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December 5, 2012
Updated December 17, 2012

Mr. Wes Weaver, President
Weaver Construction Management, Inc.
3679 South Huron Street, Suite 404
Englewood, CO 80110

Via Email to: wes@weavercm.com
No Hard Copy to Follow

Re: Harold D. Thompson Regional Water Reclamation Facility (HDTRWRF)
Lower Fountain Metropolitan Sewage Disposal District (LFMSDD)

Dear Wes:

Reference is made to your shop submittal identified as follows:

Submittal No.:	15400-007A
Date of Submittal:	November 27, 2012
Title:	Resubmittal Seal Water Station Components – Valves, Solenoid Valves, Wye Strainer and Pressure Gauge
Specification Section:	15400
Manufacturers:	Various

The referenced submittal has been stamped "**Make Corrections Noted**". Our comments are as follows:

1. No indication has been made as to the voltage for the proposed solenoid valves. Please provide these solenoid valves in a 120V AC power configuration.
2. The submitted data sheet for the proposed solenoid valves indicates a NEMA 2 rating. Please revise this to a NEMA 4 rating for proper protection in the installed environment.
3. The submitted pressure gauge proposes a range of 0 to 100 psi. Please revise this to be a range of 0 to 30 psi. The pressure regulator previously submitted indicates a reduced pressure range of 0 to 25 psi. Since this pressure gauge is installed downstream of that device, the 0 to 30 psi range will provide better reading accuracy.
4. In an effort to expedite the review process and avoid further resubmittal packages, I contacted John Jacob at WCMI via email on December 5, 2012 with questions and requested clarifications. John responded with multiple email messages from December 5 through December 12, culminating in a final compilation message culling all previous responses into a single package of supplemental information. Copies of my original email message and John's

final compilation message with all supplemental information have been attached to this letter for reference. The following addresses the six items discussed in the email messages.

- a. Item No. 1 regarding the fail open solenoid valves and additional electrical equipment required for their operation: Per the response, additional items required include commodity items and conductor installations. Therefore, additional submittal material will not be required for these items. Please note that all fail open solenoid valve installations must be accurately recorded on the as-constructed documents for this project.
- b. Item No. 2 regarding the mesh size of the submitted strainer elements: WCMI confirmed the strainers will be provided with a 40 mesh strainer element.
- c. Item No. 3 regarding concurrence from the pump manufacturers on all seal water equipment proposed in the submittals: WCMI provided a response from the Fairbanks Morse pump representative indicating general ranges of performance requirements for the RAS, WAS and digester decant pumps. GMS, Inc. has compared this data with the previously submitted performance parameters of the pressure regulator and micron filter elements, which appear to be within the range recommended by the manufacturer.

Note that WCMI's response for the Seepex progressive cavity pumps, i.e., the digested sludge pumps and scum pumps, indicated that it was decided seal water installations were not required for these pumps. The project drawings and project specifications call for seal water installations to these pumps. In addition, the approved shop submittal packages (Shop Submittal No. 11315-001B) for these pumps included a mechanical seal sectional drawing, Drawing No. 262-0GB/0170-0-112B3, which indicates a flushing seal with quench inlet and quench outlet locations specifically noted. Therefore, seal water installations must be installed for these pumps in accordance with the project documents.

- d. Item No. 4 regarding the proposed size, construction materials and end connections for the submitted ball valves: WCMI has confirmed the ball valves will be ½-inch Schedule 80 PVC with socket end connections and EPDM gasket material.
 - e. Item No. 5 regarding the proposed size, pattern and end connections for the submitted needle valve: WCMI has confirmed that the needle valves shall be ½-inch globe pattern valves with threaded end connections.
 - f. Item No. 6 regarding the lack of submittal data on unions proposed for use: WCMI has provided an additional data sheet for those unions indicating Schedule 80 PVC construction with FIPT end connections and EPDM O-ring material. This data sheet has also been attached to this letter for reference.
5. With the email correspondence and data sheet described above being attached to this letter, no additional information or resubmittal material will be required for these items.

Mr. Wes Weaver
December 12, 2012
Page 3

Please call if you should have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Mark A. Morton', with a long horizontal flourish extending to the right.

Mark A. Morton, P.E.

MAM/ikmw

ec (w/attachments):

Mr. Jim Heckman, Manager, LFMSDD, lfmanager@lfmsdd.org

Ms. Cindy Murray, Office Manager, Fountain Sanitation District, fsdistrict@fsd901.org

Mr. Jeff Burst, Project Supt., Weaver Construction Management, Inc., jeff@weavercm.com

Mr. John Jacob, Project Mgr., Weaver Construction Management, Inc., john@weavercm.com

Mr. Adam Roeder, Weaver Construction Management, Inc., aroeder@weavercm.com

Ms. Leslie Brown, Weaver Construction Management, Inc., leslie@weavercm.com

cc (w/attachments): Mr. Jerry Miller, Resident Project Representative, GMS, Inc.

To: John Jacob <john@weavercm.com>
From: Mark Morton <mamorton@gmsengr.com>
Subject: Re: 15400-007.A.pdf - transmittal sub-contractor corrected
Cc: "Roger Sams" <RJSams@gmsengr.com>, Dave Frisch <drfrisch@gmsengr.com>, Jeff Burst <jeff@weavercm.com>
Bcc:
Attached:

John,

I have some questions on this submittal, hopefully these can be answered via email and avoid another resubmittal. Please respond to the following:

1. From the 11-8-12 DTC when we discussed the fail open solenoid valves, Patrick seemed to think there would be special electrical equipment required for these fail open valves. Have you talked with him to see exactly what that may include? If there are specific electrical items required for the fail open valves can Patrick put together submittal information and append it to this submittal, or will he have a separate submittal?
2. Wye strainer cut sheet indicates the use of both 20 mesh and 50 mesh strainer elements, while detail 2/DL-5 calls for 40 mesh. Is there a reason for not going with the 40 mesh shown on the drawings? Has a pump manufacturer recommended something different?
3. Have you verified with the pump manufacturers all the items in comment no. 4 from the previous submittal review letter?
4. The ball valve cut sheets do not indicate the intended size, construction materials or end connections. Please indicate those.
5. The needle valve cut sheets do not indicate the intended size, pattern or end connections. Please indicate those.
6. Submittal does not include data on unions intended for use, as requested in previous review comment no. 3. Do you intend to use unions that have been approved in a previous submittal? If so, state that and indicate which previous submittal. If not, provide data sheets.

At 04:45 PM 11/27/2012, Leslie Brown wrote:

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Mark A. Morton, P.E.
GMS, Inc.
611 N. Weber, Ste. 300
Colorado Springs, CO 80903
Phone: 719-475-2935
Fax: 719-475-2938

X-Original-To: mamorton@gmsengr.com
Delivered-To: mamorton@gmsengr.com
From: John Jacob <john@weavercm.com>
To: Mark Morton <mamorton@gmsengr.com>
CC: Roger Sams <RJSams@gmsengr.com>, Dave Frisch <drfrisch@gmsengr.com>, "mspearslash@comcast.net" <mspearslash@comcast.net>, Jeff Burst <jeff@weavercm.com>
Subject: RE: 15400-007.A.pdf - transmittal sub-contractor corrected
Thread-Topic: 15400-007.A.pdf - transmittal sub-contractor corrected
Thread-Index:
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Date: Wed, 12 Dec 2012 23:11:11 +0000
Accept-Language: en-US
X-MS-Has-Attach: yes
X-MS-TNEF-Correlator:
x-originating-ip: [10.0.5.147]
Mailarmory-Level:
Mailarmory-Category: clean (0)
Mailarmory-Filter-Date: Wed, 12 Dec 2012 16:11:17 -0700 (MST)
Mailarmory-Details:
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Mark – see attached per our conversation today.

Thanks,
John

From: Mark Morton [mailto:mamorton@gmsengr.com]
Sent: Tuesday, December 11, 2012 5:50 PM
To: John Jacob
Cc: Roger Sams; Dave Frisch; mspearslash@comcast.net; Jeff Burst
Subject: RE: 15400-007.A.pdf - transmittal sub-contractor corrected

John,

Are you still planning on sending a final compilation of responses like you mentioned below?

At 02:13 PM 12/10/2012, John Jacob wrote:

Mark,

I'm finalizing this as we speak so everything is in one email response. Related to question #3 – we had determined that the seepex pumps (scum and digested sludge) do not require seal water. I will

find this documentation

John

From: Mark Morton [<mailto:mamorton@gmsengr.com>]
Sent: Monday, December 10, 2012 1:56 PM
To: John Jacob
Cc: Roger Sams; Dave Frisch; mspearslash@comcast.net; Jeff Burst
Subject: RE: 15400-007.A.pdf - transmittal sub-contractor corrected

John,

Piecing together your recent email responses, it seems that you still need to answer:

Question No. 2
Question No. 3 for the scum and digested sludge pumps from Seepex
Question No. 5 pattern and end connections
Question No. 6

At 10:12 AM 12/7/2012, John Jacob wrote:

Mark,

You are correct that we did not indicate 120VAC. There is an option for 120VAC on the first page of the ASCO product data under the "Electrical Table" that 120VAC is available. It looks like you will make these comments in your submittal review.

Let me know if you need anything else.

Thank you,
John

From: Mark Morton [<mailto:mamorton@gmsengr.com>]
Sent: Friday, December 07, 2012 8:30 AM
To: John Jacob
Cc: Roger Sams; Dave Frisch; mspearslash@comcast.net; Jeff Burst
Subject: RE: 15400-007.A.pdf - transmittal sub-contractor corrected

John,

I agree the solenoid valves should be 120V and NEMA 4, these were comments I was planning for my review letter. I didn't see where the 120V AC was specifically indicated in the submittal documents, and NEMA 2 was noted in the submittal documents.

Project: HDTWRF

Submittal No.: 15400-007.A. Supplemental Info

Location: Fountain, CO

Supplier: Contract Mechanical

Date: 12/12/12

Submittal 15400-007.A Seal Water Station Components – Valves, Solenoid valve, WYE Strainer and Gauge – Supplemental Information

Additional Submittal Review Comments:

GMS sent WCM the below questions/clarifications in an email dated 12/5/12 related to the referenced submittal. WCM is providing responses and additional product data in response

1. Question: From the 11-8-12 DTC when we discussed the fail open solenoid valves, Patrick seemed to think there would be special electrical equipment required for these fail open valves. Have you talked with him to see exactly what that may include? If there are specific electrical items required for the fail open valves can Patrick put together submittal information and append it to this submittal, or will he have a separate submittal?

Response: Response from MWI: These will work. They need to be 120 volt. I think they should be NEMA-4, because they may need to hose things down in that area. We will need to install extra wiring to the pumps. I will also need to add some contacts in the MCC. We also may need to add a circuit from the low voltage panel to the MCC.

2. Question: Wye strainer cut sheet indicates the use of both 20 mesh and 50 mesh strainer elements, while detail 2/DL-5 calls for 40 mesh. Is there a reason for not going with the 40 mesh shown on the drawings? Has a pump manufacturer recommended something different?

Response: The pump manufacture did not recommend something different. We will use 40 mesh as indicated on detail 2/DL-5.

3. Question: Have you verified with the pump manufacturers all the items in comment no. 4 from the previous submittal review letter?

Response: Response from Ambiente:

John,

Per the submittal and O&M on the page TD-5440 Technical Data.

WAS, RAS and Decant the same.

Pressure is 1 to 10 psi above operating pressure and the flow rates shall be 0.5 to 1.0 GPM

Sealing Box:

Mechanical Seal

Type.....	Chesterton 255
Recommended Flush Water	
Pressure, PSI (above operating pressure)	1-10
Flow, GPM	1/2-1
Sleeve OD.....	1 7/8

Don Skinner at Fairbanks also says that the filter should be at least 28 micron, and that was not in the submittal or O&M.

Attached is a letter regarding the Seepex provided pumps which do not require seal water.

- 4. Question: The ball valve cut sheets do not indicate the intended size, construction materials or end connections. Please indicate those.

Response: 1/2" Threaded SCH 80 with EDPM

- 5. Question: The needle valve cut sheets do not indicate the intended size, pattern or end connections. Please indicate those.

Response: 1/2" threaded globe

- 6. Question: Submittal does not include data on unions intended for use, as requested in previous review comment no. 3. Do you intend to use unions that have been approved in a previous submittal? If so, state that and indicate which previous submittal. If not, provide data sheets.

Response: Refer to the attached product data. 1/2" SCH 80 threaded with EDPM seal will be used.

End of Review

seepex.com
Inc.

seepex
Inc.
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Enon, OH 45323
Phone (937) 864-7150
Fax (937) 864-7157
sales@seepex.net
www.seepex.com

December 11, 2012


Weaver Construction Management, Inc.
3679 S. Huron St.
Suite 404
Englewood, CO 80110-3498

Subject: Seal Flush Requirement Response Letter
Harold D. Thompson Regional Water Reclamation Facility (HDTRWRF)
Lower Fountain Metropolitan Sewage Disposal District (LFMSDD)
Submittal No. 11315-001
Progressing Cavity Pumps
Seepex Job# 2113909

Please find the following comments for submittal, per specification #11315 Progressive Cavity Pumps:

1. Water flush is not required for pumps DSP-1, DSP-2, SCP-1 and SCP-2 as the pumped fluid has sufficient water to clean and cool the seal face surfaces. The seal units that seepex, Inc. will be providing on all four (4) pumps can be enabled to receive water if the owner decides to do so in the future. I would like to reiterate that the pumps are designed to run without seal water as long as the fluid stays between the parameters specified under the conveyed product section of the pump data sheet.

Regards,



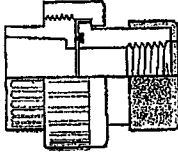
Hector Santiago
Environmental Applications Engineer
Cc: Kevin Thomas (seepex)



PVC Schedule 80 Fittings, Unions, Flanges, Tank Adapters & Expansion Joints

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
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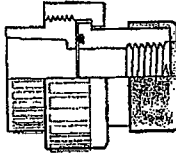
Special Reinforced Union 2000
Soc x SR Fipt with Viton® O-ring Seal -
Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8059-005SR	1/2	20	160	086	7.90
8059-007SR	3/4	20	80	086	10.88
8059-010SR	1	15	90	086	14.14
8059-012SR	1-1/4	10	0	086	27.02
8059-015SR	1-1/2	10	0	086	33.34
8059-020SR	2	5	0	086	50.91
8059-025SR	2-1/2	5	0	086	109.43
8059-030SR	3	5	0	086	124.40
8059-040SR	4	4	0	086	142.83
8059-060SR	6	1	0	086	317.40

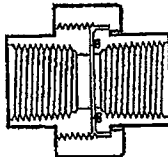
Special Reinforced Union 2000
Soc x SR Fipt with EPDM O-ring Seal -
Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8099-005SR	1/2	20	160	086	7.60
8099-007SR	3/4	20	80	086	10.83
8099-010SR	1	15	90	086	13.97
8099-012SR	1-1/4	10	0	086	24.30
8099-015SR	1-1/2	10	0	086	31.49
8099-020SR	2	5	0	086	50.88
8099-025SR	2-1/2	5	0	086	108.41
8099-030SR	3	5	0	086	120.69
8099-040SR	4	4	0	086	137.74
8099-060SR	6	1	0	086	306.10

Union 2000
Fipt with Viton® O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

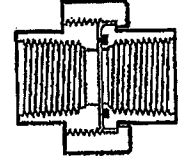
858-002	1/4	25	150	080	23.44
858-003	3/8	25	150	080	23.44
8058-005	1/2	20	120	080	13.50
8058-007	3/4	20	80	080	18.91
8058-010	1	15	90	080	25.16
8058-012	1-1/4	10	0	080	48.00
8058-015	1-1/2	10	0	080	59.44
8058-020	2	5	0	080	91.45
8058-025	2-1/2	5	0	080	154.68
8058-030	3	5	0	080	231.97
8058-040	4	4	0	080	272.63

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
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Union 2000 (continued)
Fipt with Viton® O-ring Seal

8058-060	6	1	0	080	605.82
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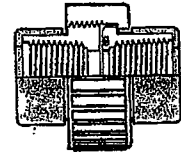
Union 2000
Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

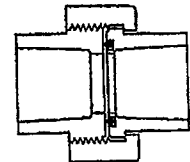
898-002	1/4	25	150	080	23.16
898-003	3/8	25	100	080	23.16
8098-005	1/2	20	240	080	13.34
8098-007	3/4	20	80	080	18.66
8098-010	1	15	90	080	24.85
8098-012	1-1/4	10	0	080	47.40
8098-015	1-1/2	10	0	080	58.69
8098-020	2	5	0	080	90.31
8098-025	2-1/2	5	0	080	120.94
8098-030	3	5	0	080	229.10
8098-040	4	4	0	080	267.95
8098-060	6	1	0	080	595.26

Special Reinforced Union 2000
SR Fipt with EPDM O-ring Seal -
Stainless Steel Collar



8098-005SR	1/2	20	120	086	8.01
8098-007SR	3/4	20	80	086	10.91
8098-010SR	1	15	90	086	14.44
8098-012SR	1-1/4	10	0	086	26.85
8098-015SR	1-1/2	10	0	086	33.77
8098-020SR	2	5	0	086	53.07
8098-025SR	2-1/2	5	0	086	107.11
8098-030SR	3	5	0	086	126.32
8098-040SR	4	4	0	086	145.02
8098-060SR	6	1	0	086	322.30

Union (Old Style)
Soc with Viton® O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

857-005	1/2	10	60	080	11.65
857-007	3/4	10	60	080	14.80
857-010	1	10	40	080	16.88
857-012	1-1/4	5	20	080	33.54
857-015	1-1/2	5	0	080	37.99
857-020	2	5	0	080	51.50

