



Legislation Details (With Text)

File #: 16-1266 **Version:** 1 **Name:** Repair of Aeration Blower number 2 at SWWRF in an amount not to exceed \$71,210

Type: Agenda Item **Status:** Approved

File created: 9/14/2016 **In control:** Public Works

On agenda: 9/27/2016 **Final action:** 9/27/2016

Title: Consider and take action on a resolution authorizing the repair of the Aeration Blower Number 2 (SC50), the replacement of resistance temperature detectors (RTD) and the installation of new generation bearings at the Southwest Water Reclamation Facility (SWWRF) by Siemens Demag Delaval Turbomachinery in an amount not to exceed \$71,210 (Deputy City Manager)

Sponsors:

Indexes:

Code sections:

Attachments: 1. Data Sheet, 2. Proposed Resolution, 3. Two (2) repair quotes, 4. Failure Analysis Letter, 5. Compressor Fact Finding Report

Date	Ver.	Action By	Action	Result
9/27/2016	1	City Council	Approved	Pass

Consider and take action on a resolution authorizing the repair of the Aeration Blower Number 2 (SC50), the replacement of resistance temperature detectors (RTD) and the installation of new generation bearings at the Southwest Water Reclamation Facility (SWWRF) by Siemens Demag Delaval Turbomachinery in an amount not to exceed \$71,210 (Deputy City Manager)

Approval of this resolution will extend Purchase Order No. 161409 to include the repair and restoration of service of aeration blower Number 2 at the SWWRF. This will provide aeration capacity and redundancy to ensure regulatory compliant wastewater treatment.

Purchase Order No. 161409, in the amount of \$35,281, was issued on July 7, 2016 for the replacement of resistance temperature detectors (RTD) and installation of new generation bearings. Additional repair scope (details attached) was identified after the factory evaluation occurred and a quote for additional work in the amount of \$35,929, was received August 23, 2016. Total repair costs will now exceed \$50,000 and requires City Council approval of the proposed Change Order, totaling \$71,210. Siemens is the proprietary manufacturer and service provider for SC50 Turbo Blower. Pricing for services cannot be competitively bid and is subject to negotiation.

Firm aeration capacity at the SWWRF is served by three Siemens SC50 direct drive turbo blowers. This technology provides the highest degree of air delivery and electrical efficiencies available in the wastewater treatment industry. In December 2015, Blower Number 2 experienced restart issues associated with failed RTD's and was later identified to include air-bearing failure (details available in attached failure analysis letter). Staff is currently engaged with the manufacture's national level management and system design team, along with the City's design consultant to identify the cause and resolution of what appears to be early premature air-bearing failure. The blowers are entering their fifth year of service life with approximately 8,500 hours of operation on each machine, and are beyond manufacturer's and contractor's warranty periods. After extensive discussions, Siemens has agreed to provide a 30 percent discount of current repair activities, including, improved bearings and shipping costs to Germany, as Seimens has ceased all stateside service support of the direct drive air-bearing machines.

Recent developments include the failure of a second SC50 blower on August 30, 2016. Blower Number 3 is currently under evaluation but early diagnosis appear to be a similar bearing failure as Blower Number 2. Siemens engineering group

was on-site on September 16 to further evaluate. The failure of the second blower created the urgent need to provide a back-up unit for redundancy, until a reasonable resolution is identified. Alvin Contracting is currently in the process of relocating an available multi-stage aeration blower from the Dallas Salmon WWTP to SWWRF for this purpose (item is presented on this agenda).

Attachments:

- 1) Data Sheet
- 2) Proposed Resolution
- 3) Two (2) repair quotes
- 4) Failure Analysis Letter
- 5) Compressor Fact Finding Report

FUNDING

NOT APPLICABLE

Funds are available in the amount of \$71,210 from Wastewater Equipment Repair & Maintenance (Sungard account 020-3221-694-5240; Tyler account 10207500-52400)

Requires Budget Amendment to transfer from Account # _____ to Account # _____