

REQUESTED COMMISSION ACTION:

Consent Ordinance Resolution Consideration Workshop Initiative

SHORT TITLE

OR MOTION: A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA, APPROVING AND AUTHORIZING THE PROPER CITY OFFICIALS TO EXECUTE WORK AUTHORIZATION NO. 1 IN THE AMOUNT OF \$ 98,299 PURSUANT TO THE AGREEMENT FOR CONSULTING/PROFESSIONAL SERVICES BETWEEN THE CITY OF POMPANO BEACH AND MWH AMERICAS, INC., TO VERIFY THE INTEGRITY OF THE DEEP INJECTION WELL; PROVIDING AN EFFECTIVE DATE.: (\$98,299.00).

Summary of Purpose and Why:

The City of Pompano Beach is mandated by the Florida Department of Environmental Protection (FDEP) to verify the mechanical integrity of the class I Deep Injection Well for the Membrane Treatment Plant every 2.5 years. This is a requirement of the FDEP Class I Well operation Permit for regulatory compliance. MWH Americas, Inc. has submitted a proposal to perform a well modification evaluation, develop bid specifications package, and provide bidding, permitting and construction management services, and final report for the amount of \$98,299. Funding is available in the Well Maintenance Program Capital Improvement Plan, account # 420-7310-533-6503 project 07-932.



Accomplishing this item supports achieving initiative "1.4. Ensure safe drinking water standards" identified in the City's: Quality and Affordable Services Strategy

QUESTIONS TO BE ANSWERED BY ORIGINATING DEPARTMENT:

- (1) Origin of request for this action: Utilities Department
- (2) Primary staff contact: A. Randolph Brown / Phil Hyer Ext 7044 / 7030
- (3) Expiration of contract, if applicable: N/A
- (4) Fiscal impact and source of funding: \$ 98,299.00 Well Maintenance Program Capital Improvement Plan Account # 420-7310-533-6503 Project 07-932

DEPARTMENTAL COORDINATION	DATE	DEPARTMENTAL RECOMMENDATION	DEPARTMENTAL HEAD SIGNATURE
Utilities	<u>6/30/16</u>	APPROVE	
Purchasing	<u>6/30/16</u>	APPROVE	
City Attorney	<u>7/5/16</u>	<u>CAC #2016-923</u>	
Finance	<u>7/1/16</u>	APPROVE	
Budget	<u>7/5/16</u>	APPROVE	

Advisory Board
 Development Services Director
 City Manager

ACTION TAKEN BY COMMISSION:

Ordinance	Resolution	Consideration	Workshop
1st Reading	1st Reading	Results:	Results:
_____	_____	_____	_____
_____	_____	_____	_____
2nd Reading	_____	_____	_____
_____	_____	_____	_____



Phone: (954) 545-7016

**City of Pompano Beach
UTILITIES TREATMENT PLANT**

Fax: (954) 545-7046

MEMORANDUM NO. 16 - 30

DATE: June 24, 2016

TO: A. Randolph Brown, Utilities Director

FROM: Phil Hyer, Utilities Treatment Plants Superintendent

C:

SUBJECT: Work Authorization -Deep Well Modification and Mechanical Integrity Testing

The City of Pompano Beach is mandated by the Florida Department of Environmental Protection (FDEP) to verify the mechanical integrity of the class I Deep Injection Well for the Membrane Treatment Plant every 2.5 years. This is a requirement of the FDEP Class I Well operation Permit Number 0167214-005-UO for regulatory compliance.

This injection well has been in service for over 15 years and another mechanical integrity test is due this year. The last two mechanical integrity tests and video of this injection well has shown severe corrosion of the steel casing. Although this well has passed the previous two pressure tests, re-lining of this well is inevitable and the most cost effective option.

Being proactive, staff and MWH Americas, Inc., one of the Utilities Department's contracted consulting engineering firms, feel a re- lining project with the required subsequent mechanical integrity testing is the most prudent course of action at this time.

MWH has submitted a proposal to perform a well modification evaluation, develop bid specifications package, and provide bidding, permitting and construction management services, and final report for the amount of \$98,299.00.

Utilities staff recommends MWH perform these services and hereby requests Commission approval of MWH Americas, Inc. Work Authorization No. 1. Funding is available in the Well Maintenance Program Capital Improvement Plan, account # 420-7310-533-6503 project 07-932.

This project supports the City's Strategic Plan Operational Goals and Initiative for Quality and Affordable Services (1.3 Ensure safe drinking water standard).

Attachment 1: MWH Proposal for Injection Well IW-1 Modification, Mechanical Integrity Test
Attachment 2: Injection Well IW-1 Work Authorization No. 1 Lump Sum Fee Breakout



City Attorney's Communication #2016-923

June 16, 2016

TO: Alessandra Delfico, P.E., Utilities Dept.

FROM: Jill R. Mesojedec, FRP, Paralegal

VIA: Mark E. Berman, City Attorney 

RE: Resolution – Work Authorization No. 1 to Verify the Integrity of the Deep Injection Well

As requested in your memorandum dated June 3, 2016, Utilities Memorandum No. 16-99, I have prepared and attached the following form of Resolution:

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA, APPROVING AND AUTHORIZING THE PROPER CITY OFFICIALS TO EXECUTE WORK AUTHORIZATION NO. 1 IN THE AMOUNT OF \$98,299.00 PURSUANT TO THE AGREEMENT FOR CONSULTING/PROFESSIONAL SERVICES BETWEEN THE CITY OF POMPANO BEACH AND MWH AMERICAS, INC., TO VERIFY THE INTEGRITY OF THE DEEP INJECTION WELL; PROVIDING AN EFFECTIVE DATE.

Please feel free to contact me if I may be of further assistance.


JILL R. MESOJEDEC

/jrm
l:cor/util/2016-923

Attachment

**CITY OF POMPANO BEACH
Broward County, Florida**

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA, APPROVING AND AUTHORIZING THE PROPER CITY OFFICIALS TO EXECUTE WORK AUTHORIZATION NO. 1 IN THE AMOUNT OF \$98,299.00 PURSUANT TO THE AGREEMENT FOR CONSULTING/PROFESSIONAL SERVICES BETWEEN THE CITY OF POMPANO BEACH AND MWH AMERICAS, INC., TO VERIFY THE INTEGRITY OF THE DEEP INJECTION WELL; PROVIDING AN EFFECTIVE DATE.

BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA:

SECTION 1. That a Work Authorization between the City of Pompano Beach and MWH Americas, Inc. to verify the integrity of the deep injection well, a copy of which Work Authorization is attached hereto and incorporated by reference as if set forth in full, is hereby approved.

SECTION 2. That the proper City officials are hereby authorized to execute said Work Authorization between the City of Pompano Beach and MWH Americas, Inc.

SECTION 3. This Resolution shall become effective upon passage.

PASSED AND ADOPTED this _____ day of _____, 2016.

LAMAR FISHER, MAYOR

ATTEST:

ASCELETA HAMMOND, CITY CLERK

CITY OF POMPANO BEACH

**CONTRACT FOR CONSULTING/PROFESSIONAL SERVICES
L-40-15**

WORK AUTHORIZATION NO. 1

**INJECTION WELL MODIFICATION AND MECHANICAL INTEGRITY TESTING (MIT)
FOR INJECITON WELL IW-1**

The services rendered pursuant to this Work Authorization No. 1 are in accordance with the terms and conditions of the Agreement for Consulting/Professional Services between the City of Pompano Beach and MWH Americas, Inc, dated February 26th 2016 and approved by City Ordinance No. 2016-43.

The City of Pompano Beach is required by Florida Department of Environmental Protection (FDEP) to verify the mechanical integrity of their Class I Deep Injection Well every 2.5 years. The City has one, Class I Deep Injection Well (IW-1) for disposal of non-hazardous membrane softening concentrate, a potable water treatment by-product, from the City of Pompano Beach nanofiltration Water Treatment Plant (WTP) and one associated dual-zone monitor well (DZMW) currently under an FDEP permit. The disposal capacity of IW-1 is permitted at 7.93 million gallons per day (MGD) at an injection rate of 10 feet per second and is constructed with a 16-inch nominal outside diameter (OD), 0.5-inch wall thickness seamless steel tubing that is fully cemented inside a 24-inch OD, 0.5-wall thickness final steel casing. The last successful 5-year MIT pressure test was performed in IW-1 on November 16, 2011 and successful 2.5-year MIT pressure test was performed on May 6, 2014.

Based on Permit Number 0167214-005-UO, Specific Condition 3.k, an MIT Plan should be received by the FDEP (both West Palm Beach and Tallahassee offices) by August 15, 2016. Testing should be followed by a MIT Summary Report to FDEP that addresses the MIT procedures and subsequent data interpretations and results within the 90 days following the completion of testing.

The City will request a variance from the FDEP to extend the date of the MIT so that they may complete a modification to the injection tubing of Well IW-1. The modification will entail adding a liner inside the deteriorated existing steel injection tubing.

SCOPE OF WORK

Unless otherwise agreed in writing, the CONSULTANT shall perform the following services in connection with the Project:

TASK 1. Project Management, Meetings and QA/QC

The CONSULTANT Project Manager provides the overall coordination of tasks during modification and testing of Well IW-1. The Project Manager is involved with the everyday

operations of the project and has routine interaction with the CITY Project Manager and CONTRACTOR. The Project Management tasks are anticipated through the work authorization completion date of May 1, 2017.

Subtask 1.1. Project Management

The CONSULTANT Project Manager provides the overall coordination of tasks during modification and testing operations of Well IW-1. The activities associated with this task are as follows:

- Project management activities include management and staffing, CONTRACTOR coordination, budget management, schedule management, quality management, project correspondence and coordination with the CITY and its other consultants/contractors related to the Well IW-1 modification and testing project as necessary during the estimated duration of the project;
- Provide monthly status reports that include work completed during current period, work planned for next period, completed meetings and status of meeting minutes, planned meetings for next period, and a summary milestone schedule of next three months of activities including deliverables and meetings involving the CITY or regulatory agencies. Key decisions will be tracked in a decision log and incorporated into the monthly status report documenting key decisions from the current month;
- Provide a critical path project schedule and monthly updates of schedule changes;
- Schedule and conduct monthly status meetings or as-needed with the CITY Project Manager;
- Develop and manage a document management system that catalogs project communication, information, report and design deliverables, quality plan audits and compliance documentation, permitting documentation, schedules, shop drawing submittals, requests for additional information (RAIs), contractor payment requests, design change directives, field reports, inspector reports, project photos, and final close out documentation.
- Monitor and support the health and safety of CONSULTANT staff in accordance with the CONSULTANT Health and Safety plan;
- Monthly progress reports with updated schedule and milestones will be prepared and provided by CONSULTANT.

Subtask 1.2. CITY and FDEP Meetings

1.2.1. City Meetings

The CONSULTANT will attend CITY progress meetings. A progress summary and schedule update will be provided to the CITY prior to each meeting. Five meetings with CITY staff are scheduled for this task.

1.2.2. FDEP Meetings

CONSULTANT will facilitate communication between the project team and FDEP prior to and during the minor modification permitting task.

The following meetings have been budgeted:

- One (1) local FDEP Southeast District pre-application meetings

- One (1) local FDEP Southeast District meetings following submittal of the Minor Modification Permit application to address requests for additional information (RAI)

Subtask 1.3. Project QA/QC

QAQC Management activities are included for the review of components of the Well IW-1 modification and testing project as follows:

- Relining material study for Well IW-1
- Minor Modification Permit application submittal; application process and RAI's
- Technical Specification development, bidding support and CONTRACTOR selection
- Well IW-1 Modification and MIT Summary Report

TASK 2. Well Modification Evaluation

The CONSULTANT shall evaluate the following factors involving Well IW-1 modification:

- Design Conditions Identification - Determine the potential maximum potable water production capacity for the City of Pompano Beach WTP to establish an estimate of the concentrate disposal capacity needed using a standard potable to raw water recovery rate of 80 percent and 85 percent.
- Injection Tubing Capacity and Material Design - Evaluate and prepare a letter of recommendation for an injection tubing replacement option. The evaluation will include a Class 3 OPCC for up to 5 tubing material and diameter options.
- Injection Tubing System Design - Upon the City's acceptance of the letter of recommendation, the CONSULTANT shall prepare a Regulatory Work Plan that will outline the expected sequence and estimated schedule of regulatory actions and submittals that will be associated with the well modification activities for the selected repair option.
- Injection Well Tubing Replacement Design - Design the tubing replacement for the injection well. The design will be incorporated into the Regulatory Work Plan (technical specifications) developed for Well IW-1.

TASK 3. Modification Permitting and Pre-Construction Activities

Subtask 3.1. Issued for Bid and Technical Specification Documents

The Consultant will complete the following:

- Prepare the Issue for Bid package (60% complete) for CITY review.
- Prepare an estimate of Construction Schedule and Class 2 OPCC for the job.
- The CITY will provide the front end bid documents to the CONSULTANT to include as part of the bid documents.
- Following the CITY's review, complete the Issue for Bid package (100% complete) for advertisement by the CITY. CITY will be responsible for the required bid advertisement, cost of the advertisement and copies for bidders.

Subtask 3.2. Bidding Support Services

The Consultant will complete the following:

- Attend one pre-bid meeting, assist in responding to questions and provide a summary of the questions asked and CONTRACTOR's in attendance.
- Assist the CITY in responding to prospective bidder and vendor questions. Respond to requests for information (RFIs) during bidding. Prepare the CITY in responding to all RFIs during the bidding of the project. Written responses will be given to the CITY for each RFI reviewed. The CITY will be responsible for providing the formal responses to the prospective bidders. Assist CITY with preparation and up to two addenda. CITY will be responsible for issuing the Addenda.
- Attend the bid opening, assist in the review the bids and provide a summary bid tabulation based on the bids received. References for the three low bidders will be reviewed and a recommendation of award letter will be prepared and sent to the CITY.
- Following bid award, CONSULTANT will prepare in electronic format the final version of the conformed bid documents (Issued for Construction) which will include all addenda, final contract forms, and bonds and provide the same to CITY on a CD. CONSULTANT will prepare 2 sets of original signed and sealed copies of the conformed documents for use by the CITY and deliver same to the CITY's project manager. The CITY will produce sets for the CONTRACTOR.

Subtask 3.3. Request for FDEP UIC Minor Modification Permit/MIT Plan

The CONSULTANT will prepare and submit a minor modification permit application and supporting documents on behalf of the CITY.

Permitting services will include preparation of a 62-528 permit application form, preparation of a letter and supporting documentation including drawings prepared under Subtask 3.2.

- The CONSULTANT will review and respond to one request for additional information (RAI) from FDEP and prepare final (100%) drawings for resubmittal to FDEP and construction. The CONSULTANT will also prepare an addendum to the CITY's O&M manual. The CONSULTANT will submit necessary documentation to FDEP for close-out of the permit.

The CONSULTANT will prepare an MIT Plan (Plan) for submittal to and approval by the FDEP. The Plan will describe the performance of a video survey, pressure test and radioactive tracer survey in the City's Concentrate Injection Well IW-1. A draft Plan will be provided to the CITY electronically for review and comment. Following CITY approval, the Plan will be forwarded to FDEP West Palm Beach and Tallahassee offices electronically.

- Following completion of the MIT work, the CONSULTANT will prepare a draft MIT Report summarizing the testing procedures, and results for the CITY's review and comment. The report will contain a log summary and viewable CD copy of the video survey, and a summary of the completed pressure test with a testing form signed by the FDEP observer. As part of the MIT report preparation, the CONSULTANT will review the injection system operation data, to include:
 1. IW-1 flows and pressures,

2. MW-1 upper and lower zone pressure,
 3. MW-1 upper and lower zone water quality results, and
 4. IW-1 concentrate effluent water quality results.
- This data review is for the City's benefit to graphically present an assessment of IW-1's condition, MW-1's condition and track potential changes in upper and lower zone water quality information over time. Assessment of this data at the MIT phase also reduces the amount of information processing required for the 5-year MIT scheduled for November 2016.

TASK 4. Field Oversight and Reporting for Modification of Well IW-1

This task includes field support activities required to provide professional services for oversight during the construction and testing of the modification to the injection well and MIT services. CONSULTANT on-site oversight personnel will prepare daily construction summaries and weekly reports as required by the FDEP UIC modification permit, document that the project technical specifications are adhered to, monitor construction quantities and progress, and provide various construction inspections required by the FDEP.

Subtask 4.1. Professional Field Services

The CONSULTANT will provide a licensed geologist or engineer experienced with the work to record video survey, pressure test, geophysical log, radioactive tracer survey, and injection testing results. Results will be reported in the weekly reports.

Subtask 4.2. Field Coordination with FDEP

CONSULTANT will provide written notification to FDEP of scheduled testing activities (video survey, pressure testing and Radioactive Tracer Surveys) 72 hours in advance of those activities and written requests for casing setting and injection testing. Modifications to written schedules will be provided to FDEP verbally.

Following modification of Well IW-1, the CONSULTANT will coordinate the MIT work with the CONTRACTOR and the CITY WTP staff to minimize the downtime. The Contractor will perform and the CONSULTANT will observe and record the following activities in IW-1:

- Video Survey through the entire length of IW-1 from the surface to the base of the injection zone in compliance with the FDEP-approved MIT Plan.
- A preliminary pressure test in IW-1 to ensure that the contractor's equipment is appropriately seated in the well and that the final pressure test will be successful.
- A final pressure test in IW-1 that will be observed by an FDEP representative.
- Radioactive tracer survey that will be observed by an FDEP representative.

TASK 5. Final Report

Following the CONSULTANT's receipt of CITY comments, a final report for the modification and MIT for Well IW-1 will be completed and electronically transmitted to the CITY and FDEP West Palm Beach and Tallahassee offices.

The CONSULTANT will prepare a draft Report summarizing the modification, testing procedures, and results for the CITY's review and comment. The report will contain a log summary and viewable CD copy of the video survey, and a summary of the completed pressure test with a testing form signed by the FDEP observer. As part of the Report preparation, the CONSULTANT will review the injection system operation data, to include:

5. IW-1 flows and pressures,
6. MW-1 upper and lower zone pressure,
7. MW-1 upper and lower zone water quality results, and
8. IW-1 concentrate effluent water quality results.

This data review is for the City's benefit to graphically present an assessment of IW-1's condition, MW-1's condition and track potential changes in upper and lower zone water quality information over time.

The CITY and MWH agree for the purposes of establishing compensation and schedule the following assumptions apply:

- Make available to CONSULTANT any pertinent documentation concerning this project.
- Review CONSULTANT submittals and provide consolidated comments within two (2) week of receipt.
- CITY comments and input on submittals will be provided to the CONSULTANT's Project Manager. Any differences between Owner's staff will be addressed by the CITY Project Manager.
- CONSULTANT will have the right to depend on the accuracy of any materials provided by the CITY for the duration of this project.
- The CITY will make provision for the emergency discharge of the nanofiltration membrane WTP concentrate or will shut down the nanofiltration membrane WTP during the rehabilitation and testing period.
- The CITY will provide flow and injectivity data (24 hour average in tabular format) electronically for IW-1 since the Interim MIT was completed in May-2014.

- The CITY will provide water quality (tabular format) and pressure data (24 hour average in tabular format) electronically from the MW-1 upper and lower zones since the Interim MIT was completed in May-2014.
- The CITY will provide concentrate effluent water quality (tabular format) electronically since the Interim MIT was completed in May-2014.
- The CITY will coordinate plant operations with the CONSULTANT to facilitate the modification and testing schedule.
- The CONSULTANT will have completed the project when the final verification report is submitted and acceptable to FDEP.
- The CONSULTANT will provide up to three technical drawings for bidding services and permitting. There will be no electrical or Instrumentation and control modifications associated with this project.

Should the Conditions Differ from Expected:

- The CONSULTANT shall not be responsible or liable for failure of the injection well, or the costs associated with such failure, to comply with FDEP standards and regulations for Class I Injection Wells as governed under FDEP Chapter 62-528. Failure of the injection well will be considered Differing Conditions. The CONSULTANT shall notify the CITY, in writing, of Differing Conditions promptly upon their discovery.
- Within 7 days of providing notice to the CITY and upon the CITY's request, the CONSULTANT shall provide a recommended course of action to address the Differing Conditions. If further explorations or tests are required to define the nature and extent of the Differing Conditions, the CONSULTANT will conduct the explorations or tests upon authorization from the CITY and FDEP.
- In the event that the Differing Conditions have a material impact on the project cost and/ or schedule, an authorization by the CITY for an equitable adjustment in time and/ or compensation shall be made before action to address the conditions are initiated.
- Field oversight services will be provided for up to 200 hours. If additional oversight services are require due to the construction schedule the CONSULTANT will request additional hours.
- The CONSULTANT reserves the right to use available, qualified personnel to complete the tasks under this scope of work.

PAYMENT SCHEDULE

The work described shall be performed using the lump sum method of payment. Invoices shall be prepared each month based upon the percent complete.

Task Description	Percent of Total Fee	Fee
Project Management, Meetings and QA/QC	16.5%	\$16,268
Well Modification Evaluation	8.7%	\$8,594
Modification Permitting and Pre-Construction Activities	23.3%	\$22,925
Field Oversight and Reporting for Modification and MIT of Well IW-1	40.5%	\$39,775
Final Report	10.9%	\$10,737
TOTAL	100%	\$98,299

DELIVERABLE/TASK SCHEDULE

The work should be completed over a twelve month period contingent on the CITY's issuance of a Notice to Proceed by July 2016 and the requirements stated in the City's FDEP Permit No. 0167214-005-UO, Special Condition 3k for the below MIT Milestones. The CONSULTANT will deliver or complete the below deliverables/ tasks by the dates indicated:

Task	Description of Deliverable	Date Completed by
2	Well Modification Evaluation Technical Memorandum	9/1/16
3	Draft Issue for Bid Package and OPCC (60% complete)	10/1/16
3	Final Issue for Bid Package and OPCC (100% complete)	11/1/16
3	Final Minor Modification Permit Application and MIT Plan	9/15/16
4	Completed FDEP-Observed Pressure Test	2/14/17
5	Draft/ Final MIT Report (electronic pdf)	3/1/17
5	Tabular and Graphic summary of Injection System Operation Data (electronic MSEXcel File)	2/1/17

