



Lake Killarney Board Regular Meeting

Agenda

July 2, 2024 @ 10:00 AM

City Hall Commission Chambers
401 S. Park Avenue

welcome

Agendas and all backup material supporting each agenda item are accessible via the city's website at cityofwinterpark.org/meetings/ and include virtual meeting instructions.

assistance & appeals

Persons with disabilities needing assistance to participate in any of these proceedings should contact the City Clerk's Office ([407-599-3277](tel:407-599-3277)) at least 48 hours in advance of the meeting.

"If a person decides to appeal any decision made by the Board with respect to any matter considered at this hearing, a record of the proceedings is needed to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based." (F.S. 286.0105).

please note

Times are projected and subject to change.

1. Call to Order

- a. Select Chair and Vice Chair 5 Minutes

2. Consent Agenda

- a. Approve the minutes of June 5, 2024 1 minute

3. Public Comments (for items not on the agenda): Three minutes allowed for each speaker**4. Public Hearings (Public participation and comment on these matters must be in person.)****5. Action Items****6. Non-Action Items****7. Staff Updates**

- a. Orange County Update 10 Minutes

- b. Lakes Management 15 Minutes

- Fairview Dock Violation Update
- Lake Level Elevation
- Maintenance & Efforts
- Water Quality
- Killarney Canal Planting Update
- Flood Management Guide Utilization
- Work Session Re-Prioritized List

- c. Upcoming Agenda Items 5 Minutes

- Filth of July - 7/6 9am @ Public Safety Building
- Teacher Event - 8/8 2:30pm @ Killarney Elementary School
- Wood Duck Box Workshop - TBD 9am @ MLK Park / WP Library

- d. Stormwater Management 15 Minutes

- CIP Update
- Nicolet Pond, Killarney Drive. Pipe Replacement, & Lake Bell Weir Project Timeline
- Lake Front Construction Updates
- Library / Event Center Additional Parking Design

-
- CRS Commission Presentation Update
 - Imperial Dry Cleaners Update

Follow-up Items:

- BMP Feasibility Study for Killarney Dr. Outfall Concolidation
- Outfall Condition Update

8. Board Comments

- | | |
|---|-----------|
| a. Discussion of Public Comments Received | 5 Minutes |
|---|-----------|

9. Upcoming Agenda Items

- | | |
|------------------------------------|-----------|
| a. Upcoming Agenda Items | 5 Minutes |
| b. Summary of Meeting Action Items | 5 Minutes |

10. Adjournment



Lake Killarney Board

agenda item 2.a

item type

Consent Agenda

meeting date

July 2, 2024

prepared by**approved by****subject**

Approve the minutes of June 5, 2024

motion | recommendation**background****alternatives | other considerations****fiscal impact****attachments**

1. LKB-mins-2024-06-05 DRAFT - SM EB EDITS



Lake Killarney Board Regular Meeting Minutes

June 5, 2024 at 10:00 AM

City Hall Commission Chambers
401 S. Park Avenue

Present

Joyce D. Cunningham, Ellen Hencken, Carolyn Minear, William Voecks, David L. Dickerson (virtual).

Absent

Staff Present

Assistant Director of Public Works Don Marcotte; Public Works Engineer Shannon Monahan, Lakes Division Manager Joseph Cordell, Administrative Assistant Victoria Tabor

Also Present:

Orange County Lake Killarney Board Members Conrad Necrason

1. Call to Order

David Dickerson called the meeting to order at 10:00 a.m.

2. Consent Agenda

Ms. Minear commented that there should be consistency when using first and last names. Mr. Dickerson requested grammar corrected.

- a. Approve the minutes of March 6, 2024

Motion made by Mr. Voecks to approve the minutes with corrected grammar, seconded by Ms. Hencken. Motion carried unanimously with a 5-0 vote.

- b. Approve the minutes of May 1, 2024

Motion made by Ms. Cunningham to approve the minutes as edited and seconded by Mr. Voecks . Motion carried unanimously with a 5-0 vote.

3. Public Comments (for items not on the agenda)

4. Public Hearings (Public participation and comment on these matters must be in person.)

5. Action Items

6. Non-Action Items

a. CRS Presentation

Ms. Monahan introduced Mr. Ahmed Hamed who presented the Community Rating System (CRS). Mr. Hamed explained that the City is reviewing the benefits and costs of the rating system program. The CRS program is backed by FEMA's National Flood Insurance Program (NFIP) encouraging communities to become more flood resilient which will result in premium discounts for resident policyholders.

There are 125 floodplain management activities within the program, allowing participants to achieve points. The more points a community receives, the lower the classification number and the higher the insurance discount. An example of a public information activity would be communicating with residents on where they can find elevation certificates. Classification numbers range from 1-10, with 1 being the best resulting in a 45% policy discount and 9 the lowest resulting in a 5% discount.

The City would need to submit a letter of interest to a CRS specialist within the NFIP program along with documentation of all the activities that they are currently participating in. There are minimum qualifications that have to be met to start the program. There is an annual recertification requirement and a verification cycle of 3 or 5 years depending on the City's classification. At this time, the City's estimated classification would be 8, resulting in a 10% discount for an average of \$59 per year for policyholders. There is an initial verification or 5-year full verification cost of approximately \$55k-\$60k or annualized cost of \$12k - \$15k with annual recertification that would require 60-80 hours of the City's CRS Coordinator's time.

The CRS program was discussed extensively. Mr. Marcotte advised the Board of the time remaining. Mr. Dickerson asked if staff had developed a recommendation for the CRS program. Mr. Ramdatt advised that staff were tasked to present the facts of the program to the Commission so they could make a decision as to whether the city will participate.

7. Staff Updates

a. Orange County Update

Orange County Senior Environmental Specialist, Nidia Volpe, provided questions in an email to Mr. Cordell as Ms. Volpe was unable to attend in person. Mr. Cordell provided responses to her questions. She asked for the Winter Park contact doing research on lift stations which is David Zusi. There was a concern about eelgrass floating on the lake, Mr. Cordell will inspect the eelgrass on Monday. Ms. Volpe questioned if the City provides weedoo services for the eelgrass. Mr. Cordell responded that currently, the chain of lakes has barges to assist with operations. Without such equipment, the labor is time-consuming, however staff is looking for alternatives. Lastly, she had questioned what was the erosion control netting used along the bank in the canal at Lake Killarney. The next Orange County Lake Killarney Advisory Board meeting will be Thursday, June 13, at 5pm at the Winter Park Public Safety Building.

b. Lakes Management

- Dock Violation Update
- Outfalls Treated
- Lake Elevation
- Maintenance & Efforts
- Water Quality

Mr. Cordell advised that a demo permit has not been applied for the dock violation at Lake Fairview, but the resident has been trying to find a vendor. Next month we will follow up with action on the removal of the dock.

The outfalls were treated recently to keep the vegetation away. Ms. Volpe requested that Winter Park treat the outfalls on the Orange County side. This will become a normal invoiced procedure.

From April 29 to May 29 lake elevations were low.

The weir board was removed on 5/30 from Lake Bell.
105 gallons of debris and 20 gallons of trash were removed the traps.

The phosphorus that had spiked has normalized. The lab advised that the spike was an anomaly.

Follow-up Items:

- Workshop Re-Prioritize List

Ms. Eby was not available to provide the re-prioritized workshop list.

c. Past & Upcoming Events:

- Lakes Event - 5/11 9am @ Lakes Knowles & Wilbar
- Lakes Event - 5/18 9am @ Lake Chelton
- Lakes Event - 6/8 9am @ Lake Bell
- Board Orientation - 6/13 6pm @ Commission Chambers
- Paddleboard Clean-up - 6/15 9am @ Kraft Azalea
- Board Appreciation - 6/20 5:30pm @ WP Pines
- Lakes Event - 6/22 9am @ Lakes Temple & Tuscany
- Vermicomposting Class - 6/27th 6pm @ WP Library

d. Stormwater Management

- CIP Update
- Nicolet Pond, Killarney Dr. Pipe Replacement, & Lake Bell Weir Project Timeline
- Nicolet Design & Diagram
- Killarney Dr. Plans
- Lake Front Construction Updates
- Exfiltration System Current Code
- Full List of Private Exfiltration Systems
- Library /Events Exfiltration Maintenance Report

Ms. Monahan displayed the full CIP.

The Nicolet pond permit has not been issued. Staff is working on ordering the structures for the Killarney drive pipe replacement.

Ms. Monahan reviewed and explained the plans for the Nicolet pond.

Ms. Monahan and Mr. Marcotte reviewed and explained the Killarney Drive plans. Ms. Monahan advised the Lake Bell weir repair is on schedule.

There are no new construction projects on the lake side of Lake Killarney.

The Board was shown a list of private exfiltration systems, when they were constructed and the ordinance that governs them. A letter will be sent within the next week to all private exfiltration system owners reminding them of their agreement with the City and that enforcement will begin in August.

Ms. Monahan displayed the Library/ Events center Retrofit Maintenance Sheet that the maintenance crews used to do the inspection. Mr. Marcotte explained how the exfiltration systems are cleaned out. Ms. Monahan showed the minimum inspection frequency and preferred frequency for structural controls chart and also the master inspection and maintenance sheet.

Follow-up Items:

- BMP Feasibility Study for Killarney Dr. Outfall Consolidation
- BMP Photos
- Outfall Condition Update
- Library /Event Center Additional Parking Design (when available)
- Exfiltration System flowchart for Maintenance & Inspection

Ms. Monahan discussed the requested follow-up items to which no one was sure what was asked about BMP feasibility study. The Library/Event center does not have a design yet, but Ms. Monahan stated she will provide the layouts that were shown to the City Commission.

8. Board Comments

Mr. Cordell requested to move the July meeting date to July 2. The appointment of Chair and Vice-Chair will be conducted at the July 2 meeting. Mr. Cordell advised that the board can change the time and day of the meeting.

- a. Discussion of Public Comments Received

9. Upcoming Agenda Items

- a. Upcoming Agenda Items
 - Layouts for the Library & Event Center parking - Ms. Monahan
 - Eelgrass inspection - Mr. Cordell
 - Updates of the CRS discussion - Mr. Dickerson
- b. Summary of Meeting Action Items

10. Adjournment

The meeting adjourned at 11:55 a.m.

Approved by the board on
/s/ Bahiyyah Layton, Board Coordinator



Lake Killarney Board

agenda item 7.a

item type

Staff Updates

meeting date

July 2, 2024

prepared by

Victoria Tabor, Administrative Coordinator II

approved by

Victoria Tabor, Administrative Coordinator II

subject

Orange County Update

motion | recommendation**background****alternatives | other considerations****fiscal impact****attachments**

None



Lake Killarney Board

agenda item 7.b

item type

Staff Updates

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July 2, 2024

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approved by

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subject

Lakes Management

- Fairview Dock Violation Update
- Lake Level Elevation
- Maintenance & Efforts
- Water Quality
- Killarney Canal Planting Update
- Flood Management Guide Utilization
- Work Session Re-Prioritized List

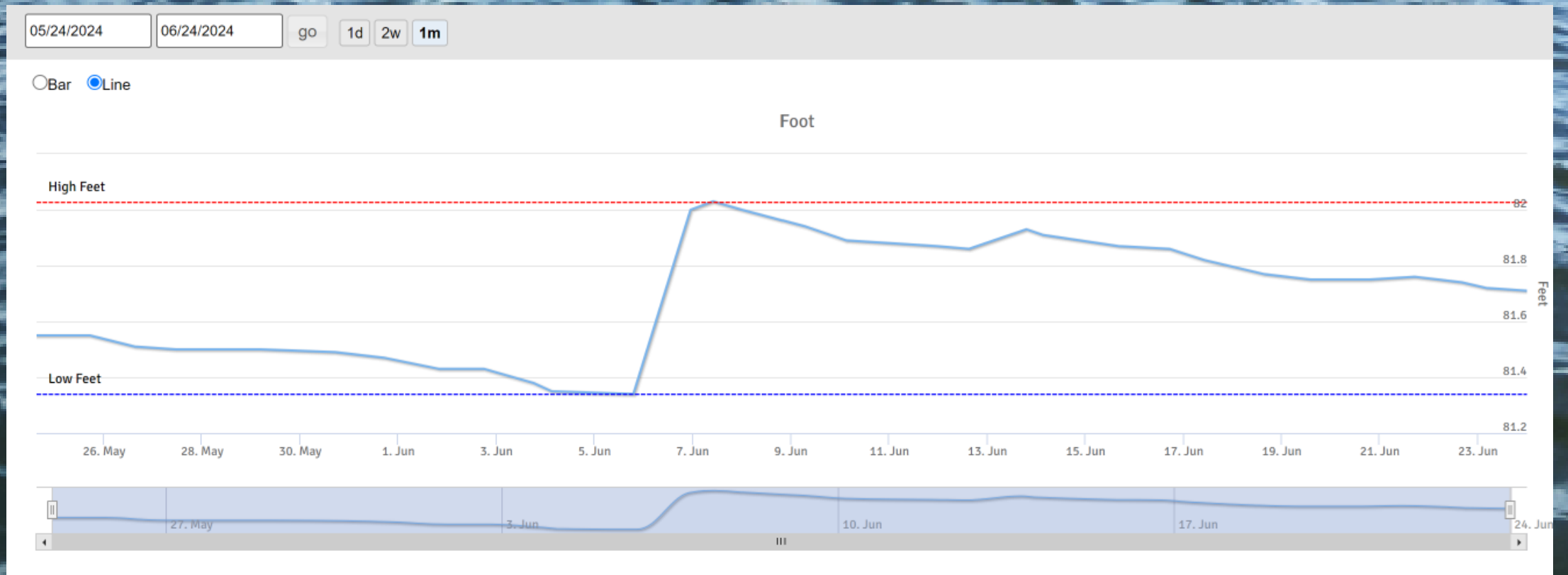
motion | recommendation**background****alternatives | other considerations****fiscal impact****attachments**

1. Lake Update 07.2024
2. Lake Killarney Work Session- Prioritized List

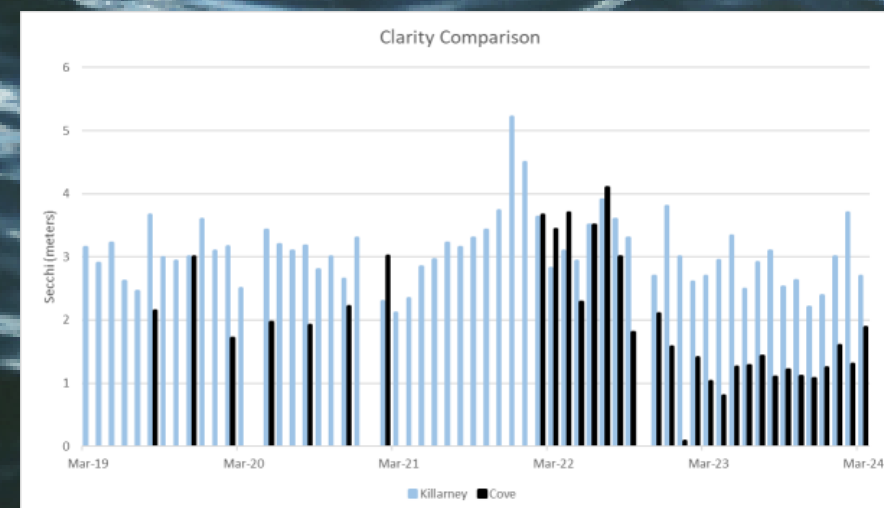
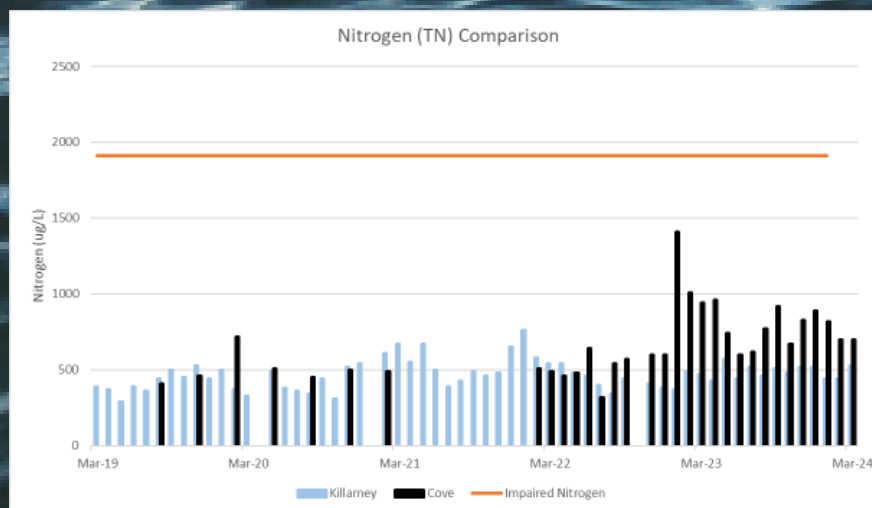
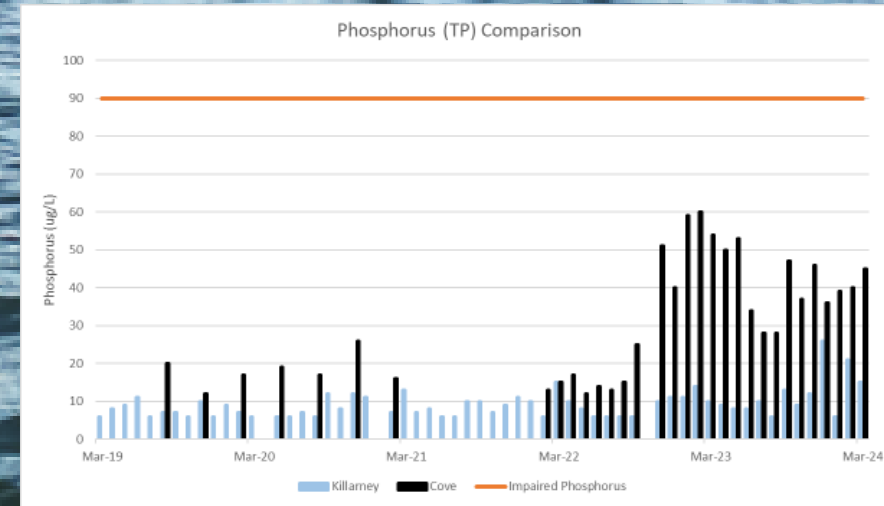
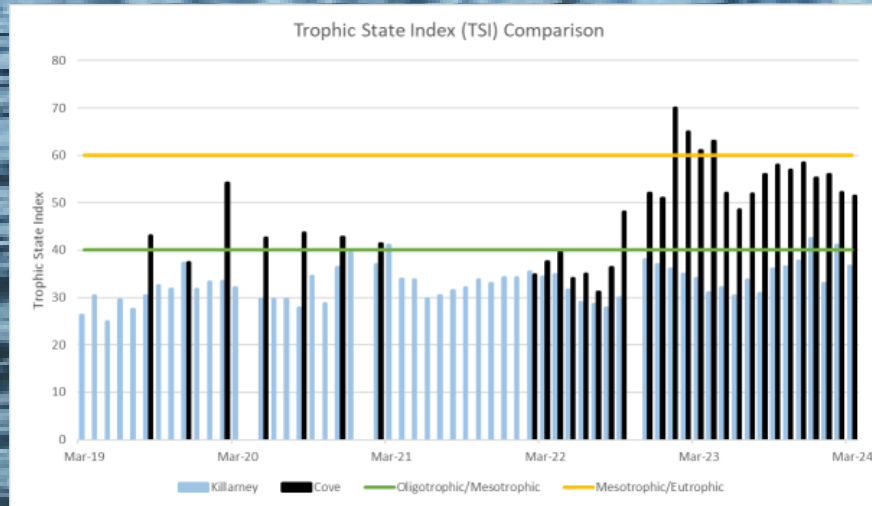
LAKE UPDATE:

- Dock Violation @ Fairview: Case is moving to Code Board
- Elevations
- Maintenance and Efforts:
 - 165 gal Debris Removed
 - 70 gal Trash Removed
- Water Quality
- Killarney Canal- Plantings completed. Treatment along the bank for invasive is on-going. Looking to further enhance as the site matures.
- Flood Management Guide Utilization

Lake Elevation

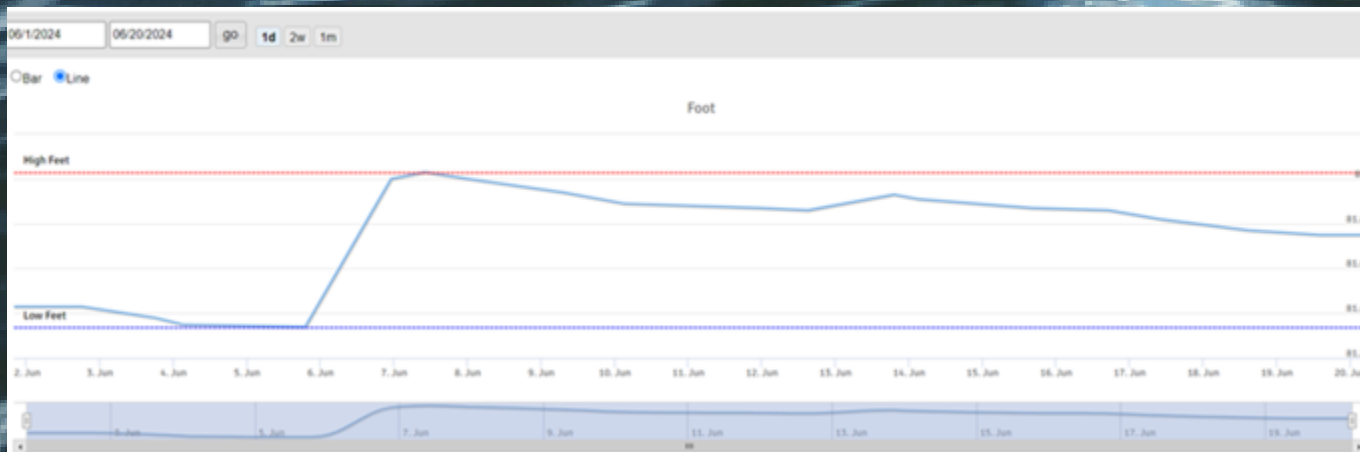


Lake Killarney Water Quality



Flood Management Guide Utilization: 6/20/24

- Update Provided to Board in email 6/20/24



Re-Prioritization List

Lake Killarney Work Session 2-7-2024

Prioritization List- To be reviewed annually in May/June Work Session

Yellow=Priority Favored by Board

Red= Staff notes regarding request

High Priority

- Any updates with the annexation of Winter Park, especially as I live on the unincorporated side of the lake. **Jeanne to write letter for updates.**
- Clean not only trash and debris from all major lake inputs but in the long term remove chemicals and fertilizers from the input. (Better Lake Quality) **Quarterly basis for pipe inspections/OC to be involved.**
- Learn about Developer events/projects earlier so that we may have input/impact into what is dumped into our lake. **Shannon will coordinate with P&Z Board for items related to Killarney.**
- See example/actual agreement regarding requirements for underground retention systems and related cleaning process and timing.
- I'd like to explore the feasibility of modifying specs and requirements for docks and sea walls for the smaller "lobes" of Lake Killarney. **Canal & Cove specifically. Staff recommends code remains non-specific.**
- Managing lake levels/hurricane preparedness. **Once study is complete, Guide will be updated.**
- Plan for Emergency Response to an accident on the lake. **List provided annually to WPPD and OC.**
- ACCESSING MONEY – The status of the city replacing their grant writer and who specifically is charged with knowing possible sources of money, and is focused on writing the grants and following up on the grants available, as it relates to our aging infrastructure.
- [IMPERIAL UPDATE] – The status of Lake Rose and possible contamination levels. What's the latest update on the testing and results? **Shannon to provide update.**
- NEW RETENTION POND – Nicolette Pond permitting process and design.
- PRIVATE LIFT STATIONS – Status of private lift station inspection and reporting program to monitor the maintenance compliance of private lift stations in Winter Park or WP's jurisdiction. **David Zusi. Provided update to the Board. Agreement pending deliverable to the Board.**
- LIBRARY AND EVENT CENTER – Status of adding parking or more hard surface to the project? Would our board be part of these discussions as it relates to changes around this facility and runoff or reconfiguring MLK POND?
- BOAT HOUSE AND DOCK INSPECTION – After a boat house or dock is approved by the board, is there a way the Lake's staff could circle back to the board and inform them that the permitted dock or boathouse was built and landscaped in accordance with the permit issued? The process of the building department staff doing this inspection leaves the Lake staff to rely on them and no reassurances are given to the board the structure was completed and is in compliance. Example, Ms. Bell on Lake Drive.

Lake Killarney Work Session 2-7-2024

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Priority Items Completed

- To know more about out the growing number of gators in the canal/cove. **Provided educational flyer and distributed.**
- Trash and recycle bins being place over storm drains with "drains to lakes" placards being on the storm drains and not moving them after collection. **Sustainability advised and outreach messaging is planned.**
- CRS – The status of the city joining the Community Rating System (CRS). Who is the point person on this project? **Charles Ramdatt. Presentation provided to Killarney Board. Presentation to be provided to Commission 6-26-24.**
- NPDES – Review the NPDES filing including all attachments. This document and attachments should preferably be emailed to the board at least a week before the workshop so the board can preview before we meet. **Shannon provided overview of the program and permit.**

LAKE SURVEY REPORT – When staff conducts a lake survey, is there a report they prepare and could this be provided to the board without much effort? This could include a review of any docks and boat houses that might be in an unsafe condition and track the resolution of the situation with an update to

the board? Staff currently provides a verbal update to inspections including violations reported and outcome for both Lakes & Waterway Board and Killarney Board. Field sheets are not uploaded to any lake Board per resources.

Priority Items Requested

- Require maintenance agreements for above ground retention systems. The affect over time of sand, silt, organic material and debris reducing the effective water storage area that reduces capacity and getting that capacity back
- Prep for possible orange county annexation
- RECONFIGURING DRAINAGE – The city staff have discussed possible plans to redo the roadway around where the Imperial Laundry was, near Lake Rose. What drainage changes are contemplated and are there plans to connect Lake Rose to any lake that flows, or overflows, into Lake Killarney? How might the board participate in these discussions and potential changes around Lake Rose, especially as it relates to connecting this lake to Lake Killarney? This same discussion as it relates to MLK POND.
- CONDITION REPORT OF LK STORMWATER SYSTEM – Status of the report on mapping and the condition evaluation of all stormwater outfalls on or around Lake Killarney /cove/ canal. Who's responsible for this project and any update, or is a partial report review possible? I know the city hired an engineering firm and that report is due in about a year; however, I believe Shannon was working on this. Is this still in the works at the staff level?
- NEW ENHANCEMENTS FOR LK – Where might it be good to include a CDS box if stormwater pipes and outfalls are updated, consolidated and fixed? Will the board be part of this discussion? Are there federal or state funds available for these types of expensive corrections and enhancements? I know staff always considers this enhancement; however, maybe the board could assist with encouragement to the commission to access funds for these environmentally beneficial devices.
- POSSIBLE ANNEXATION – Status and involvement in any city plans to annex the other side of Killarney from Orange County to WP? Where might our board fit into this discussion? Will there be a thorough review of the aging infrastructure on the Orange County side of the lake?
- Prep for possible orange county annexation
- COMMUNICATION WITH RESIDENTS – Status of online “Lakes Dept.” Dashboard for residents? When Gloria she first joined the city, she indicated she wanted to create a dash board on the city website for residents. Is that an initiative still in the works and discuss the status? **This is still a top initiative for Lakes, post Hurricane Grant work that has expiration of grant funds (current priority).**
- NEW DEVELOPMENT NOTIFICATION – Is there a way for city staff to notify the board when there is proposed development under review that would create runoff and stormwater levels that may affect Lake Killarney. Example the 54 townhomes on Webster and Swoope that were just approved that will drain into LK and how this project started at 74 units.
- BOAT HOUSE AND DOCK INSPECTION – After a boat house or dock is approved by the board, is there a way the Lake's staff could circle back to the board and inform them that the permitted dock or boathouse was built and landscaped in accordance with the permit issued? **The process of the building department staff doing this inspection leaves the Lake staff to rely on them and no reassurances are given to the board the structure was completed and is in compliance.** Example, Ms. Bell on Lake Drive. **Providing correction: Lakes conducts inspections related to Lakes not Building therefore it is not relied upon an external Department. Upon completion of Ms. Bell's permit Board will be updated.**

**item type**

Staff Updates

meeting date

July 2, 2024

prepared by

Victoria Tabor, Administrative Coordinator II

approved by

Victoria Tabor, Administrative Coordinator II

subject

Upcoming Agenda Items

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- Teacher Event - 8/8 2:30pm @ Killarney Elementary School
- Wood Duck Box Workshop - TBD 9am @ MLK Park / WP Library

motion | recommendation**background****alternatives | other considerations****fiscal impact****attachments**

None



Lake Killarney Board

agenda item 7.d

item type

Staff Updates

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July 2, 2024

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Victoria Tabor, Administrative Coordinator II

approved by

Victoria Tabor, Administrative Coordinator II

subject

Stormwater Management

- CIP Update
- Nicolet Pond, Killarney Drive. Pipe Replacement, & Lake Bell Weir Project Timeline
- Lake Front Construction Updates
- Library / Event Center Additional Parking Design
- CRS Commission Presentation Update
- Imperial Dry Cleaners Update

Follow-up Items:

- BMP Feasibility Study for Killarney Dr. Outfall Concolidation
- Outfall Condition Update

motion | recommendation**background****alternatives | other considerations****fiscal impact****attachments**

1. SW Update 7.24 Lake Killarney Board
2. MONITORING PLANS AND REPORTS RELATED 2023 GROUNDWATER MONITORING REPORT

Stormwater Staff Update

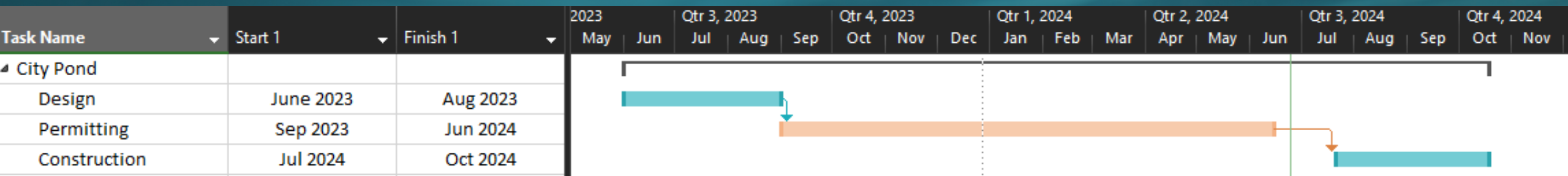
Lake Killarney Board Stormwater CIP – Fiscal Year 2024

ACCT #	CIP Title & Description	Original Year Funded	Current Balance	Status/Comments
565200	Drainage Improvements - Recent years of unusually heavy rainfall events have revealed several substandard drainage conditions in various locations throughout the City.	Annually Funded	\$56,534	Several in-house drainage improvements projects for 2023-24 - Completed replacement of 70ft of 24 inch RCP crossing Joeline Court, and 120ft of 18 inch HDPE at the north end of Laurel Road. Upcoming - add another inlet and pipe at 1622 Arbor Park Drive, increase pipe size at 1642 Arbor Park Drive, storm pipe replacement/relocate at 2601 & 2631 Temple Drive.
				1) <u>Palmer at Old England outfall repair</u> - Stormwater outfall pipe replacement required. Design is 40% complete, survey is now complete. Phase 1 permit application with SJRWMD has been submitted. Waiting on response from District.
				2) <u>Stormwater Outfall Dredging</u> - The City recently entered a new contract, dredging on several stormwater outfalls started in Aug 2023, and will continue as needed.
				3) <u>Ward Park ponds construction</u> - Estimated cost \$150k. NE and NW Pond excavation and sodding is complete. Piping installation started May 2024.
				4) <u>Pipe Repair at Summer Way</u> - Corrugated metal pipe replacement. COMPLETE.
				5) <u>Killarney Dr Outfall & Street Repairs Phase 1</u> - New outfall to replace two existing outfalls. Permit with SJRWMD to be submitted April 2024. Anticipated Construction August 2024.
565203	Lk. Bell Weir Outfall Improvements -	2009	\$69,223	Repairs may be required on the Lake Bell outfall weir. Preliminary concept and geotechnical evaluation are complete. Final plans and permitting are underway.
565221	Seminole County Ditch Piping (along Arbor Park Dr) – Drainage ditch behind the homes along Arbor Park Drive has a shared drainage basin with Seminole County. Funding is provided for the design and construction to pipe the ditch.	2016	\$733,395	The Interlocal Agreement was approved by the City Commission and by the Seminole County Commission. 60% plans completed and submitted to Seminole County. Phase I permit application has been submitted to SJRWMD.
565205	Nicolet Ave Stormwater Pond – complete the design and construction of a stormwater treatment pond on City purchased properties located at 796 & 808 Nicolet Avenue	2023	\$199,850	Commission approved \$200,000 in the City's FY'23 budget. General permit application and RAI has been submitted.
565217	Stirling Bridge Replacement	2024	\$250,000	Updates required for price estimate.
565210	Fawsett Road CDS Unit	2024	\$200,000	Seeking permit exemption with SJRWMD.
	Curb Implementation	2024	\$50,000	
	TOTALS			
	3023406 ACTIVE STORMWATER CIP's		\$1,559,002.47	BALANCE TOTAL

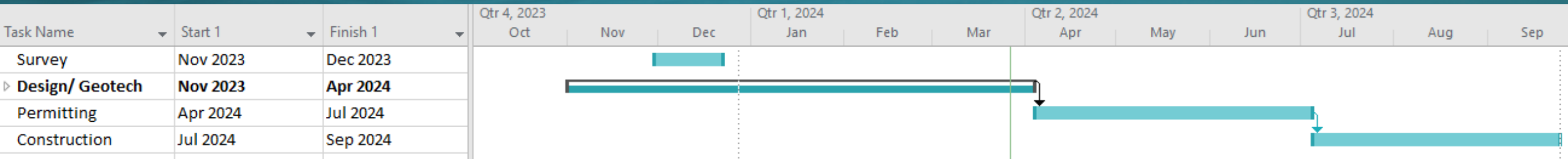
Staff Update - Infrastructure Projects

Lake Killarney Board

Nicolet Pond – Estimated Schedule



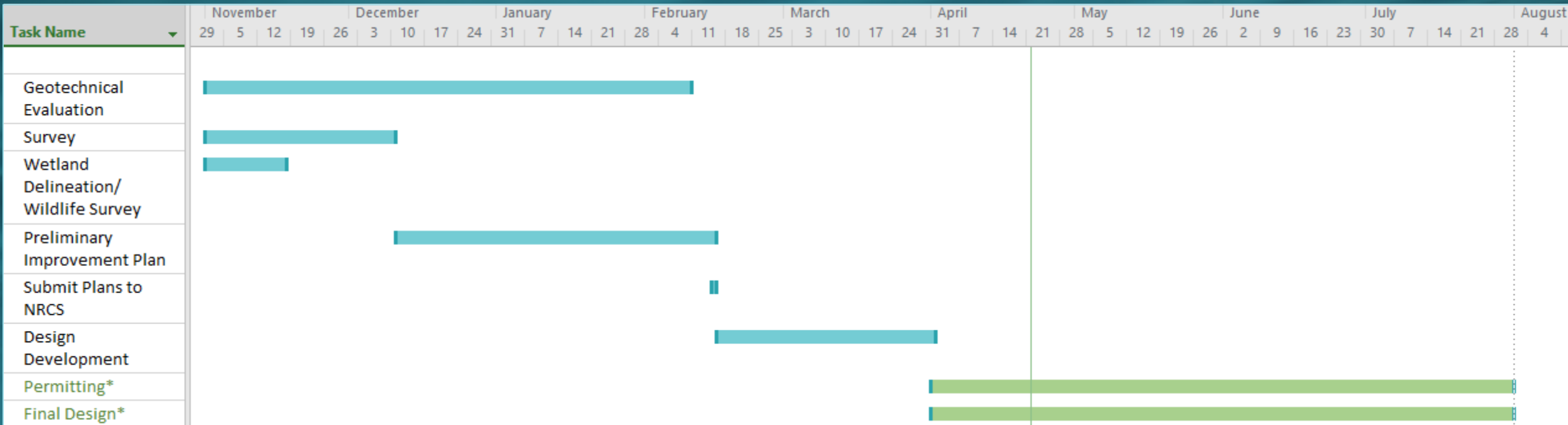
Killarney Dr Pipe Replacement – Estimated Schedule



Staff Update - Infrastructure Projects

Lake Killarney Board

Lake Bell Weir Repair – Estimated Schedule



*These are estimated timeframes

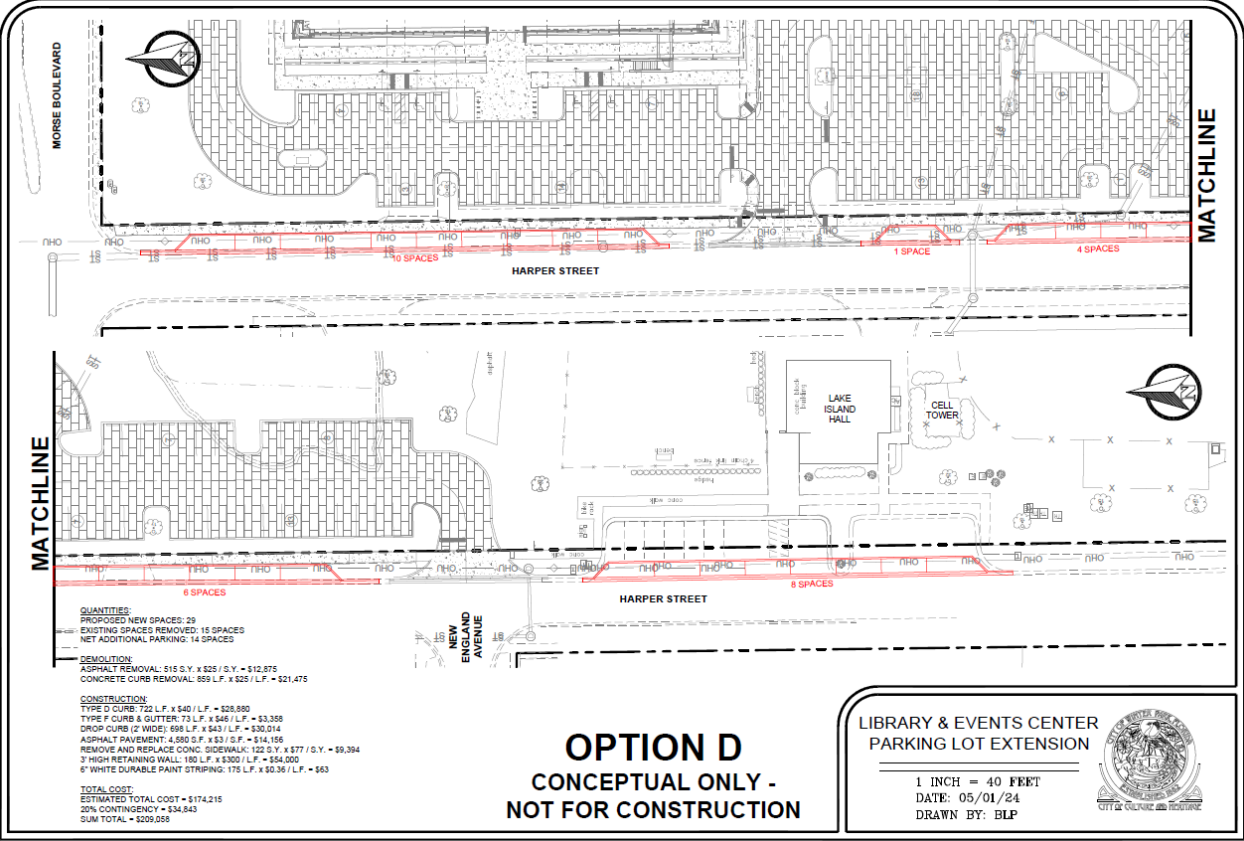
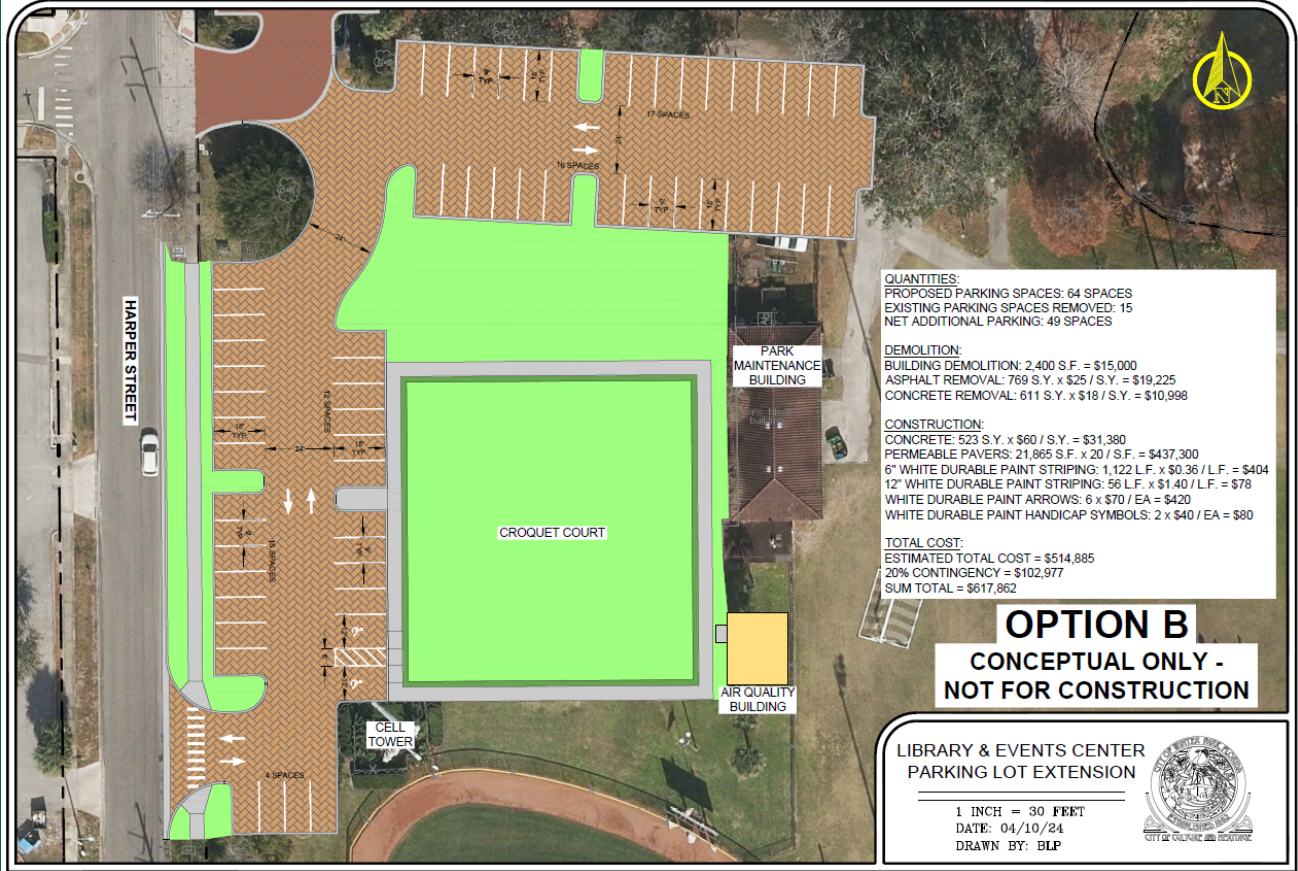
Stormwater Staff Update

Lake Killarney Board



Stormwater Staff Update

Lake Killarney Board



Stormwater Staff Update

Lake Killarney Board

- CRS Commission Presentation Update
- Imperial Dry Cleaners Update
- Follow-up items:
 - BMP feasibility study for Killarney Dr Outfall Consolidation (when available)
 - Outfall Condition Update



Florida Department of Environmental Protection

2023 GROUNDWATER MONITORING REPORT

**Imperial Laundry and Dry Cleaners
Winter Park, Orange County, Florida
FDEP Facility ID# ERIC_5039**

April 5, 2024

2023 GROUNDWATER MONITORING REPORT

Imperial Laundry and Dry Cleaners
Winter Park, Orange County, Florida
FDEP Facility ID# ERIC_5039

April 5, 2024

Prepared By:

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Florida 33607
Phone: 813 903 3100
Fax: 813 350 9046

Prepared For:

Florida Department of Environmental Protection

Our Ref:

30199512



Chad Hanna
Senior Environmental Specialist



Brian Burke, P.G.
Project Manager

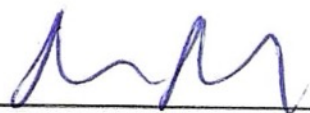
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CERTIFICATION

In accordance with the provisions of Florida Statute Chapters 492, and Chapter 62-780, Florida Administrative Code, this 2023 Groundwater Monitoring Report for the Imperial Laundry, and Dry Cleaners Site, located at 901 West Fairbanks Avenue in Winter Park, Orange County, Florida, has been reviewed, signed, and sealed by a registered Professional Geologist licensed in the State of Florida familiar with current State Drycleaning solvent clean-up criteria. I hereby certify that the work was performed in accordance with the Health & Safety Plan, Florida Department of Environmental Protection Standard Operating Procedures, task assignment DC041A, and under my direct supervision.

Arcadis U.S., Inc.
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Brian R. Burke, P.G.
State of Florida License No. 2392
Date: 4-5-2024

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1 INTRODUCTION

Arcadis U.S., Inc. (Arcadis) is pleased to submit to the Florida Department of Environmental Protection (FDEP) this Groundwater Monitoring Report for the former Imperial Laundry and Drycleaners (Site), located at 901 West Fairbanks Avenue in Winter Park, Orange County, Florida (**Figure 1**). This Report summarizes the 2023 groundwater sampling event conducted in October 2023 in accordance with FDEP Task Assignment (TA) DC041A.

2 SITE BACKGROUND

The geographic location of the Site is Section 1, Township 22 South and Range 29 East and the approximate latitudinal and longitudinal coordinates of the Site are 28° 35' 36"N and 81° 21' 40"W. The Site is located in an area comprised of a mixture of commercial and residential properties. A coffee shop and an asphalt paved parking lot adjoin the facility to the west. Denning Drive and a vacant parking lot are located east of the facility. Fairbanks Avenue and several commercial properties are located to the south. Lake Rose, a former sinkhole, is located north of the Site.

Operation of the facility began in 1965 and consisted of conventional laundry activities until 1977, when drycleaning activities were initiated. From 1977 until 1980, tetrachloroethene (PCE) was used as the drycleaning solvent. A petroleum based drycleaning solvent (Exxon DF-2000) was used at the Site from 1980 until the sale of the property to The City of Winter Park in 2021.

Detailed information concerning the Site history, surrounding area, and previous investigations are included in the Site Assessment Report (SAR) (Arcadis, 2007). The approved Remedial Action Plan (RAP) (Arcadis, 2008) recommended operation of a SVE system until volatile organic compound (VOC) concentrations in the soil are reduced to below Soil Cleanup Target Levels (SCTLs) as specified in Chapter 62-777 Florida Administrative Code (F.A.C). The RAP also recommended implementation of a NAM program, until target VOC concentrations in the source area are reduced to levels below Groundwater Cleanup Target Levels (GCTLs) specified in Chapter 62-777, F.A.C. Following the RAP approval, NAM has been completed on a routine basis to assess the groundwater quality over time.

In August and September 2009, Arcadis completed the initial SVE system construction activities which included the installation of seven SVE wells (SVE001 through SVE007), five vapor monitor points (MP001 through MP005), one air inlet well (AI001), associated system piping, the equipment compound, and power pole. In November 2009, Arcadis submitted a Remedial Action Status Report (RASR) (Arcadis, 2009) with associated as-built drawings.

The SVE System trailer previously located at the Former Saufley Square Laundry & Dry Cleaners Center in Pensacola, Florida (FDEP Facility ID# 17-9800747) was decommissioned and relocated for use at the Site in August 2013. Following startup testing in September 2013, the SVE system commenced continuous operation on October 10, 2013. Detailed information regarding the system construction and startup are included in the SVE System Startup Report (Arcadis, 2014).

Following the completion of the October 2014 O&M visit, the SVE system was shut down on October 31, 2014 to allow for subsurface equilibration prior to temporarily resuming operation on December 2, 2014 for the collection

of individual SVE well (SVE001 through SVE007) vapor and combined effluent samples as part of a bump test. The SVE system was shut down following the bump test performed on December 2, 2014.

Arcadis submitted the Year 1 Quarters 3 and 4, RASR (Arcadis, 2015a), which documented operation and maintenance (O&M) of the SVE system from April 17, 2014, to December 2, 2014, and results of the bump test, on January 29, 2015. The report recommended continuation of SVE operation for an additional two quarters and an annual NAM groundwater sampling event. The FDEP replied via electronic mail on March 27, 2015, recommending that the SVE system remain off, but bumped during the NAM Site visit and a single combined vapor influent sample be collected.

The 2015 Annual NAM and SVE Bump Test Report (Arcadis, 2015b) which documented groundwater gradient and analytical results on May 4, 2015 as well as SVE system operation and maintenance activities, was submitted to the FDEP on July 17, 2015. The report recommended quarterly NAM groundwater sampling events and SVE bump testing during each Site visit. The FDEP reviewed and approved the report via electronic mail on August 6, 2015, under the conditions that NAM continue on an Annual basis and an additional bump test be performed in conjunction with confirmatory soil sampling activities.

On November 18, 2015, Arcadis collected 9 confirmatory soil samples from locations and intervals that previously reported PCE concentrations above the FDEP leachability SCTL during assessment activities completed in 2006. All of the confirmatory samples collected reported PCE concentrations below the leachability SCTL. Results of the soil sampling activities and bump test were reported to the FDEP via electronic mail on December 15, 2015. The FDEP replied via electronic mail on January 12, 2016, recommending that the Site proceed from active remediation to annual monitoring only.

Arcadis submitted the 2016 Annual NAM Report (Arcadis, 2016) to the FDEP on July 29, 2016. This report documented groundwater gradient and analytical results from the May 2016 groundwater monitoring event in addition to SVE system maintenance activities conducted during the reporting period. The analytical results of the May 2016 event indicated an overall decreasing trend in PCE concentrations at the Site. Arcadis recommended continuation of the annual NAM groundwater sampling program of five monitoring wells (MW001, MW002, MW004, MW009 and MW012). The FDEP replied via electronic mail on August 8, 2016, approving the NAM report and recommendations therein. A Decommissioning Report (Arcadis, 2017a) was submitted on July 14, 2017 documenting the SVE system decommissioning activities conducted from May 23 through 25, 2017 in accordance with the FDEP TA DC009I.

The 2017 Annual NAM Report (Arcadis, 2017b), documenting the groundwater gradient and analytical results from samples collected in May 2017, was submitted to the FDEP on August 10, 2017. The May 2017 results indicated PCE concentrations below the FDEP GCTL for all of the wells sampled. However, MW001 was not sampled due to insufficient water column. As a result, Arcadis recommended commencement of quarterly sampling until two consecutive quarters of groundwater results less than the FDEP GCTLs are achieved. The FDEP reviewed the report and concurred with the recommendation to sample MW001 and MW002 via electronic mail on August 15, 2017.

Results of the first quarterly sampling event conducted on August 24, 2017 were reported in the 2017 Quarter 1 NAM Report (Arcadis, 2017c) submitted on September 19, 2017. PCE was detected above the FDEP GCTL in the sample collected from MW001 and below the FDEP GCTL from the sample collected from MW002. As a result, quarterly sampling of MW001 was recommended until two consecutive quarters of results below cleanup criteria were achieved. The FDEP reviewed and approved the report via electronic mail on October 2, 2017, under the condition that the monitoring return to an annual frequency.

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The 2018 Annual NAM Event was completed in November 2018 and reported in the 2018 Annual NAM Report (Arcadis, 2019a) submitted on January 11, 2019. Results indicated concentrations of constituents of concern (COCs) below GCTLs for samples collected from MW001, MW002, and MW009. Quarterly sampling of MW001 and MW002 was recommended to obtain two consecutive quarters of results below GCTLs for Site closure. The FDEP reviewed and approved the report via electronic mail on January 16, 2019.

The first quarter 2019 NAM Event was completed in February 2019 and reported in the 2019 Quarter 1 NAM Report (Arcadis, 2019b) submitted on April 11, 2019. Results indicated concentrations of COCs exceeded GCTLs for both samples collected from MW001 and MW002. Based on the results of the February 2019 groundwater sampling event, it was recommended to return to an annual monitoring frequency. The 2019 Annual NAM Event was completed in November 2019 and reported in the 2019 Annual NAM Report (Arcadis, 2020) submitted on February 7, 2020. Results indicated concentrations of COCs below GCTLs for samples collected from MW001 and MW002. Arcadis recommended sampling in February 2020, however, the FDEP elected to continue with annual monitoring in electronic mail correspondence dated February 25, 2020.

The 2020 Annual NAM event was completed in December 2020 and reported in the 2020 Annual NAM Report (Arcadis, 2021) submitted on February 12, 2021. PCE was detected above the FDEP GCTL in the sample collected from MW001 and below the FDEP GCTL from the sample collected from MW002. Additionally, all other COCs associated with the Site were reported below the respective laboratory method detection limits and FDEP GCTLs during the event. Based on the results, Arcadis recommended collecting NAM groundwater samples from monitor wells MW001 and MW002 in December 2021. The FDEP reviewed the report and concurred with Arcadis' recommendations in electronic mail correspondence dated February 18, 2021. However, the FDEP requested that MW009 be added to the sampling schedule to comply with the NAM criteria set forth in Chapter 62-780.690, F.A.C.

The 2021 Annual NAM event was completed in December 2021 and reported in the 2021 Annual NAM Report (Arcadis, 2022) submitted on March 7, 2022. Bromodichloromethane and dibromochloromethane were detected above their respective GCTLs for monitoring wells MW001 and MW002. PCE was also detected above the GCTL in the sample collected from MW001 and below the GCTL from the sample collected from MW002. No COCs were detected above the regulatory limits from the sample collected from MW009. All other COCs associated with the Site were reported below the respective laboratory method detection limits and FDEP GCTLs during the event. Based on the results, Arcadis recommended continuing collecting NAM groundwater samples in December 2022. The FDEP reviewed and approved the 2021 NAM report in email correspondence dated March 15, 2022.

The 2022 Annual NAM event was completed in December 2022 and reported in the 2022 Annual NAM Report (Arcadis, 2023) submitted on February 9, 2023. PCE was detected above the GCTL in the samples collected from MW001 and MW002. No COCs were detected above the regulatory limits from the sample collected from MW009. All other COCs associated with the Site were reported below the respective laboratory method detection limits and FDEP GCTLs during the event. Based on the results, the FDEP requested to perform quarterly groundwater sampling at monitoring wells MW001 and MW002 in an effort to achieve site closure requirements. The FDEP reviewed and approved the 2022 NAM report in email correspondence dated February 24, 2023.

The following sections of this report detail the October 2023 groundwater sampling event activities conducted at the Site and sampling results.

3 2023 ANNUAL GROUNDWATER NAM EVENT

3.1 Monitoring Well Abandonment Activities

At the request of the City of Winter Park, monitoring wells MW006, MW010, and MW011 were abandoned by licensed driller Earth Tech Drilling Inc. on October 18, 2023, following collection of depth-to-water measurements. The three wells were abandoned by lowering polyvinyl chloride (PVC) tremie pipe to the bottom of the well. Portland neat cement grout was then poured through the tremie pipe into the well and raised until reaching the top-of-casing. Abandonment was determined to be complete when grout was observed to return from the well to the top of the well casing. Additionally, the concrete pad and manhole for each well location were removed and the PVC well casing was cut approximately 3 feet below grade in preparation of site grading activities for construction of a turn lane. State of Florida Well Abandonment Completion Reports are included in **Appendix A**.

3.2 Field Methodology

On October 18, 2023, Arcadis measured the water levels within the monitor well network (**Table 1**). Following the collection of water-level measurements, Arcadis sampled two monitor wells (MW001 and MW002) using low-flow purging methods in accordance with FDEP Standard Operating Procedures for Field Activities (SOP-001/01). The groundwater samples were sent to Eurofins Laboratory (Eurofins) in Altamonte Springs, Florida, for analysis of VOHs per United States Environmental Protection Agency (USEPA) Method 8260D. Appropriate chain-of-custody documentation accompanied the samples. Groundwater sampling logs are included in **Appendix B**.

It should be noted that a second quarterly monitoring event was attempted in January 2024, but construction activities impeded completion of the sampling activities. In consultation with the FDEP, it was determined to postpone sampling activities until construction activities were completed.

3.3 Groundwater Sampling Results

3.3.1 Groundwater Gradient Study Results

Well construction details and a summary of water-level elevations are presented in **Table 1**. The groundwater flow in the shallow zone of the surficial aquifer during the October 2023 event was primarily to the north (**Figure 2**) towards Lake Rose, which is consistent with previous gradient studies. The groundwater gradient in the intermediate zone of the surficial aquifer appears to flow generally to the north-northeast (**Figure 3**), consistent with historical observations.

3.3.2 Groundwater Analytical Results

Concentrations of COCs in the groundwater samples collected from the surficial aquifer zone are summarized in **Table 2** with PCE concentrations presented on **Figure 4**. Groundwater analytical results were compared to the FDEP GCTLs provided in Chapter 62-777, F.A.C. Monitoring wells MW001 and MW002 reported PCE concentrations (8.2 micrograms per liter [$\mu\text{g/L}$] and 6.6 $\mu\text{g/L}$, respectively) above the FDEP GCTL (3 $\mu\text{g/L}$). Remaining Site COCs were reported below the respective laboratory method detection limits and FDEP GCTLs at the two wells sampled. A copy of the laboratory analytical report is included in **Appendix C**.

3.4 Investigation Derived Waste

Purge water generated from the monitoring event was containerized on-Site in a 55-gallon metal drum and stored on-Site pending profiling, transportation, and disposal. The drum was removed from the Site on February 6, 2024. A copy of the waste manifest is included in **Appendix D**.

4 QUALITY ASSURANCE & QUALITY CONTROL

This section summarizes the quality assurance/quality control (QA/QC) procedures followed during the reporting period. Groundwater samples were collected in general accordance with FDEP SOP 001/01. The analytical data provided by the laboratory was reviewed for laboratory precision, accuracy, and completeness.

The laboratory data was deemed acceptable based on the following information:

- All samples were prepared and analyzed within specified hold times.
- QC criteria were met, and the test results shown in the report meet all applicable NELAC requirements.
- The laboratory method blank was free of target analytes.
- The laboratory control sample results were within QA/QC criteria.
- The laboratory continuing calibration verification (CCV) associated with batch 59848 recovered outside of acceptance criteria for bromomethane and PCE. The MW002 sample was rerun in batch 60051 and those results used for PCE.
- The laboratory CCV associated with batch 60051 recovered outside acceptance criteria for bromomethane and dichlorodifluoromethane. The samples associated with the CCV were non-detect for the affected analytes so the data were reported.

Based on these results, the samples collected during the reporting period at the Site are an accurate representation of groundwater quality conditions (**Appendix C**).

5 CONCLUSIONS

The following conclusions can be made based on the results of the October 2023 Groundwater Monitoring event.

- Consistent with historical gradient studies, the groundwater gradients were generally to the north-northeast within the shallow and intermediate aquifer zones.
- PCE was detected above the FDEP GCTL in the samples collected from MW001 (8.2 µg/L) and MW002 (6.6 µg/L).
- Remaining Site COCs were reported below the laboratory method detection limits and/or FDEP GCTLs.

6 RECOMMENDATIONS

Based on the results of the October 2023 groundwater sampling event, Arcadis recommends continuing to collect groundwater samples from monitor wells MW001 and MW002 upon completion of turn lane construction activities.

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- Arcadis U.S., Inc. (2020). 2019 Annual NAM Report. Imperial Laundry and Dry Cleaners Winter Park, Florida, February 2020.
- Arcadis U.S., Inc. (2021). 2020 Annual NAM Report. Imperial Laundry and Dry Cleaners Winter Park, Florida, February 2021.
- Arcadis U.S., Inc. (2022). 2021 Annual NAM Report. Imperial Laundry and Dry Cleaners Winter Park, Florida, March 2022.
- Arcadis U.S., Inc. (2023). 2022 Annual NAM Report. Imperial Laundry and Dry Cleaners Winter Park, Florida, February 2023.
- Florida Department of Environmental Protection, Chapter 62-777, Florida Administrative Code, Contaminant Cleanup Target Levels, Effective April 17, 2005.

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Florida Department of Environmental Protection, Chapter 62-780, Florida Administrative Code, Contaminated Site Cleanup Criteria, Effective February 2, 2017.

Tables

TABLE 1
GROUNDWATER ELEVATIONS AND MONITOR WELL CONSTRUCTION DETAILS
Imperial Laundry and Dry Cleaners
Winter Park, Florida
FDEP Facility ID No. ERIC_5039

Monitor Well Designation	Date	Diameter (inches)	Depth of Well (ft)	Screen Interval (ft)	Top of Casing Elevation (ft)	Depth to Water (ft)	Water Elevation (ft-NVGD)
MW001	5/17/2006	1	12	2-12	95.04	12.18	82.86
	8/24/2006					11.45	83.59
	9/10/2007					11.93	83.11
	9/23/2008					8.85	86.19
	10/29/2009					10.42	84.62
	4/28/2010					10.28	84.76
	6/10/2011					11.91	83.13
	5/22/2012					12.48	82.56
	5/28/2013					11.12	83.92
	5/19/2014					11.20	83.84
	5/4/2015					10.90	84.14
	5/3/2016					11.19	83.85
	5/2/2017					12.43	82.61
	11/6/2018					9.39	85.65
	2/5/2019					10.06	84.98
	11/6/2019					8.90	86.14
	12/16/2020					9.50	85.54
	12/30/2021					9.60	85.44
	12/1/2022					7.24	87.80
	10/18/2023					9.32	85.72
MW002	5/17/2006	1	18	8-18	94.64	11.49	83.15
	8/24/2006					10.74	83.90
	9/10/2007					11.19	83.45
	9/23/2008					8.16	86.48
	10/29/2009					9.78	84.86
	4/28/2010					9.53	85.11
	6/10/2011					11.30	83.34
	5/22/2012					12.17	82.47
	5/28/2013					10.53	84.11
	5/19/2014					10.55	84.09
	5/4/2015					10.18	84.46
	5/3/2016					10.46	84.18
	5/2/2017					11.86	82.78
	11/6/2018					8.76	85.88
	2/5/2019					9.36	85.28
	11/6/2019					8.25	86.39
	12/16/2020					8.82	85.82
	12/30/2021					8.94	85.70
	12/1/2022					6.53	88.11
	10/18/2023					8.42	86.22
MW003	5/17/2006	1	33	28-33	94.63	11.60	83.03
	8/24/2006					10.85	83.78
	9/10/2007					11.31	83.32
	9/23/2008					8.90	85.73
	10/29/2009					9.83	84.80
	4/28/2010					9.63	85.00
	6/10/2011					11.39	83.24
	5/22/2012					12.24	82.39
	5/28/2013					10.46	84.17
	5/19/2014					10.65	83.98
	5/4/2015					10.28	84.35
	5/3/2016					10.55	84.08
	5/2/2017					11.95	82.68
	11/6/2018					8.83	85.80
	2/5/2019					9.48	85.15
	11/6/2019					8.32	86.31
	12/16/2020					8.87	85.76
	12/30/2021					9.03	85.60
	12/1/2022					6.66	87.97
	10/18/2023					8.50	86.13

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TABLE 1
GROUNDWATER ELEVATIONS AND MONITOR WELL CONSTRUCTION DETAILS
Imperial Laundry and Dry Cleaners
Winter Park, Florida
FDEP Facility ID No. ERIC_5039

Monitor Well Designation	Date	Diameter (inches)	Depth of Well (ft)	Screen Interval (ft)	Top of Casing Elevation (ft)	Depth to Water (ft)	Water Elevation (ft-NVGD)
MW004	5/17/2006	1	18	8-18	94.50	11.51	82.99
	8/24/2006					10.78	83.72
	9/10/2007					11.21	83.29
	9/23/2008					8.20	86.30
	10/29/2009					9.58	84.92
	4/28/2010					9.60	84.90
	6/10/2011					11.28	83.22
	5/22/2012					12.21	82.29
	5/28/2013					10.60	83.90
	5/19/2014					10.55	83.95
	5/4/2015					10.03	84.47
	5/3/2016					10.50	84.00
	5/2/2017					11.88	82.62
	11/6/2018					8.82	85.68
	2/5/2019					9.44	85.06
	11/6/2019					8.30	86.20
	12/16/2020					8.84	85.66
	12/30/2021					8.93	85.57
	12/1/2022					6.53	87.97
	10/18/2023					NM	--
MW005	5/17/2006	1	18	8-18	94.16	11.45	82.71
	8/24/2006					10.62	83.54
	9/10/2007					11.08	83.08
	9/23/2008					7.93	86.23
	10/29/2009					9.92	84.24
	4/28/2010					9.41	84.75
	6/10/2011					11.11	83.05
	5/22/2012					12.13	82.03
	5/28/2013					10.45	83.71
	5/19/2014					10.43	83.73
	5/4/2015					10.23	83.93
	5/3/2016					10.29	83.87
	5/2/2017					11.70	82.46
	11/6/2018					8.63	85.53
	2/5/2019					9.31	84.85
	11/6/2019					8.13	86.03
	12/16/2020					8.61	85.55
	12/30/2021					8.70	85.46
	12/1/2022					6.22	87.94
	10/18/2023					8.11	86.05
MW006	5/17/2006	1	18	8-18	93.94	11.33	82.61
	8/24/2006					10.59	83.35
	9/10/2007					11.12	82.82
	9/23/2008					7.86	86.08
	10/29/2009					9.48	84.46
	4/28/2010					9.30	84.64
	6/10/2011					11.13	82.81
	5/22/2012					12.03	81.91
	5/28/2013					10.34	83.60
	5/19/2014					10.39	83.55
	5/4/2015					9.95	83.99
	5/3/2016					10.29	83.65
	5/2/2017					11.70	82.24
	11/6/2018					NM	--
	2/5/2019					NM	--
	11/6/2019					NM	--
	12/16/2020					NM	--
	12/30/2021					NM	--
	12/1/2022					NM	--
	10/18/2023					NM	--

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TABLE 1
GROUNDWATER ELEVATIONS AND MONITOR WELL CONSTRUCTION DETAILS
Imperial Laundry and Dry Cleaners
Winter Park, Florida
FDEP Facility ID No. ERIC_5039

Monitor Well Designation	Date	Diameter (inches)	Depth of Well (ft)	Screen Interval (ft)	Top of Casing Elevation (ft)	Depth to Water (ft)	Water Elevation (ft-NVGD)
MW007	5/17/2006	1	48	43-48	94.37	11.79	82.58
	8/24/2006					11.05	83.32
	9/10/2007					11.44	82.93
	9/23/2008					8.31	86.06
	10/29/2009					10.03	84.34
	4/28/2010					9.85	84.52
	6/10/2011					11.53	82.84
	5/22/2012					12.46	81.91
	5/28/2013					10.72	83.65
	5/19/2014					10.87	83.50
	5/4/2015					10.38	83.99
	5/3/2016					10.66	83.71
	5/2/2017					12.13	82.24
	11/6/2018					8.88	85.49
	2/5/2019					9.53	84.84
	11/6/2019					8.42	85.95
	12/16/2020					8.92	85.45
	12/30/2021					9.03	85.34
	12/1/2022					6.60	87.77
	10/18/2023					8.37	86.00
MW008	5/17/2006	1	33	28-33	94.32	11.82	82.50
	8/24/2006					11.02	83.30
	9/10/2007					11.50	82.82
	9/23/2008					8.26	86.06
	10/29/2009					9.90	84.42
	4/28/2010					9.72	84.60
	6/10/2011					11.51	82.81
	5/22/2012					12.44	81.88
	5/28/2013					10.84	83.48
	5/19/2014					10.82	83.50
	5/4/2015					10.40	83.92
	5/3/2016					10.68	83.64
	5/2/2017					12.07	82.25
	11/6/2018					8.91	85.41
	2/5/2019					9.59	84.73
	11/6/2019					8.38	85.94
	12/16/2020					8.90	85.42
	12/30/2021					9.00	85.32
	12/1/2022					6.46	87.86
	10/18/2023					8.45	85.87
MW009	5/17/2006	1	18	8-18	94.26	11.89	82.37
	8/24/2006					11.02	83.24
	9/10/2007					11.20	83.06
	9/23/2008					8.27	85.99
	10/29/2009					10.01	84.25
	4/28/2010					9.83	84.43
	6/10/2011					NM*	NM*
	5/22/2012					12.53	81.73
	5/28/2013					10.85	83.41
	5/19/2014					10.89	83.37
	5/4/2015					10.49	83.77
	5/3/2016					10.74	83.52
	5/2/2017					12.18	82.08
	11/6/2018					8.88	85.38
	2/5/2019					9.69	84.57
	11/6/2019					8.52	85.74
	12/16/2020					8.64	85.62
	12/30/2021					9.10	85.16
	12/1/2022					6.58	87.68
	10/18/2023					8.47	85.79

Footnotes on Page 5

TABLE 1
GROUNDWATER ELEVATIONS AND MONITOR WELL CONSTRUCTION DETAILS
Imperial Laundry and Dry Cleaners
Winter Park, Florida
FDEP Facility ID No. ERIC_5039

Monitor Well Designation	Date	Diameter (inches)	Depth of Well (ft)	Screen Interval (ft)	Top of Casing Elevation (ft)	Depth to Water (ft)	Water Elevation (ft-NVGD)
MW010	5/17/2006	1	33	28-33	94.47	11.97	82.50
	8/24/2006					11.20	83.27
	9/10/2007					11.70	82.77
	9/23/2008					9.31	85.16
	10/29/2009					10.10	84.37
	4/28/2010					9.99	84.48
	6/10/2011					11.71	82.76
	5/22/2012					12.60	81.87
	5/28/2013					10.95	83.52
	5/19/2014					11.00	83.47
	5/4/2015					10.58	83.89
	5/3/2016					10.87	83.60
	5/2/2017					12.25	82.22
	11/6/2018					9.05	85.42
	2/5/2019					9.69	84.78
	11/6/2019					8.55	85.92
	12/16/2020					9.07	85.40
	12/30/2021					9.21	85.26
	12/1/2022					6.71	87.76
	10/18/2023					NM	--
MW011	5/17/2006	1	18	8-18	94.31	11.40	82.91
	8/24/2006					10.68	83.63
	9/10/2007					11.22	83.09
	9/23/2008					8.05	86.26
	10/29/2009					9.58	84.73
	4/28/2010					9.50	84.81
	6/10/2011					11.23	83.08
	5/22/2012					12.02	82.29
	5/28/2013					10.37	83.94
	5/19/2014					10.49	83.82
	5/4/2015					10.08	84.23
	5/3/2016					10.38	83.93
	5/2/2017					11.73	82.58
	11/6/2018					8.56	85.75
	2/5/2019					9.13	85.18
	11/6/2019					8.05	86.26
	12/16/2020					8.63	85.68
	12/30/2021					8.84	85.47
	12/1/2022					6.35	87.96
	10/18/2023					8.25	86.06
MW012	5/17/2006	1	18	8-18	95.08	11.89	83.19
	8/24/2006					11.23	83.85
	9/10/2007					11.71	83.37
	9/23/2008					8.76	86.32
	10/29/2009					10.18	84.90
	4/28/2010					10.02	85.06
	6/10/2011					11.78	83.30
	5/22/2012					12.59	82.49
	5/28/2013					10.95	84.13
	5/19/2014					10.99	84.09
	5/4/2015					10.70	84.38
	5/3/2016					10.94	84.14
	5/2/2017					12.34	82.74
	11/6/2018					9.21	85.87
	2/5/2019					9.80	85.28
	11/6/2019					8.72	86.36
	12/16/2020					9.33	85.75
	12/30/2021					9.50	85.58
	12/1/2022					7.18	87.90
	10/18/2023					NM	--

Footnotes on Page 5

TABLE 1
GROUNDWATER ELEVATIONS AND MONITOR WELL CONSTRUCTION DETAILS
Imperial Laundry and Dry Cleaners
Winter Park, Florida
FDEP Facility ID No. ERIC_5039



Monitor Well Designation	Date	Diameter (inches)	Depth of Well (ft)	Screen Interval (ft)	Top of Casing Elevation (ft)	Depth to Water (ft)	Water Elevation (ft-NVGD)
MW013	12/18/2006	2	18	8-18	93.87	10.42	83.45
	9/10/2007					11.15	82.72
	9/23/2008					7.85	86.02
	10/29/2009					9.27	84.60
	4/28/2010					9.32	84.55
	6/10/2011					11.16	82.71
	5/22/2012					11.93	81.94
	5/28/2013					10.28	83.59
	5/19/2014					10.32	83.55
	5/4/2015					9.98	83.89
	5/3/2016					10.26	83.61
	5/2/2017					11.63	82.24
	11/6/2018					NM	--
	2/5/2019					NM	--
	11/6/2019					NM	--
	12/16/2020					NM	--
	12/30/2021					NM	--
	12/1/2022					NM	--
	10/18/2023					NM	--

Footnotes:

* - water-level indicator stops at 10.60 feet (dry), root material on probe.
ft-NGVD - feet above National Geodetic Vertical Datum of 1929

NM - not measured
ft - feet

TABLE 2
MONITOR WELL GROUNDWATER ANALYTICAL RESULTS
Imperial Laundry and Dry Cleaners
Winter Park, Florida
FDEP Facility ID ERIC_5039



Sample			Analyte (µg/L)						
Field ID	Depth (ft bls)	Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	VC	Bromodichloro-methane	Dibromochloro-methane
FDEP GCTL			3	3	70	100	1	0.6	0.4
MW001	2-12	3/27/2006	34.8	<3.0*	<5.0*	<5.0*	<1.0*	<5.0*	<5.0*
		9/10/2007	12.5	<1.00	<1.00	<1.00	<1.00	2.21	0.813 I
		9/23/2008	14.3	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
		10/29/2009	39.2	<2.00	<2.00	<2.00	<1.00	<1.00	<2.00
		4/28/2010	9.70	<2.00	<2.00	<2.00	<1.00	<1.00	<2.00
		6/10/2011	8.02	<1.00	<1.00	<1.00	<1.00	0.418 I	<1.00
		5/28/2013	19.2	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/19/2014	3.11	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/4/2015	5.76	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/3/2016	6.21	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
		8/24/2017	4.32	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
		11/6/2018	2.48	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
		2/5/2019	4.75	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
		11/6/2019	3.12	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
		12/16/2020	10.0	<0.610	<0.320	<0.390	<0.260	<0.230	<0.310
		12/30/2021	8.9	<0.610	<0.320	<0.390	<0.260	5.2	0.88 I
		12/1/2022	7.2	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
10/18/2023	8.2	<0.89	<0.53	<0.73	<0.71	<0.52	<0.50		
MW002	8-18	5/17/2006	19.7	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
9/10/2007		13.8	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
MW002(DUP)		9/10/2007	13.4	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
MW002(DUP)		9/23/2008	24.2	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
		9/23/2008	24.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
		10/29/2009	20.9	<2.00	<2.00	<2.00	<1.00	<1.00	<2.00
		4/28/2010	25.0	<2.00	<2.00	<2.00	<1.00	<1.00	<2.00
		6/10/2011	29.1	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
		5/22/2012	11.6	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/28/2013	6.84	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/19/2014	9.53	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/4/2015	2.22	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/3/2016	6.72	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
		5/2/2017	<0.160	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
		8/24/2017	1.53	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
		11/6/2018	2.26	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
		2/5/2019	3.62	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
		11/6/2019	1.76	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
		12/16/2020	2.10	<0.610	<0.320	<0.390	<0.260	0.430 I	<0.310
		12/30/2021	3.20	<0.610	<0.320	<0.390	<0.260	3.5	0.62 I
		12/1/2022	4.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		10/18/2023	6.6	<0.89	<0.53	<0.73	<0.71	<0.52	<0.50
MW003	28-33	5/17/2006	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
9/10/2007		<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
MW004	8-18	5/17/2006	1.04	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
9/10/2007		0.623 I	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
6/10/2011		2.17	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
5/22/2012		1.13 I	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	
5/28/2013		<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	
5/19/2014		<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	
5/4/2015		<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	
5/3/2016		1.05	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150	
5/2/2017		<0.160	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150	
MW005	8-18	5/17/2006	1.88	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
9/10/2007		0.794 I	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
6/10/2011		0.565 I	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
5/22/2012		1.26 I	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	
MW006	8-18	5/17/2006	7.65	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
8/24/2006		6.43	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
9/10/2007		4.72	<1.00	<1.00	<1.00	<1.00	2.10	0.805 I	
9/23/2008		7.55	<1.00	<1.00	<1.00	<1.00	1.03	<1.00	
10/29/2009		6.59	<2.00	<2.00	<2.00	<1.00	<1.00	<2.00	
4/28/2010		5.26	<2.00	<2.00	<2.00	<1.00	<1.00	<2.00	
6/10/2011		3.20	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
5/22/2012		1.81 I	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	

Footnotes on Page 2

TABLE 2
MONITOR WELL GROUNDWATER ANALYTICAL RESULTS
Imperial Laundry and Dry Cleaners
Winter Park, Florida
FDEP Facility ID ERIC_5039

Sample			Analyte (µg/L)						
Field ID	Depth (ft bls)	Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	VC	Bromodichloro-methane	Dibromochloro-methane
FDEP GCTL			3	3	70	100	1	0.6	0.4
MW007	43-48	5/18/2006 9/10/2007	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00
MW008 MW008(DUP)	28-33	5/18/2006 5/18/2006 9/10/2007	<1.00 <1.00 <1.00	<1.00 <1.00 <1.00	<1.00 <1.00 <1.00	<1.00 <1.00 <1.00	<1.00 <1.00 <1.00	<1.00 <1.00 <1.00	<1.00 <1.00 <1.00
MW009	8-18	5/18/2006	6.15	<1.00	2.61	<1.00	<1.00	<1.00	<1.00
		9/10/2007	1.49	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
		9/23/2008	3.64	<1.00	<1.00	<1.00	<1.00	3.04	1.16
		6/10/2011	(COULD NOT BE SAMPLED - WELL APPEARS TO BE COLLAPSED AT 10.60 FEET)						
		5/22/2012	3.45	<2.00	<2.00	<2.00	<2.00	3.81	1.5
		5/28/2013	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/19/2014	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/4/2015	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/3/2016	1.02	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
		5/2/2017	<0.160	<0.190	<0.210	<0.210	<0.190	12.2	5.46
		11/20/2018	<0.160	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
		12/30/2021	<0.290	<0.610	<0.320	<0.390	<0.260	<0.230	<0.310
		12/1/2022	0.87 I	<0.50	1.1	<0.50	<0.50	<0.50	<0.50
MW010	28-33	5/17/2006 9/10/2007	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00
MW011	8-18	5/17/2006	1.96	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
		9/10/2007	4.19	<1.00	<1.00	<1.00	<1.00	2.20	<1.00
		9/23/2008	8.80	<1.00	<1.00	<1.00	<1.00	1.01	<1.00
		10/29/2009	5.63	<2.00	<2.00	<2.00	<1.00	<1.00	<2.00
		4/28/2010	2.98	<2.00	<2.00	<2.00	<1.00	<1.00	<2.00
		6/10/2011	2.97	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
		5/22/2012	1.03 I	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/28/2013	2.91	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/19/2014	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
MW012	8-18	5/17/2006	2.78	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
		9/10/2007	1.81	<1.00	<1.00	<1.00	<1.00	3.39	1.32
		9/23/2008	9.66	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
		6/10/2011	3.73	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
		5/22/2012	1.04 I	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/28/2013	5.04	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/19/2014	3.67	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/4/2015	3.30	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
		5/3/2016	2.45	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
		5/2/2017	<0.160	<0.190	<0.210	<0.210	<0.190	<0.250	<0.150
MW013	8-18	5/17/2006 9/10/2007	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00

Footnotes:

FDEP GCTL - Florida Department of Environmental Protection Groundwater Cleanup Target Levels per Chapter 62-777 Florida Administrative Code

ft bls - feet below land surface

µg/L - micrograms per liter

BOLD - exceeds FDEP GCTL

PCE - Tetrachloroethene

TCE - Trichloroethene

DCE - Dichloroethene

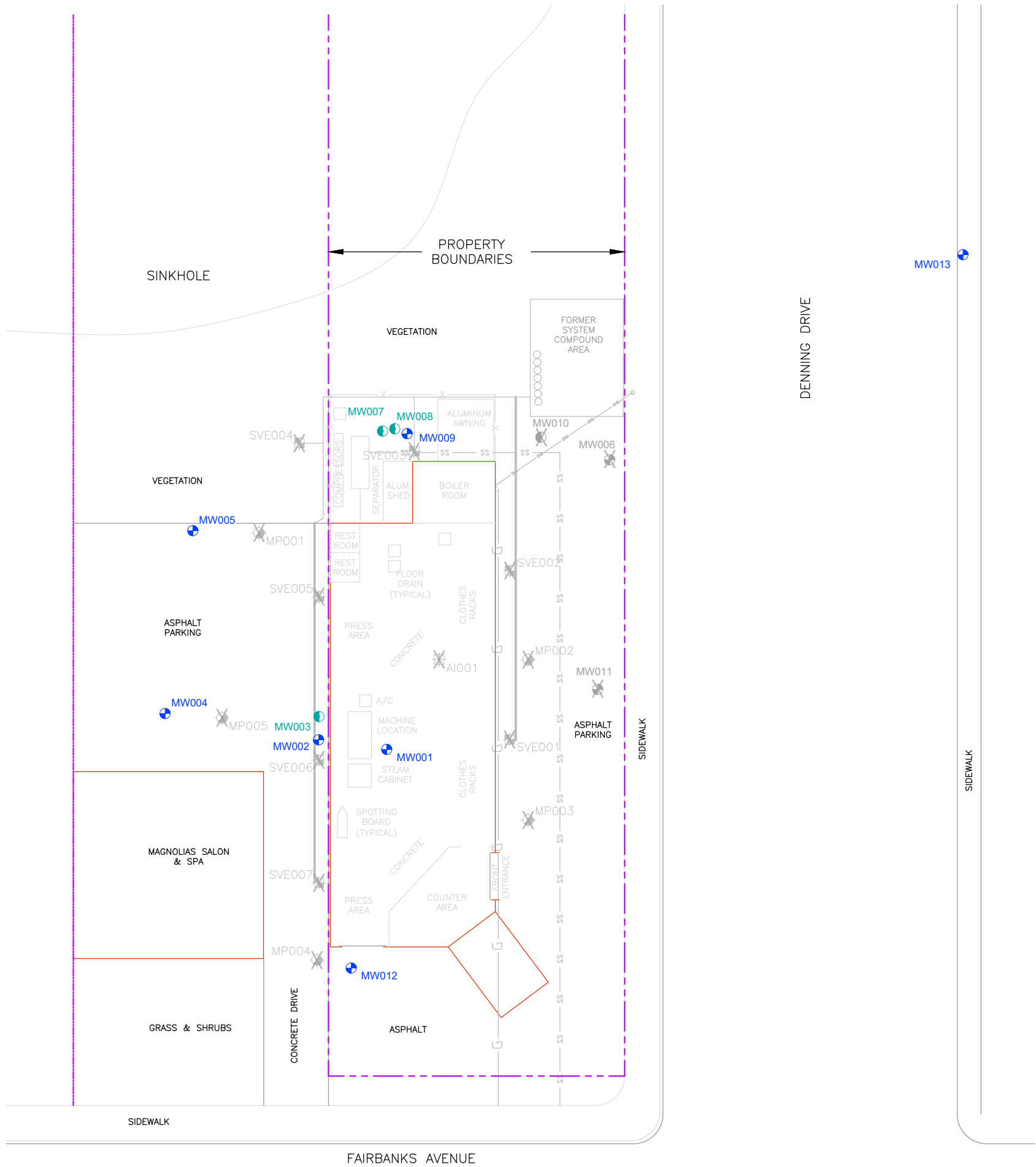
VC - Vinyl chloride

* - sample analyzed by a mobile laboratory.

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

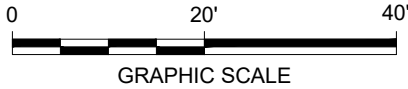
Figures

CITY: BB, FL DIV/GROUP: EN DB: B. OLIVA LD: (Opt) PIC: (Opt) PM: C. HANNA TM: A. SYKES LVR: (Opt) ON: "OFF" = "REF"
C:\Users\boliva\OneDrive\Arcadis\AUS-FDEP-DC-IMPERIAL-WINTER PARK Florida\Project Files\202301-1n Progress\01-DWG\ImperialDC 2024-SN.dwg LAYOUT: APR24-F1_S1M SAVED: 4/3/2024 2:08 PM ACADVER: 24-1S (LMS TECH) PAGES: 24-1S (LMS TECH) PLOT: 4/3/2024 2:11 PM
BY: OLIVA, BRIAN



LEGEND

- SHALLOW MONITOR WELL LOCATION
- INTERMEDIATE MONITOR WELL LOCATION
- SVE WELL LOCATION
- AIR INLET WELL LOCATION
- ABANDONED WELL LOCATION
- OVERHEAD POWER LINE
- SANITARY SEWER LINE
- GAS LINE
- TRENCH LINE
- FENCE

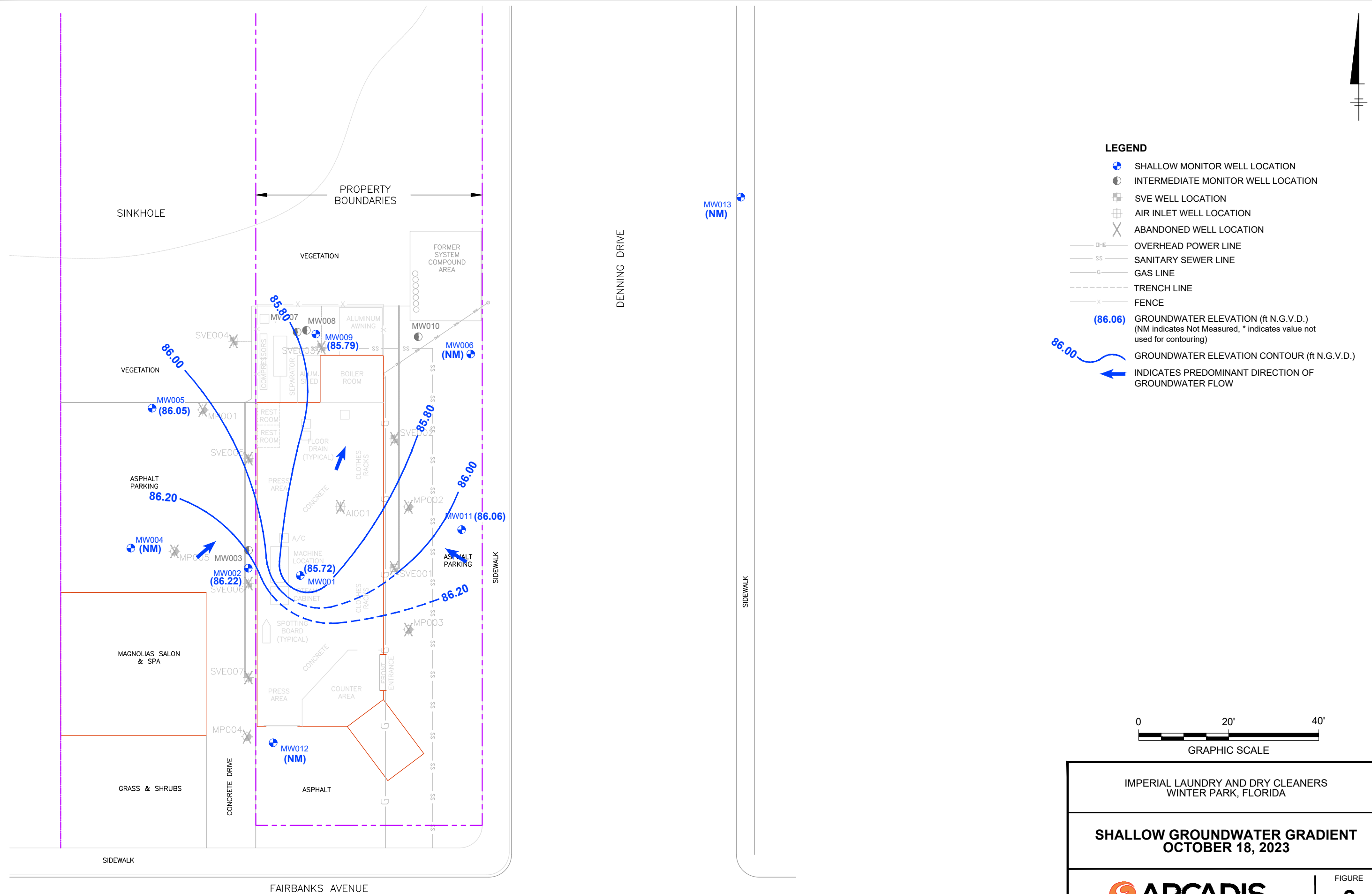


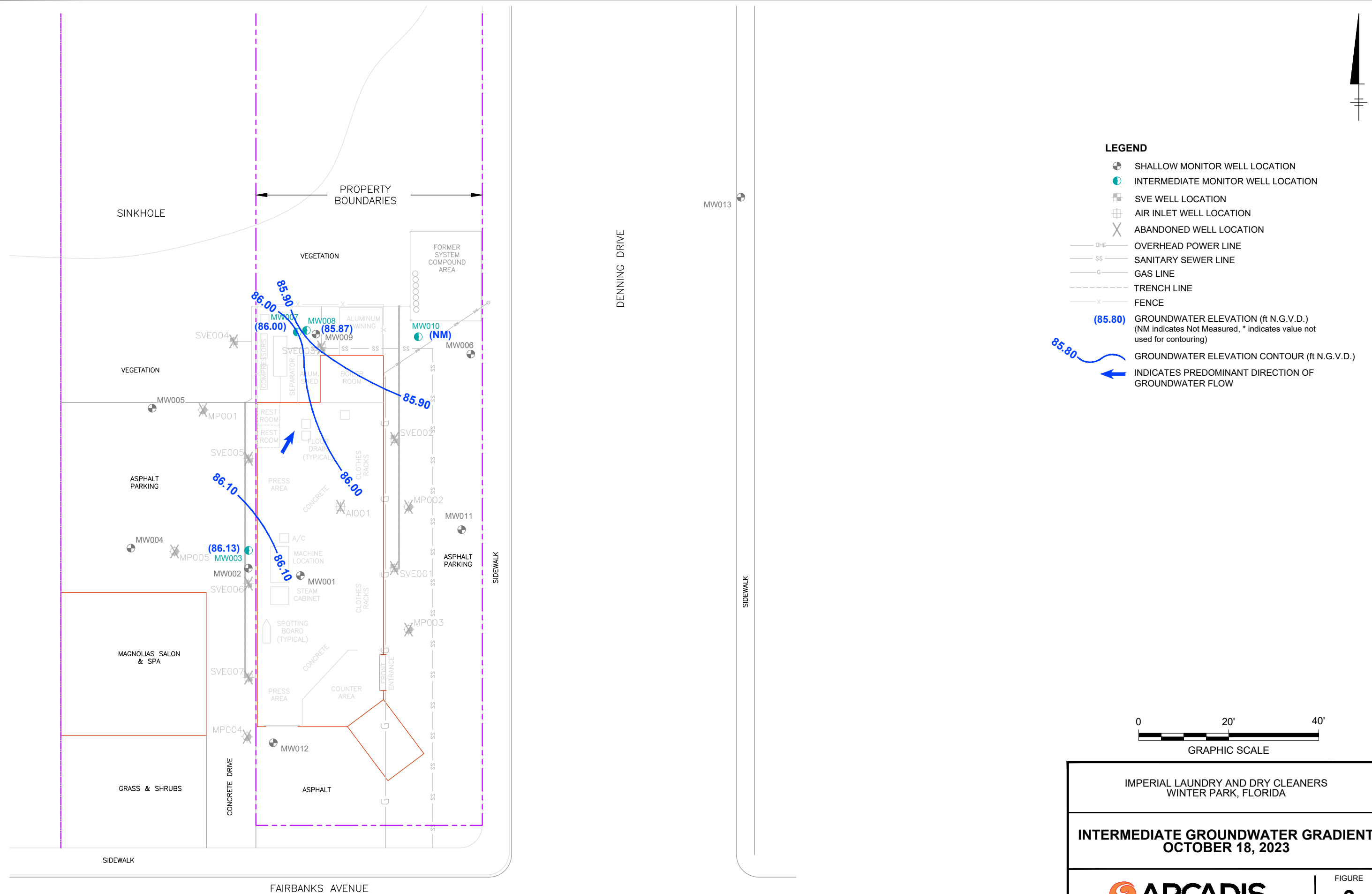
IMPERIAL LAUNDRY AND DRY CLEANERS
WINTER PARK, FLORIDA

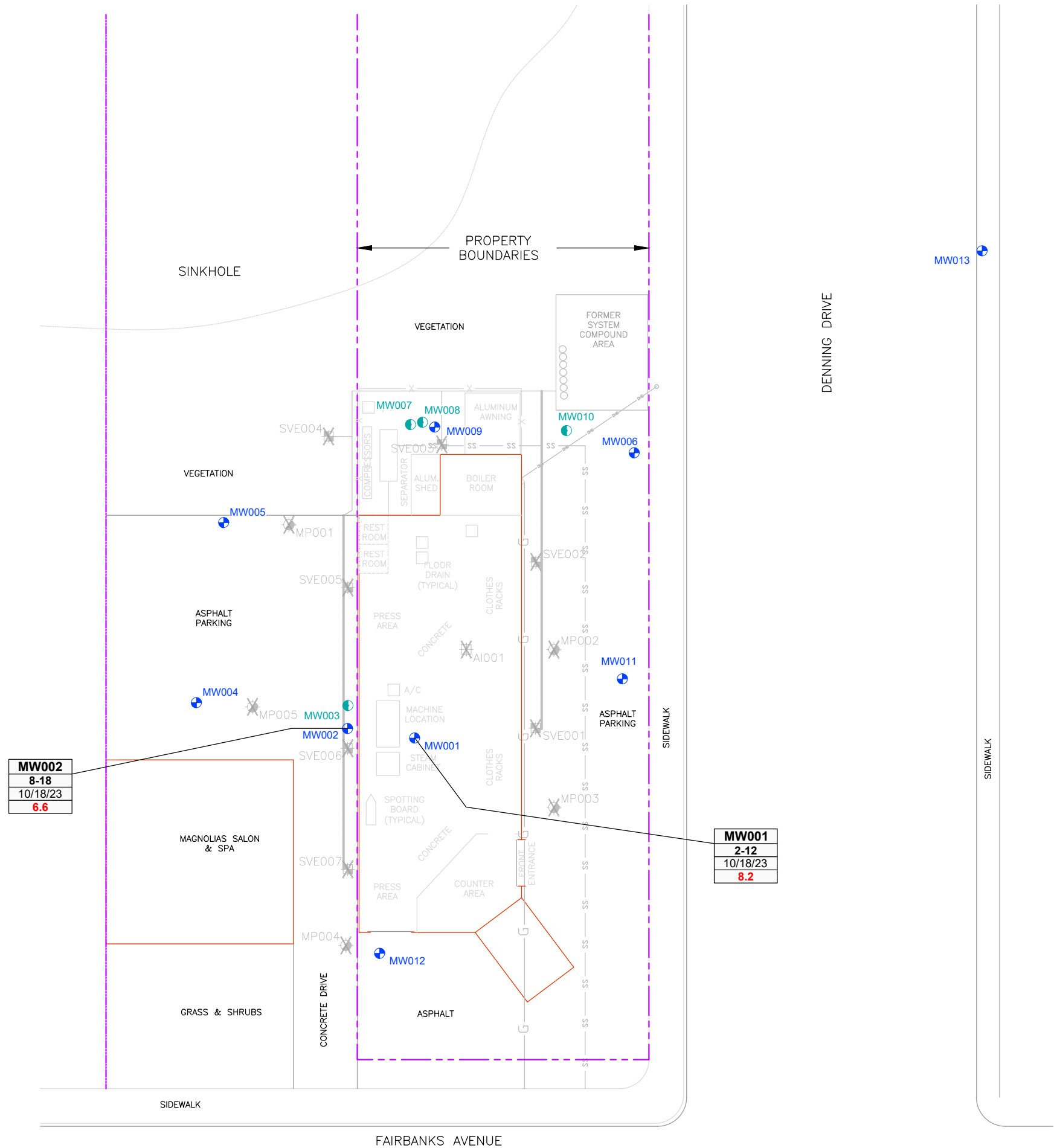
SITE LAYOUT MAP



FIGURE
1







Appendix A

Well Completion Reports



STATE OF FLORIDA WELL COMPLETION REPORT

☐ Southwest ☐ PLEASE, FILL OUT ALL APPLICABLE FIELDS
☐ Northwest (*Denotes Required Fields Where Applicable)
☐ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
☒ Delegated Authority (If Applicable) **Orange DOH**

Date Stamp

Confirmation#
855590

Date: 10/20/2023

Official Use Only

1. *Permit Number <u>209843-1</u> *CUP/WUP Number _____ *DID Number <u>550600</u> 62-524 Delineation No. _____	
2. *Number of permitted wells constructed, repaired, or abandoned <u>2</u> *Number of permitted wells not constructed, repaired, or abandoned <u>0</u>	
3. *Owner's Name <u>City Of Winter Park</u> 4. *Completion Date <u>10/18/2023</u> 5. Florida Unique ID _____	
6. <u>901 W Fairbanks Ave, Winter Park, FL 32789</u> *Well Location - Address, Road Name or Number, City, ZIP	
7. *County <u>Orange</u> *Section <u>1</u> Land Grant _____ *Township <u>22S</u> *Range <u>29E</u>	
8. Latitude <u>283536.4096</u> Longitude <u>812139.7714</u>	
9. Data Obtained From: _____ GPS ☒ Map _____ Survey _____ Datum: _____ NAD 27 ☒ NAD 83 _____ WGS 84 _____	
10. *Type of Work: _____ Construction _____ Repair _____ Modification ☒ Abandonment Reason: <u>No Longer Needed</u>	
11. *Specify Intended Use(s) of Well(s): ____ Domestic _____ Landscape Irrigation _____ Agricultural Irrigation _____ Site Investigation ____ Bottled Water Supply _____ Recreation Area Irrigation _____ Livestock ☒ Monitoring ____ Public Water Supply (Limited Use/DOH) _____ Nursery Irrigation _____ Test ____ Public Water Supply (Community or Non-Community/DEP) _____ Commercial/Industrial _____ Earth-Coupled Geothermal ____ Class I Injection _____ Golf Course Irrigation _____ HVAC Supply ____ Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage and Recovery _____ Drainage Remediation: _____ Recovery _____ Air Sparge _____ Other (Describe) _____ ____ Other (Describe) _____	
12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic ____ Horizontal Drilling _____ Hydraulic Point (Direct Push) _____ Other _____	
13. *Measured Static Water Level _____ ft. Measured Pumping Water Level _____ ft. After _____ Hours at _____ GPM	
14. *Measuring Point (Describe) _____ Which is _____ ft. _____ Above _____ Below Land Surface *Flowing: _____ Yes ☒ No	
15. *Casing Material: _____ Black Steel _____ Galvanized ☒ PVC _____ Stainless Steel _____ Not Cased _____ Other _____	
16. *Total Well Depth <u>18</u> ft. Cased Depth _____ ft. *Open Hole: From _____ To _____ ft. *Screen: From <u>8</u> To <u>18</u> ft. Slot Size _____	
17. *Abandonment: Other(Explain) _____ From <u>0</u> ft. To <u>18</u> ft. No. of Bags <u>.5</u> Seal Material (Check One): _____ Neat Cement _____ Bentonite ☒ Other <u>Neat/Portland Cement</u> From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____	
18. *Surface Casing Diameter and Depth: Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____	
19. *Primary Casing Diameter and Depth: Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____	
20. *Liner Casing Diameter and Depth: Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____	
21. *Telescope Casing Diameter and Depth: Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____	
22. Pump Type (If known): _____ Centrifugal _____ Jet _____ Submersible _____ Turbine _____ Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm Horsepower _____ Pump Capacity (GPM) _____ Pump Depth _____ ft. Intake Depth _____ ft. _____ Laboratory Test _____ Field Test Kit _____	
23. Chemical Analysis (When Required): 24. Water Well Contractor: *Contractor Name <u>Charles Bucher</u> *License Number <u>9417</u> Address <u>cbucher@earthtechdrilling.com</u> E-mail _____ *Contractor's Signature <u>Charles Bucher</u> *Driller's Name (Print or Type) <u>Eric Membreno</u> (I certify that the information provided in this report is accurate and true.)	



STATE OF FLORIDA WELL COMPLETION REPORT

Southwest
Northwest
St. Johns River
South Florida
Suwannee River
DEP
☒ Delegated Authority (If Applicable) **Orange DOH**

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

Date Stamp

Confirmation#
855587

Date: 10/20/2023

Official Use Only

1. *Permit Number <u>209846-1</u>		*CUP/WUP Number _____		*DID Number <u>550603</u>		62-524 Delineation No. _____	
2. *Number of permitted wells constructed, repaired, or abandoned <u>1</u>		*Number of permitted wells not constructed, repaired, or abandoned <u>0</u>					
3. *Owner's Name <u>City Of Winter Park</u>				4. *Completion Date <u>10/18/2023</u>		5. Florida Unique ID _____	
6. <u>901 W Fairbanks Ave, Winter Park, FL 32789</u> *Well Location -- Address, Road Name or Number, City, ZIP							
7. *County <u>Orange</u>		*Section <u>1</u>		Land Grant _____		*Township <u>22S</u> *Range <u>29E</u>	
8. Latitude <u>283536.4238</u>		Longitude <u>812139.9291</u>					
9. Data Obtained From: _____ GPS ☒ Map _____ Survey _____ Datum: _____ NAD 27 ☒ NAD 83 _____ WGS 84							
10. *Type of Work: _____ Construction _____ Repair _____ Modification ☒ Abandonment Reason: <u>No Longer Needed</u>							
11. *Specify Intended Use(s) of Well(s): ____ Domestic _____ Landscape Irrigation _____ Agricultural Irrigation _____ Site Investigation ____ Bottled Water Supply _____ Recreation Area Irrigation _____ Livestock ☒ Monitoring ____ Public Water Supply (Limited Use/DOH) _____ Nursery Irrigation _____ Test ____ Public Water Supply (Community or Non-Community/DEP) _____ Commercial/Industrial _____ Earth-Coupled Geothermal ____ Class I Injection _____ Golf Course Irrigation _____ HVAC Supply ____ Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage and Recovery _____ Drainage Remediation: _____ Recovery _____ Air Sparge _____ Other (Describe) _____ Other (Describe) _____							
12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic _____ Horizontal Drilling _____ Hydraulic Point (Direct Push) _____ Other _____							
13. *Measured Static Water Level _____ ft. Measured Pumping Water Level _____ ft. After _____ Hours at _____ GPM							
14. *Measuring Point (Describe) _____ Which is _____ ft. _____ Above _____ Below Land Surface *Flowing: _____ Yes ☒ No							
15. *Casing Material: _____ Black Steel _____ Galvanized ☒ PVC _____ Stainless Steel _____ Not Cased _____ Other _____							
16. *Total Well Depth <u>33</u> ft. Cased Depth _____ ft. *Open Hole: From _____ To _____ ft. *Screen: From <u>28</u> To <u>33</u> ft. Slot Size _____ Other(Explain _____)							
17. *Abandonment: From <u>0</u> ft. To <u>33</u> ft. No. of Bags <u>1</u> Seal Material (Check One): _____ Neat Cement _____ Bentonite ☒ Other <u>Neat/Portland Cement</u> From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____							
18. *Surface Casing Diameter and Depth: Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____							
19. *Primary Casing Diameter and Depth: Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____							
20. *Liner Casing Diameter and Depth: Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____							
21. *Telescope Casing Diameter and Depth: Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____ Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other _____							
22. Pump Type (If known): ____ Centrifugal _____ Jet _____ Submersible _____ Turbine Horsepower _____ Pump Capacity (GPM) _____ Pump Depth _____ ft. Intake Depth _____ ft.				23. Chemical Analysis (When Required): Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm ____ Laboratory Test _____ Field Test Kit			
24. Water Well Contractor: *Contractor Name <u>Charles Bucher</u> *License Number <u>9417</u> E-mail <u>cbucher@earthtechdrilling.com</u> *Contractor's Signature <u>Charles Bucher</u> *Driller's Name (Print or Type) <u>Eric Membreno</u> (I certify that the information provided in this report is accurate and true.)							

Appendix B

Field Logs

[illegible]

CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD4000)

Meter ID: YSI 556 MPS SN- 6408023 AB Project: Imperial - O1920

- Notes:** (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Circle/Fill In: Lab Calibration ☐ or Calibration/Verification on Site ☒

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	A. Sykes	10-18-23	09:25	16.23	9.82	9.84	100.2	—	—	☒ F	L/ ☒ F
ICV	↓	↓	09:28	16.33	9.80	9.80	100.0	—	—	☒ F	L/ ☒ F
CCV	↓	↓	11:00	21.47	8.84	8.79	99.5	—	—	☒ F	L/ ☒ F
CCV										P/F	L/F

DO Acceptance criteria from Table ± 0.3 mg/L. Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.
 Optical: DO gain range 0.85 to 1.15; DO charge N/A. Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard μ S/cm	Meter Reading μ S/cm	Pass / Fail	Lab / Field
Calibr.	A. Sykes	10-18-23	09:31	775621	3/24	1,000	1,004	☒ F	L/ ☒ F
ICV	↓	↓	09:34	↓	↓	1,000	1,006	☒ F	L/ ☒ F
CCV	↓	↓	11:03	↓	↓	1,000	1,002	☒ F	L/ ☒ F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	A. Sykes	10-18-23	09:37	22E255	10/24	7.0	7.0	-16.0	☒ F	L/ ☒ F
Calibr.	↓	↓	09:40	22C188	9/24	4.0	4.0	178.1	☒ F	L/ ☒ F
Calibr.	↓	↓	09:43	22C181	9/24	10.0	10.0	-164.5	☒ F	L/ ☒ F
ICV	↓	↓	09:46	22E255	10/24	7.0	7.0	-11.8	☒ F	L/ ☒ F
CCV	↓	↓	11:06	↓	↓	7.0	7.0	-19.9	☒ F	L/ ☒ F
CCV									P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ; mV pH 4 Range $+180 \pm 50$; mV pH 10 Range -180 ± 50 ;

COMMENTS:

Turbidity Calibration Log (DEP SOPs FT1000 & FT1600)
Regional Operations Centers

Meter ID: HACH 2100a

Date of Last Calibration:

Project Name: Impenel - W/land

Calibration

Sampler Name: A. Sykes

Date: 10-18-23

Time: 09:50 ETZ CTZ (circle one)

Standard Value (Use Primary Formazin Standards)	Exp. Date	Lot #	Type of Information Displayed During Calibration? (circle one)	Value Displayed NTU	Calibration Pass / Fail (circle one)
20 NTU	2/24	A2301	Meter Reading	20.1	<u>P</u> / F
100 NTU	↓	↓	Meter Reading	103	<u>P</u> / F
800 NTU	↓	↓	Meter Reading	812	<u>P</u> / F
10 NTU	↓	↓	Meter Reading	10.0	<u>P</u> / F

Initial Calibration Verification (ICV) (Only perform ICV immediately after calibr. Do not use < 0.1 NTU standard for ICV.)

Sampler Name: A. Sykes

Date: 10-18-23

Time: 09:53 ETZ CTZ (circle one)

Standard Value (Use A Primary Formazin Standard)	Exp. Date	Lot #	Meter Reading NTU	Pass / Fail (circle one)
10 NTU	2/24	A2301	10.2	<u>P</u> / F

Daily Continuing Calibration Verification (CCV) (required every day that meter is used)

Date	Time (24hr) CT-ET	Sampler Name	Standard Type	Standard Value NTU	Exp. Date	Lot #	Meter Reading NTU	Pass / Fail
10-18-23	11:12	A. Sykes	Formazin	20	2/24	A2301	9.17	<u>P</u> / F
			Formazin					P / F
			Formazin					P / F
			Formazin					P / F
			Formazin					P / F
			Formazin					P / F
			Formazin					P / F
			Formazin					P / F
			Formazin					P / F

Comments:

*Acceptance Criteria: 0.1-10 NTU → ± 10 %; 11-40 NTU → ± 8 %; 41-100 NTU → ± 6.5 %; >100 NTU → ± 5 %;
 Acceptable ranges for common standards: 20 NTU (18.4 - 21.6 NTU); 100 NTU (93.5 - 106.5 NTU); 800 NTU (760 - 840 NTU)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: <i>Imperial Cleaners</i>		SITE LOCATION: <i>901 W. Fairbanks Ave Winter Park, FL</i>	
WELL NO: <i>MW-001</i>	SAMPLE ID: <i>MU-001 (10/18/23)</i>	DATE: <i>10 / 18 / 23</i>	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <i>Amy Sykes</i> /Arcadis	SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>						SAMPLING INITIATED AT: <i>10:23</i>	SAMPLING ENDED AT: <i>10:25</i>	
PUMP OR TUBING DEPTH IN WELL (feet): <i>N/A</i>	TUBING MATERIAL CODE: HDPE						FIELD-FILTERED: Y (<i>N</i>) Filtration Equipment Type:		FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP Y (<i>N</i>) TUBING Y (<i>N</i>) (replaced)							DUPLICATE: Y (<i>N</i>)		
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
<i>MW0d</i>	<i>3</i>	<i>CG</i>	<i>40mL</i>	<i>HCL</i>	<i>-</i>	<i>-</i>	<i>VOH's</i>	<i>APP</i>	<i>~190</i>
REMARKS:									
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)									
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Shallow Method (Tubing Gravity Drain); O = Other (Specify)									

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. **STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)**

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, $+0.2$ mg/L or $+10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+5$ NTU or $+10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Imperial Cleaners		SITE LOCATION: 901 W. Fairbanks Ave Winter Park, FL	
WELL NO: MW-002	SAMPLE ID: MW-002 (10/18/23)	DATE: 10 / 18 / 23	

PURGING DATA

[illegible]

SAMPLING DATA

[illegible]

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

Appendix C

Laboratory Analytical Report

ANALYTICAL REPORT

PREPARED FOR

Attn: Chad Hanna
ARCADIS U.S. Inc
4300 West Cypress Street
Suite 450
Tampa, Florida 33607

Generated 10/26/2023 12:14:48 PM

JOB DESCRIPTION

Imperial Cleaners

JOB NUMBER

670-28829-1

Eurofins Orlando

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



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10/26/2023 12:14:48 PM

Authorized for release by
Matt Jones, Project Manager I
Matthew.Jones@et.eurofinsus.com
(850)284-4486

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Definitions/Glossary

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected at or above the method detection limit in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Job ID: 670-28829-1

Laboratory: Eurofins Orlando

Narrative

Job Narrative 670-28829-1

Receipt

The samples were received on 10/18/2023 12:12 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.4° C.

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 670-59848 recovered outside acceptance criteria, low biased, for Bromomethane and Tetrachloroethene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 670-60051 recovered outside acceptance criteria, low biased, for Bromomethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 670-60051 recovered above the upper control limit for Dichlorodifluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCVIS 670-60051/3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Client Sample ID: MW-001 (10/18/23)

Lab Sample ID: 670-28829-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	8.2		1.0	0.76	ug/L	1		8260D	Total/NA

Client Sample ID: MW-002 (10/18/23)

Lab Sample ID: 670-28829-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	6.6		1.0	0.76	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Orlando

Client Sample Results

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Client Sample ID: MW-001 (10/18/23)

Lab Sample ID: 670-28829-1

Date Collected: 10/18/23 10:23

Matrix: Water

Date Received: 10/18/23 12:12

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.80	U	1.0	0.80	ug/L			10/25/23 14:55	1
1,1,1,2,2-Tetrachloroethane	0.54	U	1.0	0.54	ug/L			10/25/23 14:55	1
1,1,2-Trichloroethane	0.76	U	2.0	0.76	ug/L			10/25/23 14:55	1
1,1-Dichloroethane	0.62	U	1.0	0.62	ug/L			10/25/23 14:55	1
1,1-Dichloroethene	0.94	U	1.0	0.94	ug/L			10/25/23 14:55	1
1,2-Dichlorobenzene	0.73	U	1.0	0.73	ug/L			10/25/23 14:55	1
1,2-Dichloroethane	0.63	U	1.0	0.63	ug/L			10/25/23 14:55	1
1,2-Dichloropropane	0.80	U	1.0	0.80	ug/L			10/25/23 14:55	1
1,3-Dichlorobenzene	0.77	U	1.0	0.77	ug/L			10/25/23 14:55	1
1,4-Dichlorobenzene	0.76	U	1.0	0.76	ug/L			10/25/23 14:55	1
Bromoform	0.75	U	1.0	0.75	ug/L			10/25/23 14:55	1
Bromomethane	0.95	U	2.0	0.95	ug/L			10/25/23 14:55	1
Carbon tetrachloride	0.94	U	1.0	0.94	ug/L			10/25/23 14:55	1
Chlorobenzene	0.72	U	1.0	0.72	ug/L			10/25/23 14:55	1
Chlorodibromomethane	0.50	U	1.0	0.50	ug/L			10/25/23 14:55	1
Chloroethane	0.98	U	2.0	0.98	ug/L			10/25/23 14:55	1
Chloroform	0.80	U	5.0	0.80	ug/L			10/25/23 14:55	1
Chloromethane	0.82	U	2.0	0.82	ug/L			10/25/23 14:55	1
cis-1,2-Dichloroethene	0.53	U	1.0	0.53	ug/L			10/25/23 14:55	1
cis-1,3-Dichloropropene	0.59	U	1.0	0.59	ug/L			10/25/23 14:55	1
Dichlorobromomethane	0.52	U	1.0	0.52	ug/L			10/25/23 14:55	1
Dichlorodifluoromethane	0.74	U	1.0	0.74	ug/L			10/25/23 14:55	1
Methylene Chloride	5.0	U	10	5.0	ug/L			10/25/23 14:55	1
Tetrachloroethene	8.2		1.0	0.76	ug/L			10/25/23 14:55	1
trans-1,2-Dichloroethene	0.73	U	1.0	0.73	ug/L			10/25/23 14:55	1
trans-1,3-Dichloropropene	0.73	U	1.0	0.73	ug/L			10/25/23 14:55	1
Trichloroethene	0.89	U	1.0	0.89	ug/L			10/25/23 14:55	1
Trichlorofluoromethane	0.94	U	1.0	0.94	ug/L			10/25/23 14:55	1
Vinyl chloride	0.71	U	1.0	0.71	ug/L			10/25/23 14:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		41 - 142					10/25/23 14:55	1
Toluene-d8 (Surr)	101		40 - 146					10/25/23 14:55	1
Dibromofluoromethane (Surr)	107		53 - 146					10/25/23 14:55	1

Client Sample ID: MW-002 (10/18/23)

Lab Sample ID: 670-28829-2

Date Collected: 10/18/23 10:53

Matrix: Water

Date Received: 10/18/23 12:12

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.80	U	1.0	0.80	ug/L			10/24/23 14:58	1
1,1,1,2,2-Tetrachloroethane	0.54	U	1.0	0.54	ug/L			10/24/23 14:58	1
1,1,2-Trichloroethane	0.76	U	2.0	0.76	ug/L			10/24/23 14:58	1
1,1-Dichloroethane	0.62	U	1.0	0.62	ug/L			10/24/23 14:58	1
1,1-Dichloroethene	0.94	U	1.0	0.94	ug/L			10/24/23 14:58	1
1,2-Dichlorobenzene	0.73	U	1.0	0.73	ug/L			10/24/23 14:58	1
1,2-Dichloroethane	0.63	U	1.0	0.63	ug/L			10/24/23 14:58	1
1,2-Dichloropropane	0.80	U	1.0	0.80	ug/L			10/24/23 14:58	1
1,3-Dichlorobenzene	0.77	U	1.0	0.77	ug/L			10/24/23 14:58	1

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Client Sample Results

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Client Sample ID: MW-002 (10/18/23)

Lab Sample ID: 670-28829-2

Date Collected: 10/18/23 10:53

Matrix: Water

Date Received: 10/18/23 12:12

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.76	U	1.0	0.76	ug/L			10/24/23 14:58	1
Bromoform	0.75	U	1.0	0.75	ug/L			10/24/23 14:58	1
Bromomethane	0.95	U	2.0	0.95	ug/L			10/24/23 14:58	1
Carbon tetrachloride	0.94	U	1.0	0.94	ug/L			10/24/23 14:58	1
Chlorobenzene	0.72	U	1.0	0.72	ug/L			10/24/23 14:58	1
Chlorodibromomethane	0.50	U	1.0	0.50	ug/L			10/24/23 14:58	1
Chloroethane	0.98	U	2.0	0.98	ug/L			10/24/23 14:58	1
Chloroform	0.80	U	5.0	0.80	ug/L			10/24/23 14:58	1
Chloromethane	0.82	U	2.0	0.82	ug/L			10/24/23 14:58	1
cis-1,2-Dichloroethene	0.53	U	1.0	0.53	ug/L			10/24/23 14:58	1
cis-1,3-Dichloropropene	0.59	U	1.0	0.59	ug/L			10/24/23 14:58	1
Dichlorobromomethane	0.52	U	1.0	0.52	ug/L			10/24/23 14:58	1
Dichlorodifluoromethane	0.74	U	1.0	0.74	ug/L			10/24/23 14:58	1
Methylene Chloride	5.0	U	10	5.0	ug/L			10/24/23 14:58	1
Tetrachloroethene	6.6		1.0	0.76	ug/L			10/25/23 15:13	1
trans-1,2-Dichloroethene	0.73	U	1.0	0.73	ug/L			10/24/23 14:58	1
trans-1,3-Dichloropropene	0.73	U	1.0	0.73	ug/L			10/24/23 14:58	1
Trichloroethene	0.89	U	1.0	0.89	ug/L			10/24/23 14:58	1
Trichlorofluoromethane	0.94	U	1.0	0.94	ug/L			10/24/23 14:58	1
Vinyl chloride	0.71	U	1.0	0.71	ug/L			10/24/23 14:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		41 - 142		10/24/23 14:58	1
4-Bromofluorobenzene (Surr)	102		41 - 142		10/25/23 15:13	1
Toluene-d8 (Surr)	95		40 - 146		10/24/23 14:58	1
Toluene-d8 (Surr)	101		40 - 146		10/25/23 15:13	1
Dibromofluoromethane (Surr)	99		53 - 146		10/24/23 14:58	1
Dibromofluoromethane (Surr)	106		53 - 146		10/25/23 15:13	1

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Surrogate Summary

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	BFB	TOL	DBFM
		(41-142)	(40-146)	(53-146)
670-28828-K-2 MS	Matrix Spike	99	98	99
670-28828-K-2 MSD	Matrix Spike Duplicate	101	97	98
670-28829-1	MW-001 (10/18/23)	100	101	107
670-28829-2	MW-002 (10/18/23)	107	95	99
670-28829-2	MW-002 (10/18/23)	102	101	106
670-28965-E-3 MS	Matrix Spike	93	99	103
670-28965-E-3 MSD	Matrix Spike Duplicate	95	99	103
LCS 670-59848/5	Lab Control Sample	102	97	100
LCS 670-60051/4	Lab Control Sample	96	100	102
MB 670-59848/8	Method Blank	106	95	101
MB 670-60051/7	Method Blank	101	103	110

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 670-59848/8

Matrix: Water

Analysis Batch: 59848

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.80	U	1.0	0.80	ug/L			10/24/23 11:34	1
1,1,2,2-Tetrachloroethane	0.54	U	1.0	0.54	ug/L			10/24/23 11:34	1
1,1,2-Trichloroethane	0.76	U	2.0	0.76	ug/L			10/24/23 11:34	1
1,1-Dichloroethane	0.62	U	1.0	0.62	ug/L			10/24/23 11:34	1
1,1-Dichloroethene	0.94	U	1.0	0.94	ug/L			10/24/23 11:34	1
1,2-Dichlorobenzene	0.73	U	1.0	0.73	ug/L			10/24/23 11:34	1
1,2-Dichloroethane	0.63	U	1.0	0.63	ug/L			10/24/23 11:34	1
1,2-Dichloropropane	0.80	U	1.0	0.80	ug/L			10/24/23 11:34	1
1,3-Dichlorobenzene	0.77	U	1.0	0.77	ug/L			10/24/23 11:34	1
1,4-Dichlorobenzene	0.76	U	1.0	0.76	ug/L			10/24/23 11:34	1
Bromoform	0.75	U	1.0	0.75	ug/L			10/24/23 11:34	1
Bromomethane	0.95	U	2.0	0.95	ug/L			10/24/23 11:34	1
Carbon tetrachloride	0.94	U	1.0	0.94	ug/L			10/24/23 11:34	1
Chlorobenzene	0.72	U	1.0	0.72	ug/L			10/24/23 11:34	1
Chlorodibromomethane	0.50	U	1.0	0.50	ug/L			10/24/23 11:34	1
Chloroethane	0.98	U	2.0	0.98	ug/L			10/24/23 11:34	1
Chloroform	0.80	U	5.0	0.80	ug/L			10/24/23 11:34	1
Chloromethane	0.82	U	2.0	0.82	ug/L			10/24/23 11:34	1
cis-1,2-Dichloroethene	0.53	U	1.0	0.53	ug/L			10/24/23 11:34	1
cis-1,3-Dichloropropene	0.59	U	1.0	0.59	ug/L			10/24/23 11:34	1
Dichlorobromomethane	0.52	U	1.0	0.52	ug/L			10/24/23 11:34	1
Dichlorodifluoromethane	0.74	U	1.0	0.74	ug/L			10/24/23 11:34	1
Methylene Chloride	5.0	U	10	5.0	ug/L			10/24/23 11:34	1
Tetrachloroethene	0.76	U	1.0	0.76	ug/L			10/24/23 11:34	1
trans-1,2-Dichloroethene	0.73	U	1.0	0.73	ug/L			10/24/23 11:34	1
trans-1,3-Dichloropropene	0.73	U	1.0	0.73	ug/L			10/24/23 11:34	1
Trichloroethene	0.89	U	1.0	0.89	ug/L			10/24/23 11:34	1
Trichlorofluoromethane	0.94	U	1.0	0.94	ug/L			10/24/23 11:34	1
Vinyl chloride	0.71	U	1.0	0.71	ug/L			10/24/23 11:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		41 - 142		10/24/23 11:34	1
Toluene-d8 (Surr)	95		40 - 146		10/24/23 11:34	1
Dibromofluoromethane (Surr)	101		53 - 146		10/24/23 11:34	1

Lab Sample ID: LCS 670-59848/5

Matrix: Water

Analysis Batch: 59848

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	20.0	18.8		ug/L		94	57 - 148
1,1,2,2-Tetrachloroethane	20.0	18.1		ug/L		90	60 - 139
1,1,2-Trichloroethane	20.0	16.6		ug/L		83	57 - 141
1,1-Dichloroethane	20.0	17.7		ug/L		88	57 - 142
1,1-Dichloroethene	20.0	23.6		ug/L		118	47 - 139
1,2-Dichlorobenzene	20.0	19.8		ug/L		99	63 - 131
1,2-Dichloroethane	20.0	18.0		ug/L		90	50 - 156
1,2-Dichloropropane	20.0	17.3		ug/L		87	61 - 133

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QC Sample Results

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 670-59848/5

Matrix: Water

Analysis Batch: 59848

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3-Dichlorobenzene	20.0	20.1		ug/L		101	66 - 129
1,4-Dichlorobenzene	20.0	19.6		ug/L		98	65 - 133
Bromoform	20.0	17.0		ug/L		85	46 - 148
Bromomethane	20.0	16.8		ug/L		84	10 - 173
Carbon tetrachloride	20.0	19.2		ug/L		96	54 - 156
Chlorobenzene	20.0	19.4		ug/L		97	51 - 139
Chlorodibromomethane	20.0	16.8		ug/L		84	50 - 140
Chloroethane	20.0	21.4		ug/L		107	27 - 180
Chloroform	20.0	18.3		ug/L		92	58 - 139
Chloromethane	20.0	19.0		ug/L		95	33 - 154
cis-1,2-Dichloroethene	20.0	17.7		ug/L		89	56 - 128
cis-1,3-Dichloropropene	20.0	17.7		ug/L		88	64 - 128
Dichlorobromomethane	20.0	17.7		ug/L		88	58 - 135
Dichlorodifluoromethane	20.0	27.1		ug/L		135	10 - 180
Methylene Chloride	20.0	22.9		ug/L		114	43 - 142
Tetrachloroethene	20.0	16.3		ug/L		81	60 - 147
trans-1,2-Dichloroethene	20.0	22.2		ug/L		111	54 - 134
trans-1,3-Dichloropropene	20.0	17.5		ug/L		87	65 - 149
Trichloroethene	20.0	17.9		ug/L		90	62 - 135
Trichlorofluoromethane	20.0	22.6		ug/L		113	56 - 155
Vinyl chloride	20.0	24.2		ug/L		121	20 - 167

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		41 - 142
Toluene-d8 (Surr)	97		40 - 146
Dibromofluoromethane (Surr)	100		53 - 146

Lab Sample ID: 670-28828-K-2 MS

Matrix: Water

Analysis Batch: 59848

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	0.80	U	20.0	20.2		ug/L		101	57 - 148
1,1,2,2-Tetrachloroethane	0.54	U	20.0	17.3		ug/L		86	60 - 139
1,1,2-Trichloroethane	0.76	U	20.0	17.1		ug/L		85	57 - 141
1,1-Dichloroethane	0.62	U	20.0	19.1		ug/L		95	57 - 142
1,1-Dichloroethene	0.94	U	20.0	26.4		ug/L		132	49 - 139
1,2-Dichlorobenzene	0.73	U	20.0	19.9		ug/L		99	63 - 131
1,2-Dichloroethane	0.63	U	20.0	18.4		ug/L		92	50 - 156
1,2-Dichloropropane	0.80	U	20.0	18.5		ug/L		92	61 - 133
1,3-Dichlorobenzene	0.77	U	20.0	20.1		ug/L		101	66 - 129
1,4-Dichlorobenzene	0.76	U	20.0	19.8		ug/L		99	65 - 133
Bromoform	2.4		20.0	18.7		ug/L		81	46 - 148
Bromomethane	0.95	U	20.0	18.2		ug/L		91	10 - 173
Carbon tetrachloride	0.94	U	20.0	21.4		ug/L		107	54 - 156
Chlorobenzene	0.72	U	20.0	19.5		ug/L		98	51 - 139
Chlorodibromomethane	2.1		20.0	20.3		ug/L		91	50 - 150
Chloroethane	0.98	U	20.0	22.8		ug/L		114	27 - 180

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QC Sample Results

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 670-28828-K-2 MS

Matrix: Water

Analysis Batch: 59848

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloroform	10		20.0	29.8		ug/L		97	59 - 139
Chloromethane	0.82	U	20.0	21.2		ug/L		106	33 - 154
cis-1,2-Dichloroethene	0.53	U	20.0	18.8		ug/L		94	56 - 128
cis-1,3-Dichloropropene	0.59	U	20.0	18.0		ug/L		90	64 - 128
Dichlorobromomethane	4.1		20.0	23.2		ug/L		95	58 - 135
Dichlorodifluoromethane	0.74	U	20.0	30.7		ug/L		153	10 - 180
Methylene Chloride	5.0	U	20.0	24.1		ug/L		121	43 - 142
Tetrachloroethene	0.76	U	20.0	18.1		ug/L		90	60 - 147
trans-1,2-Dichloroethene	0.73	U	20.0	24.8		ug/L		124	54 - 134
trans-1,3-Dichloropropene	0.73	U	20.0	18.1		ug/L		90	65 - 149
Trichloroethene	0.89	U	20.0	19.2		ug/L		96	62 - 135
Trichlorofluoromethane	0.94	U	20.0	25.4		ug/L		127	56 - 155
Vinyl chloride	0.71	U	20.0	27.5		ug/L		138	20 - 167

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		41 - 142
Toluene-d8 (Surr)	98		40 - 146
Dibromofluoromethane (Surr)	99		53 - 146

Lab Sample ID: 670-28828-K-2 MSD

Matrix: Water

Analysis Batch: 59848

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.80	U	20.0	21.0		ug/L		105	57 - 148	4	25
1,1,2,2-Tetrachloroethane	0.54	U	20.0	19.3		ug/L		97	60 - 139	11	17
1,1,2-Trichloroethane	0.76	U	20.0	18.0		ug/L		90	57 - 141	5	16
1,1-Dichloroethane	0.62	U	20.0	19.1		ug/L		96	57 - 142	0	24
1,1-Dichloroethene	0.94	U	20.0	26.1		ug/L		131	49 - 139	1	16
1,2-Dichlorobenzene	0.73	U	20.0	21.2		ug/L		106	63 - 131	6	25
1,2-Dichloroethane	0.63	U	20.0	19.2		ug/L		96	50 - 156	4	18
1,2-Dichloropropane	0.80	U	20.0	18.7		ug/L		94	61 - 133	1	26
1,3-Dichlorobenzene	0.77	U	20.0	21.4		ug/L		107	66 - 129	6	23
1,4-Dichlorobenzene	0.76	U	20.0	21.1		ug/L		106	65 - 133	7	23
Bromoform	2.4		20.0	20.4		ug/L		90	46 - 148	9	18
Bromomethane	0.95	U	20.0	20.0		ug/L		100	10 - 173	9	29
Carbon tetrachloride	0.94	U	20.0	21.5		ug/L		108	54 - 156	1	27
Chlorobenzene	0.72	U	20.0	20.5		ug/L		102	51 - 139	5	13
Chlorodibromomethane	2.1		20.0	20.4		ug/L		91	50 - 150	0	18
Chloroethane	0.98	U	20.0	24.9		ug/L		124	27 - 180	9	22
Chloroform	10		20.0	29.9		ug/L		97	59 - 139	0	17
Chloromethane	0.82	U	20.0	23.6		ug/L		118	33 - 154	11	31
cis-1,2-Dichloroethene	0.53	U	20.0	19.2		ug/L		96	56 - 128	2	17
cis-1,3-Dichloropropene	0.59	U	20.0	19.0		ug/L		95	64 - 128	5	20
Dichlorobromomethane	4.1		20.0	23.4		ug/L		96	58 - 135	1	19
Dichlorodifluoromethane	0.74	U	20.0	33.8		ug/L		169	10 - 180	10	26
Methylene Chloride	5.0	U	20.0	24.0		ug/L		120	43 - 142	0	23
Tetrachloroethene	0.76	U	20.0	17.7		ug/L		88	60 - 147	2	21

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QC Sample Results

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 670-28828-K-2 MSD

Matrix: Water

Analysis Batch: 59848

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
trans-1,2-Dichloroethene	0.73	U	20.0	24.9		ug/L		124	54 - 134	0	20
trans-1,3-Dichloropropene	0.73	U	20.0	19.2		ug/L		96	65 - 149	6	17
Trichloroethene	0.89	U	20.0	18.8		ug/L		94	62 - 135	2	20
Trichlorofluoromethane	0.94	U	20.0	28.1		ug/L		140	56 - 155	10	22
Vinyl chloride	0.71	U	20.0	29.7		ug/L		148	20 - 167	8	24

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		41 - 142
Toluene-d8 (Surr)	97		40 - 146
Dibromofluoromethane (Surr)	98		53 - 146

Lab Sample ID: MB 670-60051/7

Matrix: Water

Analysis Batch: 60051

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.80	U	1.0	0.80	ug/L			10/25/23 10:35	1
1,1,1,2-Tetrachloroethane	0.54	U	1.0	0.54	ug/L			10/25/23 10:35	1
1,1,1,2-Trichloroethane	0.76	U	2.0	0.76	ug/L			10/25/23 10:35	1
1,1-Dichloroethane	0.62	U	1.0	0.62	ug/L			10/25/23 10:35	1
1,1-Dichloroethene	0.94	U	1.0	0.94	ug/L			10/25/23 10:35	1
1,2-Dichlorobenzene	0.73	U	1.0	0.73	ug/L			10/25/23 10:35	1
1,2-Dichloroethane	0.63	U	1.0	0.63	ug/L			10/25/23 10:35	1
1,2-Dichloropropane	0.80	U	1.0	0.80	ug/L			10/25/23 10:35	1
1,3-Dichlorobenzene	0.77	U	1.0	0.77	ug/L			10/25/23 10:35	1
1,4-Dichlorobenzene	0.76	U	1.0	0.76	ug/L			10/25/23 10:35	1
Bromoform	0.75	U	1.0	0.75	ug/L			10/25/23 10:35	1
Bromomethane	0.95	U	2.0	0.95	ug/L			10/25/23 10:35	1
Carbon tetrachloride	0.94	U	1.0	0.94	ug/L			10/25/23 10:35	1
Chlorobenzene	0.72	U	1.0	0.72	ug/L			10/25/23 10:35	1
Chlorodibromomethane	0.50	U	1.0	0.50	ug/L			10/25/23 10:35	1
Chloroethane	0.98	U	2.0	0.98	ug/L			10/25/23 10:35	1
Chloroform	0.80	U	5.0	0.80	ug/L			10/25/23 10:35	1
Chloromethane	0.82	U	2.0	0.82	ug/L			10/25/23 10:35	1
cis-1,2-Dichloroethene	0.53	U	1.0	0.53	ug/L			10/25/23 10:35	1
cis-1,3-Dichloropropene	0.59	U	1.0	0.59	ug/L			10/25/23 10:35	1
Dichlorobromomethane	0.52	U	1.0	0.52	ug/L			10/25/23 10:35	1
Dichlorodifluoromethane	0.74	U	1.0	0.74	ug/L			10/25/23 10:35	1
Methylene Chloride	6.68	I	10	5.0	ug/L			10/25/23 10:35	1
Tetrachloroethene	0.76	U	1.0	0.76	ug/L			10/25/23 10:35	1
trans-1,2-Dichloroethene	0.73	U	1.0	0.73	ug/L			10/25/23 10:35	1
trans-1,3-Dichloropropene	0.73	U	1.0	0.73	ug/L			10/25/23 10:35	1
Trichloroethene	0.89	U	1.0	0.89	ug/L			10/25/23 10:35	1
Trichlorofluoromethane	0.94	U	1.0	0.94	ug/L			10/25/23 10:35	1
Vinyl chloride	0.71	U	1.0	0.71	ug/L			10/25/23 10:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		41 - 142		10/25/23 10:35	1

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QC Sample Results

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 670-60051/7

Matrix: Water

Analysis Batch: 60051

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		40 - 146		10/25/23 10:35	1
Dibromofluoromethane (Surr)	110		53 - 146		10/25/23 10:35	1

Lab Sample ID: LCS 670-60051/4

Matrix: Water

Analysis Batch: 60051

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	20.0	20.7		ug/L		104	57 - 148
1,1,1,2-Tetrachloroethane	20.0	22.5		ug/L		112	60 - 139
1,1,2-Trichloroethane	20.0	21.9		ug/L		109	57 - 141
1,1-Dichloroethane	20.0	20.9		ug/L		105	57 - 142
1,1-Dichloroethene	20.0	21.5		ug/L		107	47 - 139
1,2-Dichlorobenzene	20.0	20.5		ug/L		102	63 - 131
1,2-Dichloroethane	20.0	21.5		ug/L		107	50 - 156
1,2-Dichloropropane	20.0	20.6		ug/L		103	61 - 133
1,3-Dichlorobenzene	20.0	20.7		ug/L		104	66 - 129
1,4-Dichlorobenzene	20.0	19.5		ug/L		98	65 - 133
Bromoform	20.0	20.9		ug/L		104	46 - 148
Bromomethane	20.0	14.2		ug/L		71	10 - 173
Carbon tetrachloride	20.0	20.8		ug/L		104	54 - 156
Chlorobenzene	20.0	20.9		ug/L		104	51 - 139
Chlorodibromomethane	20.0	21.4		ug/L		107	50 - 140
Chloroethane	20.0	17.4		ug/L		87	27 - 180
Chloroform	20.0	20.7		ug/L		104	58 - 139
Chloromethane	20.0	23.7		ug/L		119	33 - 154
cis-1,2-Dichloroethene	20.0	20.7		ug/L		103	56 - 128
cis-1,3-Dichloropropene	20.0	18.7		ug/L		93	64 - 128
Dichlorobromomethane	20.0	21.1		ug/L		105	58 - 135
Dichlorodifluoromethane	20.0	24.3		ug/L		121	10 - 180
Methylene Chloride	20.0	23.1		ug/L		115	43 - 142
Tetrachloroethene	20.0	21.2		ug/L		106	60 - 147
trans-1,2-Dichloroethene	20.0	21.3		ug/L		107	54 - 134
trans-1,3-Dichloropropene	20.0	22.0		ug/L		110	65 - 149
Trichloroethene	20.0	21.2		ug/L		106	62 - 135
Trichlorofluoromethane	20.0	19.9		ug/L		100	56 - 155
Vinyl chloride	20.0	18.8		ug/L		94	20 - 167

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		41 - 142
Toluene-d8 (Surr)	100		40 - 146
Dibromofluoromethane (Surr)	102		53 - 146

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QC Sample Results

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 670-28965-E-3 MS

Matrix: Water

Analysis Batch: 60051

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	0.80	U	20.0	23.1		ug/L		116	57 - 148
1,1,2,2-Tetrachloroethane	0.54	U	20.0	23.3		ug/L		116	60 - 139
1,1,2-Trichloroethane	0.76	U	20.0	23.1		ug/L		115	57 - 141
1,1-Dichloroethane	0.62	U	20.0	23.1		ug/L		115	57 - 142
1,1-Dichloroethene	0.94	U	20.0	22.3		ug/L		112	49 - 139
1,2-Dichlorobenzene	0.73	U	20.0	20.9		ug/L		104	63 - 131
1,2-Dichloroethane	0.63	U	20.0	22.4		ug/L		112	50 - 156
1,2-Dichloropropane	0.80	U	20.0	22.4		ug/L		112	61 - 133
1,3-Dichlorobenzene	0.77	U	20.0	21.3		ug/L		107	66 - 129
1,4-Dichlorobenzene	0.76	U	20.0	20.4		ug/L		102	65 - 133
Bromoform	0.75	U	20.0	20.7		ug/L		103	46 - 148
Bromomethane	0.95	U	20.0	18.6		ug/L		93	10 - 173
Carbon tetrachloride	0.94	U	20.0	23.4		ug/L		117	54 - 156
Chlorobenzene	0.72	U	20.0	21.7		ug/L		109	51 - 139
Chlorodibromomethane	0.50	U	20.0	22.1		ug/L		110	50 - 150
Chloroethane	0.98	U	20.0	20.0		ug/L		100	27 - 180
Chloroform	0.80	U	20.0	22.5		ug/L		113	59 - 139
Chloromethane	0.82	U	20.0	26.9		ug/L		135	33 - 154
cis-1,2-Dichloroethene	0.53	U	20.0	21.9		ug/L		110	56 - 128
cis-1,3-Dichloropropene	0.59	U	20.0	18.2		ug/L		91	64 - 128
Dichlorobromomethane	0.52	U	20.0	22.5		ug/L		113	58 - 135
Dichlorodifluoromethane	0.74	U	20.0	25.6		ug/L		128	10 - 180
Methylene Chloride	5.0	U	20.0	24.3	V	ug/L		121	43 - 142
Tetrachloroethene	0.76	U	20.0	23.1		ug/L		116	60 - 147
trans-1,2-Dichloroethene	0.73	U	20.0	22.8		ug/L		114	54 - 134
trans-1,3-Dichloropropene	0.73	U	20.0	22.6		ug/L		113	65 - 149
Trichloroethene	0.89	U	20.0	23.0		ug/L		115	62 - 135
Trichlorofluoromethane	0.94	U	20.0	22.0		ug/L		110	56 - 155
Vinyl chloride	0.71	U	20.0	21.4		ug/L		107	20 - 167

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		41 - 142
Toluene-d8 (Surr)	99		40 - 146
Dibromofluoromethane (Surr)	103		53 - 146

Lab Sample ID: 670-28965-E-3 MSD

Matrix: Water

Analysis Batch: 60051

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
1,1,1-Trichloroethane	0.80	U	20.0	23.5		ug/L		117	57 - 148	2	25
1,1,2,2-Tetrachloroethane	0.54	U	20.0	23.8		ug/L		119	60 - 139	2	17
1,1,2-Trichloroethane	0.76	U	20.0	23.2		ug/L		116	57 - 141	1	16
1,1-Dichloroethane	0.62	U	20.0	23.3		ug/L		116	57 - 142	1	24
1,1-Dichloroethene	0.94	U	20.0	23.0		ug/L		115	49 - 139	3	16
1,2-Dichlorobenzene	0.73	U	20.0	21.9		ug/L		110	63 - 131	5	25
1,2-Dichloroethane	0.63	U	20.0	22.6		ug/L		113	50 - 156	1	18
1,2-Dichloropropane	0.80	U	20.0	22.2		ug/L		111	61 - 133	1	26

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QC Sample Results

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 670-28965-E-3 MSD

Matrix: Water

Analysis Batch: 60051

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,3-Dichlorobenzene	0.77	U	20.0	21.7		ug/L		108	66 - 129	2	23
1,4-Dichlorobenzene	0.76	U	20.0	21.2		ug/L		106	65 - 133	4	23
Bromoform	0.75	U	20.0	21.0		ug/L		105	46 - 148	2	18
Bromomethane	0.95	U	20.0	19.9		ug/L		100	10 - 173	7	29
Carbon tetrachloride	0.94	U	20.0	23.0		ug/L		115	54 - 156	2	27
Chlorobenzene	0.72	U	20.0	22.0		ug/L		110	51 - 139	1	13
Chlorodibromomethane	0.50	U	20.0	21.9		ug/L		109	50 - 150	1	18
Chloroethane	0.98	U	20.0	19.4		ug/L		97	27 - 180	3	22
Chloroform	0.80	U	20.0	22.9		ug/L		114	59 - 139	2	17
Chloromethane	0.82	U	20.0	26.1		ug/L		130	33 - 154	3	31
cis-1,2-Dichloroethene	0.53	U	20.0	22.1		ug/L		111	56 - 128	1	17
cis-1,3-Dichloropropene	0.59	U	20.0	18.5		ug/L		93	64 - 128	2	20
Dichlorobromomethane	0.52	U	20.0	22.0		ug/L		110	58 - 135	2	19
Dichlorodifluoromethane	0.74	U	20.0	25.6		ug/L		128	10 - 180	0	26
Methylene Chloride	5.0	U	20.0	24.0	V	ug/L		120	43 - 142	1	23
Tetrachloroethene	0.76	U	20.0	22.6		ug/L		113	60 - 147	3	21
trans-1,2-Dichloroethene	0.73	U	20.0	22.9		ug/L		115	54 - 134	1	20
trans-1,3-Dichloropropene	0.73	U	20.0	22.1		ug/L		111	65 - 149	2	17
Trichloroethene	0.89	U	20.0	22.9		ug/L		114	62 - 135	0	20
Trichlorofluoromethane	0.94	U	20.0	22.3		ug/L		111	56 - 155	1	22
Vinyl chloride	0.71	U	20.0	22.1		ug/L		110	20 - 167	3	24

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		41 - 142
Toluene-d8 (Surr)	99		40 - 146
Dibromofluoromethane (Surr)	103		53 - 146

QC Association Summary

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

GC/MS VOA

Analysis Batch: 59848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-28829-2	MW-002 (10/18/23)	Total/NA	Water	8260D	
MB 670-59848/8	Method Blank	Total/NA	Water	8260D	
LCS 670-59848/5	Lab Control Sample	Total/NA	Water	8260D	
670-28828-K-2 MS	Matrix Spike	Total/NA	Water	8260D	
670-28828-K-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Analysis Batch: 60051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-28829-1	MW-001 (10/18/23)	Total/NA	Water	8260D	
670-28829-2	MW-002 (10/18/23)	Total/NA	Water	8260D	
MB 670-60051/7	Method Blank	Total/NA	Water	8260D	
LCS 670-60051/4	Lab Control Sample	Total/NA	Water	8260D	
670-28965-E-3 MS	Matrix Spike	Total/NA	Water	8260D	
670-28965-E-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Client Sample ID: MW-001 (10/18/23)
Date Collected: 10/18/23 10:23
Date Received: 10/18/23 12:12

Lab Sample ID: 670-28829-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	60051	JFL	EET ORL	10/25/23 14:55

Client Sample ID: MW-002 (10/18/23)
Date Collected: 10/18/23 10:53
Date Received: 10/18/23 12:12

Lab Sample ID: 670-28829-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	59848	KG	EET ORL	10/24/23 14:58
Total/NA	Analysis	8260D		1	60051	JFL	EET ORL	10/25/23 15:13

Laboratory References:

EET ORL = Eurofins Orlando, 481 Newburyport Avenue, Altamonte Springs, FL 32701, TEL (407)339-5984

Accreditation/Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Laboratory: Eurofins Orlando

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	42800	06-30-24
Florida	NELAP	E83018	06-30-24
Georgia (DW)	State	C055	06-30-24
Louisiana (All)	NELAP	239316	06-30-24
Louisiana (DW)	State	LA039	05-24-24
Mississippi	State	MS00007	06-30-24
North Carolina (DW)	State	12712	07-31-24
Tennessee	State	TN04930	06-30-24
Texas	NELAP	T104704571	02-29-24

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET ORL
5030C	Purge and Trap	SW846	EET ORL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET ORL = Eurofins Orlando, 481 Newburyport Avenue, Altamonte Springs, FL 32701, TEL (407)339-5984

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: Imperial Cleaners

Job ID: 670-28829-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
670-28829-1	MW-001 (10/18/23)	Water	10/18/23 10:23	10/18/23 12:12
670-28829-2	MW-002 (10/18/23)	Water	10/18/23 10:53	10/18/23 12:12

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6712 Benjamin Road Suite 100
Tampa, FL 33634
Phone: 813-885-7427 Fax: 813-885-7049

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Ver: 06/08/2010/26/2023
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Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 670-28829-1

Login Number: 28829

List Source: Eurofins Orlando

List Number: 1

Creator: Clerisier, Meline

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix D

Waste Manifest

GENERATOR	NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone	4. Waste Tracking Number 3404		
	5. Generator's Name and Mailing Address			Generator's Site Address (if different than mailing address)				
	Imperial Cleaners 901 West Fairbanks Avenue Winter Park, FL 32789							
	Generator's Phone:							
	6. Transport 1 Company Name Erwin Remediation, Inc.			U.S. EPA ID Number FLR000223867				
	7. Transport 2 Company Name			U.S. EPA ID Number				
	8. Designated Facility Name and Site Address Erwin Remediation, Inc. 408 Ditmar Street Pensacola, FL 32503 Facility's Phone: (850) 292-6511			U.S. EPA ID Number 0439285-001-SO				
	9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt/Vol.		
			No.	Type				
	1. Non-Hazardous Water		1	DM				
2.								
3.								
4.								
13. Special Handling Instructions and Additional Information								
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in al respects in propeertt condition for transport according to applicable international and govenemental regulations.								
Generator's/Offeror's Printed/Typed Name W. Sanchez			Signature W. Sanchez		Month 2	Day 6	Year 2024	
INT'L	15. International Shipments Transporter Signature (for exports only):			☐ Import to U.S. ☐ Export from U.S.		Port of Entry/Exit: Date Leaving U.S.:		
TRANSPORTER	16. Transport Acknowledgement of Receipt of Materials							
	Transporter 1 Printed/Typed Name W. Sanchez			Signature W. Sanchez		Month 2	Day 6	Year 2024
	Transporter 2 Printed/Typed Name			Signature		Month	Day	Year
DESIGNATED FACILITY	17. Discrepancy							
	17a. Discrepancy Indication Space			☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection				
	Manifest Reference Number:							
	17b. Alternate Facility (or Generator)							
	Facility's Phone:							
	17c. Signature of Alternate Facility (or Generator)							
Month Day Year								
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a								
Printed/Typed Name Robert Donado			Signature		Month 02	Day 09	Year 2024	

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Lake Killarney Board

agenda item 8.a

item type

Board Comments

meeting date

July 2, 2024

prepared by

Victoria Tabor, Administrative Coordinator II

approved by

Victoria Tabor, Administrative Coordinator II

subject

Discussion of Public Comments Received

motion | recommendation**background****alternatives | other considerations****fiscal impact****attachments**

None



Lake Killarney Board

agenda item 9.a

item type

Upcoming Agenda Items

meeting date

July 2, 2024

prepared by

Victoria Tabor, Administrative Coordinator II

approved by

Victoria Tabor, Administrative Coordinator II

subject

Upcoming Agenda Items

motion | recommendation**background****alternatives | other considerations****fiscal impact****attachments**

None

**item type**

Upcoming Agenda Items

meeting date

July 2, 2024

prepared by

Victoria Tabor, Administrative Coordinator II

approved by

Victoria Tabor, Administrative Coordinator II

subject

Summary of Meeting Action Items

motion | recommendation**background****alternatives | other considerations****fiscal impact****attachments**

None