

Meeting Date
July 26, 2016



AGENDA	
Section	Consent
Item No.	II.C.2

AGENDA REPORT
BREVARD COUNTY BOARD OF COUNTY COMMISSIONERS

SUBJECT:	Approval of Task Order No. 4 with CDM Smith: Mechanical Integrity Testing and Wellhead Repair of South Beaches Regional Wastewater Treatment Plant (District 3, 4, 5) (Fiscal Impact: \$188,390)
DEPT/OFFICE:	Central Services/Purchasing Services on behalf of Utility Services

Requested Action:

It is requested that the Board of County Commissioners approve and authorize the Chairman to execute Task Order No. 4 with CDM Smith for necessary engineering services associated with the FDEP permit required Mechanical Integrity Test (MIT) and Wellhead Repair at the South Beaches Regional Wastewater Treatment Plant and authorize any associated budgetary changes.

Summary Explanation & Background:

Brevard County owns and operates two injection wells at the Sykes Creek Regional Wastewater Treatment Plant on Merritt Island and one at the South Beaches Regional Wastewater Treatment Plant. Injection wells in the State of Florida operate in accordance with permits issued by the Florida Department of Environmental Protection (FDEP) and the State requires that these wells be tested every five (5) years to prove that they are mechanically sound.

The operating permit for the South Beaches facility requires that a routine Mechanical Integrity Test be performed in May of 2017. The permit also requires that a testing plan be submitted to the Underground Injection Control Technical Advisory Committee in advance of the test. These tests require highly specialized engineering services, including but not limited to, a video survey, pressure testing, and an isotopic tracer survey to verify the integrity of the injection system. CDM Smith was competitively selected in 2012 to provide engineering and consulting services for all of the County's underground injection systems, including the mandatory MITs.

The South Beaches Regional Wastewater Treatment Plant is located in Melbourne Beach, and treats wastewater generated within the Utility Services Department's South Beaches service area. It produces reclaimed water for the Spessard Holland Golf Course and nearby residential areas, and uses the injection well to dispose of excess treated effluent. The injection well was constructed to protect the water quality of the Indian River Lagoon by eliminating surface water discharges from the treatment facility.

Based on a visual inspection of the well, it was determined in 2015 that the above-ground steel components were becoming highly corroded and needed replacement. To take advantage of the injection well being out of service for testing, it was recommended that this repair be completed immediately prior to the next MIT.

Funds are available for these projects in Fund 4150, Cost Center 365145.

Contact: Teresa Camarata, Central Services Director, 321-617-7390, Teresa.camarata@brevardfl.gov
 Jim Helmer, Utility Services Director, 321-633-2091, Jim.helmer@brevardfl.gov

Clerk to the Board Instructions: Please call Utility Services to pick-up two originals after execution. Rose Lyons 633-2091 (Retain 1 copy for Clerk's Records)

Exhibits Attached: 3 Originals – Task Order #4 – CDM Smith

Contract /Agreement (If attached): Reviewed by County Attorney		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	PR	<input type="checkbox"/>
County Manager		Assistant County Manager, Frank Abbate				Department Director / Extension	
Stockton Whitten		Assistant County Manager, Venetta Valdengo				Teresa Camarata, Central Services Director / x55492	
						Jim Helmer, Utility Services Director / x52091	



Tammy Rowe, Clerk to the Board, 400 South Street • P.O. Box 999, Titusville, Florida 32781-0999

Telephone: (321) 637-2001
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Tammy.Rowe@brevardclerk.us

July 27, 2016

MEMORANDUM

TO: Teresa Camarata, Central Services Director

RE: Item II.C.2., Task Order No. 4 with CDM Smith for Mechanical Integrity Testing and Wellhead Repair of South Beaches Regional Wastewater Treatment Plant

The Board of Commissioners, in regular session on July 26, 2016, executed Task Order No. 4 with CDM Smith for necessary engineering services associated with the Florida Department of Environmental Protection (FDEP) permit required Mechanical Integrity Test (MIT) and Wellhead Repair at the South Beaches Regional Wastewater Treatment Plant; and authorized any associated budgetary changes. Enclosed are two fully-executed Task Orders.

Your continued cooperation is always appreciated.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
SCOTT ELLIS, CLERK

Tammy Rowe, Deputy Clerk

Encls. (2)

cc: Utility Services Director
Finance
Budget

TASK ORDER NO. 4

ENGINEERING AGREEMENT, CDM SMITH INC.
BREVARD COUNTY UTILITY SERVICES DEPARTMENT
SOUTH BEACHES REGIONAL WASTEWATER TREATMENT PLANT
INJECTION WELL SYSTEM WELLHEAD REPAIR AND MECHANICAL INTEGRITY TESTING

THIS TASK ORDER, made and entered into this _____ day of _____, 2016, by and between the BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA, hereinafter referred to as "COUNTY," and CDM SMITH INC., hereinafter referred to as "CONSULTANT," is issued under the provisions of the master agreement executed between the COUNTY and CONSULTANT dated September 7, 2012.

WHEREAS, the COUNTY has requested that the CONSULTANT assist with wellhead repair and Mechanical Integrity Testing of the deep injection well system at the South Beaches Regional Wastewater Treatment Plant by performing the Scope of Services described in Attachment "A"; and

WHEREAS, the COUNTY and CONSULTANT desire to reduce to writing their understanding and agreement pertaining to such services;

IT IS THEREFORE AGREED AS FOLLOWS:

1. **Scope of Services.** The CONSULTANT shall do, perform, and carry out in a satisfactory and proper manner, assistance with wellhead repair and Mechanical Integrity Testing of the deep injection well system, as set forth in the Scope of Services attached hereto and marked as Attachment "A".
2. **Compensation.** In consideration for providing such professional services, the COUNTY shall pay the CONSULTANT a lump sum amount of \$188,390 for the services described in Attachments "B" and "C".
3. **Other Terms and Conditions.** All the terms and conditions of the Master Agreement shall apply to this Task Order as if fully set out herein unless such terms and conditions are specifically superseded by the terms and conditions of the Task Order.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the date and year first above written.

ATTEST:



Scott Ellis, Clerk

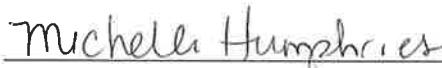
BOARD OF COUNTY COMMISSIONERS
OF BREVARD COUNTY, FLORIDA

By: 

Jim Barfield, Chairman

Approved by Board: 7/26/16

WITNESS:



Michelle Humphries

CDM SMITH INC.

By: 

Eric J. Grotke, P.E., BCEE, Vice President

ATTACHMENT A

BREVARD COUNTY UTILITY SERVICES DEPARTMENT SOUTH BEACHES REGIONAL WASTEWATER TREATMENT PLANT

TASK AUTHORIZATION NO. 4

INJECTION WELL SYSTEM WELLHEAD REPAIR AND MECHANICAL INTEGRITY TESTING

This Authorization, when executed, shall be incorporated in and become part of the Agreement for Engineering and Consulting Services between Brevard County (COUNTY) and CDM Smith Inc. (CONSULTANT), dated September 7, 2012 hereafter referred to as the Agreement.

BACKGROUND

Rule 62-528.425(1)(d) of the Florida Administrative Code (FAC), requires that the mechanical integrity of an injection well system be demonstrated every five years. Testing must be completed in accordance with Rule 62-528.300 (6), FAC. Part of the testing process requires that a mechanical integrity test (MIT) plan be submitted to the Florida Department of Environmental Protection (FDEP) 90 days prior to the due date of the field testing, and that the field test requirements be completed within 5 years from dates of the previous MIT. The previous MIT field testing at South Beaches Regional Wastewater Treatment Plant (WWTP) was completed in May 2012.

During renewal of the Underground Injection Control (UIC) operating permit for the facility in March 2015, COUNTY requested that CONSULTANT perform a cursory evaluation of the possible causes of a leak in the injection wellhead casing. Based on a visual inspection of the injection well (IW-1), it was determined that the well steel flange was highly corroded and needed replacement. At that time, it was recommended that the wellhead repair be completed prior to the next MIT. Wellhead repair and performance of the MIT will be closely coordinated with the County, since emergency effluent disposal to the Indian River Lagoon (IRL) will be required during these activities. The Domestic Wastewater Facility Permit for the COUNTY's South Beaches Regional WWTP (FL0040622) allows for a permitted discharge of 8.0 MGD over five days to the IRL every five years during performance of an MIT. In an effort to minimize discharge to the IRL, the COUNTY will plan to operate reuse to the maximum capacity, utilize on-site storage at the South Beaches Regional WWTP, and conduct the wellhead repair and testing during the dry season.

The scope of services presented in the following sections is designed to assist the COUNTY in completion of an MIT at South Beaches Regional WWTP following repair of the deep injection wellhead. Based on the previous MIT performed at the facility, the MIT components must be completed prior to May 2, 2017.

SCOPE OF SERVICES

This scope of services provides for engineering services by CONSULTANT associated with mechanical integrity testing of the injection well system and repair of the injection wellhead.

Task 1.0 - Preparation of Test Plan

A MIT plan will be prepared by the CONSULTANT in accordance with the requirements of the UIC rules (Chapter 62-528) as specified in the FAC and submitted to the FDEP. This task includes activities associated with addressing up to one request for information or modifications to the plan required for FDEP approval.

Task 2.0 - Preparation of Contract Documents

Activities associated with preparing technical specifications to assist the COUNTY in procuring the mechanical integrity testing contractor (Youngquist Brothers) will be provided for by the CONSULTANT under this task. The contract documents will be prepared and will be consistent with the procedures in the approved MIT plan. Specifications for equipment, experience, and reporting requirements, products, and well testing and geophysical logging procedures will be prepared by the CONSULTANT. Also provided for under this task is subcontract administration including contract execution, invoice processing, and project coordination.

Task 3.0 - Services During Injection Wellhead Repair

The wellhead repair will occur before performance of the MIT since the leak may contribute to failure of the MIT pressure test. To repair the wellhead, the injection well will be suppressed (killed) with salt. Then, an 8 feet by 8 feet area will be cut and excavated around the well to a maximum depth of 4 feet below the concrete pad to cut the existing steel casing. The existing casing will be cut off at a depth of 3 feet below the concrete pad and a new stainless steel spool piece will be welded onto the existing casing. A new stainless steel pump flange will be attached to the stainless steel spool piece and the pump and remaining wellhead will be reattached. Youngquist Brothers will perform the well suppression and wellhead repair. An on-site CONSULTANT project representative will be provided to observe the wellhead repair for up to three days. The Contractor will be responsible for coordinating with the COUNTY with respect to the effluent disposal to the IRL during the wellhead repair.

Task 4.0 - General Services During Testing

Subtask 4.1 - Casing Pressure Test

An on-site CONSULTANT project representative will be provided to observe casing pressure test preparations and witness the pressure test for IW-1 to confirm that it is being performed in accordance with the contract documents. Also included under this subtask will be coordination with FDEP staff to witness field activities and certification of the test results by a Florida registered Professional Engineer.

Subtask 4.2 - Geophysical Logging, Television Surveying, and Radioactive Tracer Surveying

An on-site CONSULTANT project representative will be provided to witness geophysical logging, television surveying, and radioactive tracer surveying (RTS) activities performed at IW-1, and to confirm that the testing is being done in accordance with the contract documents. The geophysical logging will consist of performing a temperature log. For the RTS test, tracer injection test depths and tracer

concentrations and rates will be selected based on the approved MIT plan and well conditions. Coordination with FDEP field staff is provided for under this subtask.

Task 5.0 - Evaluation of Data and Preparation of Report

Under this task, the data collected from Task 4.0 will be evaluated by the CONSULTANT to verify the mechanical integrity of the injection well system at the South Beaches Regional WWTP. These data will be incorporated into a final report for FDEP submittal. The final report will include a description of the test procedures and performance. An interpretation of the test results will be included in the final report. The compilation and evaluation of system operating data will be updated from the 2015 UIC Permit renewal application, as required by the UIC operation permit. Included under this task will be addressing up to one response to a request for information from FDEP.

Task 6.0 - Project Management and Administration

Activities performed under this task consist of those general functions required to maintain the project on schedule, within budget, and ensure that the quality of the work products defined within this scope is consistent with CONSULTANT's quality assurance program and COUNTY's expectations. The CONSULTANT shall provide administrative functions required to manage the CONSULTANT's project elements. Specific activities will include project update correspondence and teleconferences, quality assurance/technical review, and preparation of monthly invoices.

DATA OR ASSISTANCE TO BE PROVIDED BY COUNTY

1. Provide copies of existing record drawings of the injection well system if they are not on file with the CONSULTANT.
2. Field-verify existing structures as requested and escort CONSULTANT within project site for field verifications, rigup/rigdown, and testing as required.
3. Provide existing and predicted injection well pressures for testing purposes.
4. Provide assistance with regulatory agencies and provide payment for all permit fees (if needed).
5. Timely reviews of submittals from the CONSULTANT.
6. Coordination and guidance for effluent disposal to IRL during wellhead repair and MIT.

TIME OF COMPLETION

Task 1.0 – The submittal of the draft MIT plan described in Task 1.0 to the COUNTY for review shall be completed within four weeks from Notice-to-Proceed. The CONSULTANT shall incorporate the review comments and submit the MIT plan to the FDEP within two weeks of the receipt of review comments from the COUNTY. Per the COUNTY's UIC permit, the MIT plan needs to be submitted to FDEP for approval at least 90 days before completion of the MIT.

Task 2.0 – The CONSULTANT will schedule the well repair and MIT with the testing contractor within 14 days of the receipt of MIT plan approval from the FDEP.

Task 3.0 – The CONSULTANT will schedule the well repair with the testing contractor within 14 days of the receipt of MIT plan approval from the FDEP. It is intended that the well repair and MIT will be

conducted as part of one field mobilization effort.

Task 4.0 – The CONSULTANT will implement the well test activities prior to the May 2, 2017 due date provided that the authorization date is sufficient to conduct these activities.

Task 5.0 – Within 60 days of completing the MIT, the CONSULTANT shall submit to the COUNTY for review a draft of the MIT report. The CONSULTANT shall incorporate the COUNTY's review comments and submit the MIT report to the FDEP within two weeks of receipt of review comments from the COUNTY. Per the COUNTY's UIC permit, the MIT report needs to be submitted to FDEP for approval no later than three months after completion of the MIT.

Task 6.0 – This task will run concurrently over the duration of the project.

PAYMENT AND COMPENSATION

CONSULTANT proposes to perform the activities associated with this project on a lump sum basis. The total lump sum fee for the above tasks is \$184,790 (as described in Attachments B and C). Invoicing of services will be on a percentage of completion on a monthly basis. The fee for the services of a testing contractor is included in this proposal. For invoice purposes only, the value of each task is as shown on **Table 1**.

Table 1 Task Value for Invoice Purpose Only

Task	Description	Total Cost
Task 1.0	Preparation of Test Plan	\$6,750
Task 2.0	Preparation of Contract Documents	\$2,530
Task 3.0	Services During Injection Wellhead Repair	\$109,010 ¹
Task 4.0	General Services During Testing	\$52,610 ²
Task 5.0	Evaluation of Data and Preparation of Report	\$13,280
Task 6.0	Project Management and Administration	\$4,210
TOTAL PROJECT (Lump Sum)		\$188,390

Notes:

¹ Total cost includes \$102,000 by Outside Professional (Youngquist Brothers, Inc.) to complete well repair and 3 days of on-site CONSULTANT project representative.

² Total cost includes \$42,000 by Outside Professional (Youngquist Brothers, Inc.) to complete MIT and 5 days of on-site CONSULTANT project representative.

ATTACHMENT B

**BREVARD COUNTY UTILITY SERVICES DEPARTMENT
SOUTH BEACHES REGIONAL WASTEWATER TREATMENT PLANT
INJECTION WELL SYSTEM WELLHEAD REPAIR AND MECHANICAL INTEGRITY TESTING**

ESTIMATED LABOR HOURS

Task Description	Officer	Associate	Principal	Senior Professional	Professional II	Professional I	Senior Support Services	Staff Support Services	Project Admin Services	Total
1.0 - Preparation of Test Plan	2	4	6	4	4	12	0	12	8	52
2.0 - Preparation of Contract Documents	2	2	4	2	0	0	0	2	4	16
3.0 - Services During Injection Wellhead Repair	0	4	4	30	0	0	0	2	4	44
4.0 - General Services During Testing	0	4	4	50	0	0	0	2	4	64
5.0 - Evaluation of Data and Preparation of Report	2	8	12	8	16	24	4	8	16	98
6.0 - Project Management and Administration	4	2	8	0	0	0	4	8	2	28
Total	10	24	38	94	20	36	8	34	38	302

ATTACHMENT C

**BREVARD COUNTY UTILITY SERVICES DEPARTMENT
SOUTH BEACHES REGIONAL WASTEWATER TREATMENT PLANT
INJECTION WELL SYSTEM WELLHEAD REPAIR AND MECHANICAL INTEGRITY TESTING**

BUDGET

PROJECT: Brevard County Utility Services Department, South Beaches Regional WWTP
Injection Well System Mechanical Integrity Testing and Wellhead Repair

PROJECT

DESCRIPTION: Mechanical Integrity Testing and Wellhead Repair of IW-1

CONTRACT Agreement between Brevard County and
REFERENCE: CDM Smith Inc.

<u>Labor Category</u>	<u>Hours</u>	
Officer	10	
Associate	24	
Principal	38	
Senior Professional	94	
Professional II	20	
Professional I	36	
Senior Support Services	8	
Staff Support Services (Drafting)	34	
Project Administration (Clerical)	38	
Total	302	<u>\$42,390</u>

OTHER DIRECT COSTS

Copying and Printing
Computer/CADD
Postage and Shipping
Travel
Telephone

TOTAL OTHER DIRECT COSTS \$2,000

OUTSIDE PROFESSIONALS

Youngquist Brothers, Inc. (Well Repair & Testing) \$144,000

TOTAL ESTIMATED COSTS

LUMP SUM COST - USE \$188,390