



INDIAN RIVER COUNTY LANDFILL
 WORK ORDER No. 2 + Amendment 1
 SEGMENT 3 CELLS 1 AND 2 LANDFILL GAS SYSTEM EXPANSION
 DESIGN, PERMITTING, AND BIDDING SERVICES
 CDM Smith Project Number: 6706-250111

Description	Contract Amount	Invoice / Date	Inv. 15 / Final	21-Sep-21	Invoice Amount
		Amount Invoiced to date	Percent Complete	Amount	
Task 1 Project Quality Management, Lump Sum (LS)	\$26,990.00	\$26,990.00	100.0%	\$26,990.00	\$0.00
Subtask 1.4 Project Quality Management Construction LS	\$8,390.00	\$8,222.34	100.0%	\$8,390.00	\$167.66
Task 2 Meetings and Data Collection, Lump Sum	\$13,935.00	\$13,935.00	100.0%	\$13,935.00	\$0.00
Task 3 Final Design, Lump Sum	\$96,180.00	\$96,180.00	100.0%	\$96,180.00	\$0.00
Task 4 Permitting Assistance, Lump Sum	\$24,375.00	\$24,375.00	100.0%	\$24,375.00	\$0.00
Task 5 Bidding Assistance, Lump Sum	\$18,330.00	\$18,330.00	100.0%	\$18,330.00	\$0.00
Task 6 Additional Engineering services, Upper Limit (UL)	\$20,000.00	\$11,672.50	100.0%	\$20,000.00	\$8,327.50
Task 7 General Engineering Services during Construction (LS)	\$53,900.00	\$51,205.00	100.0%	\$53,900.00	\$2,695.00
Subtask 7.10 Engineering Services, Upper Limit	\$8,500.00	\$0.00	100.0%	\$8,500.00	\$8,500.00
Task 8 Special Engineering Services during Construction (LS)	\$18,550.00	\$5,008.00	100.0%	\$18,550.00	\$13,542.00
Task 9 Resident Project Representative during Construction (LS)	\$48,350.00	\$52,882.50	109.37%	\$52,882.50	\$0.00
Task 10 Additional Engineering services, (LS)	\$10,000.00	\$0.00	54.7%	\$5,467.50	\$5,467.50
Total	\$347,500.00	\$308,800.34	100.00%	\$347,500.00	\$38,699.66



621 NW 53rd St., Suite 265
 Boca Raton FL 33487
 Tel:+1(561) 571-3800

Please Remit To:
 CDM Smith Inc.
 PO Box 100902
 Atlanta GA 30384-0902

INVOICE

INDIAN RIVER COUNTY, FL
 1325 74th AVENUE S.W.
 VERO BEACH FL 32968

Account Number: 000200418081
 Wire Routing: 011000138
 Invoice Number: 90133790
 Invoice Date: 09/14/2021
 Project Number: 250111

Amount Due: \$38,699.66

PLEASE INCLUDE INVOICE NUMBER ON ALL CORRESPONDENCE

SERVICES FROM August 22, 2021 TO September 11, 2021 - FINAL INVOICE

In accordance with the agreement for Engineering Consulting Services for Indian River County Landfill ("Agreement"), dated July 18, 2017 , Work Order Number 2 , dated May 19, 2020, and Amendment 1 on February 9, 2021, between Indian River County Solid Waste Disposal District (SWDD), and CDM Smith Inc. ("Consultant"), we are rendering the following invoice for Professional Engineering Services as described below:

RE: IRCLF Segment 3 Cells 1 & 2 LFG Design, Permitting and Bidding

Task	Task Amount	% Complete	Total Invoiced	Previously Invoiced	Amount Due This Period
Task 1 Project Quality Management	\$35,380.00	100.00%	\$35,380.00	\$35,212.34	\$167.66
Task 2 Meetings & Data Collection	\$13,935.00	100.00%	\$13,935.00	\$13,935.00	\$0.00
Task 3 Final Design	\$96,180.00	100.00%	\$96,180.00	\$96,180.00	\$0.00
Task 4 Permitting Assistance	\$24,375.00	100.00%	\$24,375.00	\$24,375.00	\$0.00
Task 5 Bidding	\$18,330.00	100.00%	\$18,330.00	\$18,330.00	\$0.00
Task 6 Additional Engineering Services	\$20,000.00	100.00%	\$20,000.00	\$11,672.50	\$8,327.50
Task 7 General Engineering Services	\$53,900.00	115.77%	\$62,400.00	\$51,205.00	\$11,195.00
Task 8 Special Engineering Services	\$18,550.00	100.00%	\$18,550.00	\$5,008.00	\$13,542.00
Task 9 RPR Services During Construction	\$48,350.00	109.37%	\$52,882.50	\$52,882.50	\$0.00
Task 10 Additional Engineering	\$10,000.00	54.68%	\$5,467.50	\$0.00	\$5,467.50
Total	\$339,000.00		\$347,500.00	\$308,800.34	
AMOUNT DUE THIS PERIOD					\$38,699.66

Aging Summary								
Invoice #	Inv Date	Outstanding	Current	1 to 30 Days	31 to 60 Days	61 to 90 Days	Over 90 Days	
90132619	26-AUG-2021	\$30,127.00	\$30,127.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
90133790	14-SEP-2021	\$38,699.66	\$38,699.66	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Due		\$68,826.66	\$68,826.66	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00



1701 Highway A 1 A Suite 301
Vero Beach, Florida 32963
tel: 772 231 4301
fax: 772 231 4332

September 14, 2021

Mr. Himanshu Mehta, P.E.
Managing Director
Solid Waste Disposal District
1325 74th Ave SW
Vero Beach, Florida 32968

Subject: Indian River County Solid Waste Disposal District
Segment 3 Cell 1 Landfill Gas System Expansion
IRC Contract No.: 2018025
Work Order No. 2 and Amendments 1 and 2
Final Completion Report

Dear Mr. Mehta:

Transmitted herewith is the project completion report for the above referenced project. This work was completed in accordance with the Continuing Contract Agreement for Professional Services between Indian River County (IRC) Solid Waste Disposal District (SWDD) and CDM Smith Inc. (CDM Smith), dated May 19, 2020, under Work Order No. 2. This project completion report is to serve as additional information to the final invoice.

Work Order No. 2 provided Design, Permitting and Bidding Services for the project. The project was advertised for bids in December 2020 and the bids were opened on January 16, 2021. There were four responsive bidders and the contract (IRC Contract 2021006) was awarded to SCS Field Services in the amount of \$1,068,510.00.

The Notice to Proceed was issued to SCS Field Services on March 19, 2021 with the contract time of 1,800 calendar days to Substantial Completion (September 15, 2021) and 210 calendar days to final completion (October 15, 2021).

SCOPE OF SERVICES

The SWDD requested that CDM Smith provide professional engineering services during construction for the Class I Landfill Segment 3 Cell 1 landfill gas (LFG) collection system expansion project authorized under Work Order No. 2.

The completed Scope of Services included the following tasks:



Mr. Himanshu Mehta, P.E.
September 14, 2021
Page 2

TASK 1.0 PROJECT QUALITY MANAGEMENT

Activities performed under this task consisted of those generally administrative functions required to maintain the project on schedule, within budget, and that the quality of the work products defined within this scope is consistent with CDM Smith's standards, SWDD's requirements, and the Florida Department of Environmental Protection's (FDEP) permit requirements.

Subtask 1.1 Project Update Meetings

CDM Smith's project manager prepared for status meetings throughout the life of the project.

Subtask 1.2 Quality Technical Reviews

CDM Smith maintained a quality management system (QMS) on all of its projects. One formal quality technical review committee (TRC) meeting was budgeted for and was conducted at the 60 percent completion stage of the project. SWDD's representatives were invited to and attended and participate in the TRC meeting.

Subtask 1.3 Final Design Review

CDM Smith prepared and submitted a complete set of Contract Documents (drawings and technical specifications as electronic PDFs) to SWDD for review at the 100 percent (final) completion stage. CDM Smith also performed a final comprehensive design review at the 100 percent milestone to perform final quality checks and to confirm that the proposed design meets the requirements of SWDD. CDM Smith prepared for and attend one meeting with SWDD staff to review comments on the 100 percent design drawings and technical specifications. CDM Smith incorporated SWDD's written comments, prepare the final Contract Documents (Issued for Bid), and submitted two hard copies and electronic PDFs of the design drawings and technical specifications to the SWDD.

Subtask 1.4 Construction Quality Management

CDM Smith's project manager managed the independent review of CDM Smith's deliverables, monthly project status reviews, and project close-out activities. CDM Smith met with SWDD staff for project planning and coordination, as needed. CDM Smith performed quality technical reviews on the construction phase CDM Smith has reviewed deliverables such as record drawings and is filing the FDEP Certifications of Construction Completion.

TASK 2.0 MEETINGS AND DATA COLLECTION (DESIGN PHASE)

This task focused on obtaining the necessary preliminary information to prepare detailed engineering plans and construction specifications.

Task 2.0 includes the specific activities identified below:

Mr. Himanshu Mehta, P.E.
 September 14, 2021
 Page 3

Subtask 2.1 Kickoff Meeting

CDM Smith organized a kickoff meeting with SWDD to discuss the proposed Segment 3 Cells 1 and 2 landfill gas system expansion. SWDD shall further define their requirements of the project. CDM Smith prepared and distributed meeting minutes.

Subtask 2.2 Previous Design Due Diligence

CDM Smith collected and reviewed available existing data and information already obtained including as-built/record drawings, site surveys, previously performed design calculations, analysis, drawings, permits and applications, and reports that were prepared by SWDD’s previous engineering Consultant and their subconsultant for the landfill gas system. Upon review of available existing data, CDM Smith will prepare a data request letter (Issued July 7, 2020) for any additional data that is needed and submit it to SWDD for assistance with obtaining the additional data, if needed. If the requested additional data is not available, CDM Smith provided a list to SWDD to determine the appropriate manner to obtain it, which may include an amendment to this Work Order.

TASK 3.0 FINAL DESIGN, DRAWINGS, SPECIFICATIONS, AND OPINION OF PROBABLE CONSTRUCTION COST PREPARATION

This task consisted of performing final design and developing Contract Documents (drawings and specifications) in accordance with the design requirements set forth in Chapter 62-701, F.A.C., to procure and construct the project.

Task 3.0 includes the specific activities identified below:

Subtask 3.1 Design Drawing Preparation

CDM Smith prepared detailed contract drawings for the expansion of the Segment 3 Cells 1 and 2 LFG system. Below is the list of drawings required to permit and construct this project. Note that the Permit Drawings submitted for the permit modification will be those that require changes, or are new, due to the proposed horizontal collectors in Segment 3 Cell 2. The Contract Drawings prepared for bidding will be those related to Segment 3 Cell 1.

Permit Drawings:

Drawing No. ¹	Drawing Title	New Revision No.
1	Title Sheet	3
27	Conceptual Gas Management System Plan	1
31	Gas Management System Details IV	1
37	Segment 3 Cell 2 Horizontal Collector Layout	New Drawing



Contract Drawings (for Segment 3 Cell 1):

Sheet No.	Title
General	
G-0	Cover (Including Location Map)
G-1	General Notes/Symbols/Legend/Index of Sheets
G-2	Existing Conditions/Limits of Construction/Horizontal Control Plan
Civil	
C-1	Landfill Gas System Plan
C-2	Compressed Air and Condensate Force Main Plan
CD-1	Landfill Gas System Details I
CD-2	Landfill Gas System Details II
CD-3	Landfill Gas System Details III

Subtask 3.2 Specifications

CDM Smith prepared specifications, utilizing the EJCDC/CSI format (50-Division), which consisted of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to this project. Specifications for construction included the LFG system components, and other applicable items. CDM Smith incorporated the construction permit conditions, into the specifications prior to award of contract.

Subtask 3.3 Front-End Documents

SWDD supplied the Front-End Documents and CDM Smith will edit them to provide the project specific information needed to bid the project.

Subtask 3.4 Opinion of Probable Construction Cost (OPCC)

CDM Smith prepared an OPCC at the 100 percent completion stage and submitted the estimate to SWDD for review. The estimate was based on generally accepted costs for this type of work.

Deliverables:

- 60 (July 22, 2020) and 100 percent drawings (electronic PDF and AutoCAD format, including associated x-refs) and technical specifications (electronic PDF).
- Final Contract Documents Package (two signed and sealed hard copies and electronic PDFs of the drawings and technical specifications). The issued for Bid Plans and Specifications were transmitted to SWDD on November 19, 2021.
- Opinion of probable construction cost at 100 percent design was delivered on November 17, 2020.



Mr. Himanshu Mehta, P.E.
September 14, 2021
Page 5

TASK 4.0 PERMITTING ASSISTANCE

CDM Smith prepared and submitted a minor modification to Construction/Operation Permit Nos: 0128769-022-SC and 0128769-023-SO to include the proposed Segment 3 Cell 2 horizontal gas collectors into the design and permit.

Activities performed under this task consist of those functions required to prepare the application for a minor modification to the Construction/Operation Permit (Permit Nos: 0128769-022-SC and 0128769-023-SO), participate in a pre-application meeting with FDEP, and respond to one of FDEP's requests for additional information (RAI). Also included are preparation of the notifications required by the operations permit.

Task 4.0 included the specific activities identified below:

Subtask 4.1 Pre-Application Meeting

CDM Smith attended a pre-application meeting with FDEP staff via a teleconference. The purpose of the meeting will be to communicate with FDEP regarding the proposed contents of the permit application submittal package.

Subtask 4.2 Permit Application

CDM Smith prepared and submitted to FDEP the application for a minor modification to the Construction/Operation Permit required by Chapter 62-701.320, F.A.C., to include the horizontal gas collectors in Segment 3 Cell 2 into the design and permit on October 29, 2020.

Subtask 4.3 RAIs

CDM Smith responded and commented on the Notice of Intent from FDEP on December 4, 2021.

Subtask 4.4 Construction Notification

CDM Smith prepared and submitted a courtesy notification to the FDEP prior to construction of the landfill gas system expansion in Segment 3 Cell 1.

Deliverables:

- Segment 3 Cell 2 LFG Gas system permit modification application submitted on October 29, 2020.
- Design drawings to support permit modification.

TASK 5.0 BIDDING ASSISTANCE

In this task, CDM Smith assisted SWDD in obtaining bids for the construction of the project, assisted SWDD in evaluating the bids and in assembling and awarding the contract, and will arrange and preside over a pre-bid conference

Task 5.0 includes the specific activities identified below:

Mr. Himanshu Mehta, P.E.
September 14, 2021
Page 6

Subtask 5.1 CDM Smith provided Contract Documents Package in electronic PDF format suitable for distribution to bidders, coordinated the advertisement of the bid, responded to communications from Contractors, attended a pre-bid conference, and assisted with the issuance of up to two addenda. SWDD advertised the bids and distributed documents to the plan holders.

Subtask 5.2 CDM Smith attended the bid opening, evaluated bids, and recommend a bidder for award of contract to SWDD. The bidding phase of the project terminates when an assumed Notice of Award is issued to a Contractor. SCS Field Services was the lowest responsive bidder and was awarded the contract. SWDD issued Amendment No. 1 to Work Order No. 2 to include Construction Services.

TASK 6.0 ADDITIONAL ENGINEERING SERVICES

At the request of the SWDD, CDM Smith performed additional engineering services for work expressly excluded from this Work Order as noted in the Assumptions above or requested by the SWDD during the project.

Additional Engineering Service included preparation of additional design modifications such as additional wells during construction, This included adding horizontal collectors along the eastern face of Segment 3, Cell 1 during design and extending the horizontal collectors during construction and assistance in preparing documents not expressly included in the above tasks, environmental assessments, additional permitting, or any other extended/additional engineering services such as the horizontal leachate collected added during construction on the north face of Segment 3 Cell 1.

TASK 7.0 GENERAL ENGINEERING SERVICES DURING CONSTRUCTION

These services included the following subtasks:

Subtask 7.1 After issuance of a Notice of Award by SWDD, CDM Smith prepared for and administered a preconstruction meeting with the Contractor on March 24, 2021, four days after of the Contractor's Notice to Proceed.

Subtask 7.2 CDM Smith consulted with and advised SWDD and acted as its representative as provided in the General Conditions of the construction contract. CDM Smith consulted with and advise SWDD as to the acceptability of substitute materials and equipment proposed by the Contractor when substitution is permitted by the Contract Documents.

Subtask 7.3 CDM Smith maintained an on-site presence to observe the progress and quality of the executed work of the Contractor. The work was determined to be in general accordance with the Contract Documents. CDM Smith kept SWDD informed of the progress of the work.

Mr. Himanshu Mehta, P.E.

September 14, 2021

Page 7

Subtask 7.4 CDM Smith reviewed and approved shop drawings and samples, the results of laboratory tests and other data, which the contractor is required to submit by the contract documents. There were 15 shop drawing reviews budgeted in Work Order No. 2. During the project, the actual number of shop drawings reviewed by CDM Smith was 49. CDM Smith inspected deliveries of the materials to confirm compliance with the shop drawings and the project specifications.

Subtask 7.5 CDM Smith issued instructions to the Contractor and issued necessary interpretations and clarifications of the Contract Documents. CDM Smith responded to requests for information. CDM Smith acted as SWDD's representative for special inspection or testing of the work and acted as initial interpreter of the requirements of the Contract Documents regarding the execution and progress of the work.

Subtask 7.6 Based on CDM Smith's on-site observations and on review of applications for payment and the accompanying data and schedules, CDM Smith reviewed and determined the amounts owing to the Contractor and recommend in writing, payments to the Contractor in such for a total of five pay applications.

Subtask 7.7 For each portion of the work, CDM Smith performed an initial walkthrough to develop a preliminary checklist of items to be performed by the Contractor, based upon observations made jointly between the Contractor, SWDD, and CDM Smith. Substantial Completion was achieved on August 5, 2021. Final completion was achieved on September 2, 2021, and an inspection for some items to be replaced under warranty will be scheduled in the week ending September 19, 2021.

Subtask 7.8 CDM Smith assisted the SWDD with project related correspondence to SWDD, Contractor, regulatory agencies, and other parties. We prepared monthly progress meeting minutes; and maintained comprehensive project records and documentation on file. CDM Smith maintained a document log and documentation on site during the project.

Subtask 7.9 CDM Smith monitored and checked performance tests and reviewed field test reports for conformance with project contract documents.

Subtask 7.10 CDM Smith reviewed design drawings and added additional landfill gas extraction wells. The CDM Smith also reviewed field conditions and recommended solutions to lateral leachate seepage on the north face of Segment 2 landfill and recommended remedial action and facilitated changes with the Contractor to implement the changes.

Mr. Himanshu Mehta, P.E.
September 14, 2021
Page 8

TASK 8.0 SPECIAL ENGINEERING SERVICES DURING CONSTRUCTION

Activities performed under this task consisted of supplementary and special engineering services required during the construction and implementation of the project:

Subtask 8.1 CDM Smith prepared for SWDD a set of reproducible record drawings, a digital copy in AUTOCAD, and two Record Drawing prints showing those significant changes made during the construction process based on information furnished to CDM Smith by the Contractor.

Subtask 8.2 CDM Smith provided services in connection with preparing work change directives, change orders to reflect changes to the construction project. Two total change orders were processed and recommended to SWDD.

Subtask 8.3 CDM Smith is preparing the final certifications of completion of construction to the regulatory agencies and is anticipated to be submitted by September 17, 2021.

TASK 9.0 RESIDENT SERVICES DURING CONSTRUCTION

Subtask 9.1 Activities performed under this task consisted of furnishing a full-time RPR during the project construction to observe the performance of the work of the Contractor.

Subtask 9.2 CDM Smith provided a RPR which acted as an agent of CDM Smith. The RPR's dealings in matters regarding the on-site work was in general only with CDM Smith and the Contractor.

Subtask 9.3 The RPR prepared daily reports, describing the general working conditions, areas of construction activity, logged landfill gas well drilling, observed pipe pressure tests performed and special and document unusual events.

CDM Smith provided support to the RPR for observation of the work performed by the Contractor, directed and supervised the RPR, prepared supporting documentation in dealings with the Contractor, and manage the documentation, daily reports, and test reports.

PROJECT SCHEDULE

The Construction activity was completed ahead of schedule, Substantial Completion was achieved on August 5, 2021, (September 15, 2021 was the contractual date) and Final Completion was achieved on September 2, 2021 (October 15, 2021 was the contractual date).



Mr. Himanshu Mehta, P.E.
September 14, 2021
Page 9

PROJECT BUDGET

The Original Contract Price was \$1,068,510. The Contractor's Change Order No. 1 was for \$48,599.00 and Final reconciliation Change Order No. 2 was for \$6,388 for a total of \$54,987 or an increase of 5.1 percent. The change order amount was for additional work beyond the original scope of work requested by SWDD. These additional items were an extension of the landfill horizontal collectors, additional vertical wells, and upsized condensate forcemain to help maximize landfill gas extraction. A leachate collector was added to collect seepage on the north face of Segment 2 and route it to the Cell 2 drainage layer.

CDM Smith's compensation for Work Order No. 2 for Design, Permitting and Bidding Services was \$199,810. Amendment No. 1 to Work Order No. 2 for Engineering services during construction was \$139,190. Amendment No 2 for Additional Engineering services for requested additional Landfill gas wells and construction supervision is \$8,500. The new not-to-exceed Grand Total Amount of Work Order No. 2 is **\$347,500**.

CDM Smith appreciates the opportunity to provide these services to the IRC SWDD. If you have any questions or require additional information on the above project, please contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Martin J. Lewis".

Martin J. Lewis, P.E., BCEE, PMP
Project Manager
CDM Smith Inc.

MJL/jj
Attachment
File: PW_PL1_6706-250111.02.01.20

cc: Ron T. Jones, SWDD
Kevin Vann, CDM Smith

