05 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8	270D	Prep: SW3510 5/20/22 14:40	Analyst: EE
1,1`-Biphenyl	ND		19	μg/L	1	5/20/2022 11:49 PM
2,4,5-Trichlorophenol	ND		19	μg/L	1	5/20/2022 11:49 PM
2,4,6-Trichlorophenol	ND		19	μg/L	1	5/20/2022 11:49 PM
2,4-Dichlorophenol	ND		19	μg/L	1	5/20/2022 11:49 PM
2,4-Dimethylphenol	ND		19	μg/L	1	5/20/2022 11:49 PM
2,4-Dinitrophenol	ND		19	μg/L	1	5/20/2022 11:49 PM
2,4-Dinitrotoluene	ND		19	μg/L	1	5/20/2022 11:49 PM
2,6-Dinitrotoluene	ND		19	μg/L	1	5/20/2022 11:49 PM
2-Chloronaphthalene	ND		19	μg/L	1	5/20/2022 11:49 PM
2-Chlorophenol	ND		19	μg/L	1	5/20/2022 11:49 PM
2-Methylnaphthalene	ND		19	μg/L	1	5/20/2022 11:49 PM
2-Methylphenol	ND		19	μg/L	1	5/20/2022 11:49 PM
2-Nitroaniline	ND		19	μg/L	1	5/20/2022 11:49 PM
2-Nitrophenol	ND		19	μg/L	1	5/20/2022 11:49 PM
3&4-Methylphenol	ND		19	μg/L	1	5/20/2022 11:49 PM
3,3'-Dichlorobenzidine	ND		19	μg/L	1	5/20/2022 11:49 PM
3-Nitroaniline	ND		19	μg/L	1	5/20/2022 11:49 PM
4,6-Dinitro-2-methylphenol	ND		19	μg/L	1	5/20/2022 11:49 PM
4-Bromophenyl phenyl ether	ND		19	μg/L	1	5/20/2022 11:49 PM
4-Chloro-3-methylphenol	ND		19	μg/L	1	5/20/2022 11:49 PM
4-Chloroaniline	ND		19	μg/L	1	5/20/2022 11:49 PM
4-Chlorophenyl phenyl ether	ND		19	μg/L	1	5/20/2022 11:49 PM
4-Nitroaniline	ND		19	μg/L	1	5/20/2022 11:49 PM
4-Nitrophenol	ND		19	μg/L	1	5/20/2022 11:49 PM
Acenaphthene	ND		19	μg/L	1	5/20/2022 11:49 PM
Acenaphthylene	ND		19	μg/L	1	5/20/2022 11:49 PM
Acetophenone	ND		3.8	μg/L	1	5/20/2022 11:49 PM
Anthracene	ND		19	μg/L	1	5/20/2022 11:49 PM
Atrazine	ND		3.8	μg/L	1	5/20/2022 11:49 PM
Benzaldehyde	ND		3.8	μg/L	1	5/20/2022 11:49 PM
Benzo(a)anthracene	ND		19	μg/L	1	5/20/2022 11:49 PM
Benzo(a)pyrene	ND		19	μg/L	1	5/20/2022 11:49 PM
Benzo(b)fluoranthene	ND		19	μg/L	1	5/20/2022 11:49 PM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:DUPLab ID: 22051511-14

Collection Date: 5/16/2022 Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	ND		19	μg/L	1	5/20/2022 11:49 PM
Benzo(k)fluoranthene	ND		19	μg/L	1	5/20/2022 11:49 PM
Bis(2-chloroethoxy)methane	ND		19	μg/L	1	5/20/2022 11:49 PM
Bis(2-chloroethyl)ether	ND		19	μg/L	1	5/20/2022 11:49 PM
Bis(2-chloroisopropyl)ether	ND		19	μg/L	1	5/20/2022 11:49 PM
Bis(2-ethylhexyl)phthalate	ND		19	μg/L	1	5/20/2022 11:49 PM
Butyl benzyl phthalate	ND		19	μg/L	1	5/20/2022 11:49 PM
Caprolactam	ND		38	μg/L	1	5/20/2022 11:49 PM
Carbazole	ND		19	μg/L	1	5/20/2022 11:49 PM
Chrysene	ND		19	μg/L	1	5/20/2022 11:49 PM
Dibenzo(a,h)anthracene	ND		19	μg/L	1	5/20/2022 11:49 PM
Dibenzofuran	ND		19	μg/L	1	5/20/2022 11:49 PM
Diethyl phthalate	ND		19	μg/L	1	5/20/2022 11:49 PM
Dimethyl phthalate	ND		19	μg/L	1	5/20/2022 11:49 PM
Di-n-butyl phthalate	ND		19	μg/L	1	5/20/2022 11:49 PM
Di-n-octyl phthalate	ND		19	μg/L	1	5/20/2022 11:49 PM
Fluoranthene	ND		19	μg/L	1	5/20/2022 11:49 PM
Fluorene	ND		19	μg/L	1	5/20/2022 11:49 PM
Hexachlorobenzene	ND)	19	μg/L	1	5/20/2022 11:49 PM
Hexachlorobutadiene	ND)	19	μg/L	1	5/20/2022 11:49 PM
Hexachlorocyclopentadiene	ND)	19	μg/L	1	5/20/2022 11:49 PM
Hexachloroethane	ND)	19	μg/L	1	5/20/2022 11:49 PM
Indeno(1,2,3-cd)pyrene	ND)	19	μg/L	1	5/20/2022 11:49 PM
Isophorone	ND)	19	μg/L	1	5/20/2022 11:49 PM
Naphthalene	ND)	19	μg/L	1	5/20/2022 11:49 PM
Nitrobenzene	ND		19	μg/L	1	5/20/2022 11:49 PM
N-Nitrosodi-n-propylamine	ND		19	μg/L	1	5/20/2022 11:49 PM
N-Nitrosodiphenylamine	ND		19	μg/L	1	5/20/2022 11:49 PM
Pentachlorophenol	ND		19	μg/L	1	5/20/2022 11:49 PM
Phenanthrene	ND		19	μg/L	1	5/20/2022 11:49 PM
Phenol	ND		19	μg/L	1	5/20/2022 11:49 PM
Pyrene	ND		19	μg/L	1	5/20/2022 11:49 PM
Surr: 2,4,6-Tribromophenol	76.7	7	27-83	%REC	1	5/20/2022 11:49 PM
Surr: 2-Fluorobiphenyl	77.3	}	26-79	%REC	1	5/20/2022 11:49 PM
Surr: 2-Fluorophenol	47.1		13-56	%REC	1	5/20/2022 11:49 PM
Surr: 4-Terphenyl-d14	86.9)	43-106	%REC	1	5/20/2022 11:49 PM
Surr: Nitrobenzene-d5	74.9)	29-80	%REC	1	5/20/2022 11:49 PM
Surr: Phenol-d6	32.2	?	10-35	%REC	1	5/20/2022 11:49 PM

VOLATILE ORGANIC COMPOUNDS SW8260C Analyst: MF

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:DUPLab ID: 22051511-14

Collection Date: 5/16/2022 Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,1-Trichloroethane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
1,1,2,2-Tetrachloroethane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
1,1,2-Trichloroethane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
1,1,2-Trichlorotrifluoroethane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
1,1-Dichloroethane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
1,1-Dichloroethene	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
1,2,4-Trichlorobenzene	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
1,2-Dibromo-3-chloropropane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
1,2-Dibromoethane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
1,2-Dichlorobenzene	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
1,2-Dichloroethane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
1,2-Dichloropropane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
1,3-Dichlorobenzene	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
1,4-Dichlorobenzene	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
2-Butanone	ND)	5.0	μg/L	1	5/20/2022 03:47 AM
2-Hexanone	ND)	5.0	μg/L	1	5/20/2022 03:47 AM
4-Methyl-2-pentanone	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Acetone	ND)	10	μg/L	1	5/20/2022 03:47 AM
Benzene	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Bromodichloromethane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Bromoform	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Bromomethane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Carbon disulfide	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Carbon tetrachloride	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Chlorobenzene	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Chloroethane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Chloroform	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Chloromethane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
cis-1,2-Dichloroethene	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
cis-1,3-Dichloropropene	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Cyclohexane	ND)	2.0	μg/L	1	5/20/2022 03:47 AM
Dibromochloromethane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Dichlorodifluoromethane	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Ethylbenzene	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Isopropylbenzene	ND)	1.0	μg/L	1	5/20/2022 03:47 AM
Methyl acetate	ND		2.0	μg/L	1	5/20/2022 03:47 AM
Methyl tert-butyl ether	ND		1.0	μg/L	1	5/20/2022 03:47 AM
Methylcyclohexane	ND		1.0	μg/L	1	5/20/2022 03:47 AM
Methylene chloride	ND		5.0	μg/L	1	5/20/2022 03:47 AM
Styrene	ND		1.0	μg/L	1	5/20/2022 03:47 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:DUPLab ID: 22051511-14

Collection Date: 5/16/2022 Matrix: GROUNDWATER

Analyses	Result	Report Qual Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND	1.0	μg/L	1	5/20/2022 03:47 AM
Toluene	ND	1.0	μg/L	1	5/20/2022 03:47 AM
trans-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 03:47 AM
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 03:47 AM
Trichloroethene	ND	1.0	μg/L	1	5/20/2022 03:47 AM
Trichlorofluoromethane	ND	1.0	μg/L	1	5/20/2022 03:47 AM
Vinyl chloride	ND	1.0	μg/L	1	5/20/2022 03:47 AM
Xylenes, Total	ND	3.0	μg/L	1	5/20/2022 03:47 AM
Surr: 1,2-Dichloroethane-d4	98.8	75-120	%REC	1	5/20/2022 03:47 AM
Surr: 4-Bromofluorobenzene	90.6	80-110	%REC	1	5/20/2022 03:47 AM
Surr: Dibromofluoromethane	101	85-115	%REC	1	5/20/2022 03:47 AM
Surr: Toluene-d8	101	85-110	%REC	1	5/20/2022 03:47 AM

Date: 01-Jun-2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order:22051511Sample ID:Trip BlankLab ID:22051511-15Collection Date:5/16/2022Matrix:WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW82600	C		Analyst: MF
1,1,1-Trichloroethane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
1,1,2,2-Tetrachloroethane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
1,1,2-Trichloroethane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
1,1,2-Trichlorotrifluoroethane	NE	ND		μg/L	1	5/19/2022 11:47 PM
1,1-Dichloroethane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
1,1-Dichloroethene	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
1,2,4-Trichlorobenzene	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
1,2-Dibromo-3-chloropropane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
1,2-Dibromoethane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
1,2-Dichlorobenzene	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
1,2-Dichloroethane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
1,2-Dichloropropane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
1,3-Dichlorobenzene	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
1,4-Dichlorobenzene	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
2-Butanone	NE)	5.0	μg/L	1	5/19/2022 11:47 PM
2-Hexanone	NE)	5.0	μg/L	1	5/19/2022 11:47 PM
4-Methyl-2-pentanone	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Acetone	NE)	10	μg/L	1	5/19/2022 11:47 PM
Benzene	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Bromodichloromethane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Bromoform	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Bromomethane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Carbon disulfide	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Carbon tetrachloride	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Chlorobenzene	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Chloroethane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Chloroform	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Chloromethane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
cis-1,2-Dichloroethene	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
cis-1,3-Dichloropropene	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Cyclohexane	NE)	2.0	μg/L	1	5/19/2022 11:47 PM
Dibromochloromethane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Dichlorodifluoromethane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Ethylbenzene	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Isopropylbenzene	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Methyl acetate	NE)	2.0	μg/L	1	5/19/2022 11:47 PM
Methyl tert-butyl ether	NE)	1.0	μg/L	1	5/19/2022 11:47 PM
Methylcyclohexane	NE)	1.0	μg/L	1	5/19/2022 11:47 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Date: 01-Jun-2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order:22051511Sample ID:Trip BlankLab ID:22051511-15Collection Date:5/16/2022Matrix:WATER

Analyses	Result	Report Qual Limit	Units	Dilution Factor	Date Analyzed	
Methylene chloride	ND	5.0	μg/L	1	5/19/2022 11:47 PM	
Styrene	ND	1.0	μg/L	1	5/19/2022 11:47 PM	
Tetrachloroethene	ND	1.0	μg/L	1	5/19/2022 11:47 PM	
Toluene	ND	1.0	μg/L	1	5/19/2022 11:47 PM	
trans-1,2-Dichloroethene	ND	1.0	μg/L	1	5/19/2022 11:47 PM	
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	5/19/2022 11:47 PM	
Trichloroethene	ND	1.0	μg/L	1	5/19/2022 11:47 PM	
Trichlorofluoromethane	ND	1.0	μg/L	1	5/19/2022 11:47 PM	
Vinyl chloride	ND	1.0	μg/L	1	5/19/2022 11:47 PM	
Xylenes, Total	ND	3.0	μg/L	1	5/19/2022 11:47 PM	
Surr: 1,2-Dichloroethane-d4	98.1	75-120	%REC	1	5/19/2022 11:47 PM	
Surr: 4-Bromofluorobenzene	89.2	80-110	%REC	1	5/19/2022 11:47 PM	
Surr: Dibromofluoromethane	101	85-115	%REC	1	5/19/2022 11:47 PM	
Surr: Toluene-d8	99.4	85-110	%REC	1	5/19/2022 11:47 PM	

Date: 01-Jun-2022

Collection Date: 5/16/2022

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order:22051511Sample ID:MW-109Lab ID:22051511-16

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			SW8082	4	Prep: SW3511 5/20/22 16:59	Analyst: RM
Aroclor 1016	ND		0.20	μg/L	1	5/21/2022 03:31 AM
Aroclor 1221	ND		0.20	μg/L	1	5/21/2022 03:31 AM
Aroclor 1232	ND		0.20	μg/L	1	5/21/2022 03:31 AM
Aroclor 1242	ND		0.20	μg/L	1	5/21/2022 03:31 AM
Aroclor 1248	ND		0.20	μg/L	1	5/21/2022 03:31 AM
Aroclor 1254	ND		0.20	μg/L	1	5/21/2022 03:31 AM
Aroclor 1260	ND		0.20	μg/L	1	5/21/2022 03:31 AM
Aroclor 1262	ND		0.20	μg/L	1	5/21/2022 03:31 AM
Aroclor 1268	ND		0.20	μg/L	1	5/21/2022 03:31 AM
PCBs, Total	ND		0.20	μg/L	1	5/21/2022 03:31 AM
Surr: Decachlorobiphenyl	71.1		42-153	%REC	1	5/21/2022 03:31 AM
Surr: Tetrachloro-m-xylene	86.7		48-127	%REC	1	5/21/2022 03:31 AM
MERCURY BY CVAA (DISSOLVED)			SW7470	A	Prep: SW7470 5/19/22 11:03	Analyst: EJC
Mercury	ND		0.00020	mg/L	1	5/19/2022 01:01 PM
METALS BY ICP-MS (DISSOLVED)			SW6020E	3	Prep: SW3015A 5/29/22 18:37	Analyst: STP
Aluminum	0.058		0.010	mg/L	1	5/31/2022 03:50 PM
Antimony	ND		0.0050	mg/L	1	5/23/2022 07:47 PM
Arsenic	ND		0.0050	mg/L	1	5/23/2022 07:47 PM
Barium	0.19		0.0050	mg/L	1	5/23/2022 07:47 PM
Beryllium	ND		0.0020	mg/L	1	5/23/2022 07:47 PM
Boron	0.13		0.020	mg/L	1	5/23/2022 07:47 PM
Cadmium	ND		0.0020	mg/L	1	5/23/2022 07:47 PM
Chromium	ND		0.0050	mg/L	1	5/23/2022 07:47 PM
Copper	ND		0.0050	mg/L	1	5/23/2022 07:47 PM
Lead	ND		0.0050	mg/L	1	5/23/2022 07:47 PM
Nickel	ND		0.0050	mg/L	1	5/23/2022 07:47 PM
Selenium	ND		0.0050	mg/L	1	5/23/2022 07:47 PM
Silver	ND		0.0050	mg/L	1	5/23/2022 07:47 PM
Thallium	ND		0.0050	mg/L	1	5/23/2022 07:47 PM
Zinc	ND		0.010	mg/L	1	5/23/2022 07:47 PM
PFAS BY EPA 537 MODIFIED			E537 MO	D	Prep: E537 Mod 5/23/22 17:15	Analyst: ENS
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluorobutanesulfonic Acid (PFBS)	5.8		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluorobutanoic Acid (PFBA)	30		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluorodecanesulfonic Acid (PFDS)	ND		4.9	ng/L	1	5/25/2022 09:13 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Date: 01-Jun-2022

Matrix: GROUNDWATER

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-109Lab ID: 22051511-16

Collection Date: 5/16/2022 Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit Units		Dilution Factor	Date Analyzed
Perfluorodecanoic Acid (PFDA)	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluorododecanoic Acid (PFDoA)	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluoroheptanesulfonic Acid (PFHpS)	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluoroheptanoic Acid (PFHpA)	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluorohexanesulfonic Acid (PFHxS)	6.4		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluorohexanoic Acid (PFHxA)	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluorononanesulfonic Acid (PFNS)	ND	ND		ng/L	1	5/25/2022 09:13 AM
Perfluorononanoic Acid (PFNA)	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluorooctanesulfonamide (PFOSA)	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluorooctanesulfonic Acid (PFOS)	5.8		2.0	ng/L	1	5/25/2022 09:13 AM
Perfluorooctanoic Acid (PFOA)	13		2.0	ng/L	1	5/25/2022 09:13 AM
Perfluoropentanesulfonic Acid (PFPeS)	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluoropentanoic Acid (PFPeA)	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluorotridecanoic Acid (PFTriA)	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Perfluoroundecanoic Acid (PFUnA)	ND			ng/L	1	5/25/2022 09:13 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		4.9	ng/L	1	5/25/2022 09:13 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	ND		ng/L	1	5/25/2022 09:13 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND	ND		ng/L	1	5/25/2022 09:13 AM
11CI-Pf3OUdS	ND		4.9	ng/L	1	5/25/2022 09:13 AM
9CI-PF3ONS	ND		4.9	ng/L	1	5/25/2022 09:13 AM
Surr: 13C2-FtS 4:2	107		50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C2-FtS 6:2	92.7		50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C2-FtS 8:2	86.7		50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C2-PFDA	71.5		50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C2-PFDoA	54.9		50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C2-PFHxA	83.5		50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C2-PFTeA	67.3		50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C2-PFUnA	85.7		50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C3-HFPO-DA	72.0		50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C3-PFBS	102		50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C4-PFBA	112		50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C4-PFHpA	114		50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C4-PFOA	104		50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C4-PFOS	79.1		50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C5-PFNA	101		50-150	%REC	1	5/25/2022 09:13 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-109Lab ID: 22051511-16

Collection Date: 5/16/2022 Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C5-PFPeA	101	1	50-150	%REC	1	5/25/2022 09:13 AM
Surr: 13C8-FOSA	62.5	5	50-150	%REC	1	5/25/2022 09:13 AM
Surr: 1802-PFHxS	105	5	50-150	%REC	1	5/25/2022 09:13 AM
Surr: d5-N-EtFOSAA	72.4	ı	50-150	%REC	1	5/25/2022 09:13 AM
Surr: d3-N-MeFOSAA	51.1	1	50-150	%REC	1	5/25/2022 09:13 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8	270D	Prep: SW3510 5/20/22 14:40	Analyst: EE
1,1`-Biphenyl	ND)	18	μg/L	1	5/21/2022 12:09 AM
2,4,5-Trichlorophenol	ND)	18	μg/L	1	5/21/2022 12:09 AM
2,4,6-Trichlorophenol	ND)	18	μg/L	1	5/21/2022 12:09 AM
2,4-Dichlorophenol	ND)	18	μg/L	1	5/21/2022 12:09 AM
2,4-Dimethylphenol	ND)	18	μg/L	1	5/21/2022 12:09 AM
2,4-Dinitrophenol	ND)	18	μg/L	1	5/21/2022 12:09 AM
2,4-Dinitrotoluene	ND)	18	μg/L	1	5/21/2022 12:09 AM
2,6-Dinitrotoluene	ND)	18	μg/L	1	5/21/2022 12:09 AM
2-Chloronaphthalene	ND)	18	μg/L	1	5/21/2022 12:09 AM
2-Chlorophenol	ND)	18	μg/L	1	5/21/2022 12:09 AM
2-Methylnaphthalene	ND)	18	μg/L	1	5/21/2022 12:09 AM
2-Methylphenol	ND)	18	μg/L	1	5/21/2022 12:09 AM
2-Nitroaniline	ND)	18	μg/L	1	5/21/2022 12:09 AM
2-Nitrophenol	ND)	18	μg/L	1	5/21/2022 12:09 AM
3&4-Methylphenol	ND)	18	μg/L	1	5/21/2022 12:09 AM
3,3'-Dichlorobenzidine	ND)	18	μg/L	1	5/21/2022 12:09 AM
3-Nitroaniline	ND)	18	μg/L	1	5/21/2022 12:09 AM
4,6-Dinitro-2-methylphenol	ND)	18	μg/L	1	5/21/2022 12:09 AM
4-Bromophenyl phenyl ether	ND)	18	μg/L	1	5/21/2022 12:09 AM
4-Chloro-3-methylphenol	ND)	18	μg/L	1	5/21/2022 12:09 AM
4-Chloroaniline	ND)	18	μg/L	1	5/21/2022 12:09 AM
4-Chlorophenyl phenyl ether	ND)	18	μg/L	1	5/21/2022 12:09 AM
4-Nitroaniline	ND)	18	μg/L	1	5/21/2022 12:09 AM
4-Nitrophenol	ND)	18	μg/L	1	5/21/2022 12:09 AM
Acenaphthene	ND)	18	μg/L	1	5/21/2022 12:09 AM
Acenaphthylene	ND)	18	μg/L	1	5/21/2022 12:09 AM
Acetophenone	ND)	3.6	μg/L	1	5/21/2022 12:09 AM
Anthracene	ND)	18	μg/L	1	5/21/2022 12:09 AM
Atrazine	ND)	3.6	μg/L	1	5/21/2022 12:09 AM
Benzaldehyde	ND	1	3.6	μg/L	1	5/21/2022 12:09 AM
Benzo(a)anthracene	ND	1	18	μg/L	1	5/21/2022 12:09 AM
Benzo(a)pyrene	ND)	18	μg/L	1	5/21/2022 12:09 AM
Benzo(b)fluoranthene	ND)	18	μg/L	1	5/21/2022 12:09 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-109Lab ID: 22051511-16

Collection Date: 5/16/2022 Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed		
Benzo(g,h,i)perylene	ND		18	μg/L	1	5/21/2022 12:09 AM		
Benzo(k)fluoranthene	ND		18	μg/L	1	5/21/2022 12:09 AM		
Bis(2-chloroethoxy)methane	ND		18	μg/L	1	5/21/2022 12:09 AM		
Bis(2-chloroethyl)ether	ND		18	μg/L	1	5/21/2022 12:09 AM		
Bis(2-chloroisopropyl)ether	ND	ND		μg/L	1	5/21/2022 12:09 AM		
Bis(2-ethylhexyl)phthalate	ND	ND		μg/L	1	5/21/2022 12:09 AM		
Butyl benzyl phthalate	ND	ND		μg/L	1	5/21/2022 12:09 AM		
Caprolactam	ND	ND		μg/L	1	5/21/2022 12:09 AM		
Carbazole	ND	ND		μg/L	1	5/21/2022 12:09 AM		
Chrysene	ND		18	μg/L	1	5/21/2022 12:09 AM		
Dibenzo(a,h)anthracene	ND	ND		μg/L	1	5/21/2022 12:09 AM		
Dibenzofuran	ND	ND		μg/L	1	5/21/2022 12:09 AM		
Diethyl phthalate	ND		18	μg/L	1	5/21/2022 12:09 AM		
Dimethyl phthalate	ND		18	μg/L	1	5/21/2022 12:09 AM		
Di-n-butyl phthalate	ND		18	μg/L	1	5/21/2022 12:09 AM		
Di-n-octyl phthalate	ND		18	μg/L	1	5/21/2022 12:09 AM		
Fluoranthene	ND		18	μg/L	1	5/21/2022 12:09 AM		
Fluorene	ND		18	μg/L	1	5/21/2022 12:09 AM		
Hexachlorobenzene	ND		18	μg/L	1	5/21/2022 12:09 AM		
Hexachlorobutadiene	ND		18	μg/L	1	5/21/2022 12:09 AM		
Hexachlorocyclopentadiene	ND)	18	μg/L	1	5/21/2022 12:09 AM		
Hexachloroethane	ND)	18	μg/L	1	5/21/2022 12:09 AM		
Indeno(1,2,3-cd)pyrene	ND)	18	μg/L	1	5/21/2022 12:09 AM		
Isophorone	ND)	18	μg/L	1	5/21/2022 12:09 AM		
Naphthalene	ND)	18	μg/L	1	5/21/2022 12:09 AM		
Nitrobenzene	ND		18	μg/L	1	5/21/2022 12:09 AM		
N-Nitrosodi-n-propylamine	ND		18	μg/L	1	5/21/2022 12:09 AM		
N-Nitrosodiphenylamine	ND		18	μg/L	1	5/21/2022 12:09 AM		
Pentachlorophenol	ND		18	μg/L	1	5/21/2022 12:09 AM		
Phenanthrene	ND		18	μg/L	1	5/21/2022 12:09 AM		
Phenol	ND		18	μg/L	1	5/21/2022 12:09 AM		
Pyrene	ND		18	μg/L	1	5/21/2022 12:09 AM		
Surr: 2,4,6-Tribromophenol	70.1		27-83	%REC	1	5/21/2022 12:09 AM		
Surr: 2-Fluorobiphenyl	75.0)	26-79	%REC	1	5/21/2022 12:09 AM		
Surr: 2-Fluorophenol	41.8	}	13-56	%REC				
Surr: 4-Terphenyl-d14	85.8	}	43-106	%REC	1	5/21/2022 12:09 AM		
Surr: Nitrobenzene-d5	71.5	5	29-80	%REC	1	5/21/2022 12:09 AM		
Surr: Phenol-d6	28.0)	10-35	%REC	1	5/21/2022 12:09 AM		
VOLATILE ODCANIC COMPOLINDS			C/Modeo			Analyst: ME		

VOLATILE ORGANIC COMPOUNDS SW8260C Analyst: MF

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-109Lab ID: 22051511-16

Collection Date: 5/16/2022 Matrix: GROUNDWATER

Date: 01-Jun-2022

Analyses	Result Qu	Report al Limit	Units	Dilution Factor	Date Analyzed
1,1,1-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
1,1,2,2-Tetrachloroethane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
1,1,2-Trichlorotrifluoroethane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
1,1-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
1,1-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 04:05 AM
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	5/20/2022 04:05 AM
1,2-Dibromo-3-chloropropane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
1,2-Dibromoethane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
1,2-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 04:05 AM
1,2-Dichloroethane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
1,2-Dichloropropane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
1,3-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 04:05 AM
1,4-Dichlorobenzene	ND	1.0	μg/L	1	5/20/2022 04:05 AM
2-Butanone	ND	5.0	μg/L	1	5/20/2022 04:05 AM
2-Hexanone	ND	5.0	μg/L	1	5/20/2022 04:05 AM
4-Methyl-2-pentanone	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Acetone	ND	10	μg/L	1	5/20/2022 04:05 AM
Benzene	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Bromodichloromethane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Bromoform	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Bromomethane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Carbon disulfide	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Carbon tetrachloride	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Chlorobenzene	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Chloroethane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Chloroform	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Chloromethane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
cis-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 04:05 AM
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Cyclohexane	ND	2.0	μg/L	1	5/20/2022 04:05 AM
Dibromochloromethane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Dichlorodifluoromethane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Ethylbenzene	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Isopropylbenzene	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Methyl acetate	ND	2.0	μg/L	1	5/20/2022 04:05 AM
Methyl tert-butyl ether	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Methylcyclohexane	ND	1.0	μg/L	1	5/20/2022 04:05 AM
Methylene chloride	ND	5.0	μg/L	1	5/20/2022 04:05 AM
Styrene	ND	1.0	μg/L	1	5/20/2022 04:05 AM

Client: The Mannik & Smith Group, Inc.

Project:Former Mount Pleasant LandfillWork Order: 22051511Sample ID:MW-109Lab ID: 22051511-16

Collection Date: 5/16/2022 Matrix: GROUNDWATER

Analyses	Result Qu	Report al Limit	Units	Dilution Factor	Date Analyzed		
Tetrachloroethene	ND	1.0	μg/L	1	5/20/2022 04:05 AM		
Toluene	ND	1.0	μg/L	1	5/20/2022 04:05 AM		
trans-1,2-Dichloroethene	ND	1.0	μg/L	1	5/20/2022 04:05 AM		
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	5/20/2022 04:05 AM		
Trichloroethene	ND	1.0	μg/L	1	5/20/2022 04:05 AM		
Trichlorofluoromethane	ND	1.0	μg/L	1	5/20/2022 04:05 AM		
Vinyl chloride	ND	1.0	μg/L	1	5/20/2022 04:05 AM		
Xylenes, Total	ND	3.0	μg/L	1	5/20/2022 04:05 AM		
Surr: 1,2-Dichloroethane-d4	98.2	75-120	%REC	1	5/20/2022 04:05 AM		
Surr: 4-Bromofluorobenzene	83.2	80-110	%REC	1	5/20/2022 04:05 AM		
Surr: Dibromofluoromethane	102	85-115	%REC	1	5/20/2022 04:05 AM		
Surr: Toluene-d8	95.4	85-110	%REC	1	5/20/2022 04:05 AM		

Date: 01-Jun-2022

Date: 01-Jun-22

QC BATCH REPORT

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196634	Instrument ID G	GC14		Method	d: SW80	82A						
MBLK	Sample ID: PBLKW1	-196634-196	634			ι	Jnits: µg/L		Analysis	Date: 5/21	/2022 02:	:40 AN
Client ID:		Run ID	: GC14_2	220520A		Se	SeqNo: 8445303		Prep Date: 5/20)/2022	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qua
Aroclor 1016		ND	0.20									
Aroclor 1221		ND	0.20									
Aroclor 1232		ND	0.20									
Aroclor 1242		ND	0.20									
Aroclor 1248		ND	0.20									
Aroclor 1254		ND	0.20									
Aroclor 1260		ND	0.20									
Aroclor 1262		ND	0.20									
Aroclor 1268		ND	0.20									
PCBs, Total		ND	0.20									
Surr: Decachlorobi	phenyl	0.2057	0	0.208		0	98.9	42-153	0			
Surr: Tetrachloro-n	n-xylene	0.168	0	0.208		0	80.8	48-127	0			
LCS Sample ID: PLCSW1-196634-196634				ι	Jnits: µg/L		Analysis	Date: 5/21	/2022 03:	:05 AN		
Client ID:		Run ID	: GC14_2	220520A		SeqNo: 8445305		5305	Prep Date: 5/20/2022		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qua
Aroclor 1016		4.099	0.20	4.17		0	98.3	71-130	0			
Aroclor 1260		2.956	0.20	4.17		0	70.9	54-135	0			
Surr: Decachlorobi	phenyl	0.1543	0	0.208		0	74.2	42-153	0			
Surr: Tetrachloro-n		0.1947	0	0.208		0	93.6	48-127	0			
LCSD	Sample ID: PLCSDW	/1-196634-19	06634			ι	Jnits: µg/L		Analysis	Date: 5/21	/2022 03:	:18 AN
Client ID:		Run ID	: GC14_2	220520A		Se	eqNo: 844	5306	Prep Date: 5/20	0/2022	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qua
Aroclor 1016		4.11	0.20	4.17		0	98.6	71-130	4.099	0.282	20	
Aroclor 1260		3.132	0.20	4.17		0	75.1	54-135	2.956	5.79	20	
Surr: Decachlorobi	phenyl	0.1875	0	0.208		0	90.1	42-153	0.1543	19.4	20	
Surr: Tetrachloro-n	n-xylene	0.1895	0	0.208		0	91.1	48-127	0.1947	2.69	20	
The following sampl	es were analyzed in t	this batch:	22 22 22	2051511-01E 2051511-04E 2051511-07E 2051511-10E 2051511-14E	3 22 3 22 3 22	2051 2051 2051	1511-02B 1511-05B 1511-08B 1511-11B 1511-16B	22 22	051511-03B 051511-06B 051511-09B 051511-12B			

Client: The Mannik & Smith Group, Inc.

22051511 Work Order:

Project: Former Mount Pleasant Landfill

Batch ID: 196557 Instrument ID HG4 Method: SW7470A Analysis Date: 5/19/2022 12:11 PM **MBLK** Sample ID: MBLK-196557-196557 Units: mq/L Client ID: Run ID: HG4 220519A SeqNo: 8435553 Prep Date: 5/19/2022 DF: 1 RPD SPK Ref RPD Ref Control Limit Value Limit Value SPK Val %REC %RPD Qual Analyte Result **PQL** ND 0.00020 Mercury LCS Sample ID: LCS-196557-196557 Units: mg/L Analysis Date: 5/19/2022 12:13 PM Client ID: Run ID: HG4_220519A SeqNo: 8435554 Prep Date: 5/19/2022 DF: 1 SPK Ref RPD Ref RPD Control Value Limit Value Limit SPK Val %REC %RPD Qual Result **PQL** Analyte 0.00020 0.002295 0 0 Mercury 0.002 115 80-120 MS Sample ID: 22051511-14DMS Units: mg/L Analysis Date: 5/19/2022 12:58 PM Client ID: DUP Run ID: HG4_220519A SeqNo: 8435579 Prep Date: 5/19/2022 RPD SPK Ref Control RPD Ref Value Limit Value Limit **PQL** SPK Val %REC %RPD Qual Analyte Result 0.00219 Mercury 0.00020 0.002 0.0000465 107 75-125 0 MSD Sample ID: 22051511-14DMSD Units: mg/L Analysis Date: 5/19/2022 12:59 PM Run ID: HG4_220519A Client ID: DUP SeqNo: 8435580 Prep Date: 5/19/2022 DF: 1 RPD SPK Ref Control RPD Ref Value Limit Value Limit SPK Val %REC %RPD Qual Analyte Result **PQL** 0.00222 0.00020 0.002 0.0000465 109 0.00219 20 Mercury 75-125 1.36 22051511-02D 22051511-03D The following samples were analyzed in this batch: 22051511-01D 22051511-04D 22051511-05D 22051511-06D 22051511-07D 22051511-08D 22051511-09D 22051511-10D 22051511-11D 22051511-12D

22051511-14D

22051511-16D

QC BATCH REPORT

QC BATCH REPORT

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196747	Instrument ID ICPMS3	Method:	SW6020B
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MBLK	Sample ID: MBLK-196747-19674	17			Units: mg/l	L	Analys	is Date: 5/2	3/2022 06:	:54 PM
Client ID:	Run I	D: ICPMS	3_220523A		SeqNo: 8447	7286	Prep Date: 5/23/2022		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	ND	0.010								
Antimony	ND	0.0050								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Beryllium	ND	0.0020								
Boron	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0050								
Copper	0.002204	0.0050								J
Lead	ND	0.0050								
Nickel	ND	0.0050								-
Selenium	ND	0.0050								
Silver	ND	0.0050								
Thallium	ND	0.0050								
Zinc	0.02586	0.010								

LCS	Sample ID: LCS-196747-196747					Jnits: mg/	L	Analysis Date: 5/23/2022 06:55 PM			
Client ID:	Run I	Run ID: ICPMS3_220523A			SeqNo: 8447288		Prep Date: 5/23/2022		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1013	0.010	0.1		0	101	80-120	0			
Antimony	0.09687	0.0050	0.1		0	96.9	80-120	0			
Arsenic	0.09878	0.0050	0.1		0	98.8	80-120	0			
Barium	0.1001	0.0050	0.1		0	100	80-120	0			
Beryllium	0.09945	0.0020	0.1		0	99.4	80-120	0			
Boron	0.5116	0.020	0.5		0	102	80-120	0			
Cadmium	0.09773	0.0020	0.1		0	97.7	80-120	0			
Chromium	0.1026	0.0050	0.1		0	103	80-120	0			
Copper	0.1057	0.0050	0.1		0	106	80-120	0			
Lead	0.09594	0.0050	0.1		0	95.9	80-120	0			
Nickel	0.1042	0.0050	0.1		0	104	80-120	0			
Selenium	0.09634	0.0050	0.1		0	96.3	80-120	0			
Silver	0.08183	0.0050	0.1		0	81.8	80-120	0			
Thallium	0.097	0.0050	0.1		0	97	80-120	0			
Zinc	0.1176	0.010	0.1		0	118	80-120	0			В

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196747	Instrument ID ICPMS3	Method:	SW6020B
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MS	Sample ID: 22051511-01DMS				Units: mg/	L	Analysi	s Date: 5/2	3/2022 07:	12 PM
Client ID: MW-101	Run	D: ICPMS	3_220523A	;	SeqNo: 844 7	7299	Prep Date: 5/2	3/2022	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1496	0.010	0.1	0.01547	134	75-125	C)		S
Antimony	0.09946	0.0050	0.1	0.0001936	99.3	75-125	C)		
Arsenic	0.1054	0.0050	0.1	0.004369	101	75-125	C)		
Barium	0.1957	0.0050	0.1	0.09689	98.9	75-125	C)		
Beryllium	0.1026	0.0020	0.1	0.0000077	103	75-125	C)		
Boron	0.8189	0.020	0.5	0.2965	104	75-125	C)		
Cadmium	0.09819	0.0020	0.1	C	98.2	75-125	C)		
Chromium	0.1045	0.0050	0.1	0.0008184	104	75-125	C)		
Copper	0.1013	0.0050	0.1	0.0004356	101	75-125	C)		
Lead	0.09861	0.0050	0.1	-0.001705	100	75-125	C)		
Nickel	0.1016	0.0050	0.1	0.002687	98.9	75-125	C)		
Selenium	0.09838	0.0050	0.1	0.0003124	98.1	75-125	C)		
Silver	0.07876	0.0050	0.1	0.0000044	78.8	75-125	C)		
Thallium	0.0994	0.0050	0.1	-0.0000099	99.4	75-125	C)		
Zinc	0.3072	0.010	0.1	0.00695	300	75-125	C)		BS

MSD	Sample ID: 22051511-01DMSD			ı	Units: mg/	L	Analysis	Date: 5/23	3/2022 07:	13 PM
Client ID: MW-101	Run	ID: ICPMS	3_220523A	Se	eqNo: 844	7300	Prep Date: 5/23	/2022	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1147	0.010	0.1	0.01547	99.2	75-125	0.1496	26.4	20	R
Antimony	0.0971	0.0050	0.1	0.0001936	96.9	75-125	0.09946	2.39	20	
Arsenic	0.1036	0.0050	0.1	0.004369	99.2	75-125	0.1054	1.77	20	
Barium	0.1949	0.0050	0.1	0.09689	98	75-125	0.1957	0.451	20	
Beryllium	0.1	0.0020	0.1	0.0000077	100	75-125	0.1026	2.51	20	
Boron	0.8104	0.020	0.5	0.2965	103	75-125	0.8189	1.05	20	
Cadmium	0.09753	0.0020	0.1	0	97.5	75-125	0.09819	0.67	20	
Chromium	0.1014	0.0050	0.1	0.0008184	101	75-125	0.1045	3.01	20	
Copper	0.1001	0.0050	0.1	0.0004356	99.6	75-125	0.1013	1.21	20	
Lead	0.09688	0.0050	0.1	-0.001705	98.6	75-125	0.09861	1.77	20	
Nickel	0.1003	0.0050	0.1	0.002687	97.6	75-125	0.1016	1.28	20	
Selenium	0.09595	0.0050	0.1	0.0003124	95.6	75-125	0.09838	2.5	20	
Silver	0.07698	0.0050	0.1	0.0000044	77	75-125	0.07876	2.29	20	
Thallium	0.09849	0.0050	0.1	-0.0000099	98.5	75-125	0.0994	0.926	20	
Zinc	0.1114	0.010	0.1	0.00695	104	75-125	0.3072	93.5	20	BR

The following samples were analyzed in this batch:

22051511-01D	22051511-02D	22051511-03D	
22051511-04D	22051511-05D	22051511-06D	
22051511-07D	22051511-08D	22051511-09D	
22051511-10D	22051511-11D	22051511-12D	
22051511-14D			

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196748	Instrument ID ICPMS3		Metho	d: SW60 2	20B						
MBLK	Sample ID: MBLK-196748-1967	48			U	nits: mg/ l	L	Analysis	Date: 5/2	3/2022 07	:44 PN
Client ID:	Run I	D: ICPMS	3_220523A		Sec	qNo: 844 7	7320	Prep Date: 5/23	/2022	DF: 1	
				SPK Ref			Control	RPD Ref		RPD	
Analyte	Result	PQL	SPK Val	Value		%REC	Limit	Value	%RPD	Limit	Qua
Antimony	ND	0.0050									
Arsenic	ND	0.0050									
Barium	0.002898	0.0050									J
Beryllium	ND	0.0020									
Boron	ND	0.020									
Cadmium	ND	0.0020									
Chromium	ND	0.0050									
Copper	ND	0.0050									
₋ead	ND	0.0050									
Nickel	ND	0.0050									
Selenium	ND	0.0050									
Silver	ND	0.0050									
Гhallium	ND	0.0050									
Zinc	0.01099	0.010									
.cs	Sample ID: LCS-196748-196748				U	nits: mg/ l	L	Analysis Date: 5/23/2022 07:45 I			:45 PN
Client ID:	Run I	D: ICPMS	3_220523A		Sec	qNo: 844 7	7321	Prep Date: 5/23	DF: 1		
ınalyte	Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qua
Intimony	0.09741	0.0050	0.1		0	97.4	80-120	0	79.4.2		
rsenic	0.09556	0.0050	0.1		0	95.6	80-120				
Barium	0.103	0.0050	0.1		0	103	80-120				
Beryllium	0.0854	0.0020	0.1		0	85.4	80-120				
Boron	0.4301	0.020	0.1		0	86	80-120				
Cadmium	0.09751	0.020	0.5		0	97.5	80-120				
Chromium	0.09906	0.0020	0.1		0	99.1	80-120	0			
Copper	0.09985	0.0050	0.1		0	99.8	80-120	0			
.ead	0.09759	0.0050	0.1		0	97.6	80-120				
lickel	0.09808	0.0050	0.1		0	98.1	80-120				
Selenium	0.09474	0.0050	0.1		0	94.7	80-120				
Fhallium	0.09862	0.0050	0.1		0	98.6	80-120				
			0.1								
.cs	Sample ID: LCS-196748-196748	1			U	nits: mg/ l	L	Analysis	Date: 5/2	4/2022 01	:30 PN
Client ID:	Run I	D: ICPMS	3_220524A		Sec	qNo: 845 (0391	Prep Date: 5/23	/2022	DF: 1	
				SPK Ref			Control	RPD Ref		RPD Limit	
	Desult	PQL	SPK Val	Value		%REC	Limit	Value	%RPD	Limit	Qua
Analyte	Result										
Analyte Silver	0.08265	0.0050	0.1		0	82.7	80-120	0			

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196748	Instrument ID ICPMS3	Method:	SW6020B
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MS	Sample ID: 22051619-01DMS				Units: mg/	L	Analysi	s Date: 5/2	3/2022 08:	08 PM
Client ID:	Run I	ın ID: ICPMS3_220523A		S	eqNo: 844	7337	Prep Date: 5/2	3/2022	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09952	0.0050	0.1	0.0001243	99.4	75-125	()		
Arsenic	0.09918	0.0050	0.1	0.00022	99	75-125	()		
Barium	0.1071	0.0050	0.1	0.006629	100	75-125	()		
Beryllium	0.1028	0.0020	0.1	0.0000385	103	75-125	()		
Boron	0.5347	0.020	0.5	0.01715	104	75-125	()		
Cadmium	0.09892	0.0020	0.1	0.0000627	98.9	75-125	()		
Chromium	0.1012	0.0050	0.1	0.0006479	101	75-125	()		
Copper	0.105	0.0050	0.1	0.003431	102	75-125	()		
Lead	0.09815	0.0050	0.1	-0.001822	100	75-125	()		
Nickel	0.1013	0.0050	0.1	0.0006347	101	75-125	()		
Selenium	0.09717	0.0050	0.1	0.0002321	96.9	75-125	()		
Silver	0.08028	0.0050	0.1	0	80.3	75-125	()		
Thallium	0.09935	0.0050	0.1	-0.000011	99.4	75-125	()		
Zinc	0.1036	0.010	0.1	0.001426	102	75-125	()		В

MSD	Sample ID: 22051619-01DMSD				Units: mg	/L	Analysis	Date: 5/23	3/2022 08:	10 PM
Client ID:	Run I	D: ICPMS	3_220523A		SeqNo: 84 4	17338	Prep Date: 5/23	/2022	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1009	0.0050	0.1	0.000124	43 101	75-125	0.09952	1.39	20	
Arsenic	0.1016	0.0050	0.1	0.0002	22 101	75-125	0.09918	2.45	20	
Barium	0.1094	0.0050	0.1	0.00662	29 103	75-125	0.1071	2.11	20	
Beryllium	0.1032	0.0020	0.1	0.000038	35 103	75-125	0.1028	0.36	20	
Boron	0.5448	0.020	0.5	0.017	15 106	75-125	0.5347	1.87	20	
Cadmium	0.09995	0.0020	0.1	0.000062	27 99.9	75-125	0.09892	1.04	20	
Chromium	0.1036	0.0050	0.1	0.000647	79 103	75-125	0.1012	2.28	20	
Copper	0.1073	0.0050	0.1	0.00343	31 104	75-125	0.105	2.09	20	
Lead	0.09979	0.0050	0.1	-0.00182	22 102	75-125	0.09815	1.66	20	
Nickel	0.1042	0.0050	0.1	0.000634	47 104	75-125	0.1013	2.78	20	
Selenium	0.09535	0.0050	0.1	0.000232	21 95.1	75-125	0.09717	1.89	20	
Silver	0.08128	0.0050	0.1		0 81.3	75-125	0.08028	1.24	20	
Thallium	0.1005	0.0050	0.1	-0.0000	11 100	75-125	0.09935	1.11	20	
Zinc	0.1055	0.010	0.1	0.00142	26 104	75-125	0.1036	1.75	20	В

The following samples were analyzed in this batch:

22051511-16D

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196876	Instrument ID ICPMS3	Method: SW6	3020B
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MBLK	Sample ID: MBLK-196876-19687	6			Units: mg/	L	Analys	is Date: 5/2	5/2022 03	22 PM
Client ID:	Run II	: ICPMS	3_220525A		SeqNo: 845	5596	Prep Date: 5/2	25/2022	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	ND	0.010								
Antimony	ND	0.0050								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Beryllium	ND	0.0020								
Boron	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0050								
Copper	ND	0.0050								
Lead	ND	0.0050								
Nickel	ND	0.0050								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Thallium	ND	0.0050								
Zinc	ND	0.010								

LCS	Sample ID: LCS-196876-196876					Jnits: mg/	L	Analysis Date: 5/25/2022 03:24 PM			
Client ID:	Run	ID: ICPMS	3_220525A		Se	qNo: 845	5599	Prep Date: 5/25	/2022	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum Antimony	0.09965 0.1001	0.010 0.0050	0.1 0.1		0	99.6 100	80-120 80-120				
Arsenic	0.09536	0.0050	0.1		0	95.4	80-120				
Barium	0.09923	0.0050	0.1		0	99.2	80-120	0			
Beryllium	0.1008	0.0020	0.1		0	101	80-120	0			
Boron	0.5255	0.020	0.5		0	105	80-120	0			
Cadmium	0.09979	0.0020	0.1		0	99.8	80-120	0			
Chromium	0.101	0.0050	0.1		0	101	80-120	0			
Copper	0.1065	0.0050	0.1		0	107	80-120	0			
Lead	0.09802	0.0050	0.1		0	98	80-120	0			
Nickel	0.1035	0.0050	0.1		0	104	80-120	0			
Selenium	0.09328	0.0050	0.1		0	93.3	80-120	0			
Silver	0.09466	0.0050	0.1		0	94.7	80-120	0			
Thallium	0.09612	0.0050	0.1		0	96.1	80-120	0			
Zinc	0.1063	0.010	0.1		0	106	80-120	0			

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196876	Instrument ID ICPMS3	Method:	SW6020B
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MS	Sample ID: 22051619-03DMS				Units: mg/	L	Analysi	s Date: 5/2	5/2022 05	:16 PM
Client ID:	Run I	D: ICPMS	3_220525A		SeqNo: 845 8	3411	Prep Date: 5/2	5/2022	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.3377	0.010	0.1	0.2359	9 102	75-125	C)		
Antimony	0.1052	0.0050	0.1	0.000089	1 105	75-125	C)		
Arsenic	0.0944	0.0050	0.1	0.0002442	94.2	75-125	C)		
Barium	0.1159	0.0050	0.1	0.0148	3 101	75-125	C)		
Beryllium	0.1016	0.0020	0.1	0.0000363	3 102	75-125	C)		
Boron	0.5462	0.020	0.5	0.01397	7 106	75-125	C)		
Cadmium	0.1046	0.0020	0.1	0.0000682	2 105	75-125	C)		
Chromium	0.09977	0.0050	0.1	0.001273	3 98.5	75-125	C)		
Copper	0.1062	0.0050	0.1	0.0014	5 105	75-125	C)		
Lead	0.09816	0.0050	0.1	0.0002233	3 97.9	75-125	C)		
Nickel	0.1021	0.0050	0.1	0.0006545	5 101	75-125	C)		
Selenium	0.09335	0.0050	0.1	0.0000979	93.3	75-125	C)		
Silver	0.09725	0.0050	0.1	0.0000033	3 97.2	75-125	C)		
Thallium	0.09541	0.0050	0.1	0.000008	3 95.4	75-125	C)		
Zinc	0.1045	0.010	0.1	0.00126	1 103	75-125	C)		

MSD	Sample ID: 22051619-03DMSD	Sample ID: 22051619-03DMSD				nits: mg/ l	L	Analysis	Date: 5/25	/2022 05:	18 PM
Client ID:	Run I	D: ICPMS	3_220525A		Seq	No: 845 8	3412	Prep Date: 5/25	/2022	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.3542	0.010	0.1	0.23	59	118	75-125	0.3377	4.78	20	
Antimony	0.104	0.0050	0.1	0.00008	91	104	75-125	0.1052	1.14	20	
Arsenic	0.09267	0.0050	0.1	0.00024	42	92.4	75-125	0.0944	1.85	20	
Barium	0.1149	0.0050	0.1	0.01	48	100	75-125	0.1159	0.845	20	
Beryllium	0.1002	0.0020	0.1	0.00003	63	100	75-125	0.1016	1.35	20	
Boron	0.5453	0.020	0.5	0.013	97	106	75-125	0.5462	0.148	20	
Cadmium	0.1038	0.0020	0.1	0.00006	82	104	75-125	0.1046	0.806	20	
Chromium	0.09907	0.0050	0.1	0.0012	73	97.8	75-125	0.09977	0.698	20	
Copper	0.1039	0.0050	0.1	0.001	45	102	75-125	0.1062	2.13	20	
Lead	0.09721	0.0050	0.1	0.00022	33	97	75-125	0.09816	0.966	20	
Nickel	0.1001	0.0050	0.1	0.00065	45	99.4	75-125	0.1021	1.99	20	
Selenium	0.09347	0.0050	0.1	0.00009	79	93.4	75-125	0.09335	0.13	20	
Silver	0.09611	0.0050	0.1	0.00000	33	96.1	75-125	0.09725	1.18	20	
Thallium	0.09397	0.0050	0.1	0.00000	88	94	75-125	0.09541	1.52	20	
Zinc	0.1089	0.010	0.1	0.0012	61	108	75-125	0.1045	4.11	20	

The following samples were analyzed in this batch:

22051511-02D	22051511-04D	22051511-06D	
22051511-07D	22051511-10D	22051511-11D	
22051511-14D			

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Instrument ID ICPMS3		Method	SW602	20B					
Sample ID: MBLK-197094-1970	94			Units: m	g/L	Analysi	s Date: 5/3	1/2022 03	:47 PN
Run	ID: ICPMS	3_220531A		SeqNo: 84	171604	Prep Date: 5/2	9/2022	DF: 1	
			SPK Ref		Control	RPD Ref		RPD	
Result	PQL	SPK Val	Value	%RE	C Limit	Value	%RPD	Limit	Qua
ND	0.010								
ND									
ND									
				Units: m	g/L			/2022 12:2	20 PM
Run	ID: ICPMS	3_220601A		SeqNo: 84	174214	Prep Date: 5/2	9/2022	DF: 1	
			SPK Ref		Control	RPD Ref		RPD	
Result	PQL	SPK Val	Value	%RE	C Limit	Value	%RPD	Limit	Qua
ND	0.020								
Sample ID: LCS-197094-19709	1			Units: m	g/L	Analysi	s Date: 5/3	1/2022 03	:48 PN
		3_220531A			_	-		DF: 1	
			SPK Ref	·				RPD	
Result	PQL	SPK Val	Value	%RE		Value	%RPD	Limit	Qua
0.1029	0.010	0.1		0 103	80-120	()		
0.1019	0.0050	0.1							
	0.0050	0.1		0 108					
0.1075		U. 1							
0.1075 0.09724		0.1		0 972	/ 80-170				
0.09724	0.0050	0.1 0.1		0 97.2					
0.09724 0.1026	0.0050 0.0050	0.1		0 103	80-120	()		
0.09724 0.1026 0.08974	0.0050 0.0050 0.0050	0.1 0.1		0 103	80-120 80-120	()		
0.09724 0.1026	0.0050 0.0050	0.1		0 103	80-120 80-120 80-120	(()))		
	Sample ID: MBLK-197094-1970 Run Result ND	Sample ID: MBLK-197094-197094 Run ID: ICPMS: Result PQL ND	Result PQL SPK Val	Result	Sample ID: MBLK-197094-197094 Run ID: ICPMS3_220531A SPK Ref Value %REd Va	Sample ID: MBLK-197094-197094 SeqNo: 8471604 SeqNo: 8471604 Result	Sample ID: MBLK-197094-197094 Prop Date: 5/2 SeqNo: 8471-604 Prop Date: 5/2	Sample ID: MBLK-197094-197094 Run ID: ICPMS3_220531A SPK Ref SeqNo: 8471-04 Prep Date: 5/29/2022 Prep	Sample ID: MBLK-197094-197094 Run ID: ICPMS3_220531A SeqNo: 8471604 Prep Date: 5/29/2022 DF: 1

Note:

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 197094	Instrument ID ICPMS3		Method	d: SW6020)B					
LCS	Sample ID: LCS-197094-197094				Units: n	ng/L	Analysis	Date: 6/1	/2022 12:22 PM	
Client ID:	Run I	D: ICPMS	3_220601A		SeqNo: 8474215		Prep Date: 5/29	9/2022	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%RE	Control C Limit	RPD Ref Value	%RPD	RPD Limit	Qua
Boron	0.5048	0.020	0.5	(0 10	1 80-120	0			
MS	Sample ID: 22051853-09DMS				Units: m	ng/L	Analysis	Date: 5/3	1/2022 05	:38 PM
Client ID:	Run I	D: ICPMS	3_220531A		SeqNo: 8	472567	Prep Date: 5/29	9/2022	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%RE	Control C Limit	RPD Ref Value	%RPD	RPD Limit	Qua
Aluminum	3.168	0.010	0.1	2.15	3 101	0 75-125	5 0			SEC
Antimony	0.09893	0.0050	0.1	0.0000319	9 98.	9 75-125	0			
Arsenic	0.09945	0.0050	0.1	0.001066	6 98.	4 75-125	0			
Barium	0.2846	0.0050	0.1	0.1854	4 99.	2 75-125	5 0			
Beryllium	0.09961	0.0020	0.1	0.0001166	6 99.	5 75-125	0			
Cadmium	0.09942	0.0020	0.1	0.00003	3 99.	4 75-125	0			
Chromium	0.104	0.0050	0.1	0.003516	6 10	0 75-125	0			
Copper	0.1128	0.0050	0.1	0.008994	4 10	4 75-125	0			
Lead	0.101	0.0050	0.1	0.001884	4 99.	2 75-125	0			
Nickel	0.104	0.0050	0.1	0.002879	9 10	1 75-125	0			
Selenium	0.09213	0.0050	0.1	0.0000924	4 9	2 75-125	0			
Silver	0.09291	0.0050	0.1	0.0000132	2 92.	9 75-125	0			
Thallium	0.09726	0.0050	0.1	0.000008	8 97.	3 75-125	0			
Zinc	0.1137	0.010	0.1	0.01402	2 99.	75-125	0			
MS	Sample ID: 22051853-09DMS				Units: m	ng/L	Analysis	Date: 6/1	/2022 12:2	25 PM
Client ID:	Run I	D: ICPMS	3_220601A		SeqNo: 8	474217	Prep Date: 5/29	9/2022	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%RE	Control C Limit	RPD Ref Value	%RPD	RPD Limit	Qua
Boron	0.5844	0.020	0.5	0.07552	2 10	2 75-125	5 0			

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 197094 Instrument ID ICPMS3 Method: SW6020B

MSD	Sample ID: 22051853-09DMSD				Units: mg/	L	Analysis Date: 5/31/2022 05:40 PM				
Client ID:	Run II	D: ICPMS	3_220531A	Se	eqNo: 847 2	2568	Prep Date: 5/29	/2022	DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Aluminum	3.157	0.010	0.1	2.153	1000	75-125	3.168	0.352	20	SEO	
Antimony	0.09732	0.0050	0.1	0.0000319	97.3	75-125	0.09893	1.64	20		
Arsenic	0.09934	0.0050	0.1	0.001066	98.3	75-125	0.09945	0.11	20		
Barium	0.2862	0.0050	0.1	0.1854	101	75-125	0.2846	0.555	20		
Beryllium	0.1012	0.0020	0.1	0.0001166	101	75-125	0.09961	1.61	20		
Cadmium	0.09833	0.0020	0.1	0.000033	98.3	75-125	0.09942	1.11	20		
Chromium	0.1047	0.0050	0.1	0.003516	101	75-125	0.104	0.656	20		
Copper	0.1123	0.0050	0.1	0.008994	103	75-125	0.1128	0.428	20		
Lead	0.0999	0.0050	0.1	0.001884	98	75-125	0.101	1.14	20		
Nickel	0.1027	0.0050	0.1	0.002879	99.9	75-125	0.104	1.18	20		
Selenium	0.09594	0.0050	0.1	0.0000924	95.9	75-125	0.09213	4.05	20		
Silver	0.09221	0.0050	0.1	0.0000132	92.2	75-125	0.09291	0.759	20		
Thallium	0.09764	0.0050	0.1	0.0000088	97.6	75-125	0.09726	0.389	20		
Zinc	0.1153	0.010	0.1	0.01402	101	75-125	0.1137	1.38	20		

MSD	Sample ID: 22051853-09DMSE)			Units: mg/	L	Analysis Date: 6/1/2022 12:27 PM				
Client ID:	Rur	ID: ICPMS	3_220601A		SeqNo: 847	4218	Prep Date: 5/29	9/2022	DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Boron	0.5812	0.020	0.5	0.075	52 101	75-125	0.5844	0.549	20		

The following samples were analyzed in this batch:

22051511-16D

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196606 Instrument ID LCMS1 Method: E537 Mod

MBLK San	nple ID: MBLK-1	96606-196606	6			Units: ng/	L	Analysis Date: 5/24/2022 11:			
Client ID:		Run ID	: LCMS1	_220523C		SeqNo: 84	0642	Prep Date: 5/20/2022		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Allalyte		rtesuit	I QL	OI IT VAI		701 \L O			701 N D		Quu
Fluorotelomer Sulphonic A	cid 4:2 (FtS	ND	5.0								
Fluorotelomer Sulphonic A	cid 6:2 (FtS	ND	5.0								
Fluorotelomer Sulphonic A	cid 8:2 (FtS	ND	5.0								
Perfluorobutanesulfonic A	cid (PFBS)	ND	5.0								
Perfluorobutanoic Acid (Pf	FBA)	ND	5.0								
Perfluorodecanesulfonic A	cid (PFDS)	ND	5.0								
Perfluorodecanoic Acid (P	FDA)	ND	5.0								
Perfluorododecanoic Acid	(PFDoA)	ND	5.0								
Perfluoroheptanesulfonic A	Acid (PFHpS	ND	5.0								
Perfluoroheptanoic Acid (F		ND	5.0								
Perfluorohexanesulfonic A	cid (PFHxS)	ND	5.0								
Perfluorohexanoic Acid (P	FHxA)	ND	5.0								
Perfluorononanesulfonic A	cid (PFNS)	ND	5.0								
Perfluorononanoic Acid (P	FNA)	ND	5.0								
Perfluorooctanesulfonamic	le (PFOSA)	ND	5.0								
Perfluorooctanesulfonic Ad	cid (PFOS)	ND	2.0								
Perfluorooctanoic Acid (PF	OA)	ND	2.0								
Perfluoropentanesulfonic A	Acid (PFPeS	ND	5.0								
Perfluoropentanoic Acid (F	PFPeA)	ND	5.0								
Perfluorotetradecanoic Aci	d (PFTeA)	ND	5.0								
Perfluorotridecanoic Acid (PFTriA)	ND	5.0								
Perfluoroundecanoic Acid	(PFUnA)	ND	5.0								
N-Ethylperfluorooctanesul	onamidoace	ND	5.0								
N-Methylperfluorooctanes	ulfonamidoa	0.6528	5.0								J
Hexafluoropropylene oxide	dimer acid	ND	5.0								
4,8-Dioxa-3H-perfluoronor	anoic Acid (ND	5.0								
11CI-Pf3OUdS		ND	5.0								
9CI-PF3ONS		ND	5.0								
Surr: 13C2-FtS 4:2		123.3	0	149.4		0 82.5	50-150	(0		
Surr: 13C2-FtS 6:2		150.7	0	152		0 99.2	50-150	(0		
Surr: 13C2-FtS 8:2		144.3	0	153.3		0 94.2	50-150	(0		
Surr: 13C2-PFDA		138.9	0	160		0 86.8	50-150	(0		
Surr: 13C2-PFDoA		141.8	0	160		0 88.6	50-150	()		
Surr: 13C2-PFHxA		133.1	0	160		0 83.2	50-150	(0		
Surr: 13C2-PFTeA		144.7	0	160		0 90.5	50-150	(0		
Surr: 13C2-PFUnA		143.5	0	160		0 89.7	50-150	(0		
Surr: 13C3-HFPO-DA		131.4	0	160		0 82.1	50-150	()		
Surr: 13C3-PFBS		136.1	0	148.8		0 91.4	50-150	(0		
Surr: 13C4-PFBA		142.1	0	160		0 88.8	50-150	()		
Surr: 13C4-PFHpA		143.9	0	160		0 90	50-150	(0		
Surr: 13C4-PFOA		134.9	0	160		0 84.3	50-150	(0		
Surr: 13C4-PFOS		134.2	0	152.8		0 87.8	50-150)		

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196606	Instrument ID LCMS1		Method	E537 Mod			
Surr: 13C5-PFNA	156.2	0	160	0	97.6	50-150	0
Surr: 13C5-PFPeA	147.3	0	160	0	92.1	50-150	0
Surr: 1802-PFHxS	156.1	0	151.2	0	103	50-150	0
Surr: d5-N-EtFOSAA	150.8	0	160	0	94.2	50-150	0
Surr: d3-N-MeFOSAA	140.4	0	160	0	87.8	50-150	0

Note:

See Qualifiers Page for a list of Qualifiers and their explanation.

QC Page: 13 of 45

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196606 Instrument ID LCMS1 Method: E537 Mod

LCS	Sample ID: LCS-196	6606-196606				L	Jnits: ng/L	-	Analysis Date: 5/24/2022 07:17 AM				
Client ID:		Run ID	: LCMS1	_220523C		Se	qNo: 845 (0612	Prep Date: 5/20	0/2022	DF: 1		
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
•	honic Acid 4:2 (FtS	37.6	5.0	29.9		0	126	63-143	0				
•	honic Acid 6:2 (FtS	40.82	5.0	30.3		0	135	63-162					
Fluorotelomer Sulph	,	28.09	5.0	30.3		0	91.5	61-165					
Perfluorobutanesult	`	36	5.0	28.3		0	127	72-130	0				
Perfluorobutanoic A	, ,	39.86	5.0	32		0	125	73-129	0				
Perfluorodecanesul	,	38.9	5.0	30.8		0	126	53-142					
Perfluorodecanoic		37.05	5.0	30.8		0	116	71-129					
Perfluorododecanoi		32.35	5.0	32		0	101	72-134	0				
	ulfonic Acid (PFHpS	36.48	5.0	30.5		0	120	69-134	0				
Perfluoroheptanoic	` '	40.93	5.0	32		0	128	72-130	0				
Perfluorohexanesul		35.38	5.0	29.1		0	120	68-131	0				
Perfluorohexanoic /	,	34.2	5.0	32		0	107	72-129					
Perfluorononanesul	,	32.62	5.0	30.7		0	107	69-127	0				
Perfluorononanoic	,	29.36	5.0	32		0	91.8	69-130	0				
Perfluorooctanesulf	,	35.51	5.0	32		0	111	67-137	0				
Perfluorooctanesulf	,	30.46	2.0	29.7		0	103	65-140	0				
Perfluorooctanoic A	, ,	34.79	2.0	32		0	109	71-133					
	ulfonic Acid (PFPeS	37.51	5.0	30		0	125	71-127	0				
Perfluoropentanoic	•	38.23	5.0	32		0	119	72-129	0				
Perfluorotetradecar	,	37.75	5.0	32		0	118	71-132					
Perfluorotridecanoi	, ,	40.34	5.0	32		0	126	65-144	0				
Perfluoroundecanoi	,	30.34	5.0	32		0	94.8	69-133					
	tanesulfonamidoace	42.07	5.0	32		0	131	61-135					
N-Methylperfluoroo		36.06	5.0	32		0	113	65-136	0				
Hexafluoropropylen		38.55	5.0	32		0	120	70-130	0				
4,8-Dioxa-3H-perflu		29.44	5.0	30.1		0	97.8	70-130					
9CI-PF3ONS		37.6	5.0	29.8		0	126	70-130					
Surr: 13C2-FtS 4	1 :2	107.6	0	149.4		0	72	50-150					
Surr: 13C2-FtS 6		103.6	0	152		0	68.2	50-150					
Surr: 13C2-FtS 8		131.8	0	153.3		0	86	50-150					
Surr: 13C2-PFD		128.2	0	160		0	80.1	50-150					
Surr: 13C2-PFD		112.4	0	160		0	70.2	50-150					
Surr: 13C2-PFHx		144.1	0	160		0	90.1	50-150					
Surr: 13C2-PFTe		129.2	0	160		0	80.8	50-150					
Surr: 13C2-PFU		166.5	0	160		0	104	50-150					
Surr: 13C3-HFP		114.7	0	160		0	71.7	50-150					
Surr: 13C3-PFBS		119.9	0	148.8		0	80.6	50-150					
Surr: 13C4-PFBA		135.7	0	160		0	84.8	50-150					
Surr: 13C4-PFH		129.3	0	160		0	80.8	50-150					
Surr: 13C4-PFO		156.3	0	160		0	97.7	50-150					
Surr: 13C4-PFO		121.5	0	152.8		0	79.5	50-150					
Surr: 13C5-PFN/		140.2	0	160		0	87.6	50-150					

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196606	Instrument ID LCMS1		Method	E537 Mod			
Surr: 13C5-PFPeA	122.5	0	160	0	76.5	50-150	0
Surr: 13C8-FOSA	103.6	0	160	0	64.7	50-150	0
Surr: 1802-PFHxS	114.6	0	151.2	0	75.8	50-150	0
Surr: d5-N-EtFOSAA	125.6	0	160	0	78.5	50-150	0
Surr: d3-N-MeFOSAA	100.9	0	160	0	63	50-150	0

LCS	Sample ID: LCS-196606	Sample ID: LCS-196606-196606							Analysis Date: 5/25/2022 03:09 AM				
Client ID:		Run ID:	Run ID: LCMS1_220524B				qNo: 845 4	1692	Prep Date: 5	/20/2022	DF: 1		
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
11CI-Pf3OUdS		30.76	5.0	30.1		0	102	70-130		0			

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196606 Instrument ID LCMS1 Method: E537 Mod

MS	Sample ID: 2205150	01-01AMS				Units: ng/L	-	Analysis	Date: 5/2	4/2022 09	:22 AM
Client ID:		Run ID	: LCMS1	_220523C	S	eqNo: 845 (0626	Prep Date: 5/20	/2022	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qua
Fluorotelomer Suli	phonic Acid 4:2 (FtS	32.99	5.1	30.46	0.03274	108	63-143	0			
•	phonic Acid 4:2 (FtS	36.59	5.1	30.40	1.201	115	63-162				
·	phonic Acid 8:2 (FtS	46.77	5.1	31.28	1.483	145	61-165				
•	ulfonic Acid (PFBS)	38.49	5.1	28.83	2.252	126	72-130				
Perfluorobutanoic	,	52.29	5.1	32.6	3.306	150	73-129	0			S
	ulfonic Acid (PFDS)	34.52	5.1	31.38	0.000	110	53-142				J
Perfluorodecanoic	,	38.11	5.1	32.6	-0.7071	119	71-129				
Perfluorododecand	,	34.89	5.1	32.6	0.1015	107	72-134	0			
	sulfonic Acid (PFHpS	42.26	5.1	31.07	1.526	131	69-134	0			
Perfluoroheptanoio	` .	42.68	5.1	32.6	3.509	120	72-130				
	ulfonic Acid (PFHxS)	35.8	5.1	29.65	1.192	117	68-131	0			
Perfluorohexanoic	,	41.19	5.1	32.6	5.798	109	72-129				
	ulfonic Acid (PFNS)	32.11	5.1	31.28	000	103	69-127	0			
Perfluorononanoic	,	35.21	5.1	32.6	0.5402	106	69-130	0			
	ılfonamide (PFOSA)	39.33	5.1	32.6	0.3012	120	67-137	0			
	Ilfonic Acid (PFOS)	36.07	2.0	30.26	2.874	110	65-140	0			
Perfluorooctanoic	, ,	48.6	2.0	32.6	8.112	124	71-133				
	sulfonic Acid (PFPeS	40.42	5.1	30.56	0.1899	132	71-127	0			S
Perfluoropentanoio	•	46.35	5.1	32.6	6.786	121	72-129	0			
•	anoic Acid (PFTeA)	37.43	5.1	32.6	0.2259	114	71-132				
Perfluorotridecano	,	31.08	5.1	32.6	0.1179	95	65-144	0			
Perfluoroundecand	,	38.26	5.1	32.6	-0.7399	120	69-133				
	ctanesulfonamidoace	36.05	5.1	32.6	0.1244	110	61-135				
	octanesulfonamidoa	42.81	5.1	32.6	0.6155	129	65-136				
	ene oxide dimer acid	39.15	5.1	32.6	0.1637	120	70-130	0			
	luorononanoic Acid (37.69	5.1	30.66	0.03274	123	70-130	0			
11CI-Pf3OUdS	,	31.12	5.1	30.66	0.02292	101	70-130				
9CI-PF3ONS		31.12	5.1	30.36	0.03274	102	70-130	0			
Surr: 13C2-FtS	4:2	145.3	0	152.2	0	95.4	50-150	0			
Surr: 13C2-FtS	6:2	150.8	0	154.8	0	97.4	50-150	0			
Surr: 13C2-FtS	8:2	183.3	0	156.2	0	117	50-150	0			
Surr: 13C2-PFD		153.6	0	163	0	94.2	50-150	0			
Surr: 13C2-PFD		133.6	0	163	0	81.9	50-150				
Surr: 13C2-PFH		147.2	0	163	0	90.3	50-150				
Surr: 13C2-PFT		149	0	163	0	91.4	50-150				
Surr: 13C2-PFU		140.1	0	163	0	85.9	50-150				
Surr: 13C3-HFF		150.7	0	163	0	92.4	50-150				
Surr: 13C3-PFE		124.9	0	151.6	0	82.4	50-150				
Surr: 13C4-PFE		135.8	0	163	0	83.3	50-150				
Surr: 13C4-PFH	НрА	124.6	0	163	0	76.5	50-150				
Surr: 13C4-PFC	•	132.7	0	163	0	81.4	50-150				
Surr: 13C4-PFC		139	0	155.7	0	89.3	50-150				

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196606	Instrument ID LCMS1		Method:	E537 Mod			
Surr: 13C5-PFNA	132.9	0	163	0	81.5	50-150	0
Surr: 13C5-PFPeA	133.5	0	163	0	81.9	50-150	0
Surr: 13C8-FOSA	119.3	0	163	0	73.2	50-150	0
Surr: 1802-PFHxS	117.2	0	154	0	76.1	50-150	0
Surr: d5-N-EtFOSAA	144.5	0	163	0	88.7	50-150	0
Surr: d3-N-MeFOSAA	151.4	0	163	0	92.9	50-150	0

Note:

See Qualifiers Page for a list of Qualifiers and their explanation.

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Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196606 Instrument ID LCMS1 Method: E537 Mod

MSD Sample ID: 22	2051501-01AMSD				Units: ng/L	-	Analysis	Date: 5/24	/2022 09:	30 AM
Client ID:	Run ID	: LCMS1	_220523C	Se	eqNo: 845 (0627	Prep Date: 5/20	/2022	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qua
•	25.00									
Fluorotelomer Sulphonic Acid 4:2 (F		5.1	30.32	0.03274	118	63-143	32.99	8.53	30	
Fluorotelomer Sulphonic Acid 6:2 (F		5.1	30.72	1.201	115	63-162	36.59	0.0751	30	
Fluorotelomer Sulphonic Acid 8:2 (F		5.1	31.13	1.483	127	61-165	46.77	13.1	30	
Perfluorobutanesulfonic Acid (PFBS)	,	5.1	28.69	2.252	114	72-130	38.49	9.59	30	
Perfluorobutanoic Acid (PFBA)	44.11	5.1	32.45	3.306	126	73-129	52.29	17	30	
Perfluorodecanesulfonic Acid (PFDS	,	5.1	31.23	0	111	53-142	34.52	0.782	30	
Perfluorodecanoic Acid (PFDA)	37.16	5.1	32.45	-0.7071	117	71-129	38.11	2.52	30	
Perfluorododecanoic Acid (PFDoA)	31.39	5.1	32.45	0.1015	96.4	72-134	34.89	10.6	30	
Perfluoroheptanesulfonic Acid (PFH _I		5.1	30.92	1.526	105	69-134	42.26	21.8	30	
Perfluoroheptanoic Acid (PFHpA)	43.12	5.1	32.45	3.509	122	72-130	42.68	1.03	30	
Perfluorohexanesulfonic Acid (PFHx	,	5.1	29.5	1.192	116	68-131	35.8	1.44	30	
Perfluorohexanoic Acid (PFHxA)	38.79	5.1	32.45	5.798	102	72-129	41.19	6.01	30	
Perfluorononanesulfonic Acid (PFNS	37.18	5.1	31.13	0	119	69-127	32.11	14.6	30	
Perfluorononanoic Acid (PFNA)	34.08	5.1	32.45	0.5402	103	69-130	35.21	3.27	30	
Perfluorooctanesulfonamide (PFOSA	A) 39.94	5.1	32.45	0.3012	122	67-137	39.33	1.53	30	
Perfluorooctanesulfonic Acid (PFOS) 34.06	2.0	30.11	2.874	104	65-140	36.07	5.74	30	
Perfluorooctanoic Acid (PFOA)	44.66	2.0	32.45	8.112	113	71-133	48.6	8.44	30	
Perfluoropentanesulfonic Acid (PFPe	eS 28.75	5.1	30.42	0.1899	93.9	71-127	40.42	33.7	30	R
Perfluoropentanoic Acid (PFPeA)	44.37	5.1	32.45	6.786	116	72-129	46.35	4.38	30	
Perfluorotetradecanoic Acid (PFTeA) 33.63	5.1	32.45	0.2259	103	71-132	37.43	10.7	30	
Perfluorotridecanoic Acid (PFTriA)	34.82	5.1	32.45	0.1179	107	65-144	31.08	11.3	30	
Perfluoroundecanoic Acid (PFUnA)	36.31	5.1	32.45	-0.7399	114	69-133	38.26	5.22	30	
N-Ethylperfluorooctanesulfonamidoa	ас∈ 37	5.1	32.45	0.1244	114	61-135	36.05	2.59	30	
N-Methylperfluorooctanesulfonamido	oa 37.81	5.1	32.45	0.6155	115	65-136	42.81	12.4	30	
Hexafluoropropylene oxide dimer ac	id 35.54	5.1	32.45	0.1637	109	70-130	39.15	9.65	30	
4,8-Dioxa-3H-perfluorononanoic Acid		5.1	30.52	0.03274	103	70-130	37.69	17.9	30	
11CI-Pf3OUdS	29.44	5.1	30.52	0.02292	96.4	70-130	31.12	5.57	30	
9CI-PF3ONS	30.8	5.1	30.21	0.03274	102	70-130	31.12	1.03	30	
Surr: 13C2-FtS 4:2	125.9	0	151.5	0	83.1	50-150		14.3	30	
Surr: 13C2-FtS 6:2	150.1	0	154.1	0	97.4	50-150		0.467	30	
Surr: 13C2-FtS 8:2	194.9	0	155.4	0	125	50-150		6.14	30	
Surr: 13C2-PFDA	139.8	0	162.2	0	86.2	50-150		9.39	30	
Surr: 13C2-PFDoA	124.7	0	162.2	0	76.9	50-150		6.85	30	
Surr: 13C2-PFHxA	118.4	0	162.2	0	73	50-150		21.7		
Surr: 13C2-PFTeA	124	0	162.2	0	76.5	50-150		18.3	30	
Surr: 13C2-PFUnA	132.1	0	162.2	0	81.4	50-150		5.84		
Surr: 13C3-HFPO-DA	122.6	0	162.2	0	75.6	50-150		20.6	30	
Surr: 13C3-PFBS	111.2	0	150.9	0	73.7	50-150		11.6		
Surr: 13C4-PFBA	124.6	0	162.2	0	76.8	50-150		8.65	30	
Surr: 13C4-PFHpA	110	0	162.2	0	67.8	50-150		12.5		
Surr: 13C4-PF0A	116.9	0	162.2 162.2							
Suil. ISC4-FFCA	123.5	U	154.9	0	72.1 79.7	50-150 50-150		12.6 11.8	30 30	

Note:

See Qualifiers Page for a list of Qualifiers and their explanation.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196606	Instrument ID LCMS1		Method	E537 Mod					
Surr: 13C5-PFNA	129.3	0	162.2	0	79.7	50-150	132.9	2.71	30
Surr: 13C5-PFPeA	126.7	0	162.2	0	78.1	50-150	133.5	5.17	30
Surr: 13C8-FOSA	110.2	0	162.2	0	67.9	50-150	119.3	7.92	30
Surr: 1802-PFHxS	118.4	0	153.3	0	77.2	50-150	117.2	1	30
Surr: d5-N-EtFOSAA	133.1	0	162.2	0	82	50-150	144.5	8.25	30
Surr: d3-N-MeFOSAA	159.4	0	162.2	0	98.3	50-150	151.4	5.14	30

The following samples were analyzed in this batch:

22051511-01E	22051511-02E	22051511-03E	
22051511-04E	22051511-05E	22051511-06E	
22051511-07E			

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196707 Instrument ID LCMS1 Method: E537 Mod

MS Sample	ID: 2205127	1-01B MS				Jnits: ng/L	-	Analysis Date: 5/2	25/2022 06	:19 AM
Client ID:		Run ID	LCMS1	_220524B	Se	eqNo: 845 4	4713	Prep Date: 5/23/2022	DF: 1	
					SPK Ref		Control	RPD Ref	RPD	
Analyte		Result	PQL	SPK Val	Value	%REC	Limit	Value %RPD	Limit	Qua
Fluorotelomer Sulphonic Acid	1:2 (FtS	41.58	4.7	28.03	0	148	63-143	0		S
Fluorotelomer Sulphonic Acid	6:2 (FtS	38.96	4.7	28.4	4.299	122	63-162	0		
Fluorotelomer Sulphonic Acid	3:2 (FtS	29.79	4.7	28.78	0	104	61-165	0		
Perfluorobutanesulfonic Acid (I	PFBS)	31.51	4.7	26.53	0	119	72-130	0		
Perfluorobutanoic Acid (PFBA)		39.95	4.7	30	0	133	73-129	0		S
Perfluorodecanesulfonic Acid (PFDS)	29.6	4.7	28.87	0	103	53-142	0		
Perfluorodecanoic Acid (PFDA)	36.36	4.7	30	0	121	71-129	0		
Perfluorododecanoic Acid (PFI	DoA)	32.82	4.7	30	0	109	72-134	0		
Perfluoroheptanesulfonic Acid	(PFHpS	26.22	4.7	28.59	0	91.7	69-134	0		
Perfluoroheptanoic Acid (PFH)		34.86	4.7	30	0	116	72-130	0		
Perfluorohexanesulfonic Acid (,	31.89	4.7	27.28	0	117	68-131	0		
Perfluorohexanoic Acid (PFHx		33.46	4.7	30	0	112	72-129			
Perfluorononanesulfonic Acid (,	40.59	4.7	28.78	0	141	69-127	0		S
Perfluorononanoic Acid (PFNA	,	31.84	4.7	30	0	106	69-130	0		
Perfluorooctanesulfonamide (F	,	39.55	4.7	30	0	132	67-137	0		
Perfluorooctanesulfonic Acid (I		30.73	1.9	27.84	1.158	106	65-140	0		
Perfluorooctanoic Acid (PFOA)	,	40.78	1.9	30	0	136	71-133			S
Perfluoropentanesulfonic Acid		26.87	4.7	28.12	0	95.6	71-127	0		
Perfluoropentanoic Acid (PFPe	•	37.31	4.7	30	0	124	72-129	0		
Perfluorotetradecanoic Acid (P		34.08	4.7	30	0	114	71-132			
Perfluorotridecanoic Acid (PFT	,	43.24	4.7	30	0	144	65-144	0		S
Perfluoroundecanoic Acid (PFI		32.9	4.7	30	0	110	69-133	0		
N-Ethylperfluorooctanesulfona	,	32.4	4.7	30	1.66	102	61-135			
N-Methylperfluorooctanesulfon		46.48	4.7	30	0	155	65-136			S
Hexafluoropropylene oxide dim		36.89	4.7	30	0	123	70-130			3
4,8-Dioxa-3H-perfluorononano		23.98	4.7	28.22	0	85	70-130	0		
4,6-bloxa-3i i-periluororioriario 11Cl-Pf3OUdS	c Acid (28.31	4.7	28.22	0	100	70-130			
9CI-PF3ONS		42.95	4.7	27.93	0	154	70-130	0		S
		42.93 122.1			0					3
Surr: 13C2-FtS 4:2		124.6	0	140.1		87.2 97.5	50-150			
Surr: 13C2-FtS 6:2		124.6 111.8		142.5	0	87.5	50-150 50-150			
Surr: 13C2-FtS 8:2		107.5	0	143.7	0	77.8	50-150			
Surr: 13C2-PFDA			0	150	0	71.7	50-150			
Surr: 13C2-PFDoA		95.53	0	150	0	63.7	50-150			
Surr: 13C2-PFHxA		124.2 57.26	0	150	0	82.8	50-150			_
Surr: 13C2-PFTeA		57.36	0	150	0	38.2	50-150			S
Surr: 13C2-PFUnA		128.2	0	150	0	85.5	50-150			
Surr: 13C3-HFPO-DA		119.7	0	150	0	79.8	50-150			
Surr: 13C3-PFBS		119.6	0	139.5	0	85.7	50-150			
Surr: 13C4-PFBA		136.4	0	150	0	91	50-150			
Surr: 13C4-PFHpA		135.3	0	150	0	90.2	50-150			
Surr: 13C4-PFOA		137.3	0	150	0	91.5	50-150			
Surr: 13C4-PFOS		115.7	0	143.2	0	80.8	50-150	0		

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196707	Instrument ID LCMS1		Method	E537 Mod			
Surr: 13C5-PFNA	164.4	0	150	0	110	50-150	0
Surr: 13C5-PFPeA	129.5	0	150	0	86.4	50-150	0
Surr: 13C8-FOSA	169.8	0	150	0	113	50-150	0
Surr: 1802-PFHxS	146.5	0	141.7	0	103	50-150	0
Surr: d5-N-EtFOSAA	157.4	0	150	0	105	50-150	0
Surr: d3-N-MeFOSAA	103.9	0	150	0	69.3	50-150	0

мѕ	Sample ID: 22051271- (ample ID: 22051271-01B MS					nits: ng/L		Analysis Date: 5/25/2022 12:40 PM				
Client ID:		Run ID:	LCMS1	_220524B		Sec	qNo: 845 4	1756	Prep Date: 5/	23/2022	DF: 1		
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Perfluoroheptanesul	fonic Acid (PFHpS	23.96	4.7	28.59		0	83.8	69-134		0			

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196707 Instrument ID LCMS1 Method: E537 Mod

Date(11D. 190707	mstument ib			- Wictio	u. E337 N	nou .						
DUP	Sample ID: 2205108	37-02A DUP	A DUP			U	nits: ng/L	-	Analysis	Date: 5/25/2022 06:27 AM		
Client ID:		Run ID	: LCMS1	_220524B		Sec	qNo: 845 4	1714	Prep Date: 5/23	/2022	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qua
Fluorotelomer Sulpho	nic Acid 4:2 (FtS	ND	5.0	0		0	0	0-0	0	0	30	
Fluorotelomer Sulpho	· · · · · · · · · · · · · · · · · · ·	2.3	5.0	0		0	0	0-0	0	0	30	J
Fluorotelomer Sulpho	•	ND	5.0	0		0	0	0-0	0	0	30	
Perfluorobutanesulfor	· · · · · · · · · · · · · · · · · · ·	2.439	5.0	0		0	0	0-0	1.907	0	30	J
Perfluorobutanoic Aci	, ,	7.067	5.0	0		0	0	0-0	7.444	5.19	30	
Perfluorodecanesulfo	,	ND	5.0	0		0	0	0-0	0	0	30	
Perfluorodecanoic Ac	,	ND	5.0	0		0	0	0-0	0	0	30	
Perfluorododecanoic		ND	5.0	0		0	0	0-0	0	0	30	
Perfluoroheptanesulfo	onic Acid (PFHpS	2.579	5.0	0		0	0	0-0	0	0	30	J
Perfluoroheptanoic A	, ,	3.51	5.0	0		0	0	0-0	3.632	0	30	J
Perfluorohexanesulfo	` ' '	2.747	5.0	0		0	0	0-0	1.914	0	30	J
Perfluorohexanoic Ac	, ,	7.041	5.0	0		0	0	0-0	7.469	5.89	30	
Perfluorononanesulfo	,	ND	5.0	0		0	0	0-0	0	0	30	
Perfluorononanoic Ac	id (PFNA)	ND	5.0	0		0	0	0-0	0	0	30	
Perfluorooctanesulfor	namide (PFOSA)	ND	5.0	0		0	0	0-0	0	0	30	
Perfluorooctanesulfor	nic Acid (PFOS)	1.21	2.0	0		0	0	0-0	2.006	0	30	J
Perfluorooctanoic Aci	d (PFOA)	12.23	2.0	0		0	0	0-0	11.28	8.03	30	
Perfluoropentanesulfo	onic Acid (PFPeS	ND	5.0	0		0	0	0-0	0	0	30	
Perfluoropentanoic Ad	cid (PFPeA)	10.85	5.0	0		0	0	0-0	10.02	7.96	30	
Perfluorotetradecanoi	c Acid (PFTeA)	ND	5.0	0		0	0	0-0	0	0	30	
Perfluorotridecanoic <i>A</i>	Acid (PFTriA)	ND	5.0	0		0	0	0-0	0	0	30	
Perfluoroundecanoic	Acid (PFUnA)	ND	5.0	0		0	0	0-0	0	0	30	
N-Ethylperfluorooctan	esulfonamidoace	ND	5.0	0		0	0	0-0	0	0	30	
N-Methylperfluoroocta	anesulfonamidoa	ND	5.0	0		0	0	0-0	0	0	30	
Hexafluoropropylene	oxide dimer acid	ND	5.0	0		0	0	0-0	0	0	30	
4,8-Dioxa-3H-perfluor	ononanoic Acid (ND	5.0	0		0	0	0-0	0	0	30	
11CI-Pf3OUdS		ND	5.0	0		0	0	0-0	0	0	30	
9CI-PF3ONS		ND	5.0	0	-	0	0	0-0	0	0	30	
Surr: 13C2-FtS 4:2		112.1	0	148.3		0	75.6	50-150	150.8	29.4	30	
Surr: 13C2-FtS 6:2		109.1	0	150.9	-	0	72.3	50-150	141.3	25.7	30	
Surr: 13C2-FtS 8:2		112.2	0	152.1		0	73.7	50-150	229.4	68.6	30	R
Surr: 13C2-PFDA		101.1	0	158.8		0	63.7	50-150	115.7	13.4	30	
Surr: 13C2-PFDoA		95.99	0	158.8		0	60.4	50-150	94.53	1.54	30	
Surr: 13C2-PFHxA		100.2	0	158.8		0	63.1	50-150	95.01	5.32	30	
Surr: 13C2-PFTeA		105	0	158.8		0	66.1	50-150	122.4	15.3	30	
Surr: 13C2-PFUnA		149.5	0	158.8		0	94.1	50-150	118.7	23	30	
Surr: 13C3-HFPO-	DA	90.93	0	158.8		0	57.3	50-150	97.28	6.75	30	
Surr: 13C3-PFBS		109.6	0	147.7		0	74.2	50-150	93.66	15.7	30	
Surr: 13C4-PFBA		125.2	0	158.8		0	78.8	50-150	99.01	23.3	30	
Surr: 13C4-PFHpA		143.2	0	158.8		0	90.2	50-150	103.3	32.3	30	R
Surr: 13C4-PFOA		148.9	0	158.8		0	93.8	50-150	97.45	41.8	30	R
Surr: 13C4-PFOS		113.8	0	151.7		0	75	50-150	91.73	21.4	30	

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196707	Instrument ID LCMS1		Method	E537 Mod						
Surr: 13C5-PFNA	132.5	0	158.8	0	83.5	50-150	105.8	22.4	30	
Surr: 13C5-PFPeA	108.4	0	158.8	0	68.2	50-150	102.8	5.26	30	
Surr: 13C8-FOSA	128.8	0	158.8	0	81.1	50-150	99.84	25.4	30	
Surr: 1802-PFHxS	130.4	0	150.1	0	86.9	50-150	80.01	47.9	30	R
Surr: d5-N-EtFOSAA	152	0	158.8	0	95.7	50-150	123.9	20.4	30	
Surr: d3-N-MeFOSAA	84.71	0	158.8	0	53.3	50-150	135.3	46	30	R

DUP Sample ID: 22	: 22051087-02A DUP				Units: ng/	L	Analysis Date: 5/25/2022 12:48 PM				
Client ID:	Run ID:	LCMS1	_220524B		SeqNo: 845	4757	Prep Date: 5	/23/2022	D	F: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RP Lim		Qual
Perfluoroheptanesulfonic Acid (PFH)	oS 1.693	5.0	0		0 0	0-0		0	0	30	J

The following samples were analyzed in this batch:

22051511-08E	22051511-09E	22051511-10E
22051511-11E	22051511-12E	22051511-13A
22051511-14E	22051511-16E	

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196624 Instrument ID SVMS8 Method: SW846 8270D

MBLK	Sample ID: SBL	KW1-196624-196	624			Units: µg/L	-	Analysis Date: 5/20/2022 03:54			
Client ID:		Run ID	SVMS8	_220520A		SeqNo: 844	4873	Prep Date: 5/2	20/2022	DF: 1	
					SPK Ref		Control	RPD Ref		RPD	
Analyte		Result	PQL	SPK Val	Value	%REC	Limit	Value	%RPD	Limit	Qua
1,1`-Biphenyl		ND	5.0								
2,4,5-Trichlorophe	enol	ND	5.0								
2,4,6-Trichlorophe	enol	ND	5.0								
2,4-Dichloropheno	ol	ND	5.0								
2,4-Dimethylphen	ol	ND	5.0								
2,4-Dinitrophenol		ND	5.0								
2,4-Dinitrotoluene		ND	5.0								
2,6-Dinitrotoluene		ND	5.0								
2-Chloronaphthale		ND	5.0								
2-Chlorophenol		ND	5.0								
2-Methylnaphthale	ene	ND	5.0								
2-Methylphenol		ND	5.0								
2-Nitroaniline		ND	5.0								
2-Nitrophenol		ND	5.0								
3&4-Methylpheno	1	ND	5.0								
3,3'-Dichlorobenz		ND	5.0								
3-Nitroaniline	idilic	ND	5.0								
4,6-Dinitro-2-meth	winhonol	ND	5.0								
		ND	5.0								
4-Bromophenyl ph		ND	5.0								
4-Chloro-3-methyl	iprierioi	ND									
4-Chloroaniline			5.0								
4-Chlorophenyl ph	nenyl ether	ND	5.0								
4-Nitroaniline		ND	5.0								
4-Nitrophenol		ND	5.0								
Acenaphthene		ND	5.0								
Acenaphthylene		ND	5.0								
Acetophenone		ND	1.0								
Anthracene		ND	5.0								
Atrazine		ND	1.0								
Benzaldehyde		ND	1.0								
Benzo(a)anthrace	ne	ND	5.0								
Benzo(a)pyrene		ND	5.0								
Benzo(b)fluoranth	ene	ND	5.0								
Benzo(g,h,i)peryle	ene	ND	5.0								
Benzo(k)fluoranth	ene	ND	5.0								
Bis(2-chloroethox	y)methane	ND	5.0								
Bis(2-chloroethyl)	ether	ND	5.0								
Bis(2-chloroisopro	ppyl)ether	ND	5.0								
Bis(2-ethylhexyl)p	hthalate	ND	5.0								
Butyl benzyl phtha		ND	5.0								
Caprolactam		ND	10								
Carbazole		ND	5.0								

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196624	Instrument ID SVMS8		Method:	SW846 8270	D			
Chrysene	ND	5.0						
Dibenzo(a,h)anthracene	ND	5.0						
Dibenzofuran	ND	5.0						
Diethyl phthalate	ND	5.0						
Dimethyl phthalate	ND	5.0						
Di-n-butyl phthalate	ND	5.0						
Di-n-octyl phthalate	ND	5.0						
Fluoranthene	ND	5.0						
Fluorene	ND	5.0						
Hexachlorobenzene	ND	5.0						
Hexachlorobutadiene	ND	5.0						
Hexachlorocyclopentadiene	ND	5.0						
Hexachloroethane	ND	5.0						
Indeno(1,2,3-cd)pyrene	ND	5.0						
Isophorone	ND	5.0						
Naphthalene	ND	5.0						
Nitrobenzene	ND	5.0						
N-Nitrosodi-n-propylamine	ND	5.0						
N-Nitrosodiphenylamine	ND	5.0						
Pentachlorophenol	ND	5.0						
Phenanthrene	ND	5.0						
Phenol	ND	5.0						
Pyrene	ND	5.0						
Surr: 2,4,6-Tribromophene	ol 34.59	0	50	0	69.2	27-83	0	
Surr: 2-Fluorobiphenyl	36.13	0	50	0	72.3	26-79	0	
Surr: 2-Fluorophenol	24.84	0	50	0	49.7	13-56	0	
Surr: 4-Terphenyl-d14	43.12	0	50	0	86.2	43-106	0	
Surr: Nitrobenzene-d5	35.35	0	50	0	70.7	29-80	0	
Surr: Phenol-d6	17.35	0	50	0	34.7	10-35	0	

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196624 Instrument ID SVMS8 Method: SW846 8270D

LCS	Sample ID: SLCS	W1-196624-196	624			U	Jnits: μg/L		Analysis Date: 5/20/2022 04:15 PM			
Client ID:		Run ID	: SVMS8	_220520A		Se	qNo: 844	4874	Prep Date: 5/20	0/2022	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qua
1,1`-Biphenyl		14.05	5.0	20		0	70.2	40-85	0			
2,4,5-Trichlorophe	enol	14.72	5.0	20		0	73.6	47-84	0			
2,4,6-Trichlorophe		14.77	5.0	20		0	73.8	45-83	0			
2,4-Dichlorophen		14.3	5.0	20		0	71.5	39-84	0			
2,4-Dimethylphen		13.88	5.0	20		0	69.4	34-79	0			
2,4-Dinitrophenol		11.64	5.0	20		0	58.2	11-117				
2,4-Dinitrotoluene		14.78	5.0	20		0	73.9	54-93	0			
2,6-Dinitrotoluene		15.05	5.0	20		0	75.2	51-90	0			
2-Chloronaphthal		14.74	5.0	20		0	73.7	37-84	0			
2-Chlorophenol	0110	14.12	5.0	20		0	70.6	38-83	0			
2-Methylnaphthal	ene	13.99	5.0	20		0	70.0	33-85	0			
2-Methylphenol		13.06	5.0	20		0	65.3	29-76	0			
2-Nitroaniline		15.25	5.0	20		0	76.2	45-94	0			
2-Nitrophenol		14.26	5.0	20		0	71.3	41-84	0			
3&4-Methylpheno	ol .	12.01	5.0	20		0	60	24-70	0			
3,3'-Dichlorobenz		14.34	5.0	20		0	71.7	39-96	0			
3-Nitroaniline		15.14	5.0	20		0	75.7	50-93	0			
,6-Dinitro-2-meth	hylphenol	14.31	5.0	20		0	71.6	23-116				
I-Bromophenyl pl		15.3	5.0	20		0	76.5	51-93	0			
I-Chloro-3-methy	-	14.35	5.0	20		0	71.8	41-86	0			
I-Chloroaniline	.p.r.e.r.e.	14.69	5.0	20		0	73.4	44-92	0			
I-Chlorophenyl pl	henvl ether	14.48	5.0	20		0	72.4	49-89	0			
I-Nitroaniline		15.04	5.0	20		0	75.2	47-98	0			
I-Nitrophenol		7.85	5.0	20		0	39.2	10-43	0			
Acenaphthene		14.44	5.0	20		0	72.2	42-85	0			
Acenaphthylene		14.84	5.0	20		0	74.2	42-88	0			
Acetophenone		14.64	1.0	20		0	73.2	39-91	0			
Anthracene		15.15	5.0	20		0	75.8	55-93	0			
Atrazine		14.98	1.0	20		0	74.9	52-100				
Benzaldehyde		15.82	1.0	20		0	79.1	42-110				
Benzo(a)anthrace	ene	15.9	5.0	20		0	79.5	56-91	0			
Benzo(a)pyrene		15.46	5.0	20		0	77.3	55-96	0			
Benzo(b)fluoranth	nene	15.82	5.0	20		0	79.1	55-99	0			
Benzo(g,h,i)peryle		15.29	5.0	20		0	76.4	44-102				
Benzo(k)fluoranth		16.8	5.0	20		0	84	57-96	0			
Bis(2-chloroethox		14.45	5.0	20		0	72.2	39-88	0			
Bis(2-chloroethyl)		14.43	5.0	20		0	72.2	36-91	0			
Bis(2-chloroisopro		14.29	5.0	20		0	71.4	33-83	0			
Bis(2-ethylhexyl)p	,	15.06	5.0	20		0	75.3	39-113				
Butyl benzyl phtha		14.61	5.0	20		0	73	49-97	0			
Carbazole		15.15	5.0	20		0	75.8	59-92	0			
Chrysene		16.53	5.0	20		0	82.6	55-92	0			

The Mannik & Smith Group, Inc.

QC BATCH REPORT

Work Order: 22051511

Client:

Project: Former Mount Pleasant Landfill

Batch ID: 196624	Instrument ID SVMS8		Method:	SW846 827	0D			
Dibenzo(a,h)anthracene	14.81	5.0	20	0	74	47-100	0	
Dibenzofuran	14.74	5.0	20	0	73.7	44-89	0	
Diethyl phthalate	14.41	5.0	20	0	72	54-95	0	
Dimethyl phthalate	14.81	5.0	20	0	74	51-92	0	
Di-n-butyl phthalate	14.87	5.0	20	0	74.4	57-98	0	
Di-n-octyl phthalate	14.31	5.0	20	0	71.6	36-117	0	
Fluoranthene	15.06	5.0	20	0	75.3	59-93	0	
Fluorene	14.64	5.0	20	0	73.2	47-91	0	
Hexachlorobenzene	14.8	5.0	20	0	74	53-89	0	
Hexachlorobutadiene	12.9	5.0	20	0	64.5	11-83	0	
Hexachlorocyclopentadiene	8.98	5.0	20	0	44.9	14-75	0	
Hexachloroethane	12.78	5.0	20	0	63.9	10-85	0	
Indeno(1,2,3-cd)pyrene	13.97	5.0	20	0	69.8	46-102	0	
Isophorone	14.72	5.0	20	0	73.6	42-90	0	
Naphthalene	13.83	5.0	20	0	69.2	26-78	0	
Nitrobenzene	15.01	5.0	20	0	75	38-86	0	
N-Nitrosodi-n-propylamine	14.82	5.0	20	0	74.1	39-95	0	
N-Nitrosodiphenylamine	15.2	5.0	20	0	76	47-94	0	
Pentachlorophenol	14.21	5.0	20	0	71	37-94	0	
Phenanthrene	15.27	5.0	20	0	76.4	51-90	0	
Phenol	7.26	5.0	20	0	36.3	10-40	0	
Pyrene	16.7	5.0	20	0	83.5	48-98	0	
Surr: 2,4,6-Tribromopher	ool 37.87	0	50	0	75.7	27-83	0	
Surr: 2-Fluorobiphenyl	36.45	0	50	0	72.9	26-79	0	
Surr: 2-Fluorophenol	23.49	0	50	0	47	13-56	0	
Surr: 4-Terphenyl-d14	42.21	0	50	0	84.4	43-106	0	
Surr: Nitrobenzene-d5	36.13	0	50	0	72.3	29-80	0	
Surr: Phenol-d6	15.56	0	50	0	31.1	10-35	0	

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: 196624 Instrument ID SVMS8 Method: SW846 8270D

LCSD S	ample ID: SLCSDW1-196624-	196624			L	Jnits: µg/L		Analysis	Date: 5/20)/2022 04:	35 PM
Client ID:	Run	ID: SVMS8	_220520A		Se	qNo: 844 4	1875	Prep Date: 5/20	/2022	DF: 1	
				SPK Ref			Control	RPD Ref		RPD	
Analyte	Result	PQL	SPK Val	Value		%REC	Limit	Value	%RPD	Limit	Qual
1,1`-Biphenyl	11.55	5.0	20		0	57.8	40-85	14.05	19.5	30	
2,4,5-Trichlorophenol	12.55	5.0	20		0	62.8	47-84	14.72	15.9	30	
2,4,6-Trichlorophenol	12.04	5.0	20		0	60.2	45-83	14.77	20.4	30	
2,4-Dichlorophenol	11.36	5.0	20		0	56.8	39-84	14.3	22.9	30	
2,4-Dimethylphenol	11.63	5.0	20		0	58.2	34-79	13.88	17.6	30	
2,4-Dinitrophenol	7.65	5.0	20		0	38.2	11-117	11.64	41.4	30	R
2,4-Dinitrotoluene	13.3	5.0	20		0	66.5	54-93	14.78	10.5	30	
2,6-Dinitrotoluene	13.02	5.0	20		0	65.1	51-90	15.05	14.5	30	
2-Chloronaphthalene	11.74	5.0	20		0	58.7	37-84	14.74	22.7	30	
2-Chlorophenol	11.52	5.0	20		0	57.6	38-83	14.12	20.3	30	
2-Methylnaphthalene	11.17	5.0	20		0	55.8	33-85	13.99	22.4	30	
2-Methylphenol	11.38	5.0	20		0	56.9	29-76	13.06	13.7	30	
2-Nitroaniline	13.33	5.0	20		0	66.6	45-94	15.25	13.4	30	
2-Nitrophenol	10.9	5.0	20		0	54.5	41-84	14.26	26.7	30	
3&4-Methylphenol	10.45	5.0	20		0	52.2	24-70	12.01	13.9	30	
3,3'-Dichlorobenzidine	12.51	5.0	20		0	62.6	39-96	14.34	13.6	30	
3-Nitroaniline	14.27	5.0	20		0	71.4	50-93	15.14	5.92	30	
4,6-Dinitro-2-methylphe	nol 11.28	5.0	20		0	56.4	23-116	14.31	23.7	30	
4-Bromophenyl phenyl	ther 13.39	5.0	20		0	67	51-93	15.3	13.3	30	
4-Chloro-3-methylpheno	12.37	5.0	20		0	61.8	41-86	14.35	14.8	30	
4-Chloroaniline	12.49	5.0	20		0	62.4	44-92	14.69	16.2	30	
4-Chlorophenyl phenyl	ther 12.4	5.0	20		0	62	49-89	14.48	15.5	30	
4-Nitroaniline	13.44	5.0	20		0	67.2	47-98	15.04	11.2	30	
4-Nitrophenol	6.84	5.0	20		0	34.2	10-43	7.85	13.8	30	
Acenaphthene	11.96	5.0	20		0	59.8	42-85	14.44	18.8	30	
Acenaphthylene	12.35	5.0	20		0	61.8	42-88	14.84	18.3	30	
Acetophenone	11.91	1.0	20		0	59.6	39-91	14.64	20.6	30	
Anthracene	13.4	5.0	20		0	67	55-93	15.15	12.3	30	
Atrazine	13.43	1.0	20		0	67.2	52-100	14.98	10.9	30	
Benzaldehyde	12.57	1.0	20		0	62.8	42-110	15.82	22.9	30	
Benzo(a)anthracene	14.08	5.0	20		0	70.4	56-91	15.9	12.1	30	
Benzo(a)pyrene	13.46	5.0	20		0	67.3	55-96	15.46	13.8	30	
Benzo(b)fluoranthene	14.46	5.0	20		0	72.3	55-99	15.82	8.98	30	
Benzo(g,h,i)perylene	12.99	5.0	20		0	65	44-102	15.29	16.3	30	
Benzo(k)fluoranthene	14.4	5.0	20		0	72	57-96	16.8	15.4	30	
Bis(2-chloroethoxy)metl	ane 11.71	5.0	20		0	58.6	39-88	14.45	20.9	30	-
Bis(2-chloroethyl)ether	11.53	5.0	20		0	57.6	36-91	14.43	22.3	30	
Bis(2-chloroisopropyl)et	ner 11.39	5.0	20	-	0	57	33-83	14.29	22.6	30	
Bis(2-ethylhexyl)phthala	te 13.33	5.0	20		0	66.6	39-113	15.06	12.2	30	
Butyl benzyl phthalate	13.17	5.0	20		0	65.8	49-97	14.61	10.4	30	
Carbazole	13.54	5.0	20		0	67.7	59-92	15.15	11.2	30	
Chrysene	14.3	5.0	20		0	71.5	55-92	16.53	14.5	30	

Work Order: 22051511

Project: Former Mount Pleasant Landfill

QC BATCH REPORT

Batch ID: 196624	Instrument ID SVMS8		Method:	SW846 827	0D				
Dibenzo(a,h)anthracene	12.56	5.0	20	0	62.8	47-100	14.81	16.4	30
Dibenzofuran	12.4	5.0	20	0	62	44-89	14.74	17.2	30
Diethyl phthalate	12.96	5.0	20	0	64.8	54-95	14.41	10.6	30
Dimethyl phthalate	12.87	5.0	20	0	64.4	51-92	14.81	14	30
Di-n-butyl phthalate	13.05	5.0	20	0	65.2	57-98	14.87	13	30
Di-n-octyl phthalate	12.64	5.0	20	0	63.2	36-117	14.31	12.4	30
Fluoranthene	13.29	5.0	20	0	66.4	59-93	15.06	12.5	30
Fluorene	12.45	5.0	20	0	62.2	47-91	14.64	16.2	30
Hexachlorobenzene	13.21	5.0	20	0	66	53-89	14.8	11.4	30
Hexachlorobutadiene	10.6	5.0	20	0	53	11-83	12.9	19.6	30
Hexachlorocyclopentadiene	7.62	5.0	20	0	38.1	14-75	8.98	16.4	30
Hexachloroethane	10.66	5.0	20	0	53.3	10-85	12.78	18.1	30
Indeno(1,2,3-cd)pyrene	11.91	5.0	20	0	59.6	46-102	13.97	15.9	30
Isophorone	12.2	5.0	20	0	61	42-90	14.72	18.7	30
Naphthalene	11.07	5.0	20	0	55.4	26-78	13.83	22.2	30
Nitrobenzene	12	5.0	20	0	60	38-86	15.01	22.3	30
N-Nitrosodi-n-propylamine	11.94	5.0	20	0	59.7	39-95	14.82	21.5	30
N-Nitrosodiphenylamine	13.36	5.0	20	0	66.8	47-94	15.2	12.9	30
Pentachlorophenol	12.5	5.0	20	0	62.5	37-94	14.21	12.8	30
Phenanthrene	13.62	5.0	20	0	68.1	51-90	15.27	11.4	30
Phenol	6.32	5.0	20	0	31.6	10-40	7.26	13.8	30
Pyrene	15.07	5.0	20	0	75.4	48-98	16.7	10.3	30
Surr: 2,4,6-Tribromopher	nol 32.26	0	50	0	64.5	27-83	37.87	16	40
Surr: 2-Fluorobiphenyl	28.54	0	50	0	57.1	26-79	36.45	24.3	40
Surr: 2-Fluorophenol	20.12	0	50	0	40.2	13-56	23.49	15.5	40
Surr: 4-Terphenyl-d14	38.32	0	50	0	76.6	43-106	42.21	9.66	40
Surr: Nitrobenzene-d5	28.61	0	50	0	57.2	29-80	36.13	23.2	40
Surr: Phenol-d6	14.12	0	50	0	28.2	10-35	15.56	9.7	40

The following samples were analyzed in this batch:

22051511-01C	22051511-02C	22051511-03C	
22051511-04C	22051511-05C	22051511-06C	
22051511-07C	22051511-08C	22051511-09C	
22051511-10C	22051511-11C	22051511-12C	
22051511-14C	22051511-16C		

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344771a Instrument ID VMS8 Method: SW8260C

Daterrio. N34477 1a	mstrument iD VIVIS				u. 344020						
MBLK	Sample ID: 8V-BLKW2-	220519-R	344771a			Units: µg/L		Analys	is Date: 5/1	9/2022 11	:11 PN
Client ID:		Run ID	: VMS8_2	220519B		SeqNo: 843	9351	Prep Date:		DF: 1	
			_		CDK D-f					RPD	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	Limit	Qua
Allalyte				Of It var		701120			701 CI D		Que
1,1,1-Trichloroethane		ND	1.0								
1,1,2,2-Tetrachloroetha	ane	ND	1.0								
1,1,2-Trichloroethane		ND	1.0								
1,1,2-Trichlorotrifluoroe	ethane	ND	1.0								
1,1-Dichloroethane		ND	1.0								
1,1-Dichloroethene		ND	1.0								
1,2,4-Trichlorobenzene		ND	1.0								
1,2-Dibromo-3-chlorop	ropane	ND	1.0								
1,2-Dibromoethane		ND	1.0								
1,2-Dichlorobenzene		ND	1.0								
1,2-Dichloroethane		ND	1.0								
1,2-Dichloropropane		ND	1.0								
1,3-Dichlorobenzene		ND	1.0								
1,4-Dichlorobenzene		ND	1.0								
2-Butanone		ND	5.0								
2-Hexanone		ND	5.0								
4-Methyl-2-pentanone		ND	1.0								
Acetone		ND	10								
Benzene		ND	1.0								
Bromodichloromethane	е	ND	1.0								
Bromoform		ND	1.0								
Bromomethane		ND	1.0								
Carbon disulfide		ND	1.0								
Carbon tetrachloride		ND	1.0								
Chlorobenzene		ND	1.0								
Chloroethane		ND	1.0								
Chloroform		ND	1.0								
Chloromethane		ND	1.0								
cis-1,2-Dichloroethene		ND	1.0								
cis-1,3-Dichloropropen	ie	ND	1.0								
Cyclohexane		ND	2.0								
Dibromochloromethane		ND	1.0								
Dichlorodifluoromethar	ne	ND	1.0								
Ethylbenzene		ND	1.0								
Isopropylbenzene		ND	1.0								
Methyl acetate		ND	2.0								
Methyl tert-butyl ether		ND	1.0								
Methylcyclohexane		ND	1.0								
Methylene chloride		ND	5.0								
Styrene		ND	1.0								
Tetrachloroethene		ND	1.0								
Toluene		ND	1.0								

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344771a Instrumer	nt ID VMS8		Method:	SW8260C				
trans-1,2-Dichloroethene	ND	1.0						
trans-1,3-Dichloropropene	ND	1.0						
Trichloroethene	ND	1.0						
Trichlorofluoromethane	ND	1.0						
Vinyl chloride	ND	1.0						
Xylenes, Total	ND	3.0						
Surr: 1,2-Dichloroethane-d4	19.56	0	20	0	97.8	75-120	0	
Surr: 4-Bromofluorobenzene	18.58	0	20	0	92.9	80-110	0	
Surr: Dibromofluoromethane	20.29	0	20	0	101	85-115	0	
Surr: Toluene-d8	20.95	0	20	0	105	85-110	0	

Note:

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344771a Instrument ID VMS8 Method: SW8260C

LCS	Sample ID: 8V-L	CSW2-220519-R	344771a			U	Units: µg/L An			Analysis Date: 5/19/2022 10:15 PM			
Client ID:		Run ID	: VMS8_2	220519B		Se	qNo: 843 9	9349	Prep Date:		DF: 1		
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qua	
1,1,1-Trichloroetha	ne	20.39	1.0	20		0	102	75-130	()			
1,1,2,2-Tetrachloro		22.92	1.0	20		0	115	75-130	(
1.1.2-Trichloroetha		20.76	1.0	20		0	104	75-125					
1,1,2-Trichlorotriflu		20.9	1.0	20		0	104	50-150	(
1,1-Dichloroethane		19.55	1.0	20		0	97.8	68-142	(
1,1-Dichloroethene		20.24	1.0	20		0	101	70-145	(
1,2,4-Trichlorobenz		20.69	1.0	20		0	103	70-135					
1,2-Dibromo-3-chlo		22.84	1.0	20		0	114	60-130	C				
1,2-Dibromoethane		21.99	1.0	20		0	110	67-155	C				
1,2-Dichlorobenzer		20.84	1.0	20		0	104	70-130	(
1,2-Dichloroethane		19.66	1.0	20		0	98.3	78-125					
1,2-Dichloropropan		19.17	1.0	20		0	95.8	75-125	C				
1.3-Dichlorobenzer		20.15	1.0	20		0	101	75-130					
1,4-Dichlorobenzer	ne	19.93	1.0	20		0	99.6	75-130	C)			
2-Butanone		23.81	5.0	20		0	119	55-150	C				
2-Hexanone		24.62	5.0	20		0	123	60-135	C				
4-Methyl-2-pentanc	one	32.06	1.0	20		0	160	77-178					
Acetone		23.16	10	20		0	116	60-160	C				
Benzene		19.64	1.0	20		0	98.2	70-130	C				
Bromodichlorometh	nane	19.08	1.0	20		0	95.4	75-125	C				
Bromoform		18.04	1.0	20		0	90.2	60-125					
Bromomethane		20.42	1.0	20		0	102	30-185	C				
Carbon disulfide		21.36	1.0	20		0	107	60-165					
Carbon tetrachlorid	e	19.03	1.0	20		0	95.2	65-140	C				
Chlorobenzene		20.87	1.0	20		0	104	80-120	C				
Chloroethane		14.58	1.0	20		0	72.9	31-172	(
Chloroform		19.48	1.0	20		0	97.4	66-135					
Chloromethane		14.92	1.0	20		0	74.6	46-148	C				
cis-1,2-Dichloroethe	ene	19.9	1.0	20		0	99.5	75-134	C				
cis-1,3-Dichloropro		17.34	1.0	20		0	86.7	70-130	C)			
Cyclohexane		19.97	2.0	20		0	99.8	50-150	C				
Dibromochlorometh	nane	19.26	1.0	20		0	96.3	60-115	C)			
Dichlorodifluoromet		20.55	1.0	20		0	103	10-180	(
Ethylbenzene		20.85	1.0	20		0	104	76-123	(
sopropylbenzene		21.3	1.0	20		0	106	80-127	(
Methyl tert-butyl eth	ner	22.28	1.0	20		0	111	68-129	(
Methylcyclohexane		20.35	1.0	20		0	102	50-150	(
Methylene chloride		20.24	5.0	20		0	101	72-125					
Styrene		21.55	1.0	20		0	108	79-117	(
Tetrachloroethene		20.08	1.0	20		0	100	68-166	(
Toluene		19.66	1.0	20		0	98.3	76-125	(
trans-1,2-Dichloroe	thene	21.4	1.0	20		0	107	80-140	(

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344771a Instrum	ent ID VMS8		Method:	SW8260C				
trans-1,3-Dichloropropene	17.52	1.0	20	0	87.6	56-132	0	
Trichloroethene	18.47	1.0	20	0	92.4	77-125	0	
Trichlorofluoromethane	17.56	1.0	20	0	87.8	60-140	0	
Vinyl chloride	19.92	1.0	20	0	99.6	50-136	0	
Xylenes, Total	64.29	3.0	60	0	107	76-127	0	
Surr: 1,2-Dichloroethane-d4	20.15	0	20	0	101	75-120	0	
Surr: 4-Bromofluorobenzene	20.46	0	20	0	102	80-110	0	-
Surr: Dibromofluoromethane	20.28	0	20	0	101	85-115	0	
Surr: Toluene-d8	19.1	0	20	0	95.5	85-110	0	

Note:

See Qualifiers Page for a list of Qualifiers and their explanation.

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Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344771a Instrument ID VMS8 Method: SW8260C

MS	Sample ID: 22051	511-01A MS				Units: µg/l	-	Analysi	s Date: 5/2	0/2022 06:	51 AM
Client ID: MW-101		Run ID	VMS8_2	220519B	5	SeqNo: 843	9376	Prep Date:		DF: 1	
					SPK Ref		Control	RPD Ref		RPD	
Analyte		Result	PQL	SPK Val	Value	%REC	Limit	Value	%RPD	Limit	Qua
1,1,1-Trichloroethan	e	20.84	1.0	20	0	104	75-130	()		
1,1,2,2-Tetrachloroe	thane	21.69	1.0	20	0	108	75-130	()		
1,1,2-Trichloroethan	е	21.48	1.0	20	0	107	75-125	()		
1,1,2-Trichlorotrifluo	roethane	19.37	1.0	20	0	96.8	50-150	()		
1,1-Dichloroethane		20.02	1.0	20	0	100	68-142	()		
1,1-Dichloroethene		19.78	1.0	20	0	98.9	70-145	()		
1,2,4-Trichlorobenze	ene	18.93	1.0	20	0	94.6	70-135	()		
1,2-Dibromo-3-chlor	opropane	20.49	1.0	20	0		60-130	()		
1,2-Dibromoethane		22.31	1.0	20	0	112	67-155	()		
1,2-Dichlorobenzen	e	20.26	1.0	20	0		70-130	(
1,2-Dichloroethane		20.05	1.0	20	0		78-125	(
1,2-Dichloropropane		19.11	1.0	20	0		75-125	(
1,3-Dichlorobenzen		18.68	1.0	20	0		75-130	(
1,4-Dichlorobenzen		19.02	1.0	20	0		75-130	(
2-Butanone	-	24.15	5.0	20	0		55-150	(
2-Hexanone		22.98	5.0	20	0		60-135	(
4-Methyl-2-pentanoi	ne	32.74	1.0	20	0		77-178	(
Acetone		25.83	10	20	1.76		60-160	(
Benzene		19.33	1.0	20	0		70-130	(
Bromodichlorometh:	ane	18.89	1.0	20	0		75-125	(
Bromoform		17.14	1.0	20	0		60-125	(
Bromomethane		29.53	1.0	20	0		30-185	(
Carbon disulfide		20.82	1.0	20	0		60-165	(
Carbon tetrachloride	<u> </u>	19.08	1.0	20	0		65-140	(
Chlorobenzene	•	19.62	1.0	20	0		80-120	(
Chloroethane		22.89	1.0	20	0		31-172	(
Chloroform		19.97	1.0	20	0		66-135	(
Chloromethane		13.97	1.0	20	0		46-148	(
cis-1,2-Dichloroethe	no	19.37	1.0	20	0		75-134	(
cis-1,2-Dichloroprop		15.21	1.0	20	0		70-130	(
	ene	20.09					50-150				
Cyclohexane Dibromochlorometh	ano	18.89	2.0 1.0	20	0		60-115	(
Dichlorodifluorometh		20.09					10-115				
	iaiie	20.09	1.0	20 20	0			(
Ethylbenzene		20.1					76-123				
Isopropylbenzene		21.98	1.0	20	0		80-127	(
Methyl tert-butyl eth	eı		1.0	20	0		68-129	(
Methylcyclohexane		18.76	1.0	20	0		50-150	(
Methylene chloride		19.87	5.0	20	0		72-125	(
Styrene		20.14	1.0	20	0		79-117	(
Tetrachloroethene		21.39	1.0	20	0		68-166	(
Toluene		19.58	1.0	20	0		76-125	(
trans-1,2-Dichloroet	hene	21.43	1.0	20	0	107	80-140	()		

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344771a	Instrument ID VMS8		Method:	SW8260C				
trans-1,3-Dichloropropene	15.33	1.0	20	0	76.6	56-132	0	
Trichloroethene	18.53	1.0	20	0	92.6	77-125	0	
Trichlorofluoromethane	18.29	1.0	20	0	91.4	60-140	0	
Vinyl chloride	21.87	1.0	20	0	109	50-136	0	
Xylenes, Total	61.63	3.0	60	0	103	76-127	0	
Surr: 1,2-Dichloroethane-c	20.45	0	20	0	102	75-120	0	
Surr: 4-Bromofluorobenze	ne 19.81	0	20	0	99	80-110	0	
Surr: Dibromofluorometha	ne 20.46	0	20	0	102	85-115	0	
Surr: Toluene-d8	20.03	0	20	0	100	85-110	0	

Note:

See Qualifiers Page for a list of Qualifiers and their explanation.

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Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344771a Instrument ID VMS8 Method: SW8260C

DUP Sample ID: 22	2051511-02A DUP				L	Jnits: µg/L	-	Analys	is Date: 5/2	0/2022 06	:32 AM
Client ID: MW-102	Run ID:	VMS8_	220519B		Se	qNo: 843 9	9375	Prep Date:		DF: 1	
				SPK Ref			Control	RPD Ref		RPD	
Analyte	Result	PQL	SPK Val	Value		%REC	Limit	Value	%RPD	Limit	Qual
1,1,1-Trichloroethane	ND	1.0	0		0	0		(0 0	30	
1,1,2,2-Tetrachloroethane	ND	1.0	0		0	0		(0	30	
1,1,2-Trichloroethane	ND	1.0	0		0	0		(0 0	30	
1,1,2-Trichlorotrifluoroethane	ND	1.0	0		0	0		(0 0	30	
1,1-Dichloroethane	ND	1.0	0		0	0		(0 0	30	
1,1-Dichloroethene	ND	1.0	0		0	0		(0 0	30	
1,2,4-Trichlorobenzene	ND	1.0	0		0	0		(0 0	30	
1,2-Dibromo-3-chloropropane	ND	1.0	0		0	0		(0 0	30	
1,2-Dibromoethane	ND	1.0	0		0	0		(0 0	30	
1,2-Dichlorobenzene	ND	1.0	0		0	0		(0 0	30	
1,2-Dichloroethane	ND	1.0	0		0	0		(0 0	30	
1,2-Dichloropropane	ND	1.0	0		0	0		(0 0	30	
1,3-Dichlorobenzene	ND	1.0	0		0	0		(0 0	30	
1,4-Dichlorobenzene	ND	1.0	0		0	0		(0 0	30	
2-Butanone	ND	5.0	0		0	0		(0 0	30	
2-Hexanone	ND	5.0	0		0	0		(0 0	30	
4-Methyl-2-pentanone	ND	1.0	0		0	0		(0 0	30	
Acetone	ND	10	0		0	0		1.29	9 0	30	
Benzene	ND	1.0	0		0	0		(0 0	30	
Bromodichloromethane	ND	1.0	0		0	0		(0 0	30	
Bromoform	ND	1.0	0		0	0		(0 0	30	
Bromomethane	ND	1.0	0		0	0		(0 0	30	
Carbon disulfide	ND	1.0	0		0	0		(0 0	30	
Carbon tetrachloride	ND	1.0	0		0	0		(0 0	30	
Chlorobenzene	0.79	1.0	0		0	0		0.63	3 0	30	J
Chloroethane	ND	1.0	0		0	0		(0 0	30	
Chloroform	ND	1.0	0		0	0		(0 0	30	
Chloromethane	ND	1.0	0		0	0		(0 0	30	
cis-1,2-Dichloroethene	ND	1.0	0		0	0			0	30	
cis-1,3-Dichloropropene	ND	1.0	0		0	0		(0 0	30	
Cyclohexane	ND	2.0	0		0	0		(0 0	30	
Dibromochloromethane	ND	1.0	0		0	0			0 0	30	
Dichlorodifluoromethane	ND	1.0	0		0	0		(0 0	30	
Ethylbenzene	ND	1.0	0		0	0		(0 0	30	
Isopropylbenzene	ND	1.0	0		0	0		(0 0	30	
Methyl acetate	ND	2.0	0		0	0			0 0	30	
Methyl tert-butyl ether	ND	1.0	0		0	0		(0 0	30	
Methylcyclohexane	ND	1.0	0		0	0		(0 0	30	
Methylene chloride	ND	5.0	0		0	0		(0 0	30	
Styrene	ND	1.0	0		0	0		(0 0	30	
Tetrachloroethene	ND	1.0	0		0	0		() 0		
Toluene	ND	1.0	0		0	0		(0 0		

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344771a Instrum	nent ID VMS8		Method:	SW8260C						
trans-1,2-Dichloroethene	ND	1.0	0	0	0		0	0	30	
trans-1,3-Dichloropropene	ND	1.0	0	0	0		0	0	30	
Trichloroethene	ND	1.0	0	0	0		0	0	30	
Trichlorofluoromethane	ND	1.0	0	0	0		0	0	30	
Vinyl chloride	ND	1.0	0	0	0		0	0	30	
Xylenes, Total	ND	3.0	0	0	0		0	0	30	
Surr: 1,2-Dichloroethane-d4	19.48	0	20	0	97.4	75-120	21.21	8.5	30	
Surr: 4-Bromofluorobenzene	18.1	0	20	0	90.5	80-110	19.11	<i>5.4</i> 3	30	
Surr: Dibromofluoromethane	20.15	0	20	0	101	85-115	20.27	0.594	30	
Surr: Toluene-d8	19.52	0	20	0	97.6	85-110	20.6	5.38	30	

The following samples were analyzed in this batch:

22051511-01A	22051511-02A	22051511-03A	
22051511-04A	22051511-05A	22051511-06A	
22051511-07A	22051511-08A	22051511-09A	
22051511-10A	22051511-11A	22051511-12A	
22051511-14A	22051511-15A	22051511-16A	

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344778a Instrument ID VMS10 Method: SW8260C

MBLK	Sample ID: 10V-	BLKW1-220520-I	R344778a	1		Units: µg/L	-	Analys	is Date: 5/2	0/2022 12	2022 12:09 PM		
Client ID:		Run ID	: VMS10	_220520A		SeqNo: 844 0	0296	Prep Date:		DF: 1			
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qua		
	hana	ND	1.0			-							
1,1,1-Trichloroeth 1,1,2,2-Tetrachlo		ND	1.0										
1,1,2-Trichloroeth		ND	1.0										
1,1,2-Trichlorotrif		ND	1.0										
1,1-Dichloroethar		ND	1.0										
1,1-Dichloroether		ND	1.0										
1,2,4-Trichlorobe		ND	1.0										
1,2-Dibromo-3-ch		ND	1.0										
1,2-Dibromo-5-ci 1,2-Dibromoetha		ND	1.0										
1,2-Dibromoetria 1,2-Dichlorobenz		ND	1.0										
1,2-Dichloroethar		ND ND	1.0										
		ND ND	1.0										
1,2-Dichloropropa 1,3-Dichlorobenz		ND ND	1.0										
1,4-Dichlorobenz		ND											
*	ene	ND ND	1.0										
2-Butanone		ND ND	5.0										
2-Hexanone		ND ND	5.0										
4-Methyl-2-penta	inone	ND ND	1.0										
Acetone			10										
Benzene		ND	1.0										
Bromodichlorome	etnane	ND	1.0										
Bromoform		ND	1.0										
Bromomethane		ND	1.0										
Carbon disulfide		ND	1.0										
Carbon tetrachlo	ride	ND	1.0										
Chlorobenzene		ND	1.0										
Chloroethane		ND	1.0										
Chloroform		ND	1.0										
Chloromethane		ND	1.0										
cis-1,2-Dichloroe		ND	1.0										
cis-1,3-Dichlorop	ropene	ND	1.0										
Cyclohexane		ND	2.0										
Dibromochlorome		ND	1.0										
Dichlorodifluorom	nethane	ND	1.0										
Ethylbenzene		ND	1.0										
Isopropylbenzene	е	ND	1.0										
Methyl acetate		ND	2.0										
Methyl tert-butyl		ND	1.0										
Methylcyclohexa		ND	1.0										
Methylene chlorid	de	ND	5.0										
Styrene		ND	1.0										
Tetrachloroethen	e	ND	1.0										
Toluene		ND	1.0										

Work Order: 22051511

Project: Former Mount Pleasant Landfill

								—
Batch ID: R344778a	Instrument ID VMS10		Method:	SW8260C				
trans-1,2-Dichloroethene	ND	1.0						
trans-1,3-Dichloropropene	ND	1.0						
Trichloroethene	ND	1.0						
Trichlorofluoromethane	ND	1.0						
Vinyl chloride	ND	1.0						
Xylenes, Total	ND	3.0						
Surr: 1,2-Dichloroethane-	d4 21.1	0	20	0	106	75-120	0	
Surr: 4-Bromofluorobenze	ene 18.91	0	20	0	94.6	80-110	0	
Surr: Dibromofluorometha	nne 19.7	0	20	0	98.5	85-115	0	
Surr: Toluene-d8	20.06	0	20	0	100	85-110	0	

Note:

See Qualifiers Page for a list of Qualifiers and their explanation.

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QC BATCH REPORT

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344778a Instrument ID VMS10 Method: SW8260C

LCS	Sample ID: 10V-LCS	SW1-220520-F	R344778a	1		U	Inits: µg/L		Analys	is Date: 5/2	0/2022 12:	26 PM
Client ID:		Run ID	VMS10	_220520A		Sec	qNo: 844 (0297	Prep Date:		DF: 1	
					SPK Ref			Control	RPD Ref		RPD	
Analyte		Result	PQL	SPK Val	Value		%REC	Limit	Value	%RPD	Limit	Qual
1,1,1-Trichloroethan	е	20.9	1.0	20		0	104	75-130		0		
1,1,2,2-Tetrachloroe		24.93	1.0	20		0	125	75-130		0		
1,1,2-Trichloroethan	e	21.44	1.0	20		0	107	75-125		0		
1,1,2-Trichlorotrifluo	roethane	21.92	1.0	20		0	110	50-150		0		
1,1-Dichloroethane		22.83	1.0	20		0	114	68-142		0		
1,1-Dichloroethene		24.22	1.0	20		0	121	70-145		0		
1,2,4-Trichlorobenze	ene	21.16	1.0	20		0	106	70-135		0		
1,2-Dibromo-3-chlor	opropane	20.31	1.0	20		0	102	60-130		0		
1,2-Dibromoethane		23.58	1.0	20		0	118	67-155		0		
1,2-Dichlorobenzene)	21.57	1.0	20		0	108	70-130		0		
1,2-Dichloroethane		22.96	1.0	20		0	115	78-125		0		
1,2-Dichloropropane	!	21.43	1.0	20		0	107	75-125		0		
1,3-Dichlorobenzene)	21.77	1.0	20		0	109	75-130		0		
1,4-Dichlorobenzene)	21.76	1.0	20		0	109	75-130		0		
2-Butanone		23.95	5.0	20		0	120	55-150		0		
2-Hexanone		24.39	5.0	20		0	122	60-135		0		
4-Methyl-2-pentanor	ne	31.87	1.0	20		0	159	77-178		0		
Acetone		30.15	10	20		0	151	60-160		0		
Benzene		22.07	1.0	20		0	110	70-130		0		
Bromodichlorometha	ane	20.87	1.0	20		0	104	75-125		0		
Bromoform		18.43	1.0	20		0	92.2	60-125		0		
Bromomethane		23.71	1.0	20		0	119	30-185		0		
Carbon disulfide		22.17	1.0	20		0	111	60-165		0		
Carbon tetrachloride	!	19.75	1.0	20		0	98.8	65-140		0		
Chlorobenzene		21.34	1.0	20		0	107	80-120		0		
Chloroethane		21.18	1.0	20		0	106	31-172		0		
Chloroform		22.16	1.0	20		0	111	66-135		0		
Chloromethane		14.85	1.0	20		0	74.2	46-148		0		
cis-1,2-Dichloroethe	ne	22.56	1.0	20		0	113	75-134		0		
cis-1,3-Dichloroprop	ene	21.96	1.0	20		0	110	70-130		0		
Cyclohexane		20.08	2.0	20		0	100	50-150		0		
Dibromochlorometha	ane	18.93	1.0	20		0	94.6	60-115		0		
Dichlorodifluorometh	nane	19.32	1.0	20		0	96.6	10-180		0		
Ethylbenzene		21.21	1.0	20		0	106	76-123		0		
Isopropylbenzene		21.72	1.0	20		0	109	80-127		0		
Methyl tert-butyl ethe	er	23.26	1.0	20	-	0	116	68-129		0		
Methylcyclohexane		19.52	1.0	20		0	97.6	50-150		0		
Methylene chloride		22.02	5.0	20		0	110	72-125		0		
Styrene		21.22	1.0	20		0	106	79-117		0		
Tetrachloroethene		21.38	1.0	20		0	107	68-166		0		
Toluene		21.24	1.0	20		0	106	76-125		0		
trans-1,2-Dichloroeth	nene	22.87	1.0	20		0	114	80-140		0		

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344778a	Instrument ID VMS10		Method:	SW8260C			
trans-1,3-Dichloropropene	17.91	1.0	20	0	89.6	56-132	0
Trichloroethene	20.47	1.0	20	0	102	77-125	0
Trichlorofluoromethane	19.68	1.0	20	0	98.4	60-140	0
Vinyl chloride	19.51	1.0	20	0	97.6	50-136	0
Xylenes, Total	64.75	3.0	60	0	108	76-127	0
Surr: 1,2-Dichloroethan	e-d4 21.03	0	20	0	105	75-120	0
Surr: 4-Bromofluoroben	zene 19.66	0	20	0	98.3	80-110	0
Surr: Dibromofluoromet	hane 20.67	0	20	0	103	85-115	0
Surr: Toluene-d8	19.95	0	20	0	99.8	85-110	0

QC BATCH REPORT

QC BATCH REPORT

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344778a Instrument ID VMS10 Method: SW8260C

Analyte 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Lrichloroethane 1,2-Dichloroethane 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,2-Dichlorobenzene 1,2-Dichloropropane 1,3-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone	Run ID Result 216.2 225.3 202.8	PQL	_ 220520A SPK Val	SPK Ref	SeqNo: 844 2	2341 Control	Prep Date:		DF: 10)
1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone	216.2 225.3	-	SPK Val			Control	DDD Dof		DD2	
1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone	216.2 225.3	-	SPK Val				KPD Kei		RPD	
1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	225.3	40		Value	%REC	Limit	Value	%RPD	Limit	Qua
1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone		10	200	0	108	75-130	0			
1,1,2-Trichlorotrifluoroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethene 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,3-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	202.8	10	200	0	113	75-130	0			
1,1-Dichloroethane 1,1-Dichloroethene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone		10	200	0	101	75-125	0			
1,1-Dichloroethene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	247.8	10	200	0	124	50-150	0			
1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	219.8	10	200	0	110	68-142	0			
1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	259.7	10	200	0	130	70-145	0			
1,2-Dibromoethane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	187.2	10	200	0	93.6	70-135	0			
1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	191.6	10	200	0	95.8	60-130	0			
1,2-Dichloroethane 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	218.7	10	200	0	109	67-155	0			
1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	198	10	200	0	99	70-130	0			
1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	211.1	10	200	0	106	78-125	0			
1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	200.2	10	200	0	100	75-125	0			
2-Butanone 2-Hexanone 4-Methyl-2-pentanone	204.8	10	200	0	102	75-130	0			
2-Hexanone 4-Methyl-2-pentanone	202.3	10	200	0	101	75-130	0			
4-Methyl-2-pentanone	225.6	50	200	0	113	55-150	0			
	229.2	50	200	0	115	60-135	0			
Acetone	302.4	10	200	0	151	77-178	0			
	285.8	100	200	32.9	126	60-160	0			
Benzene	211.5	10	200	0	106	70-130	0			
Bromodichloromethane	198.2	10	200	0	99.1	75-125	0			
Bromoform	185.4	10	200	0		60-125	0			
Bromomethane	429.2	10	200	0		30-185	0			S
Carbon disulfide	238.3	10	200	0		60-165	0			
Carbon tetrachloride	206.5	10	200	0		65-140	0			
Chlorobenzene	206.5	10	200	0	103	80-120	0			
Chloroethane	254.7	10	200	0		31-172				
Chloroform	208.3	10	200	0		66-135	0			
Chloromethane	287.4	10	200	6.3		46-148	0			
cis-1,2-Dichloroethene	222.5	10	200	0		75-134	0			
cis-1,3-Dichloropropene	209.8	10	200	0		70-130	0			
Cyclohexane	218	20	200	0		50-150				
Dibromochloromethane	185	10	200	0		60-115				
Dichlorodifluoromethane	225.9	10	200	0		10-180				
Ethylbenzene	211.4	10	200	1.4		76-123				
sopropylbenzene	216.3	10	200	0		80-127				
Methyl tert-butyl ether	222.4	10	200	0		68-129	0			
Methylcyclohexane	208.4	10	200	0		50-150				
Methylene chloride	213.7	50	200	0		72-125				
Styrene	202.3	10	200	0		79-117	0			
Tetrachloroethene	221 0	10	200	0	111	68-166	0			
Toluene trans-1,2-Dichloroethene	221.9	10	200	0		76-125				

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344778a	Instrument ID VMS10		Method	SW8260C			
trans-1,3-Dichloropropene	173.5	10	200	0	86.8	56-132	0
Trichloroethene	199.9	10	200	0	100	77-125	0
Trichlorofluoromethane	225.8	10	200	0	113	60-140	0
Vinyl chloride	235.1	10	200	0	118	50-136	0
Xylenes, Total	641.8	30	600	0	107	76-127	0
Surr: 1,2-Dichloroethane	e-d4 203.5	0	200	0	102	75-120	0
Surr: 4-Bromofluorobenz	zene 203.6	0	200	0	102	80-110	0
Surr: Dibromofluorometh	nane 199.4	0	200	0	99.7	85-115	0
Surr: Toluene-d8	203.1	0	200	0	102	85-110	0

QC BATCH REPORT

QC BATCH REPORT

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344778a Instrument ID VMS10 Method: SW8260C

MSD	Sample ID: 2205	1315-04A MSD				Jnits: μg/l	•	Analysis	Date: 5/20	/2022 07:	10 PM
Client ID:		Run ID	: VMS10	_220520A	Se	eqNo: 844	2342	Prep Date:		DF: 10	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qua
4 4 4 Triableses		204.8	40	200	0	400	75 400	246.2	F 40	20	
1,1,1-Trichloroeth		218.9	10	200	0	102	75-130	216.2	5.42	30	
1,1,2,2-Tetrachlo		191.6	10	200	0	109	75-130	225.3	2.88	30	
1,1,2-Trichloroeth		226.7	10	200	0	95.8 113	75-125 50-150	202.8	5.68 8.89	30	
		207.5	10	200	0	104	68-142	219.8	5.76	30	
1,1-Dichloroethar		242.3			0		70-145				
1,1-Dichloroether		183.5	10	200 200		121	70-145	259.7 187.2	6.93	30 30	
1,2,4-Trichlorobe		183.9	10		0	91.8			2		
1,2-Dibromo-3-ch		207.9	10	200	0	92	60-130	191.6	4.1	30	
1,2-Dibromoetha		194.7	10	200	0	104	67-155	218.7	5.06	30	
1,2-Dichlorobenz			10	200	0	97.4	70-130	198	1.68	30	
1,2-Dichloroethar		201.9	10	200	0	101	78-125	211.1	4.46	30	
1,2-Dichloropropa		189.1	10	200	0	94.6	75-125	200.2	5.7	30	
1,3-Dichlorobenz		198.1	10	200	0	99	75-130	204.8	3.33	30	
1,4-Dichlorobenz	ene	192.8	10	200	0	96.4	75-130	202.3	4.81	30	
2-Butanone		215.5	50	200	0	108	55-150	225.6	4.58	30	
2-Hexanone		218.2	50	200	0	109	60-135	229.2	4.92	30	
4-Methyl-2-penta	none	291.4	10	200	0	146	77-178	302.4	3.7	30	
Acetone -		278.5	100	200	32.9	123	60-160	285.8	2.59	30	
Benzene		201.7	10	200	0	101	70-130	211.5	4.74	30	
Bromodichlorome	ethane	191.7	10	200	0	95.8	75-125	198.2	3.33	30	
Bromoform		174.2	10	200	0	87.1	60-125	185.4	6.23	30	
Bromomethane		483.3	10	200	0	242	30-185	429.2	11.9	30	S
Carbon disulfide		275	10	200	0	138	60-165	238.3	14.3	30	
Carbon tetrachlo	ride	204.4	10	200	0	102	65-140	206.5	1.02	30	
Chlorobenzene		193.4	10	200	0	96.7	80-120	206.5	6.55	30	
Chloroethane		241.2	10	200	0	121	31-172	254.7	5.44	30	
Chloroform		197.8	10	200	0	98.9	66-135	208.3	5.17	30	
Chloromethane		278.1	10	200	6.3	136	46-148	287.4	3.29	30	
cis-1,2-Dichloroe		210.7	10	200	0	105	75-134	222.5	5.45	30	
cis-1,3-Dichlorop	ropene	199.6	10	200	0	99.8	70-130	209.8	4.98	30	
Cyclohexane		209.4	20	200	0	105	50-150	218	4.02	30	
Dibromochlorome		185.4	10	200	0	92.7	60-115	185	0.216	30	
Dichlorodifluorom	nethane	216.2	10	200	0	108	10-180	225.9	4.39	30	
Ethylbenzene		197.3	10	200	1.4	98	76-123	211.4	6.9	30	
Isopropylbenzene		203.1	10	200	0	102	80-127	216.3	6.29	30	
Methyl tert-butyl	ether	210.4	10	200	0	105	68-129	222.4	5.55	30	
Methylcyclohexa	ne	200.5	10	200	0	100	50-150	208.4	3.86	30	
Methylene chlorid	de	203.1	50	200	0	102	72-125	213.7	5.09	30	
Styrene		190.5	10	200	0	95.2	79-117	202.3	6.01	30	
Tetrachloroethen	e	206.5	10	200	0	103	68-166	221.9	7.19	30	
Toluene		196	10	200	0	98	76-125	207.7	5.8	30	
trans-1,2-Dichlor	oethene	209.4	10	200	0	105	80-140	219.7	4.8	30	

Client: The Mannik & Smith Group, Inc.

Work Order: 22051511

Project: Former Mount Pleasant Landfill

Batch ID: R344778a Instrume	nt ID VMS10		Method:	SW8260C					
trans-1,3-Dichloropropene	167.3	10	200	0	83.6	56-132	173.5	3.64	30
Trichloroethene	186.8	10	200	0	93.4	77-125	199.9	6.78	30
Trichlorofluoromethane	207.4	10	200	0	104	60-140	225.8	8.49	30
Vinyl chloride	213.8	10	200	0	107	50-136	235.1	9.49	30
Xylenes, Total	598.9	30	600	0	99.8	76-127	641.8	6.92	30
Surr: 1,2-Dichloroethane-d4	201.3	0	200	0	101	75-120	203.5	1.09	30
Surr: 4-Bromofluorobenzene	197.3	0	200	0	98.6	80-110	203.6	3.14	30
Surr: Dibromofluoromethane	196.9	0	200	0	98.4	85-115	199.4	1.26	30
Surr: Toluene-d8	198.2	0	200	0	99.1	85-110	203.1	2.44	30

The following samples were analyzed in this batch:

22051511-08A

QC BATCH REPORT

MOTALS- 10 MICH MOTALS + AL, Sb, Be, B.N. ATTALLED South Charleston, WV +1 304 356 3168 York, PA +1 717 505 5280 7 PFAS - ISTOPE DILVADA- SEE Parameter/Method Request for Analysis Results Due Date: Spring City, PA +1 610 948 4903 Salt Lake City, UT +1 801 266 7700 I ALS Work Order #: O STRADARD LL. 151 - EGLE C18D ш Houston, TX +1 281 530 5656 Middletown, PA +1 717 944 5541 Δ SVOCS 2002 □2BD O Furnaround Time in Business Days (BD 00 3 BD Chain of Custody Form 057206 ⋖ O Ω ~ A \mathbf{m} エ (4) ALS Project Manager: # Bottles MT. PLEASINGT LAND PILL 9 □ 5 BD of MANNIL YSMITH Pres. COC ID: □ 10 BD M346 0003 Page __ Project Information D. ADLER OWNON CROWN WATCH Matrix 1342 944 1249 1302 1645 1553 1555 014 1500 Shipment Method land, Mi 616 399 6070 Fort Collins, CO 970 490 1511 eject Name Phone Fax regect Number Bill To Company Invoice Attn City/State/Zip Address e-Mail Address 5-16-22 5-16-22 Date 2365 NACECARY PO. SOUTA MANNIK YSMITH (CANTON) Cincinnati, OH 10-20 CANDON MI 48188 SMITHGROUPS COM DAQUER D MANNIK MANNIK&SMITH: The Mannik & Smith Group, Inc. 734 7905/64 Project: Former Mount Pleasant Landfill ME 22051511 Sample Description D. ADVER at de MW-106 401-MW Sampler(s) Please Print & Sign MW-200 101-WH MW-103 701-MM 702-MM MW-105 102-WM A OF Send Report To Company Name Phone Work Order Address e-Mail Address City/State/Zip S. N 9 3 4 S 9 / ∞ 0

Hold

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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☐ TRRP Checklist ☐ TRRP Level IV

☐ Level III Std QC/Raw Date ☐ Level IV SW846/CLP

Other

5 mm

日27

9-5035

8-4°C

7-Other

6-NaHSO4

5-Na, S, O3

4-NaOH

2-HNO3

1-HC

Preservative Key:

Logged by (Laboratory):

Relinquished by: Relinquished b

Checked by (Laboratory):

Received by (Laboratory):

Received by:

Lh&du

☐ Level II Std QC

QC Package: (Check One Box Below)

Cooler Temp.

Cooler ID

Notes:

MANNIK YSMITH-D. NOWER MEMUS - 10 MICH + AL, 56, BE, B, NI, Th South Charleston, WV +1 304 356 3168 PFAS- ISOTOPE DILUTION - SEE NATIONAL Hold York, PA +1 717 505 5280 ☐ TRRP Level IV Parameter/Method Request for Analysis Results Due Date: LIST- EGUE 10/1/2019 QC Package: (Check One Box Below) Salt Lake City, UT +1 801 266 7700 Spring City, PA +1 610 948 4903 I ☐ Level III Std QC/Raw Date ALS Work Order #: ☐ Level IV SW846/CLP G ☐ Level II Std QC 12. STANDARD 0180 ш Houston, TX +1 281 530 5656 Middletown, PA +1 717 944 5541 Cooler Temp. ۵ □ 2 BD Svacs PCBS X O VOCS Turnaround Time in Business Days (BD) m Cooler ID 3 BD **Chain of Custody Form** Notes: 057205 8 < LANDRILL B O шш --O I 7 ALS Project Manager: # Bottles 0 ☐ 5 BD 0 N O Page Z of Z Pres. COC ID: □ 10 BD MT. PLENSANT M346 0003 **Project Information** LAND LAND GROWN WATCH Spran STO1 Matrix 30 Received by (Laboratory): Checked by (Laboratory): 1545 5-16-22 1055 Received by: Shipment Method MI 99 6070 Fort Collins, CO Name Invoice Attn Phone amber MANNIK YSMITAL-CANTON Bill To Company Fax Address City/State/Zip e-Mail Address 5-16-22 5-16-22 5-16-22 Lime: 447 Time: Date Cincinnati, OH MANNIK&SMITH: The Mannik & Smith Group, Inc. 5/8 3-HSO Project: Former Mount Pleasant Landfill FIELD BLANK 22051511 7347905164 Sample Description D. ADLER DADLERAM TAM BLANK MW-14-20 NW-15-20 MW-IOG Sampler(s) Please Print & Sign DUP Logged by (Laboratory): , ADVER Company Name Send Report To Phone Work Order e-Mail Address Address City/State/Zip Relinquished by: Relinquished Purc

S.

N က 4 S 9 ~ ∞ O 9 Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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☐ Other

9-5035

8-4°C

7-Other

6-NaHSO

5-Na,S,O3

4-NaOH

2-HNO₃

1-HCI

Preservative Key:

Sample Receipt Checklist

Client Name: MA	MNIK&SWITH				Date/Time F	Received:	1 / - IVI	ay-22 2	<u>3:50</u>		
Work Order: 220	<u>051511</u>				Received by	y:	<u>LYS</u>				
Checklist completed	· -	1	8-May-22	R	eviewed by:	-					
Matriana N	eSignature		Date			eSignature					ate
	<u>Vater</u> <u>courier</u>										
Shipping container/o	cooler in good condition?		Yes	✓	No 🗌	Not Pre	sent				
Custody seals intac	t on shipping container/cooler	?	Yes		No 🗌	Not Pre	sent	✓			
Custody seals intac	t on sample bottles?		Yes		No 🗌	Not Pre	sent	✓			
Chain of custody pro	esent?		Yes	✓	No 🗌						
Chain of custody sig	gned when relinquished and re	eceived?	Yes	✓	No 🗌						
Chain of custody ag	grees with sample labels?		Yes	✓	No 🗌						
Samples in proper of	container/bottle?		Yes	✓	No 🗌						
Sample containers i	intact?		Yes	✓	No 🗌						
Sufficient sample vo	olume for indicated test?		Yes	✓	No 🗌						
All samples receive	d within holding time?		Yes	✓	No 🗌						
Container/Temp Bla	ank temperature in compliance	?	Yes	✓	No 🗌						
Sample(s) received	on ice?		Yes	✓	No 🗌						
Temperature(s)/The	ermometer(s):		3.0/3.0,	3.2/3.	2, 4.6/4.6c	<u>IF</u>	<u>R1</u>				
Cooler(s)/Kit(s):											
Date/Time sample(s	s) sent to storage:				56:15 AM				_		
Water - VOA vials h	ave zero headspace?			✓	No L	No VOA via	ls subm	itted			
Water - pH accepta	ble upon receipt?		Yes	✓		N/A					
pH adjusted? pH adjusted by:			Yes		No 🗸	N/A					
Login Notes:			<u>-</u>								
g											
			· — — —							- — — -	
					- — — —	- — — — –		- — —		. — — –	
Client Contacted:	ı	Date Contacted:			Person	Contacted:					
Contacted By:	ı	Regarding:									
•											
Comments:											
CorrectiveAction:											
										_	_

PERFLUOROALKYL AND POLYFLUOROALKYL SUBSTANCES (PFAS) MINIMUM LABORATORY ANALYTE LIST

Below is the minimum laboratory PFAS analyte list for analysis of deer, drinking water, groundwater, surface water, soil, wastewater effluent, and landfill leachate samples collected by Michigan's Departments of Environment, Great Lakes, and Energy, Health and Human Services, Agriculture and Rural Development, and Natural Resources.

This minimum analyte list was developed based on the potential for these chemicals to be found in Michigan, the availability of the chemical standards used for testing, and the ability of available laboratories to test for these PFAS. This list includes PFAS that can be tested for in drinking water using United States Environmental Protection Agency (USEPA) Methods 537 Rev.1.1 or 537.1, which are the only methods that should be used when analyzing drinking water samples. Other testing methodology may be used to test for PFAS in other media (not drinking water). This list is not exhaustive of PFAS in Michigan's environment.

A fish icon () precedes those compounds that are also currently being tested for in fish tissue.

Analyte Name	Acronym	Fluorinated Carbon Chain Length	Molecular Formula	CAS Number	USEPA Method 537 Rev. 1.1	USEPA Method 537.1
Perfluorotetradecanoic acid	PFTeA	C ₁₄	C ₁₃ F ₂₇ COOH	376-06-7	X	X
Perfluorotridecanoic acid	PFTriA	C ₁₃	C ₁₂ F ₂₅ COOH	72629-94-8	X	Х
Perfluorododecanoic acid	PFDoA	C ₁₂	C ₁₁ F ₂₃ COOH	307-55-1	X	Х
Perfluoroundecanoic acid	PFUnA	C ₁₁	C ₁₀ F ₂₁ COOH	2058-94-8	X	Х
Perfluorodecanoic acid	PFDA	C ₁₀	C ₉ F ₁₉ COOH	335-76-2	X	Х
Perfluorononanoic acid	PFNA	C ₉	C ₈ F ₁₇ COOH	375-95-1	X	Х
Perfluorooctanoic acid	PFOA	C ₈	C ₇ F ₁₅ COOH	335-67-1	X	Х
Perfluoroheptanoic acid	PFHpA	C ₇	C ₆ F ₁₃ COOH	375-85-9	X	Х
Perfluorohexanoic acid	PFHxA	C ₆	C ₅ F ₁₁ COOH	307-24-4	X	Х
Perfluoropentanoic acid	PFPeA	C ₅	C ₄ F ₉ COOH	2706-90-3		
Perfluorobutanoic acid	PFBA	C ₄	C₃F ₇ COOH	375-22-4		
Perfluorodecanesulfonic acid	PFDS	C ₁₀	C ₁₀ F ₂₁ SO ₃ H	335-77-3		

Michigan.gov/PFASResponse

EGLE Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Minimum Laboratory Analyte List

Analyte Name	Acronym	Fluorinated Carbon Chain Length	Molecular Formula	CAS Number	USEPA Method 537 Rev. 1.1	USEPA Method 537.1
Perfluorononanesulfonic acid	PFNS	C ₉	C ₉ F ₁₉ SO ₃ H	68259-12-1		
Perfluorooctanesulfonic acid	PFOS	C ₈	C ₈ F ₁₇ SO ₃ H	1763-23-1	x	x
Perfluoroheptanesulfonic acid	PFHpS	C ₇	C ₇ F ₁₅ SO ₃ H	375-92-8		
Perfluorohexanesulfonic acid	PFHxS	C ₆	C ₆ F ₁₃ SO ₃ H	355-46-4	X	Х
Perfluoropentanesulfonic acid	PFPeS	C ₅	C ₅ F ₁₁ SO ₃ H	2706-91-4		
Perfluorobutanesulfonic acid	PFBS	C ₄	C ₄ F ₉ SO ₃ H	375-73-5	X	Х
Perfluorooctanesulfonamide	PFOSA	C ₈	C ₈ F ₁₇ SO ₂ NH ₂	754-91-6		
Fluorotelomer sulphonic acid 8:2	FtS 8:2	C ₈	C ₈ F ₁₇ CH ₂ CH ₂ SO ₃	39108-34-4		
Fluorotelomer sulphonic acid 6:2	FtS 6:2	C ₆	C ₆ F ₁₃ CH ₂ CH ₂ SO ₃	27619-97-2		
Fluorotelomer sulphonic acid 4:2	FtS 4:2	C ₄	C ₄ F ₉ CH ₂ CH ₂ SO ₃	757124-72-4		
2-(N- Ethylperfluorooctanesulfonamido) acetic acid	N-EtFOSAA	C ₈	C ₈ F ₁₇ SO ₂ N(C ₂ H ₅)CH ₂ COOH	2991-50-6	X	X
2-(N- Methylperfluorooctanesulfonamido) acetic acid	N-MeFOSAA	C ₈	C ₈ F ₁₇ SO ₂ N(CH ₃)CHCOOH	2355-31-9	х	Х
Hexafluoropropylene oxide dimer acid	HFPO-DA	C ₆	C ₆ HF ₁₁ O ₃	13252-13-6		Х
11-chloroeicosafluoro-3- oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	C ₁₀	C ₁₀ HF ₂₀ CISO ₄	763051-92-9		х
9-chlorohexadecafluoro-3-oxanone- 1-sulfonic acid	9CI-PF3ONS	C ₈	C ₈ HF ₁₆ CISO ₄	756426-58-1		X
4,8-dioxa-3H-perfluorononanoic acid	ADONA	C ₇	C7H2F12O4	919005-14-4		Х

APPENDIX E SOIL SAMPLE TEST DATA



CLIENT City of Mt. Pleasant, MI

The Mannik & Smith Group, Inc. 2365 Haggerty Road South, Canton, MI 48188 ph: (734) 397-3100 fax: (734) 397-3131 www.manniksmithgroup.com

SUMMARY OF LABORATORY RESULTS

PAGE 1 OF 1



PROJECT NAME Former Mt Pleasant Landfill

PROJECT NUMBER	M3460003	PROJECT LOCATION	Mt. Pleasant, MI

Boring No. / Sample No.	Depth	Liquid Limit	Plastic Limit	Plasticity Index	Maximum Size (mm)	%<#200 Sieve	Class- ification	Water Content (%)	Bulk Density (pcf)	Satur- ation (%)	Specific Gravity
MW-200 / 17-20	17.0	NP	NP	NP	25	4	SP				
MW-200 / 25.5-30	25.5	31	14	17	4.75	95	CL				
MW-200 / 37-39.5	37.0	23	11	12	9.525	63	CL				
MW-201 / 20-24	20.0	NP	NP	NP	19	16	SM				
MW-201 / 29-30	29.0	33	16	17	4.75	99	CL				
MW-201 / 39-40	39.0	17	10	7	9.525	49	SC-SM				
MW-202 / 5-7	5.0	NP	NP	NP	25	2	GW				
MW-202 / 8.5-10	8.5	20	10	10	4.75	55	CL				
SB-19 / 34-35	34.0	17	9	8	4.75	49	SC				
SB-19 / 47-49	47.0	19	10	9	9.525	56	CL				
SB-20 / 45-50	45.0	19	10	9	9.525	55	CL				
SB-21 / 23-25	23.0	20	10	10	19	55	CL				



The Mannik & Smith Group, Inc. 2365 Haggerty Road South, Canton, MI 48188 ph: (734) 397-3100 fax: (734) 397-3131 www.manniksmithgroup.com

GRAIN SIZE DISTRIBUTION



PROJECT NAME Former Mt Pleasant Landfill CLIENT City of Mt. Pleasant, MI

PROJECT NUMBER M3460003 PROJECT LOCATION Mt. Pleasant, MI U.S. SIEVE OPENING IN INCHES U.S. SIEVE NUMBERS HYDROMETER 3 810 14 16 20 30 40 50 60 1/23/8 100 140 200 100 95 90 Ø 85 80 75 70 65 PERCENT FINER BY WEIGHT 60 55 50 45 GRAIN SIZE - GINT STD US LAB.GDT - 7/15/22 08:13 - W:\PROJECTS\PROJECTS K-O\M3460003\DMINLAB\M3460002 BORING LOGS REV2.GPJ 40 35 30 25 20 15 10 5 100 0.1 0.01 0.001 **GRAIN SIZE IN MILLIMETERS GRAVEL** SAND **COBBLES** SILT OR CLAY fine medium fine coarse coarse

31							1			_		
ַבְּׁלְּבְּׁי	Specimen Identification				Classificatio	n		LL	PL	PI	Сс	Cu
<u>-</u>	MW-200 / 17-20	17.0	POC	RLY GRAD	ED SAND w	ith GRAVEL	(SP)	NP	NP	NP	0.18	21.30
8	MW-200 / 25.5-30	25.5		LE	31	14	17					
77/CI	MW-200 / 37-39.5	37.0		SAND	23	11	12					
<u> </u>	MW-201 / 20-24	20.0		SIL	NP	NP	NP					
<u>.</u>	MW-201 / 29-30	29.0		LEAN CLAY (CL)						17		
	Specimen Identification		D100	D60	D30	D10	%Gravel	%San	id	%Silt	%	Clay
	MW-200 / 17-20	17.0	25	4.026	0.366	0.189	37.7	58.3			4.0	
	MW-200 / 25.5-30	25.5	4.75	0.009	0.002			5.1		62.8	3	1.7
- - - -	MW-200 / 37-39.5	37.0	9.525	0.068	0.005		1.1	36.1		44.4	1	8.4
ก่⊸	MW-201 / 20-24	20.0	19	0.215	0.144		0.5	83.6		15.9		
₹ (°	MW-201 / 29-30	29.0	4.75 0.006 0.001							61.9	3	6.9



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GRAIN SIZE DISTRIBUTION



PROJECT NAME Former Mt Pleasant Landfill CLIENT City of Mt. Pleasant, MI

PROJECT NUMBER M3460003 PROJECT LOCATION Mt. Pleasant, MI U.S. SIEVE OPENING IN INCHES U.S. SIEVE NUMBERS HYDROMETER 1 3/4 1/23/8 3 810 14 16 20 30 40 50 60 100 140 200 100 95 90 85 80 75 70 65 PERCENT FINER BY WEIGHT 60 55 50 45 GRAIN SIZE - GINT STD US LAB.GDT - 7/15/22 08:13 - W:\PROJECTS\PROJECTS K-O\M3460003\ADMIN\LAB\M3460002 BORING LOGS REV2.GPJ 40 35 30 25 20 15 10 5 100 0.1 0.01 0.001 **GRAIN SIZE IN MILLIMETERS GRAVEL** SAND **COBBLES** SILT OR CLAY fine medium fine coarse coarse

	Specimen Identification		Classification				LL	PL	PI	Сс	Cu
- 6	MW-201 / 39-40 39.0		SILTY, CL	AYEY SAND	(SC-SM)		17	10	7	2.47	75.13
8	MW-202 / 5-7 5.0	WE	LL-GRADED	GRAVEL w	rith SAND (G	iW)	NP	NP	NP	1.99	22.71
77/CI	MW-202 / 8.5-10 8.5		SAND	Y LEAN CLA	Y (CL)		20	10	10		
<u>'</u>			CLAYEY SAND (SC)			17	9	8			
9.60	SB-19 / 47-49 47.0		SANDY LEAN CLAY (CL)			19	10	9			
	Specimen Identification	D100	D60	D30	D10	%Gravel	%San	d	%Silt	%(Clay
	MW-201 / 39-40 39.0	9.525	0.148	0.027	0.002	2.6	48.4		38.5	1	0.1
	MW-202 / 5-7 5.0	25	10.07	2.984	0.443	61.0	37.5			1.5	
9 - <u>1</u>		4.75	0.114	0.01			42.9		38.2	1	6.5
ō ⋅	P CB-10 / 3/1-35 3/10	4.75	0.14	0.011			46.8		35.8	1	3.6
	SB-19 / 47-49 47.0	9.525	0.108	0.009		1.7	41.7		42.1	1	4.0



Specimen Identification

SB-20 / 45-50

SB-21 / 23-25

STD

GINT \blacksquare

GRAIN SIZE

D100

9.525

19

45.0

23.0

D60

0.113

0.111

D30

0.011

0.012

D10

%Gravel

3.4

2.6

%Sand

41.0

42.4

%Silt

38.7

39.5

%Clay

16.0

15.6

The Mannik & Smith Group, Inc. 2365 Haggerty Road South, Canton, MI 48188 ph: (734) 397-3100 fax: (734) 397-3131

GRAIN SIZE DISTRIBUTION



www.manniksmithgroup.com PROJECT NAME Former Mt Pleasant Landfill CLIENT _City of Mt. Pleasant, MI PROJECT NUMBER M3460003 PROJECT LOCATION Mt. Pleasant, MI U.S. SIEVE OPENING IN INCHES U.S. SIEVE NUMBERS HYDROMETER 1/23/8 810 14 16 20 30 40 50 60 100 140 200 100 95 90 85 80 75 70 65 PERCENT FINER BY WEIGHT 60 55 50 45 13 - W:\PROJECTS\PROJECTS K-O\M3460003\ADMIN\LAB\M3460002 BORING LOGS REV2.GPJ 40 35 30 25 20 15 10 5 0.01 0.001 **GRAIN SIZE IN MILLIMETERS GRAVEL** SAND **COBBLES** SILT OR CLAY fine medium fine coarse coarse LL PL Specimen Identification Classification Ы Сс Cu SB-20 / 45-50 45.0 SANDY LEAN CLAY (CL) 19 10 9 98 SB-21 / 23-25 23.0 10 \mathbf{X} **SANDY LEAN CLAY (CL)** 20 10 - 7/15/22 US LAB.GDT



The Mannik & Smith Group, Inc. 2365 Haggerty Road South, Canton, MI 48188 ph: (734) 397-3100 fax: (734) 397-3131 www.manniksmithgroup.com

ATTERBERG LIMITS RESULTS



CLIENT _City of Mt. Pleasant, MI ______ PROJECT NAME _ Former Mt Pleasant Landfill

PROJECT NUMBER M3460003 PROJECT LOCATION Mt. Pleasant, MI 60 (CL) (CH) 50 40 PLASTICITY INDEX 30 20 ⊙ 10 CL-ML (ML)(MH)20 40 60 80 100

LIQUID LIMIT

BORIN	Specimen Identification		LL	PL	PI	Fines	Classification
60002 •	MW-200 / 17-20	17.0	NP	NP	NP	4	POORLY GRADED SAND with GRAVEL (SP)
K-O\M3460003\ADMIN\LAB\M3460002	MW-200 / 25.5-30	25.5	31	14	17	95	LEAN CLAY (CL)
	MW-200 / 37-39.5	37.0	23	11	12	63	SANDY LEAN CLAY (CL)
03/ADI	MW-201 / 20-24	20.0	NP	NP	NP	16	SILTY SAND (SM)
134600	MW-201 / 29-30	29.0	33	16	17	99	LEAN CLAY (CL)
	MW-201 / 39-40	39.0	17	10	7	49	SILTY, CLAYEY SAND (SC-SM)
	MW-202 / 5-7	5.0	NP	NP	NP	2	WELL-GRADED GRAVEL with SAND (GW)
PRO 7	MW-202 / 8.5-10	8.5	20	10	10	55	SANDY LEAN CLAY (CL)
SECT.	SB-19 / 34-35	34.0	17	9	8	49	CLAYEY SAND (SC)
%.PRO	SB-19 / 47-49	47.0	19	10	9	56	SANDY LEAN CLAY (CL)
]; <u>;</u>	SB-20 / 45-50	45.0	19	10	9	55	SANDY LEAN CLAY (CL)
2/25 08 €/25 08	SB-21 / 23-25	23.0	20	10	10	55	SANDY LEAN CLAY (CL)
1. L							
AB.GD							
IS L							
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Overview

Project Name

Kinney Street Mill and Overlay

Total Requested

\$290,000.00

(amount based on the Itemized Budget total)

Applicant Project Priority

Medium

Reocurring Need?

Not Reocurring

Applicant Information

Applicant Name

jmoore@mt-pleasant.org

Applicant Email

Jason Moore

Organization

City of MtPleasant

Address

320 W Broadway St

MOUNT PLEASANT, 48858

Phone Number

9897795405

Organization Information

Primary Organization

City of Mt. Pleasant

Authorizers

adesentz@mt-pleasant.org

Status

Review

Address

320 W. Broadway

Mount Pleasant, Michigan 48858

Phone

(989) 779-5300

Fax

Categories

- Infrastructure
- Transportation

Project Description

The city's engineering department utilizes an in-depth process to develop our capital plan for the maintenance of our street network. It involves regular evaluation of the street surface to determine the right "mix of fixes" to maintain the system as effectively as possible. Generally, our mix of fixes includes crack sealing, thin overlays, mill and overlays, and full reconstructs. We strive to schedule these projects at the most effective point in a street segment's maintenance curve to get the highest return on investment in terms of service life that we can.

Our streets spend most of their useful life in a cycle of mill/overlays and thin overlays since these are far more effective treatments on a dollar/year basis than full reconstructs. Reconstruction is around 50x more expensive than overlays. However, we have streets in the city that have had their curb pans overlayed causing issues with being able to stay in the overlay cycle.

In the past contractors have been unwilling to mill streets that have overlayed curb pans due to constructability issues. They have been

concerned about damaging the milling machine by striking the concrete curb or having drainage issues after leaving asphalt in the curb. Recently our engineering team worked with our local asphalt contractor to produce a set of specifications that we think will allow us to do a mill and overlay project on these street segments. This project, if funded, would be a proof of concept and allow us to program our capital improvement plan more effectively in the future utilizing this new "fix".

Benefit Description

With the recent, significant, decrease in funding for our street network from the state of Michigan, we must find more cost-effective treatments to maintain our streets. This project would help us greatly in that effort.

Funding Requirements

The City's overlay program is ongoing with projects of various size and location happening normally every year.

Project Timeline

Summer of 2025

Budget Items

Name	Cost	Quantity	Total	Category
Mill and Overlay of Kinney from Michigan to Pickard	\$290,000.00	1	\$290,000.00	Infrastructure
AmountRequested	\$290,000.00			

Matching Funds

Name	Cost	Quantity	Total
No Matching Funds items have been added.			
AmountMatched	\$0.00		

Budget Summary

Amount Requested

\$290,000.00

Amount Matched

\$0.00

Total Amount

\$290,000.00

Uploaded Files

KinneyEstimate 2024-08-26.pdf

There are no comments to display.

City of MtPleasant

Estimate Breakdown Report

Project Number: 268 Project Engineer: Stacie Tewari
Estimate Number: 1 Date Created: 8/28/2023

Estimate Number: 1 Date Created: 8/28/2023

Project Type: Resurfacing Date Edited: 8/28/2023

Kinney: Michigan to Pickard

Fed/State #:
Fed Item:

Description: Control Section:

Line	Pay Item	Description	Quantity	Units	Unit Price	Total
Break	down ID:					
0001	2040020	Curb and Gutter, Rem	160.000	Ft	\$17.00	\$2,720.00
0002	2040050	Pavt, Rem	45.000	Syd	\$17.00	\$765.00
0003	2040055	Sidewalk, Rem	168.000	Syd	\$13.75	\$2,310.00
0004	2080014	Erosion Control, Filter Bag	4.000	Ea	\$115.00	\$460.00
0005	3010002	Subbase, CIP	19.000	Cyd	\$11.50	\$218.50
0006	4037050	_ Dr Structure Cover, STM, Modified	1.000	Ea	\$1,525.00	\$1,525.00
0007	5010002	Cold Milling HMA Surface	13,380.000	Syd	\$3.25	\$43,485.00
8000	5010025	Hand Patching	9.000	Ton	\$340.00	\$3,060.00
0009	5010033	HMA, 13A	1,545.000	Ton	\$102.00	\$157,590.00
0010	8030010	Detectable Warning Surface	80.000	Ft	\$85.00	\$6,800.00
0011	8030030	Curb Ramp Opening, Conc	160.000	Ft	\$34.00	\$5,440.00
0012	8030044	Sidewalk, Conc, 4 inch	400.000	Sft	\$5.00	\$2,000.00
0013	8032002	Curb Ramp, Conc, 6 inch	1,365.000	Sft	\$9.75	\$13,308.75
0014	8167001	_ Restoration, Modified	215.000	Ft	\$325.00	\$69,875.00

Breakdown ID Total: \$309,557.25

Estimate Total: \$309,557.25

Contract # LS Resurf/Recon (Various)

MERL: 2022.6.0

Location:

Overview

Project Name

Lime Disposal

Total Requested

\$215,000.00

(amount based on the Itemized Budget total)

Applicant Project Priority

High

Reocurring Need?

Not Reocurring

Applicant Information

Applicant Name

jmoore@mt-pleasant.org

Applicant Email

Jason Moore

Organization

City of MtPleasant

Address

320 W Broadway St

MOUNT PLEASANT, 48858

Phone Number

9897795405

Organization Information

Primary Organization

City of Mt. Pleasant

Authorizers

adesentz@mt-pleasant.org

Status

Review

Address

320 W. Broadway

Mount Pleasant, Michigan 48858

Phone

(989) 779-5300

Fax

Categories

- Environmental
- Infrastructure

Project Description

The water treatment plant softens water using a chemical precipitation process. Lime residual is produced as part of this treatment process. This is a required and ongoing project.

Benefit Description

This is a project that must be completed to ensure continued ability to produce softened drinking water. Lime residual removal is required every 3-5 years depending on the amount produced per year. Additional funding would allow us to remove an amount in 2025 to make up for the lack of removal caused by increased costs realized since 2019.

Funding Requirements

This project is a part of an ongoing Asset Management Program that is funded by the Capitol Improvement Planning process. The city was previously awarded a 2% grant in 2021 for lime residual removal.

Project Timeline

Summer 2025

Budget Items

Name	Cost	Quantity	Total	Category
Lime Disposal	\$215,000.00	1	\$215,000.00	Environmental
AmountRequested	\$215,000.00			

Matching Funds

Name	Cost	Quantity	Total
Lime Disposal	\$215,000.00	1	\$215,000.00
AmountMatched	\$215,000.00		

Budget Summary

Amount Requested

\$215,000.00

Amount Matched

\$215,000.00

Total Amount

\$430,000.00

Uploaded Files

Name			
No files have been u	oloaded.		

There are no comments to display.

Overview

Project Name

Annual Roadway Pavement Markings

Total Requested

\$35,000.00

(amount based on the Itemized Budget total)

Applicant Project Priority

Low

Reocurring Need?

Not Reocurring

Applicant Information

Applicant Name

jmoore@mt-pleasant.org

Applicant Email

Jason Moore

Organization

City of MtPleasant

Address

320 W Broadway St MOUNT PLEASANT , 48858

Phone Number

9897795405

Organization Information

Primary Organization

City of Mt. Pleasant

Authorizers

adesentz@mt-pleasant.org

Status

Review

Address

320 W. Broadway

Mount Pleasant, Michigan 48858

Phone

(989) 779-5300

Fax

Categories

- Infrastructure
- Transportation

Project Description

Annually, the city contracts for pavement marking on major streets including long-line markings, crosswalks, centerline, bike lane symbols, railroad crossings, and school crossings. The paint is applied on a 2-3 year cycle depending on condition, with high traffic majors streets painted every year. Parking lot lines on-street and in the parks are repainted as needed.

The \$35,000 in 2% grant funds would pay for the 2025 pavement marking contract which would cover markings of approximately 1/3 of the city's major streets. The cost estimate is based on the bid total for the 2024 pavement marking contract.

Benefit Description

Pavement markings increase visibility of pedestrian crossings, promote roadway safety, improve efficiency, provide guidance for pedestrians and drivers, and reduce the risk of accidents.

Funding Requirements

Not Entered

Project Timeline

Summer 2025

Budget Items

Name	Cost	Quantity	Total	Category
Pavement Markings	\$35,000.00	1	\$35,000.00	Safety/Security
AmountRequested	\$35,000.00			

Matching Funds

Name	Cost	Quantity	Total			
No Matching Funds items have been added.						
AmountMatched	\$0.00					

Budget Summary

Amount Requested

\$35,000.00

Amount Matched

\$0.00

Total Amount

\$35,000.00

Uploaded Files

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Pricing Example

There are no comments to display.

M & M Pavement Marking P.O. Box 530 Grand Blanc, MI 48480-0530 P.K. Contracting, Inc. 6344 W. Blue Road Lake City, MI 49651

DIVISION I - LOCAL STREETS

ITEM	QTY.	UNIT	UNIT PRICE		AMOUNT		UNI	T PRICE	AMOUNT
Pavt Mrkg, Waterborne, 4 inch, White, Crosswalk	570	Ft	\$	2.50	\$	1,425.00	\$	1.50	\$ 855.00
Pavt Mrkg, Waterborne, 12 inch, White, Crosswalk, Special Emphasis	318	Ft	\$	2.80	\$	890.40	\$	3.00	\$ 954.00
Pavt Mrkg, Waterborne, 24 inch, White, Stop Bar	559	Ft	\$	3.00	\$	1,677.00	\$	6.00	\$ 3,354.00

DIVISION I - TOTAL \$ 3,992.40 \$ 5,163.00

DIVISION II - MAJOR STREETS

ITEM	QTY.	UNIT	UN	NIT PRICE	AMOUNT	UNIT PRICE		-	AMOUNT
Pavt Mrkg, Waterborne, 4 inch, White	28,641	Ft	\$	0.25	\$ 7,160.25	\$	0.29	\$	8,305.89
Pavt Mrkg, Waterborne, 4 inch, White, Parking	243	Ft	\$	2.00	\$ 486.00	\$	1.85	\$	449.55
Pavt Mrkg, Waterborne, 4 inch, White, Crosswalk	997	Ft	\$	2.50	\$ 2,492.50	\$	1.85	\$	1,844.45
Pavt Mrkg, Waterborne, 4 inch, White, Restricted Area	358	Ft	\$	2.00	\$ 716.00	\$	1.85	\$	662.30
Pavt Mrkg, Waterborne, 4 inch, Blue, Restricted Area	199	Ft	\$	2.00	\$ 398.00	\$	1.95	\$	388.05
Pavt Mrkg, Waterborne, 4 inch, Yellow	24,082	Ft	\$	0.25	\$ 6,020.50	\$	0.29	\$	6,983.78
Pavt Mrkg, Waterborne, 12 inch, White, Crosswalk, Special Emphasis	1,506	Ft	\$	2.80	\$ 4,216.80	\$	3.00	\$	4,518.00
Pavt Mrkg, Waterborne, 12 inch, Yellow Restricted	102	Ft	\$	3.00	\$ 306.00	\$	3.00	\$	306.00
Pavt Mrkg, Waterborne, 24 inch, White, Stop Bar	1,005	Ft	\$	3.00	\$ 3,015.00	\$	6.00	\$	6,030.00
Pavt Mrkg, Waterborne, RR Xing	9	Ea	\$	180.00	\$ 1,620.00	\$	200.00	\$	1,800.00
Pavt Mrkg, Waterborne, Right and Thru Arrow	5	Ea	\$	100.00	\$ 500.00	\$	150.00	\$	750.00
Pavt Mrkg, Waterborne, Left and Thru Arrow	2	Ea	\$	100.00	\$ 200.00	\$	150.00	\$	300.00
Pavt Mrkg, Waterborne, Right Arrow	3	Ea	\$	70.00	\$ 210.00	\$	100.00	\$	300.00
Pavt Mrkg, Waterborne, Left Arrow	9	Ea	\$	70.00	\$ 630.00	\$	100.00	\$	900.00
Pavt Mrkg, Waterborne, School	2	Ea	\$	120.00	\$ 240.00	\$	150.00	\$	300.00
Pavt Mrkg, Waterborne, Bike Lane Arrow (6 FT)	12	Ea	\$	50.00	\$ 600.00	\$	100.00	\$	1,200.00
Pavt Mrkg, Waterborne, Small Bike Lane Symbol (6 FT)	12	Ea	\$	70.00	\$ 840.00	\$	100.00	\$	1,200.00
Pavt Mrkg, Waterborne, Blue, ADA Symbol	1	Ea	\$	50.00	\$ 50.00	\$	100.00	\$	100.00
DIVISION II - TOTA	•		\$ 29,701.05	•		\$	36,338.02		

TOTAL BID - ALL DIVISIONS \$ 33,693.45 \$ 41,501.02

Overview

Project Name

Island Park - New Sidewalk for War Memorials

Total Requested

\$12,000.00

(amount based on the Itemized Budget total)

Applicant Project Priority

Medium

Reocurring Need?

Not Reocurring

Applicant Information

Applicant Name

jmoore@mt-pleasant.org

Applicant Email

Jason Moore

Organization

City of MtPleasant

Address

320 W Broadway St

MOUNT PLEASANT, 48858

Phone Number

9897795405

Organization Information

Primary Organization

City of Mt. Pleasant

Authorizers

adesentz@mt-pleasant.org

Status

Review

Address

320 W. Broadway

Mount Pleasant, Michigan 48858

Phone

(989) 779-5300

Fax

Categories

- Infrastructure
- Safety/Security
- Transportation

Project Description

As part of the city's Town Center reconstruction project in the summer of 2024, the existing war memorials at the Main/Broadway intersection were relocated to Island Park. The Korean War Memorial, along with the World War I and World War II memorials, were respectfully relocated to Island Park, adjacent to the Vietnam Memorial. This effort was proudly assisted by the Mt. Pleasant VFW Post 3033, American Legion Post 110, and Rolling Thunder Michigan Chapter 4.

A 2% Tribal grant of \$12,000 will allow the city to provide sidewalk connections from the Vietnam Memorial sidewalk and the parking lot to the relocated memorials, which were placed on concrete pads in park green space area.

Benefit Description

The sidewalk connections to the relocated memorials will provide barrier free accessibility to the relocated monuments from the Vietnam Memorial and the parking lot, including a new sidewalk ramp at the parking lot. The proposed sidewalk would also connect to the asphalt looped trail in the park, allowing another barrier free access point for pedestrians. This new sidewalk will be a benefit for ceremonies at the site along with general access for veterans and visitors. Having the memorials at one site with barrier free access to all is a benefit to the veterans and the community.

Funding Requirements

Not Entered

Project Timeline

Summer 2025

Budget Items

Name	Cost	Quantity	Total	Category
Sidewalk	\$12,000.00	1	\$12,000.00	Park Improvements
AmountRequested	\$12,000.00			

Matching Funds

Name	Cost	Quantity	Total							
No Matching Funds items have been added.										
AmountMatched	\$0.00									

Budget Summary

Amount Requested

\$12,000.00

Amount Matched

\$0.00

Total Amount

\$12,000.00

Uploaded Files

Name

warmonumentplanrevised09192023 2024-08-29.pdf

NewParkMemorialSidewalk_2024-08-29.xlsx

There are no comments to display.



ISLAND PARK WAR MEMORIAL SIDEWALKS

Parking Lot to Trail New Sidewalk

ltem					
No.	Description	<u>Quan.</u>	<u>Unit</u>	Unit Price	<u>Total</u>
1	Pavt, Rem, Modified	2	Syd	\$30.00	\$ 60.00
2	Curb and Gutter, Rem	10	Ft	\$20.00	\$ 200.00
3	Sidewalk, Rem	0	Syd	\$22.00	\$ -
4	Erosion Control, Inlet Protection, Filter Bag	2	Ea	\$175.00	\$ 350.00
5	Excavation, Earth	13	Cyd	\$20.00	\$ 260.00
6	Subbase, CIP	7	Cyd	\$25.00	\$ 175.00
7	Embankment, LM	10	Cyd	\$22.00	\$ 220.00
8	Curb and Gutter, Conc, Det F4, Modified	5	Ft	\$38.00	\$ 190.00
9	Curb Ramp Opening, Conc, Modified	5	Ft	\$38.00	\$ 190.00
10	Detectable Warning Surface, Modified	5	Ft	\$88.00	\$ 440.00
11	Sidewalk Ramp, Conc, 6 inch	75	Sft	\$6.50	\$ 487.50
12	Sidewalk, Conc, 4 inch	280	Sft	\$5.00	\$ 1,400.00
13	Pavt Mrkg, Waterborne, 4 inch, Restricted Area	100	Ft	\$0.60	\$ 60.00
16	Hand Patching	1	Ton	\$380.00	\$ 380.00
19	Restoration, Modified	80	Ft	\$6.00	\$ 480.00
20	Staking Allowance	1	Ls	\$1,500.00	\$ 1,500.00
	Subtotal				\$ 6,392.50
	10% Contingency				\$ 639.25
	Total				\$ 7,031.75

Half Circle Sidewalk

Item					
No.	<u>Description</u>	<u>Quan.</u>	<u>Unit</u>	Unit Price	<u>Total</u>
1	Pavt, Rem, Modified	0	Syd	\$30.00	\$ -
2	Curb and Gutter, Rem	0	Ft	\$20.00	\$ -
3	Sidewalk, Rem	0	Syd	\$22.00	\$ -
4	Erosion Control, Inlet Protection, Filter Bag	1	Ea	\$175.00	\$ 175.00
5	Excavation, Earth	14	Cyd	\$20.00	\$ 280.00
6	Subbase, CIP	7	Cyd	\$25.00	\$ 175.00
7	Embankment, LM	6	Cyd	\$22.00	\$ 132.00
8	Curb and Gutter, Conc, Det F4, Modified	0	Ft	\$38.00	\$ -
9	Curb Ramp Opening, Conc, Modified	0	Ft	\$38.00	\$ -
10	Detectable Warning Surface, Modified	0	Ft	\$88.00	\$ -
11	Sidewalk Ramp, Conc, 6 inch	0	Sft	\$6.50	\$ -
12	Sidewalk, Conc, 4 inch	371	Sft	\$5.00	\$ 1,855.00
13	Pavt Mrkg, Waterborne, 4 inch, Restricted Area	0	Ft	\$0.60	\$ -
16	Hand Patching	0	Ton	\$380.00	\$ -
19	Restoration, Modified	65	Ft	\$6.00	\$ 390.00
20	Staking Allowance	1	Ls	\$1,500.00	\$ 1,500.00
	Subtotal				\$ 4,507.00
	10% Contingency				\$ 450.70
	Total				\$ 4,957.70

PROJECT TOTAL \$ 11,989.45

Pay #1	Amount This Period	Total to Date
Amount Earned	\$156,487	7.10
Less Amount Retained	\$15,648	3.71
Less Previous Payments	\$0	0.00
Amound Due	\$140,838	3.39

Pay #2	Amount This Period	Total to Date
Amount Earned	\$1,221.4	6 \$157,708.56
Less Amount Retained	\$0.0	0 \$15,648.71
Less Previous Payments	\$0.0	0 \$140,838.39
Less Water Service Repair	\$2,192.1	6 \$2,192.16
Retainage Returned	\$15,648.7	1 \$15,648.71
Amount Due	\$14,678.0	1 \$14,678.01

City of Mt. Pleasant, MI Division of Public Works

2023 Thin Overlay Project Pay Request #1

Central Asphalt, Inc. 900 S. Bradley St. Mt. Pleasant, MI 48858

Amount of Contract: \$273,182.42

DATE OF COMPLETION:

ORIGINAL: REVISED: Date of Estimate:

FROM: TO:

DIVISION - LOCALS

ITEM							Qty. This	•	Total This	Qty. To	Total To	Last Qty.
NO.	DESCRIPTION	Quan.	<u>Unit</u>	<u> </u>	Unit Price	<u>Total</u>	Period		<u>Period</u>	<u>Date</u>	Date	To Date
1	Curb and Gutter, Conc, Det F4	464	LFT	\$	28.00	\$ 12,992.00	692.00	\$	19,376.00	692 \$	19,376.00	0
2	Curb and Gutter, Rem	464	LFT	\$	17.00	\$ 7,888.00	692.00	\$	11,764.00	692 \$	11,764.00	0
3	Sidewalk Ramp, Conc. 6 inch	3,128	SFT	\$	9.00	\$ 28,152.00	3,106.80	\$	27,961.20	3,107 \$	27,961.20	0
4	Subbase CIP	12	CYD	\$	50.00	\$ 600.00	0.00	\$	-	0 \$	-	0
5	Sidewalk, Rem	410	SYD	\$	20.00	\$ 8,200.00	506.80	\$	10,136.00	507 \$	10,136.00	0
6	Sidewalk, Conc. 4 inch	535	SFT	\$	6.50	\$ 3,477.50	1,720.00	\$	11,180.00	1,720 \$	11,180.00	0
7	Detectable Warning Surface, Modified	284	LFT	\$	50.00	\$ 14,200.00	227.00	\$	11,350.00	227 \$	11,350.00	0
8	Dr Structure Cover Adj. Case 1	26	EA	\$	287.69	\$ 7,479.94	24.00	\$	6,904.56	24 \$	6,904.56	0
9	Dr Structure Cover , SAN, Modified	6	EA	\$	1,259.57	\$ 7,557.42	3.00	\$	3,778.71	3 \$	3,778.71	0
10	Dr Structure Cover, STM, Modified	3	EA	\$	1,240.26	\$ 3,720.78	2.00	\$	2,480.52	2 \$	2,480.52	0
11	Dr Structure Cover, CB, Modified	4	Ea	\$	1,200.00	\$ 4,800.00	3.00	\$	3,600.00	3 \$	3,600.00	0
12	HMA, Ultra-Thin, Medium Volume	1,633	TON	\$	102.12	\$ 166,761.96	1,385.96	\$:	141,534.24	1,386 \$	141,534.24	0
13	Hand Patching	36	TON	\$	75.71	\$ 2,725.56	33.18	\$	2,512.06	33 \$	2,512.06	0
14	Restoration, Modified	925	LFT	\$	5.00	\$ 4,627.26	896.50	\$	4,482.50	897 \$	4,482.50	0
	TOTAL DIVISION - LOCAL					\$ 273,182.42		\$ 2	257,059.78	\$	257,059.78	



Goals & Objectives

- Maintain Service Excellence: The City of Mt. Pleasant is committed to sustaining the current level of service across all departments to ensure the safety and satisfaction of all residents and visitors.
- Promote Professional Development: We will prioritize recruitment, training, and development opportunities across all departments to enhance the capabilities and professionalism of our workforce.
- Address Community Needs: Proactively address community needs, including mental health issues, economic development, and environmental sustainability, through collaborative efforts across all divisions.



Goals & Objectives

- Implement Strategic Planning: Develop and implement comprehensive strategic plans to guide the future growth and development of the city, focusing on long-term sustainability and resilience.
- Enhance Financial Management: Improve financial management practices, including budgeting, accounting, and revenue generation, to ensure fiscal responsibility and transparency.

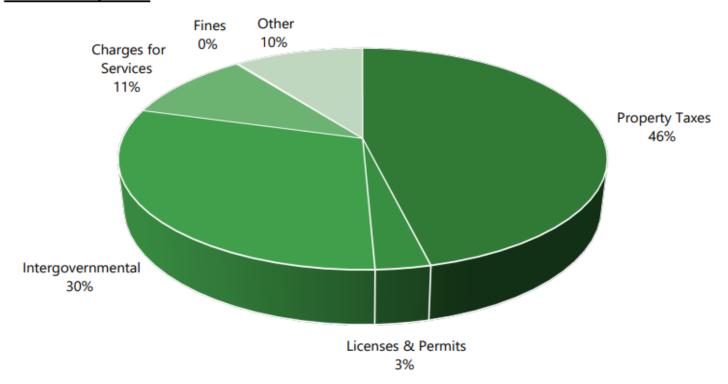


- Challenges
 - Inflation
 - PEAK & Recreation
 - Solid Waste future funding
 - MTT Cases



General Fund Revenue – \$18.9M

2025 Proposed





General Fund Revenue

- ARPA Funds
 - Recognize when we use them
 - GKB Trail \$525,000 (less \$170,000 in 2024)
 - Parking Lots 4 & 5 \$932,000
- Same millage rate
 - Assumed 2% increase in taxable value
- State Shared Revenue
 - Current state projections

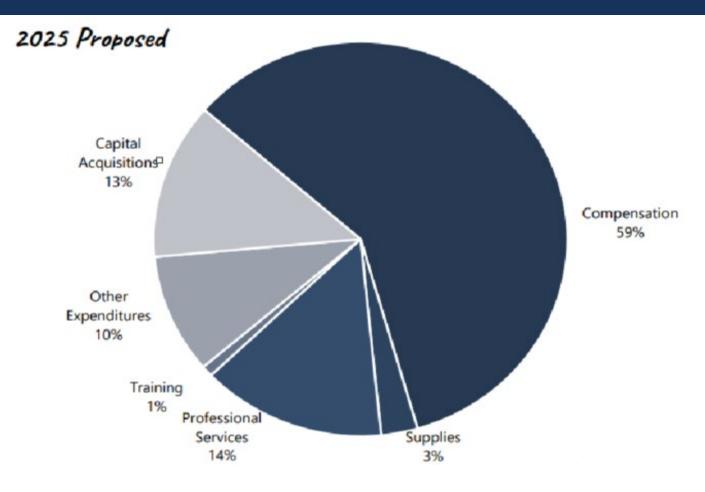


Millage Rates – 16.25





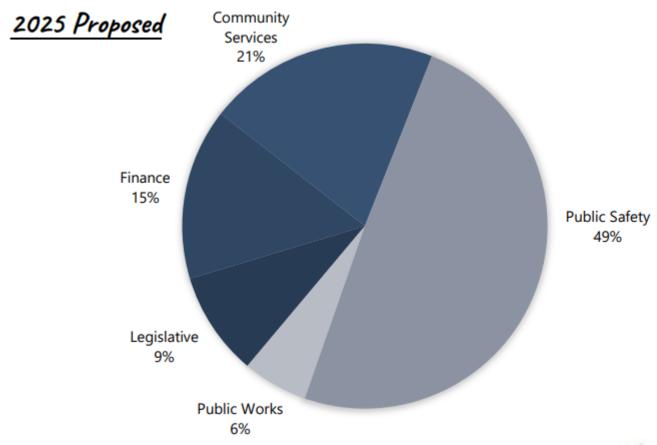
General Fund Expenditures – \$19.1M



Mt. Pleasant

meet here

General Fund By Division





General Fund Expenditures

- Mainly Status Quo
 - Supports current workforce model
- Changes:
 - MERS Contribution \$6000,000



General Fund Balance

- Unassigned Fund Balance
 - Adding \$56,150 of Unassigned Fund Balance
 - \$6.1 million
 - 32.2% of 2025 budgeted expenditures



General Fund Balance - Assigned

- Fire truck reserve
 - \$200,000 annual contribution
- Assigned for Economic Initiatives
 - **-** \$721,088



- Local Street
 - Reconstructs: Downtown Alley
 - Overlays 12 streets
- Major Street
 - Reconstructs: Franklin
 - Overlays 3 streets



CIP Millage Projects

- \$402,570 toward Chippewa River Bank Protection
- \$120,000 toward Chipp-A-Waters Playground
- \$90,000 toward Apparatus Bay Concrete Approaches (DPS)
- \$85,000 toward Roof Replacement (DPS)
- \$80,000 toward Oil Separator (DPS)
- \$72,500 toward Downtown Alley Reconstruction
- \$65,000 toward Downtown Improvement Program

Mt. Pleasant meet here

- Airport
 - Runway rehab design work
- Water Resource Recovery Facility
 - Plant rehab Phase II



- Solid Waste
 - Continue no-fee brush pickup twice per year
 - First year for contracted pickup
- Water
 - DWSRF phase I application successful



Fees and Charges

- New Fees
 - Water & Sewer
 - Public Works



Utility Bill – Residential Monthly

(assumed 5,000 gallons)

Water	WRRF	Total
\$36.25	\$48.35	\$84.60
41.95	58.39	100.34
21.31	40.27	61.58
24.25	37.32	61.57
58.41	71.16	129.57
	\$36.25 41.95 21.31 24.25	\$36.25 \$48.35 41.95 58.39 21.31 40.27 24.25 37.32

City of Mt. Pleasant

2024 Actual	\$29.29	\$28.49	\$57.78
2025 Proposed	30.50	28.49	58.99
Change from 2024 to 2025	1.21	0.0	1.21

Unresolved Issues/Unknown

- Opioid Settlement Funding
- MERS Contribution
- CHILL Grant (early 2025 amendment)
- Future Discussion on Solid Waste Fund (fund balance to last until 2027)
- Open Contract Negotiations



Next Steps

- Work Sessions
 - September 23: Presentation
 - October 28: Commissioner Questions
- Questions to City Manager by October 14
- Public Hearing November 11
- Budget Adoption by last meeting of the year

