

CCNA2018 WORK ORDER 1

SOUTH GIFFORD ROAD LANDFILL

This Work Order Number 1 is entered into as of this ___ day of _____, 201__, pursuant to that certain Continuing Consulting Engineering Services Agreement for Professional Services entered into as of this 17th day of April, 2018 (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 (Fee Schedule), attached to this Work Order and 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:

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

By: Jill W. Johnson

By: _____
Peter D. O'Bryan, Chairman

Print Name: Jill Johnson

Title: 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

30 April 2018

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 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, monitoring well maintenance and brush clearing, 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. CCNA2018 WO No. 1 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 is ongoing at monitoring well GR-MW37B and conducted concurrently groundwater monitoring of the plume monitoring well network.

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 tasks:

- Task 1 – Project Management;
- Task 2 – Meetings/Regulatory Interaction;
- Task 3 – Annual Pollution Remediation Liabilities Evaluation;
- Task 4 – Semi-Annual Sampling Activities;
- Task 5 – Monitoring Well Maintenance;
- Task 6 – Brush Clearing Activities; and
- Task 7 – Data Evaluation and Semi-Annual Reporting.

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

Task 1 – Project Management: Under this task, 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 ten hours per sampling/reporting event for the project manager, two hours for the principal-in-charge, and two hours for the administrative assistant.

Task 2 – Meetings/Regulatory Interaction: Under this task, Geosyntec will prepare for and attend up to two meetings, with IRC SWDD, FDEP, and/or IRC Board of County Commission, as necessary. It has been assumed that one of these meetings will be in person and one meeting will be by conference call. Also, under this task, six hours has been included for the principal-in-charge to provide ongoing support to IRC SWDD related to interaction and negotiation with FDEP.

Task 3 – Annual Pollution Remediation Liabilities Evaluation: As requested by IRC SWDD, under this task, 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 41st Street) and Old Administration Building (1840 25th Street). In addition, two hours have been included for a Florida registered professional engineer to conduct an independent review of the liability evaluation.

Task 4 – Semi-Annual Sampling Activities: Under this task, Geosyntec will perform 2018 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. Performance monitoring well MW-37B associated with the *RAPM3* implementation is included in the semi-annual sampling plan for analysis of bioremediation performance parameters, including dissolved gasses, total organic carbon, and dechlorinating microbial concentration.

Geosyntec will perform the groundwater sampling activities associated with the CVOC plume monitoring well network. Sampling activities will be completed with a combination of PDB samplers and traditional low-flow sampling techniques. PDBs are anticipated to be purchased from EON Products, one of the few suppliers of this type of passive sampling device. Two PDB harnesses will be purchased from EON Products for monitoring wells GR-MW02C and GR-MW22CCR. 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 2018 field event (tentatively scheduled for June) will include sampling of nine monitoring wells (three wells using PDBs and six wells with traditional sampling techniques). The summer 2018 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 field days each with two persons). The proposed winter 2018 field event (tentatively scheduled for

December) will include sampling of 47 monitoring wells (37 wells using PDBs and ten wells with traditional sampling techniques). The winter 2018 field event is budgeted to include a total of three days (with two persons) for groundwater sampling activities and PDB deployment for the summer 2019 sampling 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 2017 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 coincident 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 90 wells per event).

It is anticipated that purge water (investigation-derived waste [IDW]) will be containerized in 55-gallon polyethylene drums and temporarily staged on Site for characterization prior to removal and disposal. Costs are included herein for two 55-gallon polyethylene drums and oversight of drum disposal concurrent with one of the sampling events.

Overall, budget has been included for six field days with a two-person team (i.e., 12 man days) and associated field expenses for sampling.

Task 5 – Monitoring Well Maintenance: A monitoring well inventory was conducted by Geosyntec personnel in December 2017 to document maintenance needs, including top of casings that had shifted above well completions, new well plugs, and/or new manhole lids. Based on observations, maintenance activities are necessary, as discussed with IRC, to repair well pads at three cluster locations, GR-MW13, GR-MW27, GR-MW32. Geosyntec will provide oversight for a subcontractor to repair tops of casings and replace well pads. A Florida-licensed surveyor will survey the repaired monitoring wells and performance monitoring well GR-MW37B to identify the location and relevant elevation information (e.g., top of casing, ground surface). Monitoring well maintenance will be performed prior to the summer 2018 semi-annual groundwater monitoring event.

Task 6 – Brush Clearing Activities: During the monitoring well inventory conducted by Geosyntec personnel in December 2017, approximately 20 well clusters were noted to be overgrown by brush or tall grass impeding access for sample collection. Geosyntec will provide oversight for a contractor to clear brush and mow undergrowth in an approximate 6 feet radius around select well clusters. Brush clearing activities will be performed prior to the summer 2018 semi-annual groundwater monitoring event.

Task 7 – Data Evaluation and Semi-Annual Reporting: Under this task, Geosyntec will perform data evaluation activities and reporting. The reporting includes preparation of one summer 2018 report (simplified format) and one winter 2018 report for submittal to FDEP.

The summer 2018 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 2018 report will include database management, screening results against applicable regulatory criteria, and summary data table preparation. This report will be prepared following the June groundwater sampling event.

The winter 2018 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 2018 annual report will be supported by attachments containing Chain-of-Custody sheets, field notes and observations, water sampling logs, maps, graphs, analytical results, and any other applicable materials.

In addition to the information outlined above (which has been provided historically in groundwater monitoring reports for the Site), this report will include a more rigorous quantitative statistical evaluation of the CVOC results to support the possible reduction in the quantity and frequency of the sampling activities. 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. This report will be prepared following the December groundwater sampling event.

The draft summer and winter 2018 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 monitoring events will be tentatively conducted in June and December 2018 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 Tasks 1 through 7 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 tasks for SWDD since 2002 at the Site, and experience with groundwater monitoring and reporting activities at similar facilities. Geosyntec will not exceed the budget estimate without prior approval and written authorization from IRC SWDD.

Task 1 – Project Management	\$5,222
Task 2 – Meetings/Regulatory Interaction	\$5,686
Task 3 – Annual Pollution Remediation Liabilities Evaluation	\$2,613
Task 4 – Semi-Annual Sampling Activities	\$45,964
Task 5 – Monitoring Well Maintenance	\$6,308
Task 6 – Brush Clearing Activities	\$9,801
Task 7 – Data Evaluation and Semi-Annual Reporting	\$17,204
TOTAL	\$92,798

CLOSURE1

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 to Ms. Johnson's attention. Please call either of the undersigned with questions you may have as you review this proposal.

Sincerely,



Crystal Towns, P.G.
Hydrogeologist



Jill W. Johnson, P.G.
Principal Hydrogeologist

Attachments

FR0766\XR18011

ATTACHMENT A
BUDGET ESTIMATE

Table 1

APRIL 2018 BUDGET ESTIMATE
SOUTH GIFFORD ROAD LANDFILL

TASK 1: Project Management

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
A. Professional Services				
Principal	hr	\$225	2	\$450
Professional	hr	\$160	24	\$3,840
Subtotal Professional Services				\$4,290
B. Technical/Administrative Services				
Project Administrator	hr	\$65	12	\$780
Subtotal Technical/Administrative Services				\$780
C. Reimbursables				
Communications Fee	3% labor	0.03	5,070	\$152
Subtotal Reimbursables				\$152
TOTAL ESTIMATED BUDGET : TASK 1				\$5,222

Table 2

APRIL 2018 BUDGET ESTIMATE
SOUTH GIFFORD ROAD LANDFILL

TASK 2: Meetings/Regulatory Interaction

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
A. Professional Services				
Principal	hr	\$225	16	\$3,600
Professional	hr	\$160	12	\$1,920
Subtotal Professional Services				\$5,520
C. Reimbursables				
Communications Fee	3% labor	0.03	5,520	\$166
Subtotal Reimbursables				\$166
TOTAL ESTIMATED BUDGET : TASK 2				\$5,686

Table 3

**APRIL 2018 BUDGET ESTIMATE
SOUTH GIFFORD ROAD LANDFILL**

TASK 3: Annual Pollution Remediation Liabilities Evaluation

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
A. Professional Services				
Senior Principal	hr	\$240	1	\$240
Principal	hr	\$225	1	\$225
Senior Professional	hr	\$205	2	\$410
Professional	hr	\$160	2	\$320
Staff Professional	hr	\$120	10	\$1,200
Subtotal Professional Services				\$2,395
B. Technical/Administrative Services				
Project Administrator	hr	\$65	2	\$130
Subtotal Technical/Administrative Services				\$130
C. Reimbursables				
Communications Fee	3% labor	0.03	2,525	\$76
8.5"x11" Photocopies	each	\$0.12	100	\$12
Subtotal Reimbursables				\$88
TOTAL ESTIMATED BUDGET : TASK 3				\$2,613

Table 4

APRIL 2018 BUDGET ESTIMATE
SOUTH GIFFORD ROAD LANDFILL

TASK 4: Semi-Annual Sampling Activities

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
A. Professional Services				
Principal	hr	\$225	4	\$900
Professional	hr	\$160	12	\$1,920
Senior Staff Professional	hr	\$140	100	\$14,000
Subtotal Professional Services				\$16,820
B. Technical/Administrative Services				
Construction Manager II	hr	\$120	100	\$12,000
Project Administrator	hr	\$65	2	\$130
Subtotal Technical/Administrative Services				\$12,130
C. Subcontractors				
Laboratory Analysis for VOCs	each	\$62	59	\$3,630
Laboratory Analysis for TOC	each	\$29	7	\$206
Laboratory Analysis for Dissolved Gases	each	\$83	7	\$580
Laboratory Analysis for Dhc	each	\$305	4	\$1,220
Laboratory Analysis for vcrA	each	\$90	4	\$360
Subtotal Subcontractor Services				\$5,996
D. Reimbursables				
Miscellaneous Supplies	day	\$50	14	\$700
PDBs for Summer event	quote	\$32	3	\$97
PDBs for Winter event	quote	\$32	37	\$1,196
PDB Harnesses	quote	\$55	2	\$110
Drums	each	\$50	2	\$100
Drum Transport	each	\$262	2	\$524
Lodging	day	\$152	14	\$2,128
Per Diem	day	\$51	14	\$714
Communications Fee	3% labor	0.03	\$28,950	\$869
Field Vehicle	day	\$80	14	\$1,120
8.5"x11" Photocopies	each	\$0.12	160	\$19
Overnight Cooler-Test America	each	\$95	4	\$380
Overnight Cooler-SIREM	each	\$95	2	\$190
Groundwater Sampling Kit (per sampler)	day	\$300	8	\$2,400
Water Level Measurement Kit (2 person team)	day	\$55	2	\$110
PDB Deployment Kit	day	\$100	2	\$200
Equipment Shipping	each	\$54	3	\$162
Subtotal Reimbursables				\$11,019
TOTAL ESTIMATED BUDGET : TASK 4				\$45,964

Notes:

- Lodging and per diem rates were taken from the GSA website for the Vero Beach area (www.gsa.gov).
- 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.
- Water Level Measurement Kit includes: water level indicator and miscellaneous field supplies.
- PDB Deployment Kit includes: miscellaneous field supplies necessary to suspend and deploy PDBs.

Table 5

**APRIL 2018 BUDGET ESTIMATE
SOUTH GIFFORD ROAD LANDFILL**

TASK 5: Monitoring Well Maintenance

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
A. Professional Services				
Principal	hr	\$225	0	\$0
Professional	hr	\$160	4	\$640
Senior Staff Professional	hr	\$140	14	\$1,960
Subtotal Professional Services				\$2,600
C. Subcontractors				
Environmental Drilling Service	lump sum	\$2,461	1	\$2,461
Kugelmann Land Surveying	lump sum	\$1,038	1	\$1,038
Subtotal Subcontractor Services				\$3,499
D. Reimbursables				
Miscellaneous Supplies	day	\$50	1	\$50
Per Diem	day	\$51	1	\$51
Communications Fee	3% labor	0.03	\$2,600	\$78
Field Vehicle	day	\$80	1	\$80
Subtotal Reimbursables				\$209
TOTAL ESTIMATED BUDGET : TASK 5				\$6,308

Notes:

1. Per diem rates were taken from the GSA website for the Vero Beach area (www.gsa.gov).

Table 6

**APRIL 2018 BUDGET ESTIMATE
SOUTH GIFFORD ROAD LANDFILL**

TASK 6: Brush Clearing Activities

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
A. Professional Services				
Principal	hr	\$225	0	\$0
Professional	hr	\$160	4	\$640
Senior Staff Professional	hr	\$140	26	\$3,640
Subtotal Professional Services				\$4,280
C. Subcontractors				
Santa Cruz Construction	lump sum	\$4,869	1	\$4,869
Subtotal Subcontractor Services				\$4,869
D. Reimbursables				
Miscellaneous Supplies	day	\$50	2	\$100
Lodging	day	\$131	2	\$262
Per Diem	day	\$51	2	\$102
Communications Fee	3% labor	0.03	\$4,280	\$128
Field Vehicle	day	\$80	2	\$160
Subtotal Reimbursables				\$652
TOTAL ESTIMATED BUDGET : TASK 6				\$9,801

Notes:

1. Lodging and per diem rates were taken from the GSA website for the Vero Beach area (www.gsa.gov).

Table 7

APRIL 2018 BUDGET ESTIMATE
SOUTH GIFFORD ROAD LANDFILL

TASK 7: Data Evaluation and Semi-Annual Reporting

ITEM	BASIS	RATE	QUANTITY	ESTIMATED BUDGET
A. Professional Services				
Senior Principal	hr	\$240	4	\$960
Principal	hr	\$225	12	\$2,700
Professional	hr	\$160	30	\$4,800
Staff Professional	hr	\$120	40	\$4,800
Subtotal Professional Services				\$13,260
B. Technical/Administrative Services				
Designer	hr	\$130	18	\$2,340
Project Administrator	hr	\$65	8	\$520
Subtotal Technical/Administrative Services				\$2,860
C. Reimbursables				
Communications Fee	3% labor	0.03	\$16,120	\$484
Specialized Computer Applications	hr	\$15	36	\$540
8.5"x11" Photocopies	each	\$0.12	500	\$60
Subtotal Reimbursables				\$1,084
TOTAL ESTIMATED BUDGET : TASK 7				\$17,204