

ENGINEERING SERVICES WORK ORDER 6

This Work Order Number 6 is entered into as of this 21st day of May, 2024, pursuant to that certain Continuing Contract Agreement, dated May 2, 2023 (referred to as the "Agreement"), by and between INDIAN RIVER COUNTY, a political subdivision of the State of Florida ("COUNTY") and Geosyntec ("Consultant").

The COUNTY has selected the Consultant to perform the professional services set forth on Exhibit A (Scope of Work), attached to this Work Order and made part hereof by this reference. The professional services will be performed by the Consultant for the mutually agreed upon lump sum or maximum amount not-to-exceed professional fee. Any additional costs must be approved in writing, and at a rate not to exceed the prices set forth in Exhibit B (Rate Schedule) of the Agreement, made a part hereof by this reference. The Consultant will perform the professional services within the timeframe more particularly set forth in Exhibit A (Time Schedule), attached to this Work Order and made a part hereof by this reference all in accordance with the terms and provisions set forth in the Agreement. Pursuant to paragraph 1.4 of the Agreement, nothing contained in any Work Order shall conflict with the terms of the Agreement and the terms of the Agreement shall be deemed to be incorporated in each individual Work Order as if fully set forth herein.

IN WITNESS WHEREOF, the parties hereto have executed this Work Order as of the date first written above.

CONSULTANT:

By: Joseph 1. Applegate

Print Name: Joseph Applegate

Title: Sr. Principal Geologist

**BOARD OF COUNTY COMMISSIONERS
OF INDIAN RIVER COUNTY**

By: _____
Susan Adams, Chairman

BCC Approval Date: May 21, 2024

Attest: Ryan L. Butler, Clerk of Court and Comptroller

By: _____
Deputy Clerk

By: _____
John A. Titkanich, Jr., County Administrator

Approved as to form and legal sufficiency:

William K. DeBraal, County Attorney

EXHIBIT A

SCOPE OF WORK
TIME SCHEDULE
FEE SCHEDULE

22 April 2024

Mr. Himanshu H. Mehta, P.E.
Managing Director
Solid Waste Disposal District
Indian River County
1325 74th Avenue SW
Vero Beach, Florida 32968

**Subject: Proposal to Provide One Year of Groundwater Monitoring/Reporting and Related Consulting Services
Former South Gifford Road Landfill
Vero Beach, Indian River County, Florida**

Dear Mr. Mehta:

Geosyntec Consultants (Geosyntec) is pleased to submit this letter proposal to the Indian River County (IRC) Solid Waste Disposal District (SWDD) to provide professional services for Florida Department of Environmental Protection (FDEP)-required activities associated with continued implementation of the groundwater monitoring for the chlorinated volatile organic compound (CVOC) plume at the Former South Gifford Road Landfill located in Vero Beach, Indian River County, Florida (Site). This scope and fee proposal is based on correspondence with the FDEP and discussions with IRC. As requested by IRC, this fee proposal includes budget for the following activities:

- Complete two semi-annual monitoring events for the plume monitoring well network,
- Provide related consulting services,
- Represent IRC during interactions with regulatory agencies,
- Prepare an annual pollution liabilities evaluation report for identified IRC-owned environmental liabilities, and
- Prepare an annual groundwater monitoring report summarizing semi-annual sampling activities and results.

Geosyntec has prepared this proposal (professional services as Exhibit A) as Work Order No. 6 for the 2023 Continuing Contract Agreement for Professional Services between IRC SWDD and Geosyntec. The remainder of this letter provides an overview of the project background, a description of the proposed scope of work, a budget estimate, and a discussion of the schedule for accomplishment of the work described herein.

PROJECT BACKGROUND

As part of the long-term monitoring activities for the identified CVOC plume associated with the South Gifford Road Landfill, a network of monitoring wells require sampling on an annual or semi-annual basis to: (i) confirm that the CVOC plume is not migrating by monitoring the lateral and vertical extent; (ii) evaluate the impact of source and dissolved plume bioremediation to assess CVOC plume centerline concentrations over time; and (iii) assess the impact of biological and physical natural attenuation processes on CVOC plume degradation.

Geosyntec conducted previous bioremediation injection events in 2008, 2009, 2012, and 2017 to remediate recalcitrant CVOC groundwater impacts in the downgradient biobarriers and in the former source area. Groundwater monitoring results in 2023 suggested that the plume monitoring well network could be reduced to account for plume shrinkage since the previous 2017 bioremediation injection. In the *2023 Annual GMR*, Geosyntec recommended to remove 16 monitoring wells from the 2024 sampling and analysis plan, reducing the number of monitoring wells sampled from 42 to 26, a 38% decrease. Geosyntec also recommended to change the reporting frequency from semi-annual to annual. FDEP approved these recommendations to reduce sampling and reporting frequency in an approval letter dated 18 March 2024.

PROPOSED SCOPE OF WORK

For the purpose of budgeting, the scope of work has been divided into the following phases:

- Phase 1 – Project Management,
- Phase 2 – Meetings/Regulatory Interaction,
- Phase 3 – Annual Pollution Remediation Liabilities Evaluation,
- Phase 4 – Semi-Annual Sampling Activities, and
- Phase 5 – Data Evaluation and Annual Reporting.

The remainder of this section presents a general description of the activities to be performed in each phase.

Phase 1 – Project Management: Under this phase, Geosyntec will perform project planning and management responsibilities, such as correspondence with IRC SWDD and FDEP, invoice review, project coordination, and project administration. The budget includes two hours per month for the project manager (24 hours total) and one hour per month (12 hours total) for the project administrator.

Phase 2 – Meetings/Regulatory Interaction: Under this phase, Geosyntec will prepare for and attend up to one meeting, with IRC SWDD, FDEP, and/or IRC Board of County Commissioners, as necessary. It has been assumed that this meeting will be in person. Also, under this phase, four hours has been included for the Senior Principal-in-charge to provide ongoing support to IRC SWDD related to interaction and negotiation with FDEP.

Phase 3 – Annual Pollution Remediation Liabilities Evaluation: As requested by IRC SWDD, under this phase, Geosyntec will prepare the annual environmental liability evaluation. This document is prepared annually in response to Governmental Accounting Standards Board Statement No. 49 (GASB No. 49), *Accounting and Financial Reporting for Pollution Remediation Obligations*, which requires the inclusion and calculation of pollution remediation obligations. The objective of GASB No. 49 is to enhance the usefulness and comparability of pollution remediation obligation information reported by state and local governments. It has been assumed that the report will include evaluation of two sites, including Former South Gifford Road Landfill (4701 41st Street) and Former Premier Citrus Property (375 82nd Street). In addition, two hours have been included for a Florida-registered Professional Engineer to conduct an independent review of the liability evaluation.

Phase 4 – Semi-Annual Sampling Activities: Under this phase, Geosyntec will perform 2024 routine semi-annual groundwater monitoring. The semi-annual activities will include field preparation, water level measurements, and groundwater sampling. Field preparation activities will include scheduling and staffing, subcontracting, coordination with the analytical laboratory, field equipment preparation, procurement of Passive Diffusion Bag (PDB) samplers, coordination with Vero Beach Municipal Airport for water level measurement, and notifying FDEP of the field schedule.

Geosyntec will perform the groundwater sampling activities associated with the CVOC plume monitoring well network. Sampling activities in 2024 will be completed with a combination of PDB samplers, as a cost-savings measure, and traditional low-flow sampling techniques, to evaluate groundwater quality and the occurrence of intrinsic biodegradation. PDBs are anticipated to be purchased from EON Products, one of the few suppliers of this type of passive sampling device. Groundwater sampling activities will be executed using a 2-person sampling crew and will be performed in general accordance with the FDEP Standard Operating Procedures (SOPs).

The proposed Summer 2024 field event (tentatively scheduled for June 2024) will include sampling and analyses of groundwater from 7 monitoring wells. The Summer 2024 field event is budgeted to include 1 day with 2 people for groundwater sampling and PDB deployment activities for the next sampling event. The proposed Winter 2024 field event (tentatively scheduled for December 2024) will include sampling of 26 monitoring wells (19 using PDBs and 7 wells via traditional purging techniques) to collect field water quality parameters. The Winter 2024 field event is budgeted to include a total of 3 days (with 2 people) for groundwater sampling activities and PDB deployment for the Summer 2025 field event. Consistent field documentation and field protocols will be utilized to develop reliable data to support the natural attenuation evaluation for the groundwater plume. The groundwater samples will

be analyzed in accordance with the sampling plan summarized in the *2023 Annual Groundwater Monitoring Report (GMR)*. Quality control (QC) samples are proposed to be collected at a rate of 5% of total samples as required by the most recent FDEP SOPs, resulting in 2 QC samples annually.

Geosyntec will conduct a round of groundwater level measurements in accordance with the sampling plan summarized in the *2023 Annual GMR* concurrent with each semi-annual groundwater sampling event (budgeted for 1 day with 2-person field team for each event). Depth to groundwater measurements will be recorded to the nearest 0.01-ft in each monitoring well, including existing monitoring wells and applicable City of Vero Beach wells (assumed up to 60 wells per event). Overall, for field activities, budget has been included for 6 field days with 2 persons, mobilization time for field personnel, and associated field expenses for sampling.

Due to wet site conditions and difficult access to certain well clusters, costs for rental of a utility phase vehicle are included for 1 day of groundwater level measurements and 1 day of sampling per event (4 total days).

It is anticipated that purge water (investigation-derived waste [IDW]) will be containerized in a 55-gallon polyethylene drum and temporarily staged on Site for characterization prior to removal and disposal. Costs are included herein for purchase of one 55-gallon polyethylene drum, drum removal and disposal by a licensed subcontractor, and for 4 hours of drum removal oversight for 1 person.

Brush clearing by a contractor is necessary on a biannual basis to clear overgrowth and maintain access to the well clusters and was last performed at the Site in October 2022. In 2024, Geosyntec will provide oversight for a contractor to clear shrubs, vines, and tall grass in an approximate 6 feet radius around select well clusters using a track loader with mower deck. Costs are included for one day oversight (with one person) and for subcontractor costs.

Phase 5 – Data Evaluation and Annual Reporting: Under this phase, Geosyntec will perform data evaluation activities and reporting. The reporting includes preparation of the *2024 Annual GMR* for submittal to FDEP.

The *2024 Annual GMR* will be consistent with the groundwater monitoring reports historically submitted to FDEP for this Site and the data evaluation activities will include database management, screening results against applicable regulatory criteria, GIS figure preparation, time trend analyses, and/or statistical data analyses. The report will be supported by attachments containing Chain-of-Custody sheets, field notes and observations, water sampling logs, maps, graphs, analytical results, quantitative statistical evaluation, and other applicable materials. As part of the statistical analysis, trend analysis graphs showing temporal concentrations of constituents and a summary of the Mann-Kendall statistics will be included to identify increasing, decreasing, or no trends in groundwater constituent concentrations. The draft *2024 Annual GMR* will be submitted to IRC SWDD for review

prior to submittal to FDEP. The final report will be signed and sealed by a Florida-registered Professional Engineer or Geologist.

ASSUMPTIONS

The following assumptions were made in developing this fee proposal:

- IDW for off-site disposal (decontamination water) will be characterized as non-hazardous.
- If needed, changes to the proposed scope of work, budget or schedule will be agreed upon in writing in advance of the work being performed.
- Adverse weather conditions that require operations to be halted may affect the proposed schedule and budget. Adverse weather conditions may include, but are not limited to, a tornado watch/warning, lightning in the area, and a hurricane or threat of a hurricane.
- If a stop work order is issued for reasons outside of Geosyntec's control, the budgeted cost and schedule shall be subject to revision due to changed circumstances.

TIME SCHEDULE

The semi-annual groundwater sampling events are tentatively scheduled for June and December 2024 as described herein. The *2024 Annual GMR* will be submitted to FDEP to meet the required deadline of 28 February 2025.

BUDGET ESTIMATE

Geosyntec proposes to complete the scope of work described herein on a Total Cost Not to Exceed Price with Fee at risk basis in accordance with the terms of the Continuing Contract Agreement for Consulting Engineering Services between our IRC and Geosyntec. The total cost for this work is **\$88,617.86**. Breakdown of the costs by category and by phase is provided below. Detailed costs tables (fee schedule) are included in the Attachment as **Table 1**. Geosyntec will not exceed the budget estimate without prior approval and written authorization from IRC SWDD.

• Personnel Labor	\$68,562.00
• Subcontractors	\$8,872.00
• General Conditions (ODCs)	\$11,183.86
Phase 1 – Project Management	\$7,663.20
Phase 2 – Meetings/Regulatory Interaction	\$4,844.60
Phase 3 – Annual Pollution Remediation Liabilities Evaluation	\$6,087.30
Phase 4 – Semi-Annual Sampling Activities	\$58,145.18
Phase 5 – Data Evaluation and Semi-Annual Reporting	\$11,877.58
TOTAL	\$88,617.86

Mr. Himanshu H. Mehta, P.E.
22 April 2024
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CLOSURE

Geosyntec appreciates this opportunity to offer our services. If this proposal is acceptable, please indicate your agreement by signing the attached work authorization, which references this proposal. Please return one signed work authorization. Please call Crystal Wilson at 850.483.5102 with questions you may have as you review this proposal.

Sincerely,

A handwritten signature in blue ink that reads 'Crystal Wilson'.

Crystal Wilson, P.G.
Senior Geologist

A handwritten signature in black ink that reads 'Joseph Applegate'.

Joseph Applegate, P.G.
Senior Principal Geologist

ATTACHMENT

TABLE 1: GEOSYNTEC PROJECT COST ESTIMATE SUMMARY (FEE SCHEDULE)

FIGURE 1: SITE MAP AND 2024 MONITORING PLAN

Table 1: Geosyntec Project Cost Estimate Summary

Client: Indian River County Solid Waste Disposal District
Site: South Gifford Road Landfill
Task: 2024 Groundwater Monitoring/Reporting
Date: 04/22/24

Phase	Cost Estimate
Personnel Labor	
PHASE 1: Project Management	\$7,440
PHASE 2: Meetings/Regulatory Interaction	\$4,420
PHASE 3: Annual Pollution Remediation Liabilities Evaluation	\$5,910
PHASE 4: Semi-Annual Sampling Activities	\$39,406
PHASE 5: Data Evaluation and Annual Reporting	\$11,386
Personnel Labor Total	\$68,562.00
Subcontractor	
PHASE 1: Project Management	\$0
PHASE 2: Meetings/Regulatory Interaction	\$0
PHASE 3: Annual Pollution Remediation Liabilities Evaluation	\$0
PHASE 4: Semi-Annual Sampling Activities	\$8,872
PHASE 5: Data Evaluation and Annual Reporting	\$0
Subcontractor Total	\$8,872.00
General Conditions - ODCs	
PHASE 1: Project Management	\$223.20
PHASE 2: Meetings/Regulatory Interaction	\$424.60
PHASE 3: Annual Pollution Remediation Liabilities Evaluation	\$177.30
PHASE 4: Semi-Annual Sampling Activities	\$9,867.18
PHASE 5: Data Evaluation and Annual Reporting	\$491.58
General Conditions Total	\$11,183.86
Estimated Project Cost:	\$88,617.86

**PHASE 1: Project Management
2024 BUDGET ESTIMATE
SOUTH GIFFORD ROAD LANDFILL**

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
A. Professional Services				
Senior Professional	hr	\$265	24	\$6,360
Subtotal Professional Services				\$6,360
B. Technical/Administrative Services				
Project Administrator	hr	\$90	12	\$1,080
Subtotal Technical/Administrative Services				\$1,080
C. Reimbursables				
Communications Fee	3% labor	0.03	7,440	\$223.20
Subtotal Reimbursables				\$223.20
TOTAL ESTIMATED BUDGET : PHASE 1				\$7,663.20

**PHASE 2: Meetings/Regulatory Interaction
2024 BUDGET ESTIMATE
SOUTH GIFFORD ROAD LANDFILL**

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
A. Professional Services				
Senior Principal	hr	\$310	4	\$1,240
Senior Professional	hr	\$265	12	\$3,180
Subtotal Professional Services				\$4,420
B. Technical/Administrative Services				
Subtotal Technical/Administrative Services				\$0
C. Reimbursables				
Communications Fee	3% labor	0.03	4,420	\$132.60
Lodging	day	\$192	1	\$192
Vehicle Rental	day	\$100	1	\$100
Subtotal Reimbursables				\$424.60
TOTAL ESTIMATED BUDGET : PHASE 2				\$4,844.60

**PHASE 3: Annual Pollution Remediation Liabilities Evaluation
2024 BUDGET ESTIMATE
SOUTH GIFFORD ROAD LANDFILL**

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
A. Professional Services				
Senior Principal	hr	\$310	4	\$1,240
Senior Professional	hr	\$265	6	\$1,590
Senior Staff Professional	hr	\$184	16	\$2,944
Subtotal Professional Services				\$5,774
B. Technical/Administrative Services				
Clerical	hr	\$68	2	\$136
Subtotal Technical/Administrative Services				\$136
C. Reimbursables				
Communications Fee	3% labor	0.03	5,910	\$177.30
Subtotal Reimbursables				\$177.30
TOTAL ESTIMATED BUDGET : PHASE 3				\$6,087.30

**PHASE 4: Semi-Annual Sampling Activities
2024 BUDGET ESTIMATE
SOUTH GIFFORD ROAD LANDFILL**

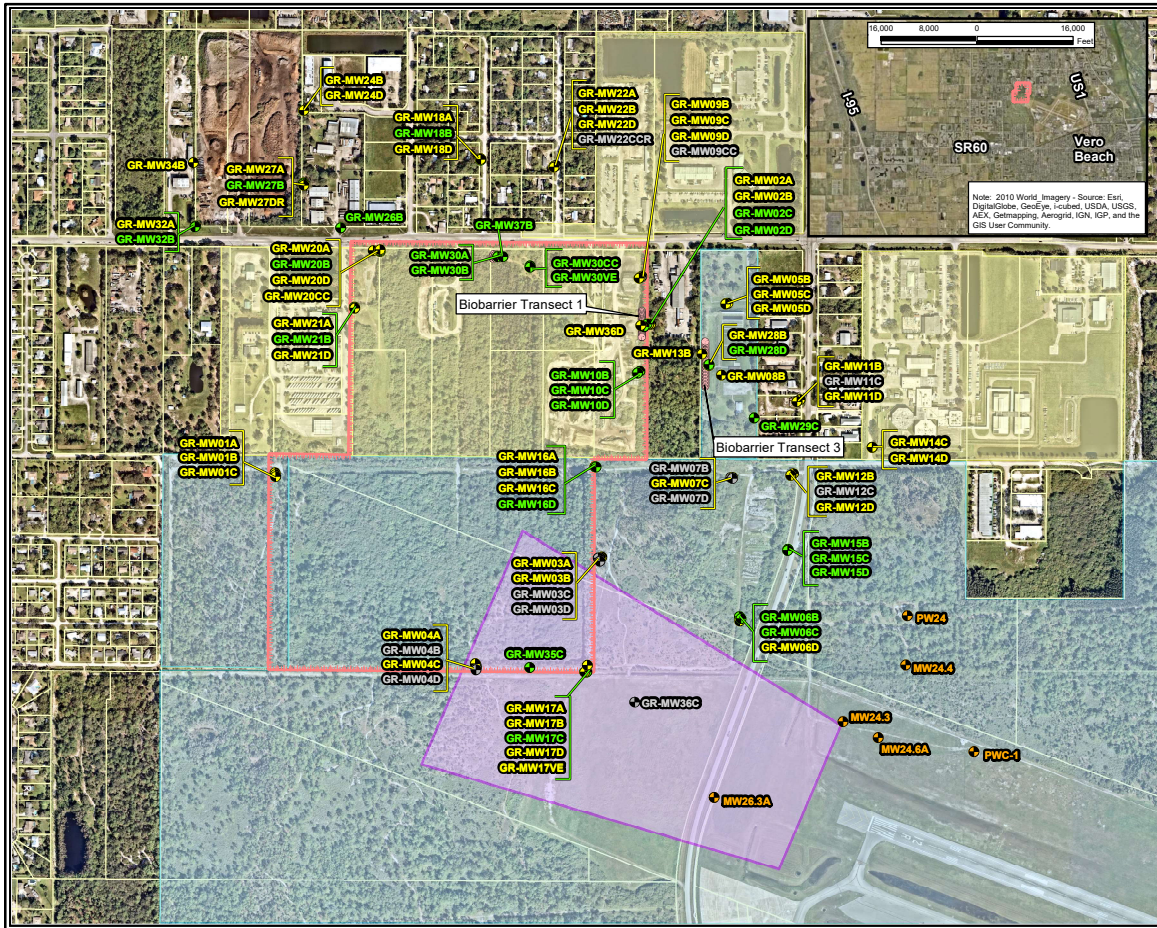
ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
A. Professional Services				
Senior Principal	hr	\$310	2	\$620
Senior Professional	hr	\$265	16	\$4,240
Senior Staff Professional	hr	\$184	104	\$19,136
Staff Professional	hr	\$160	92	\$14,720
Subtotal Professional Services				\$38,716
B. Technical/Administrative Services				
Designer	hr	\$165	2	\$330
Project Administrator	hr	\$90	4	\$360
Subtotal Technical/Administrative Services				\$690
C. Subcontractors				
Drum Transport/Disposal	each	\$290	1	\$290
Laboratory Analysis for VOCs	each	\$92	36	\$3,312
Laboratory Analysis for RCRA Metals	each	\$60	1	\$60.00
Laboratory Analysis for Mercury	each	\$35	1	\$35.00
Brush Clearing Contractor	each	\$5,175	1	\$5,175
Subtotal Subcontractor Services				\$8,872
D. Reimbursables				
Communications Fee	3% labor	0.03	\$39,406	\$1,182.18
Miscellaneous Supplies - Summer (2), Winter (4), Brush Clearing (1)	day	\$50	7	\$350
PDBs for Winter 2024 and June 2025 event	quote	\$42	30	\$1,260
PDB Harness	quote	\$82	1	\$82
Drum for Purge Water	each	\$50	1	\$50
Lodging - Summer (2x1), Winter (2x3)	day	\$192	8	\$1,536
Per Diem - Summer (2x2), Winter (2x4), Brush Clearing (1)	day	\$59	13	\$767
Utility Task Vehicle Rental (daily rate plus delivery fee)	day	\$250	4	\$1,000
Field Vehicle - Summer (2x2), Winter (2x4), Brush Clearing (1), IDW (1)	day	\$100	14	\$1,400
Groundwater Sampling Equipment - Summer	each	\$500	1	\$500
Groundwater Sampling Equipment - Winter	each	\$1,500	1	\$1,500
PDB Deployment Kit - Summer (1), Winter (1)	day	\$50	2	\$100
Equipment Shipping - Summer (1), Winter (1)	each	\$70	2	\$140
Subtotal Reimbursables				\$9,867.18
TOTAL ESTIMATED BUDGET : PHASE 4				\$58,145.18

Notes:

- Lodging rates were taken from the GSA website for the Vero Beach area (<https://www.gsa.gov/travel/plan-book/per-diem-rates/>).
- Groundwater Sampling Equipment includes the following: water level indicator, peristaltic pump, water quality meter (pH, temperature, conductivity, dissolved oxygen, and oxidation reduction potential), turbidity meter, tubing, and nitrile gloves.
- PDB Deployment Kit includes: miscellaneous field supplies necessary to suspend and deploy PDBs.

PHASE 5: Data Evaluation and Annual Reporting
2024 BUDGET ESTIMATE
SOUTH GIFFORD ROAD LANDFILL

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
A. Professional Services				
Senior Principal	hr	\$310	2	\$620
Senior Professional	hr	\$265	20	\$5,300
Senior Staff Professional	hr	\$184	20	\$3,680
Subtotal Professional Services				\$9,600
B. Technical/Administrative Services				
Designer	hr	\$165	10	\$1,650
Clerical	hr	\$68	2	\$136
Subtotal Technical/Administrative Services				\$1,786
C. Reimbursables				
Communications Fee	3% labor	0.03	\$11,386	\$341.58
Specialized Computer Applications	hr	\$15	10	\$150.00
Subtotal Reimbursables				\$491.58
TOTAL ESTIMATED BUDGET : PHASE 5				\$11,877.58



N

0 300 600 1,200 Feet

Legend

- Biobarrier Transect
- Monitoring Well Location-Not Monitored
- Water Level Only Monitoring Well Location
- Plume Monitoring Well Location
- City of Vero Beach Monitoring Well Location
- Gifford Road Landfill Site Boundary
- Parcels owned by Indian River County
- Parcels owned by the City of Vero Beach
- Runway Protection Zone

Notes:

- Maintenance wells are defined as monitoring wells that are not being monitored but are maintained for water level measurement purposes.
- Aerial Source: Nearmap October 2022.

Site Map and 2024
Monitoring Plan

South Gifford Road Landfill

	FIGURE NO. 1 PROJECT NO. FR0766U
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