




ERIE COUNTY WATER AUTHORITY

INTEROFFICE MEMORANDUM

October 11, 2022

To: Terrence D. McCracken, Secretary to the Authority

From: Leonard F. Kowalski, Executive Engineer 

Subject: Sturgeon Point Water Treatment Plant
Filtration Piping, Valve, and Underdrain Improvements
MP-090-P01 AWI Underdrain System – Sole Source Purchase
ECWA Project No. 202200014

Contract MP-090 consists of design and construction of improvements to Filters 1 through 10 at the Sturgeon Point WTP. Various components needed for this project will be purchased through the pre-procurement contracts. Pre-procurement contract P-01 is for AWI Underdrain System, which has been determined to be a sole source purchase. Please refer to the memo provided by Arcadis and the Sole Source Justification form for additional information.

Anthratech US, Inc. d/b/a AWI (AWI) is an established equipment supplier of the AWI Underdrain System. They have demonstrated a good understanding of the scope and requirements for this contract.

The Claims Representative/Risk Manager has approved the insurance certificates provided by AWI. There is no apprenticeship program or WMBE participation requirements on this contract.

We, therefore, recommend award of the above referenced contract to Anthratech US, Inc. d/b/a AWI in the amount of \$3,224,243.00.

Budget Information (2022 Construction):

Unit: 2510 Eng/Const Sturgeon Point
Item 101506 Filter Gallery Piping Design

Additional funds are required in the 2022 budget and will be funded through a budget transfer at the October 20, 2022 Board Meeting. The Authority 2023 budget will include funding allocations for subsequent years.

Attached please find the following documents:

1. ECWA Authorization Form.
2. ECWA Recommendation for Award of Contract form.
3. Sole Source Justification Form.
4. Arcadis memo dated May 9, 2022

LFK:jmf

Attachments

cc: R.Stoll

M.Wymer

D.Patton

L.Lester

CONT-MP-090-2101-X-12

SOLE SOURCE JUSTIFICATION

Requisition Item: Filter Underdrain System – Sturgeon Point – Contract MP-090 – PN 202200014

Purchase Order or Master Purchase Order Number: TBD

Prior Purchase Order or Master Purchase Order Number (if item has been approved previously): NA

1. Please describe the item and its function: AWI Underdrain System to be installed in Filters 1-10 as part of overall filter system rehabilitation under MP-090. Underdrain supports the filter media, collects filtered water and provides air/water backwash. See 6/8/22 justification memo (attached).

2. This is a sole source* because:

- Sole provider of a licensed or patented good or service;
- Sole provider of items that are compatible with existing equipment, inventory, systems, programs or services;
- Sole provider of goods and services for which the Authority has established a standard**;
- Sole provider of factory-authorized warranty service;
- Vendor/distributor is a holder of a used item that would represent good value and is advantageous to the Authority (please attach information on market price survey, availability, etc.);
- Sole provider of goods or services that will meet the specialized needs of the Authority or perform the intended function (please detail below or in an attachment).

A comprehensive examination of the available underdrain systems from multiple manufacturers was conducted by Arcadis under MP-085 and MP-090 – see attached memo. The AWI system was the only system to meet all necessary criteria including the key requirement that the underdrain function in a concurrent air/water flow within the existing geometry of Filters 5 through 10.

3. What necessary features does this vendor provide which are not available from other vendors? Be specific. See attached memo - 1. Air/water distribution performance related to individual air/water channels within existing filter geometry, 2. Least reduction in filter surface area, 3. Meets regulatory requirements for media penetration, 4. Utilization of anchor bolts to secure underdrain system.


4. What steps were taken to verify that these features are not available elsewhere?

- Verification from manufacturer of sole source attached (current year).
- Other brands/manufacturers were examined (please list phone numbers and names and explain why these were not suitable).
Seven underdrain systems were evaluated by consultant (Arcadis)- Refer to chart in attached memorandum.
- Other vendors were contacted (please list phone numbers and names and explain why these were not suitable).
Multiple vendors contacted by Arcadis to evaluate ability of filter underdrain system to meet specific needs of this project – Refer to chart in attached memorandum.

SUBMIT TO DIRECTOR OF ADMINISTRATION FOR APPROVAL

Buyer's Signature: 
Buyer's Name Michael Wymer

Date: 6/8/2022

(Please Print)
Approved: 
Director of Administration

Date: 06/08/2022

* Sole Source: Only one vendor possesses the unique and singularly available capability to meet the requirement of the solicitation.
** Procurement of items for which the Authority has established a standard by designating a brand or manufacturer or by pre-approving via a testing, shall be competitively bid if there is more than one vendor of the item.

SUBJECT
STP WTP Underdrain Sole Source Justification

TO
Mike Wymer, PE
ECWA

DATE
May 9, 2022

PROJECT NUMBER
MP-090

COPIES TO
Dave Patton, PE, ECWA
Len Kowalski, PE, ECWA

NAME
James O'Shaughnessy, PE
Mark Lenz, PE

The Erie County Water Authority (ECWA) owns and operates the Sturgeon Point Water Treatment Plant (STP WTP) located in Debry, New York. The STP WTP includes ten filters with underdrain systems that have reached the end of their useful life and thus will be replaced as part of MP-090. The purpose of this memorandum is to provide sole source justification for the AWI underdrain system.

Multiple underdrain systems were reviewed for this application during the Basis of Design of the previous project (MP-085) and again during the Preliminary Design stage of this project. Each underdrain system was reviewed with respect to performance and cost effectiveness. It is Arcadis' opinion that the AWI underdrain offers Authority considerable differentiators and benefits which justify a sole source procurement, including:

1. Superior Distribution Performance – Improved backwash efficacy occurs when performing air scour concurrently with freeboard fill (air and water simultaneously). Due to existing limitations of Filters 5-10, air from the air scour system cannot be added in the existing filter flume. As a result, air must be added at each end of the filter cell. This creates a counterflow arrangement where water and air are flowing in opposite directions. This configuration is suboptimal and can contribute to maldistribution during filter backwashing. The AWI underdrain system includes a dedicated air header that eliminates potential maldistribution due to the required counterflow arrangement.
2. Water Quality and Operational Advantages
 - a. Filtration Area and Hydraulic Loading – Retrofitting air scour into the existing filters will reduce available filter area due to air scour distribution piping being introduced. The AWI underdrain system has a unique air distribution system located underneath the underdrain lateral system. Implementation of this system will result in a filter area reduction of less than 2%. Other underdrain systems evaluated would require a reduction of filter area of greater than 6%. AWI's approach to maintain greater filter area will result in reduced hydraulic loading and improved filter performance.
 - b. Air Header Displacing Filter Media – The AWI approach includes an air distribution system beneath the underdrains. Alternative air distribution approaches have been proposed by other manufacturers that would locate an air header within the filter media. This alternate approach creates a potential short-circuiting opportunity for flow through the filter media that may result in reduced filter performance.
3. Regulatory Compliance – The proposed AWI air header drop through the filter media can be concrete encased as requested in previous meetings with ECDOH. This approach will minimize the potential for short circuiting filtered water.

4. Long Term Reliability – The proposed AWI underdrain system utilizes anchor bolts to secure the underdrain to the bottom of the filter cell. This approach provides a reliable long-term installation that minimizes the risks of future operational disruptions. Some alternate underdrain manufacturers require their system to be grouted in place which introduces the risks of contractor skill and installation quality, grout material properties and/or adhesion of the grout to the existing filter cell concrete. These risks can manifest themselves into future operational disruptions and thus the AWI mechanical connection is considered an advantage.

During the development of the Basis of Design, Arcadis received budgetary quotes from multiple underdrain system manufacturers. AWI's cost was comparable to the low cost alternative (<10% difference) while providing significant operational and performance advantages to ECWA. As a result, Arcadis recommends ECWA engage AWI in a negotiated procurement of the underdrain systems for MP-090.

ERIE COUNTY WATER AUTHORITY
 AUTHORIZATION FORM
 For Approval/Execution of Documents
 (check which apply)

Contract: MP-090 **Project No.:** 202200014
Project Description: Contract MP-090-P01 – Filter Underdrain Procurement

Item Description:

Agreement Professional Service Contract Amendment Change Order
 BCD NYSDOT Agreement Contract Documents Addendum
 Recommendation for Award of Contract Recommendation to Reject Bids
 Request for Proposals
 Other _____

Action Requested:

Board Authorization to Execute Legal Approval
 Board Authorization to Award Execution by the Chairman
 Board Authorization to Advertise for Bids Execution by the Secretary to the Authority
 Board Authorization to Solicit Request for Proposals
 Other _____

Approvals Needed:

APPROVED AS TO CONTENT:

<input checked="" type="checkbox"/> Sr. Production Engineer	<u>D. J. M. Patti</u>	Date: <u>10/11/2022</u>
<input checked="" type="checkbox"/> Chief Operating Officer	<u>Russell J. Stoll</u>	Date: <u>10/11/2022</u>
<input checked="" type="checkbox"/> Executive Engineer	<u>Jeanine F. Donalick</u>	Date: <u>10/11/2022</u>
<input checked="" type="checkbox"/> Director of Administration	<u>Sherry L. Lott</u>	Date: <u>10/11/2022</u>
<input checked="" type="checkbox"/> Risk Manager	<u>Molly G. Musarra</u>	Date: <u>10/11/2022</u>
<input checked="" type="checkbox"/> Chief Financial Officer	<u>Karen A. Bendegast</u>	Date: <u>10/11/2022</u>
<input checked="" type="checkbox"/> Legal	<u>[Signature]</u>	Date: <u>10/11/2022</u>

APPROVED FOR BOARD RESOLUTION:

<input checked="" type="checkbox"/> Secretary to the Authority	<u>[Signature]</u>	Date: <u>10/11/22</u>
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Remarks: Sole Source Contract.

Resolution Date: _____ **Item No:** _____

**ERIE COUNTY WATER AUTHORITY
RECOMMENDATION FOR AWARD OF CONTRACT**

Contract: _____ Project No.: 202200014
Project Description: Contract MP-090-P01 – Filter Underdrain Procurement

CONTRACT AWARD

Contractor/Supplier: Anthratech US, Inc. d/b/a AWI
Award Amount: \$3,224,243.00

BID SUMMARY:

Date Advertised for Bids: n/a Date of Bid Opening n/a

Bidder	Total Bid Amount
<u>Anthratech US, Inc. d/b/a AWI</u>	<u>\$3,224,243.00</u>

*** Sole Source Procurement ***

Attachments: Bid Tabulation Consultant's Recommendation

APPROVALS (Select applicable)

WMBE APPROVAL

No Waiver
 Full Waiver
 Partial Waiver
 Affirmative Action Officer _____ Date _____

INSURANCE APPROVAL

Claims Rep/Risk Manager Molly Jo Musarra Date 10/11/2022

NYS CERTIFIED APPRENTICESHIP PROGRAM APPROVAL

Coordinator of Employee Relations _____ Date _____

Remarks: Sole Source Procurement.