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May 2, 2013

Mr. Wes Weaver, President
Weaver Construction Management, Inc.
c/o Garney Construction
7911 Shaffer Parkway
Littleton, CO 80127

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.:	11369-001B
Date of Submittal:	By Email: May 1, 2013
Title:	Belt Filter Press and Associated Dewatering Equipment
Specification Section:	11369
Manufacturer:	Phoenix Process Equipment Co.

The referenced submittal has been stamped "**No Exception Taken**" and "**Revise and Resubmit**".
Our comments are as follows:

1. The WCMI submittal transmittal letter indicated this submittal has not been reviewed by WCMI, but that John Jacob would be in contract via telephone regarding its review. We have not heard from John as of the writing of this review letter. However, we are issuing this review letter with comments in an effort to expedite the submittal review process. Should WCMI notice any other issues that need to be addressed, we can discuss those issues in the near future and include any additional revisions to the submittal documents in the subsequent resubmittal package.
2. We take no exception to the general arrangement drawings submitted for the belt filter press and gravity belt thickener pieces of equipment.
3. Previous submittal review comment No. 2.f.1) requested the differential pressure switch be added to the polymer feed system schematic in Section 5, subsection 6, page 4-2. The Phoenix response indicated this switch had been added to the schematic. However, the resubmitted schematic drawing still does not include the differential pressure switch. It appears to be the same version of drawing as originally submitted as there are no notations indicating revisions have been made. Please provide a revised polymer feed system schematic drawing including the differential pressure switch, and verify the termination labels on that schematic match the labels indicated on the electrical and control wiring diagrams.
4. Previous submittal review comment No. 2.f.2) requested a verification from WCMI and its subcontractors and suppliers that grouping all of the proposed AC and DC voltages for the polymer feed system through the single proposed junction box meets the requirements of the

2011 NEC and local codes. No response has been provided for that comment. Please address this item.

5. Regarding the revised water booster pump, the general performance chart submitted showing the capacity range of various pump models does not provide enough detail to verify the proposed pump will meet the submitted design point of 120 gpm at 40 psi. Please submit a pump performance curve specific to the proposed pump model with the proposed design point plotted for review. In addition, please provide detailed product sheets and performance data for the motor of the proposed water booster pump. Refer to subsequent comment No. 10.
6. Previous submittal review comment No. 2.i. requested product data sheets for the sludge feed pump accessories, including the dry run protection device, the discharge overpressure switch and the elastomer expansion joints. The Phoenix response comment indicated those items were not included in their scope of supply. These items are required by the Project Drawings and therefore, must be provided. WCMI shall coordinate with its subcontractors and suppliers to ensure all items required by the project documents are provided. It must be noted that the Phoenix controls package must accommodate the integration of the dry run protection device and discharge overpressure switch for each of the sludge feed pumps. Refer to subsequent comment No. 11.
7. Previous submittal review comment No. 2.j. requested revision of the sludge feed pumps to meet the operating parameters specified in Specification Section 11315, Paragraph 2.1.D., as described in Addendum No. Eleven (11). The Phoenix response to this comment referenced Specification Section 11315, Paragraph 2.1.C., Digested Sludge Pumps. This reference is incorrect. The Phoenix scope of supply includes the sludge feed pumps that deliver sludge to the dewatering equipment, not the digested sludge pumps referenced. Please revise the submitted sludge feed pumps to meet the above referenced Paragraph 2.1.D. described in Addendum No. Eleven (11). In particular, the submitted pump data indicates the maximum pump flow rate of 174 gpm requires a VFD frequency of 78 hertz, which is not acceptable. The referenced Paragraph 2.1.D. requires a maximum VFD frequency of 60 hertz at the maximum pump flow rate of 174 gpm. Please revise the pump to meet the requirements of Paragraph 2.1.D.
8. Previous submittal review comment No. 3.c. discussed the coordination requirements for installing the electrical and control panels of the Phoenix package, particularly the wall-mounted panels versus floor-mounted panels. The Phoenix response to this item indicates the supplied panels will be wall-mounted units. WCMI shall coordinate with the building manufacturer to ensure the proper wall members and supports are provided in the building design to accommodate the installation of these wall-mounted units.
9. Previous submittal review comment No. 3.d. requested the manufacturer's part numbers for the components of the pneumatic system. The Phoenix response to this comment was that submittal drawing 01211722D814 had been revised to reflect the manufacturer's part numbers. However, this drawing does not appear to include those revisions. Please provide the requested manufacturer's part numbers.
10. Previous submittal review comment No. 6 discussed communication requirements between the facility's SCADA system and the equipment furnished in the Phoenix package. The Phoenix response to this item indicates communication to the SCADA system will be available via the Ethernet connection to the PLC in their controls package. WCMI shall coordinate with Phoenix

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in acquiring the proper data addressing for programming the facility's SCADA system to process the required information from the Phoenix control package. In addition, Phoenix indicated they do not have equipment included in their package for motor speed and current draw information, but they can provide 4-20 mA signals to communicate that information to the SCADA system. That approach appears acceptable. WCMI shall coordinate with their electrical and controls subcontractor to ensure this information is received and handled correctly within the facility's SCADA system.

11. Previous submittal review comment No. 7.a. requested submittal drawing 01211722D801 be revised with regard to the water boost pump motor information. The Phoenix response to this item indicates the drawing has been revised. However, the submitted drawing does not show any change in the motor information. Please provide the correct and current motor information related to the revised pump utilizing a 5 horsepower, 3600 rpm motor.
12. Previous submittal review comment No. 7.b. requested revisions to the electrical and control wiring diagrams as necessary to include the wiring and connection requirements of the sludge feed pump protective devices. The Phoenix response to this item indicated that those protective devices are not included. These devices are required by the Project Drawings and WCMI must therefore coordinate the provision of these devices for the sludge feed pumps. The Phoenix controls must account for these protective devices in the pump shutdown action required upon activation of any one of these protective devices. Therefore, we request the submitted electrical and control wiring diagrams be revised to accommodate the protective devices and the required individual pump shutdown response.
13. Previous submittal review comment No. 7.d. requested coordination in the verbiage of tag labels for the pneumatic system between submittal drawings 01211722D813 and 01211722D814. The Phoenix response to this item indicated a correction to the tag labels. However, the tags still do not correlate. A tag label of "GBT TENSION FAULT (IN)" appears on drawing 01211722D813, yet a label of "GBT TRACKING (OUT)" appears on drawing 01211722D814. Please revise to show the correct label verbiage on both submittal drawings.

Please call if you should have any questions.

Sincerely,



Mark A. Morton, P.E.

MAM/kmw

ec (letter only):

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

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cc (letter only): Mr. Jerry Miller, Resident Project Representative, GMS, Inc.