

6770 South Washington Avenue, Suite 3
Titusville, Florida 32780
PH 321.269.5880
FAX 321.269.5813
www.geosyntec.com

30 June 2017

Mr. Himanshu Mehta, P.E. Managing Director Solid Waste Disposal District Indian River County 1325 74<sup>th</sup> Avenue Southwest Vero Beach, Florida 32968

**Subject:** Project Completion Report

One Year of Groundwater Monitoring/Reporting and Related Consulting Services

IRC Work Order No. 4, Amendments 1 and 2 South Gifford Road Landfill, Vero Beach, Florida

Dear Mr. Mehta:

Geosyntec Consultants, Inc. (Geosyntec) is pleased to present to you this project completion report for Geosyntec Project No. FR0766L – One Year of Groundwater Monitoring and Reporting and related activities – for the South Gifford Road Landfill site. This project was completed under Work Order No. 4, authorized on 1 June 2016, pursuant to the Continuing Contract Agreement for Professional Services between Indian River County (IRC), Solid Waste Disposal District (SWDD) and Geosyntec, dated 15 November 2011. Amendment No. 1 was approved by IRC on 20 September 2016 and Amendment No. 2 was approved by IRC on 24 January 2017. This report has been prepared as a supplement to our final Invoice Number 273321589, dated 22 June 2017, which was submitted to SWDD on 27 June 2017 and is attached herein.

### SCOPE OF WORK

The scope of work initially authorized under Work Order No. 4 addressed the FDEP-required semiannual groundwater monitoring and reporting for one year (two sampling and reporting events) and related consulting services. The project was executed under the following phases: (i) Project Management; (ii) Meetings/Regulatory Interaction; (iii) RAP Modification Addendum 3 (RAPM3) preparation; (iv) Annual Pollution Remediation Liabilities Evaluation; (v) Field Activities; (vi) Reporting; (vii) RAPM Sampling; and (viii) Injection Activities. Below is a phase by phase summary of the work that Geosyntec performed under this work authorization.

#### Phase 1 – Project Management

Under this phase, Geosyntec performed project planning and management responsibilities, such as correspondences and meetings with IRC SWDD and FDEP, invoice review and completion, project coordination, and project administration.

# <u>Phase 2 – Meetings/Regulatory Interaction</u>

Under this phase, Geosyntec prepared a presentation for and participated in a teleconference with IRC SWDD and FDEP in January 2017 to provide an update on the schedule for RAPM activities, discuss potential changes to the monitoring plan for the Site, and provide a Brownfields project update. Geosyntec completed a statistical data analysis and monitoring plan optimization evaluation and presented the results to FDEP during the January 2017 teleconference. The optimization results and recommendation to decrease monitoring frequency of 21 wells from semi-annual to annual monitoring were included in the Fall/Winter Semi-Annual Groundwater Monitoring Report.

# Phase 3 – RAPM3 Preparation

Under this phase, Geosyntec prepared RAPM3 for submittal to FDEP, which outlined the approach for a focused injection of electron donor to address volatile organic compound (VOC) groundwater impacts in the vicinity of GR-MW30B. FDEP approved RAPM3 in July 2016 with no comments.

### **Phase 4 - Annual Pollution Remediation Liabilities Evaluation**

Under this phase, Geosyntec prepared the annual environmental liability evaluation 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 report included the evaluation of two sites, South Gifford Road Closed Landfill (4701 41st Street) and Old Administration Building (1840 25th Street).

## **Phase 5 – Field Activities**

Under this phase, Geosyntec conducted field preparation and groundwater sampling activities for two semi-annual groundwater monitoring events in June and December 2016. Throughout the two sampling events, a total of 77 groundwater samples were collected under this work authorization.

#### Phase 6 – Reporting

Under this phase, Geosyntec prepared the semi-annual reports for the June and December 2016 events. As part of the report preparation, Geosyntec completed database management, data evaluation, trend evaluation, table preparation, and GIS figure preparation. Each report was submitted to IRC SWDD for review and comment prior to submittal to FDEP. In addition, Geosyntec completed a sampling frequency evaluation and optimization analysis that was not in the original budget request but was completed within the authorized project budget. Based on the results of this evaluation, 21 monitoring wells that were being sampled semi-annually for VOCs

were recommended for annual sampling. FDEP approved decrease in sampling frequency for 20 of these monitoring wells, which will result in future sampling cost savings for the County.

# Phase 7 – RAPM Sampling

Under this phase, Geosyntec completed RAPM-related field activities, including injection well development, injection well sampling, and direct-push groundwater sampling, in June and July 2016. Based on the results, Geosyntec then prepared a RAPM3 implementation plan, which defined a refined injection area, provided dosing calculations for the focused injection activities, and outlined the performance and underground injection control monitoring plan.

# **Phase 8 – Injection Activities**

Under this phase, Geosyntec implemented RAPM activities in April 2017, including installation of a performance monitoring well, set up and breakdown for the injection event, and injection activities. In addition, performance and UIC monitoring were completed during the June 2017 sampling event.

#### BUDGET

The approved budget for Work Order No. 4 was \$172,102. The total invoiced amount, including the final invoice, is \$172,097.93. Therefore, Geosyntec completed this project within the approved budget.

Geosyntec is pleased to note that we were able to complete a sampling frequency evaluation and optimization analysis under this work order that was not originally included in the scope. Based on the results, we were **successful in decreasing future project costs** by attaining FDEP approval for the recommendation to decrease sampling frequency for 20 monitoring wells from twice per year to once per year.

# **CLOSURE**

Geosyntec appreciates the opportunity to provide services to Indian River County. If you have any question regarding this correspondence, please feel free to contact the undersigned at 850.483.5100.

Sincerely,

Crystal Towns Hydrogeologist

Guphl Jours

Jill W. Johnson, P.G. Senior Hydrogeologist

Jul W. Johnson

Table 1
Summary of Invoices Submitted for Geosyntec's Project Number FR0766L
South Gifford Road Landfill

Geosyntec Project Number/IRC Work Authorization Number	Invoice No.	Invoice Date	Amount
	27160164	04/14/2016	\$2,637.97
	27160196	05/09/2016	\$4,654.57
	27160269	07/08/2016 (REV)	\$4,369.26
	27160325	07/21/2016	\$16,101.18
	27160391	08/24/2016	\$26,494.19
	27160435	09/23/2016	\$19,436.95
	27160449	10/06/2016	\$2,920.79
FR0766L	27160533	11/22/2016	\$2,297.93
(IRC Work Order No. 4)	27160540	12/12/2016	\$3,327.93
	27318339	01/24/2017	\$15,716.76
	27319684	02/21/2017	\$9,473.04
	27321595	03/28/2017	\$8,581.56
	27328639	04/14/2017	\$4,547.45
	27330615	05/18/2017	\$47,532.68
	273321589	06/22/2017	\$4,005.67
	TOTAL		\$172,097.93



316 South Baylen Street, Suite 201 Pensacola, Florida 32502 PH 850.477.6547 FAX 850.477.6707 www.geosyntec.com

27 June 2017

Mr. Himanshu Mehta Managing Director Indian River County Solid Waste Disposal District 1325 74<sup>th</sup> Avenue Southwest Vero Beach, Florida 32968

Subject: Project Management Report and Transmittal of Invoice

South Gifford Road Landfill

Dear Mr. Mehta:

Geosyntec Consultants (Geosyntec) prepared this project management report to address the Plume Groundwater Monitoring project being conducted by Geosyntec on behalf of Indian River County (IRC) Solid Waste Disposal District (SWDD) at the South Gifford Road Landfill site. This report presents: (i) a budget overview for this project; (ii) a summary of activities completed to date; (iii) a discussion of the work reflected on the enclosed invoice; and (iv) recommended actions for the site. The enclosed invoice reflects labor and expenses in May 2017 for work being performed at the South Gifford Road Landfill. Table 1 provides invoicing details for the project.

Work Order No. 4 was approved by IRC on 1 March 2016 and the budget for the project was developed using labor rates that were approved by IRC for use in 2016. Amendment No. 1 was approved by IRC on 20 September 2016 and Amendment No. 2 was approved by IRC on 24 January 2017.

#### PROJECT MANAGEMENT SUMMARY

<u>Geosyntec's Project No. FR0766L</u>: One Year of Groundwater Monitoring/Reporting and Related Consulting Services (IRC Work Order No. 4, Amendment Nos. 1 and 2)

#### **Budget Overview**

Invoice No. 273321589 dated 22 June 2017 for \$4,005.67, Project No. FR0766L is enclosed. Listed below is a summary of the budget, including invoiced amount, and remaining budget. Geosyntec is within the budget appropriated for this project.

Approved Budget: \$ 172,102.00 Invoiced Amount to-date: \$ 172,097.93 Remaining Budget: \$ 4.07

## Work Completed to Date

The summer 2016 semi-annual groundwater sampling event was completed in June 2016. The Remedial Action Plan Modification Addendum No. 3 (RAPM) was approved by FDEP on 15 July 2016. RAPM-related field activities, including injection well development and sampling and DPT groundwater sampling, were conducted in June and July 2016. The Summer 2016 Semi-Annual Groundwater Monitoring Report was submitted to FDEP on 30 August 2016. The annual IRC Pollution Remediation Liabilities Evaluation was submitted to IRC on 28 October 2016. The fall/winter semi-annual groundwater sampling event was completed in December 2016. A project update meeting was held via conference call with FDEP, IRC, and Geosyntec on 23 January 2017 to provide an update on the schedule for RAPM activities, discuss potential changes to the monitoring plan for the Site, and provide a Brownfields project update. Geosyntec completed a statistical data analysis and monitoring plan optimization evaluation and presented the results to FDEP during the 23 January 2017 meeting. The Fall/Winter Semi-Annual Groundwater Monitoring Report, including the optimization results and recommendation to decrease monitoring frequency of 21 wells from semi-annual to annual monitoring, was submitted to FDEP on 28 March 2017. The budget request for RAPM implementation activities was approved at the 24 January 2017 Board of County Commissioners (BCC) meeting. RAPM activities were implemented the week of 10 April 2017 and included installation of a performance monitoring well, set up and breakdown for the injection event, and injection activities.

# Work Reflected on Enclosed Invoice

Labor reflected on the enclosed invoice as professional services (\$3,889.00) is attributed to project management and administration, and finalization of the RAPM field activities and associated field forms, and associated data management. The remainder of the invoice is associated with a communications fee per the contract.

#### Recommended Actions

None.

# **CLOSURE**

Geosyntec appreciates the opportunity to provide services to Indian River County. If you have any questions regarding this correspondence, please feel free to contact me at (850) 483-5100.

Sincerely,

Jill W. Johnson, P.G. Senior Hydrogeologist

Enclosure

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Ι	27321595	03/28/2017	\$8,581.56
Ι Γ	27328639	04/14/2017	\$4,547.45
	27330615	05/18/2017	\$47,532.68
	273321589	06/22/2017	\$4,005.67
	TOTAL		\$172,097.93



PLEASE REMIT PAYMENT TO: Geosyntec Consultants 900 Broken Sound Parkway NW, Suite 200 Boca Raton, Florida 33487-2775 USA Tel (561) 995-0900 Fax (561) 995-0925

INDIAN RIVER COUNTY SWDD 1325 74TH AVENUE SW VERO BEACH, FL 32968

Attention: HIMANSHU MEHTA, P.E.

Invoice #: 273321589 Invoice Date: 6/22/2017 Project: FR0766L

Project Name: R2016 GIFFORD LF

# For Professional Services Rendered through transaction date: 5/31/2017

If you have questions about this invoice, please contact Crystal Towns at (850) 483-5102.

WORK ORDER NUMBER 4 DATED MARCH 1, 2016

Professional Services \$3,889.00

3.0% Communication Fee \$116.67

Current Invoice \$4,005.67

\*\*Amount Due This Invoice \*\* \$4,005.67

Statement			
Prior Billings	\$168,092.26	Project Budget	\$172,102.00
Current Invoice	\$4,005.67	Expended to Date	\$172,097.93
Billed To Date	\$172,097.93	Contract Balance	\$4.07
Paid To Date	\$168,092.26	**Amount Due This Invoice **	\$4,005.67

Total Project: FR0766L R2016 GIFFORD LF		4,005.67	
	Total Project Labor 3.0% Communication Fee	3,889.00 116.67	
	Phase Labor 3.0% Communication Fee	1,090.00 32.70	
6.00	116.00	696.00	
3.00	116.00	348.00	
0.50	92.00	46.00	
Hours	Rate	Amount	
	Phase Labor 3.0% Communication Fee	319.00 9.57	
2.75	116.00	319.00	
Hours	Rate	Amount	
	Phase Labor 3.0% Communication Fee	926.00 27.78	
6.00	116.00	696.00	
2.50	92.00	230.00	
Hours	Rate	Amount	
	Phase Labor 3.0% Communication Fee	1,554.00 46.62	
7.50	184.00	1,380.00	
1.50	116.00	174.00	
	<del></del>		
Hours	Rate	Amount	
_	1.50 7.50  Hours 2.50 6.00  Hours 2.75  Hours 0.50 3.00 6.00	1.50	

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# Received by SWDD

JUN 2 8 2017



Indian River County

316 South Baylen Street, Suite 201 Pensacola, Florida 32502 PH 850.477.6547 FAX 850.477.6707 www.geosyntec.com

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Project:	FRU/66	-	RZUID	GIFFURD LI	_

TOJECT. TROTOGE NZOTO ON TOND ET			
Phase: 01) PM			
Class / Employee Name	Hours	Rate	Amount
SENIOR STAFF PROFESSIONAL			
TOWNS, CRYSTAL	1.50	116.00 <	174.00
SENIOR PROFESSIONAL			
JOHNSON, JILL	7.50	184.00 /	1,380.00 /
Total Phase: 01) PM		Phase Labor	1,554.00
		3.0% Communication Fee	46.62
Phase: 02) MTGS/REGULATORY			
Class / Employee Name	Hours	Rate	Amount
PROJECT ADMINISTRATOR			1
EDWARDS, CYNTHIA	2.50	92.00 🗸	230.00
SENIOR STAFF PROFESSIONAL			T .
TOWNS, CRYSTAL	6.00	116.00	696.00
Total Phase: 02) MTGS/REGULATORY		Phase Labor 3.0% Communication Fee	926.00 27.78
Phase: 07) RAPM SAMPLING			
Class / Employee Name	Hours	Rate	Amount
SENIOR STAFF PROFESSIONAL			240.00
TOWNS, CRYSTAL	2.75	116.00 /	319.00 <b>319.00</b>
Total Phase: 07) RAPM SAMPLING		Phase Labor 3.0% Communication Fee	9.57
Phase: 08) INJECTION ACTIVITIES	Hours	Rate	Amount
Class / Employee Name			
PROJECT ADMINISTRATOR  EDWARDS, CYNTHIA	0.50	92.00 /	46.00
SENIOR STAFF PROFESSIONAL	0.00	J2.00	
TOWNS, CRYSTAL	3.00	116.00 /	348.00
CRUM, JAKE	6.00	116.00 /	696.00
Total Phase: 08) INJECTION ACTIVITIES	0.00	Phase Labor	1,090.00
55, 11025 11511 115		3.0% Communication Fee	32.70
		Total Project Labor	3,889.00
TALEST PROPERTY PROPERTY FOR		3.0% Communication Fee	116.67
Total Project: FR0766L R2016 G	IFFUKU LF		4,005.67/

# Geosyntec Consultants 2016 Bill Rates

Labor Classification	Bill Rate
Clerical	\$56
Project Administrator/Administrative Assistant	\$92
Technical Word Processor	\$94
Drafter/CADD Operator/Artist	\$82
Senior Drafter/Senior CADD Operator	\$133
Designer	\$135
Engineering Technician	\$65
Senior Engineering Technician	\$83
Field Manager	\$98
Site Manager	\$112
Field Superintendent	\$116
Staff Professional	\$99
Senior Staff Professional	\$116 -
Professional	\$132
Project Professional	\$151
Senior Professional	\$184
Principal/Associate	\$209
Senior Principal	\$221
<u>General</u>	
Communications Fee 3% of Profes Specialized Computer Applications \$	At Cost ost Plus 7% ssional Fees 15 per hour 12 per page

Effective 1 January 2015 and each year thereafter the bill rates stated above will be adjusted based on the prior twelve month Consumer Price Index for all south urban consumers.