

**WORK ORDER 16**

**SOUTH GIFFORD ROAD LANDFILL**

This Work Order Number 16 is entered into as of this \_\_\_ day of \_\_\_\_\_, 2022, pursuant to that certain Continuing Consulting Engineering Services Agreement dated April 17, 2018, renewed and amended as of May 18, 2021, (collectively referred to as the "Agreement"), by and between INDIAN RIVER COUNTY, a political subdivision of the State of Florida ("COUNTY") and Geosyntec Consultants, Inc. ("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 fee schedule set forth in Exhibit A. The Consultant will perform the professional services within the timeframe more particularly set forth in Exhibit A (Schedule). 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:**

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

By: Joseph 1. Applegate

By: \_\_\_\_\_  
**Peter D. O'Bryan, Chairman**

Print Name: Joseph Applegate

Title: Senior Principal

BCC Approved Date: \_\_\_\_\_

**Attest: Jeffrey R. Smith, Clerk of Court and Comptroller**

By: \_\_\_\_\_  
**Deputy Clerk**

Approved: \_\_\_\_\_  
**Jason E. Brown, County Administrator**

Approved as to form and legal sufficiency: \_\_\_\_\_  
**Dylan T. Reingold, County Attorney**

**EXHIBIT A**

**PROFESSIONAL SERVICES**

7 June 2022

Mr. Himanshu H. Mehta, P.E.  
Managing Director  
Solid Waste Disposal District  
Indian River County  
1325 74<sup>th</sup> 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 fee proposal is based on correspondence with the FDEP and discussions with IRC. As requested by IRC, this fee proposal includes budget to complete two semi-annual monitoring and reporting events for the plume monitoring well network, as well as related consulting services to prepare an annual pollution liabilities evaluation report for identified IRC-owned environmental liabilities and represent IRC during interactions with regulatory agencies. Geosyntec has prepared this proposal (professional services as Exhibit A) as Work Order No. 16 for the 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 will 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.

In consideration of the ongoing natural attenuation processes occurring at the site, the enhancement of these biological processes via the injection of an electron donor was proposed and agreed to in concept by the FDEP in correspondence dated 2 August 2006. In response to FDEP's request and supported by groundwater monitoring results, Geosyntec conducted an injection event in 2017 [*Remedial Action Plan Modification Addendum No. 3 (RAPM 3)*] to remediate recalcitrant CVOC groundwater impacts in the former source area. Semi-annual performance monitoring associated with bioremediation implementation was conducted from 2017 to 2020. In April 2021, FDEP approved to discontinue performance monitoring associated with *RAPM 3* and to discontinue CVOC sample collection at five monitoring well locations where CVOCs had not been detected for at least three consecutive sampling events. Semi-annual groundwater monitoring for CVOCs at 42 monitoring well locations will be conducted in 2022, as well as semi-annual reporting.

## PROPOSED SCOPE OF WORK

The proposed scope of work consists of semi-annual groundwater monitoring and reporting and related activities to be performed on behalf of IRC SWDD at the Former South Gifford Road Landfill. 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 Semi-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 five hours per sampling/reporting event and one hour per month for the project manager (22 hours total), one hour for the senior principal-in-charge, and one hour per month (12 hours total) for the administrative assistant.

**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 Commission, 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 South Gifford Road Closed Landfill (4701 41<sup>st</sup> Street) and Former Premier Citrus Property (375 82<sup>nd</sup> 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 2022 field activities related to the performance monitoring and plume groundwater monitoring. The semi-annual activities will include field preparation, groundwater sampling, and water level measurements. Field preparation activities will include scheduling and staffing, subcontracting, coordination with the analytical laboratory, field equipment preparation, procurement of Passive Diffusion Bag (PDB) samplers, and notifying FDEP and Vero Beach Municipal Airport of the field schedule.

Geosyntec will perform the groundwater sampling activities associated with the CVOC plume monitoring well network. Sampling activities in 2022 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 two-person sampling crew and will be performed in general accordance with the FDEP Standard Operating Procedures (SOPs).

The proposed summer 2022 field event (tentatively scheduled for the week of 27 June 2022) will include sampling and analyses of groundwater from nine monitoring wells. The summer 2022 field event is budgeted to include one day for groundwater sampling activities and one day for PDB deployment for the next sampling event (total of two [2] field days each with two persons). The proposed winter 2022 field event (tentatively scheduled for December 2022) will include sampling of 42 monitoring wells (31 using PDBs and 11 wells via traditional purging techniques) to collect field water quality parameters. The winter 2022 field event is budgeted to include a total of two (2) days (with two persons) for groundwater sampling activities and PDB deployment for the summer 2023 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 2021 Annual Groundwater Monitoring Report. Quality control samples are proposed to be collected at a rate of 5% of total samples as required by the most recent FDEP SOPs.

Geosyntec will conduct a complete round of groundwater level measurements concurrent with each semi-annual groundwater sampling event (budgeted for one day with two-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 95 wells per event). Due to wet site conditions and difficult access to certain well clusters, costs for rental of a utility phase vehicle are included for one day of groundwater level measurements and one 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 one-half day of drum removal oversight for one person.

Overall, for field activities, budget has been included for six field days with two persons, mobilization time for field personnel, and associated field expenses for sampling.

Geosyntec will provide oversight for a contractor to clear brush in an approximate 6 feet radius around select well clusters in conjunction with the winter 2022 groundwater sampling event to maintain access to well clusters. Costs are included for one day oversight (with one person) and for subcontractor costs.

**Phase 5 – Data Evaluation and Semi-Annual Reporting:** Under this phase, Geosyntec will perform data evaluation activities and reporting. The reporting includes preparation of one summer 2022 report (simplified format) and one winter 2022 report for submittal to FDEP.

The summer 2022 report will be a letter report with attachments, including a monitoring well location map and tables of the field and laboratory results. Data evaluation activities for the summer 2022 report will include database management, screening results against applicable regulatory criteria, and summary data table preparation. This report is due to FDEP by 31 July 2022.

The winter 2022 report 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 winter 2022 annual 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. Historical data summaries will be included for monitoring wells recommended for removal from the monitoring plan.

The draft summer and winter 2022 reports will be submitted to IRC SWDD for review prior to submittal to FDEP. Each final report will be signed and sealed by a Florida registered professional engineer or geologist.

## SCHEDULE

The semi-annual groundwater sampling events will be tentatively conducted in June and December 2022 as described herein. Reports will be submitted to FDEP to meet required deadlines.

## BUDGET ESTIMATE

A budget estimate for the scope of work outlined in Phases 1 through 6 of this proposal is summarized in the following table, and a detailed budget estimate is provided as Attachment A. The budget estimate presented in this proposal is based on Geosyntec's understanding of the project requirements, our experience gained from executing similar phases for SWDD since 2002 at the Site, and experience with groundwater monitoring and reporting activities at similar facilities. The estimated budget for 2022 compared to 2021 is approximately 5% less due to efficiencies gained from previous field and reporting events. Geosyntec will not exceed the budget estimate without prior approval and written authorization from IRC SWDD.

Phase 1 – Project Management	\$6,431.32
Phase 2 – Meetings/Regulatory Interaction	\$4,651.48
Phase 3 – Annual Pollution Remediation Liabilities Evaluation	\$5,963.70
Phase 4 – Semi-Annual Sampling Activities	\$48,221.04
Phase 5 – Data Evaluation and Semi-Annual Reporting	\$15,092.60
<b>TOTAL</b>	<b>\$80,360.14</b>

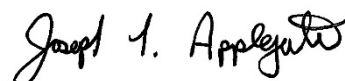
## CLOSURE

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,



Crystal Wilson, P.G.  
Project Geologist



Joseph Applegate, P.G.  
Senior Principal Geologist

**ATTACHMENT A**  
**BUDGET ESTIMATE**



**PHASE 1: Project Management  
2022 BUDGET ESTIMATE  
SOUTH GIFFORD ROAD LANDFILL**

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
<b>A. Professional Services</b>				
Senior Principal	hr	\$260	2	\$520
Project Professional	hr	\$203	24	\$4,872
<b>Subtotal Professional Services</b>				<b>\$5,392</b>
<b>B. Technical/Administrative Services</b>				
Project Administrator	hr	\$71	12	\$852
<b>Subtotal Technical/Administrative Services</b>				<b>\$852</b>
<b>C. Reimbursables</b>				
Communications Fee	3% labor	0.03	6,244	\$187.32
<b>Subtotal Reimbursables</b>				<b>\$187.32</b>
<b>TOTAL ESTIMATED BUDGET : PHASE 1</b>				<b>\$6,431.32</b>

**PHASE 2: Meetings/Regulatory Interaction  
2022 BUDGET ESTIMATE  
SOUTH GIFFORD ROAD LANDFILL**

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
<b>A. Professional Services</b>				
Senior Principal	hr	\$260	8	\$2,080
Project Professional	hr	\$203	12	\$2,436
<b>Subtotal Professional Services</b>				<b>\$4,516</b>
<b>C. Reimbursables</b>				
Communications Fee	3% labor	0.03	4,516	\$135.48
<b>Subtotal Reimbursables</b>				<b>\$135.48</b>
<b>TOTAL ESTIMATED BUDGET : PHASE 2</b>				<b>\$4,651.48</b>

**PHASE 3: Annual Pollution Remediation Liabilities Evaluation  
2022 BUDGET ESTIMATE  
SOUTH GIFFORD ROAD LANDFILL**

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
<b>A. Professional Services</b>				
Senior Principal	hr	\$260	6	\$1,560
Project Professional	hr	\$203	8	\$1,624
Senior Staff Professional	hr	\$154	16	\$2,464
<b>Subtotal Professional Services</b>				<b>\$5,648</b>
<b>B. Technical/Administrative Services</b>				
Project Administrator	hr	\$71	2	\$142
<b>Subtotal Technical/Administrative Services</b>				<b>\$142</b>
<b>C. Reimbursables</b>				
Communications Fee	3% labor	0.03	5,790	\$173.70
<b>Subtotal Reimbursables</b>				<b>\$173.70</b>
<b>TOTAL ESTIMATED BUDGET : PHASE 3</b>				<b>\$5,963.70</b>

**PHASE 4: Semi-Annual Sampling Activities  
2022 BUDGET ESTIMATE  
SOUTH GIFFORD ROAD LANDFILL**

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
<b>A. Professional Services</b>				
Senior Principal	hr	\$260	2	\$520
Project Professional	hr	\$203	14	\$2,842
Senior Staff Professional	hr	\$154	112	\$17,248
Staff Professional	hr	\$132	88	\$11,616
<b>Subtotal Professional Services</b>				<b>\$32,226</b>
<b>B. Technical/Administrative Services</b>				
Project Administrator	hr	\$71	2	\$142
<b>Subtotal Technical/Administrative Services</b>				<b>\$142</b>
<b>C. Subcontractors</b>				
Drum Transport/Disposal	each	\$276	1	\$276
Laboratory Analysis for VOCs	each	\$64	54	\$3,456
Brush Clearing Contractor	each	\$2,035	1	\$2,035
<b>Subtotal Subcontractor Services</b>				<b>\$5,767</b>
<b>D. Reimbursables</b>				
Communications Fee	3% labor	0.03	\$32,368	\$971.04
Miscellaneous Supplies - Summer (3), Winter (3), IDW (1), Brush Clearing (1)	day	\$50	8	\$400
PDBs for Winter 2022 event (includes shipping)	quote	\$33	33	\$1,089
PDBs for Summer 2023 event (includes shipping)	quote	\$33	11	\$363
Drum for Purge Water	each	\$50	1	\$50
Lodging - Summer (3x2), Winter (3x2)	day	\$164	12	\$1,968
Per Diem - Summer (3x2), Winter (3x2), IDW (1), Brush Clearing (1)	day	\$59	14	\$826
Utility Task Vehicle Rental (daily rate plus delivery fee)	day	\$210	4	\$840
Field Vehicle - Summer (3x2), Winter (3x2), IDW (1), Brush Clearing (1)	day	\$80	14	\$1,120
Overnight Cooler-Test America - Summer (1), Winter (2)	each	\$95	3	\$285
Groundwater Sampling Kit - (per sampler) Summer (1x2), Winter (2x2)	day	\$300	6	\$1,800
Water Level Measurement Kit - Summer (1), Winter (1)	day	\$60	2	\$120
PDB Deployment Kit - Summer (1), Winter (1)	day	\$100	2	\$200
Equipment Shipping - Winter (1)	each	\$54	1	\$54
<b>Subtotal Reimbursables</b>				<b>\$10,086.04</b>
<b>TOTAL ESTIMATED BUDGET : PHASE 4</b>				<b>\$48,221.04</b>

Notes:

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

**PHASE 5: Data Evaluation and Semi-Annual Reporting**  
**2022 BUDGET ESTIMATE**  
**SOUTH GIFFORD ROAD LANDFILL**

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
<b>A. Professional Services</b>				
Senior Principal	hr	\$260	5	\$1,300
Project Professional	hr	\$203	28	\$5,684
Senior Staff Professional	hr	\$154	32	\$4,928
<b>Subtotal Professional Services</b>				<b>\$11,912</b>
<b>B. Technical/Administrative Services</b>				
Designer	hr	\$143	16	\$2,288
Clerical	hr	\$55	4	\$220
<b>Subtotal Technical/Administrative Services</b>				<b>\$2,508</b>
<b>C. Reimbursables</b>				
Communications Fee	3% labor	0.03	\$14,420	\$432.60
Specialized Computer Applications	hr	\$15	16	\$240
<b>Subtotal Reimbursables</b>				<b>\$672.60</b>
<b>TOTAL ESTIMATED BUDGET : PHASE 5</b>				<b>\$15,092.60</b>