

## **Proposals for a New Perforated Plate Filter Screen and a Screw Wash Press**

The Aiken County Public Service Authority (ACPSA) is located at 70 PSA Road Beech Island, SC 29842. The ACPSA is a wastewater pollution control facility that serves several counties in South Carolina.

The ACPSA is requesting proposals for a new perforated plate filter screen and a screw wash press to facilitate trash removal and nutrient recovery from our influent wastewater to improve plant performance, extend equipment lifecycles and reduce operational and maintenance cost. The current screening equipment is inadequate for trash and fibrous materials removal and is causing serious problems with our ability to operate and properly treat wastewater, dryer facility production and increasing maintenance cost and downtime of equipment. The ACPSA staff will evaluate received proposals and determine the best one for treatment of our process. This RFP will also be used in a future budget year for an additional unit to be installed.

### **Performance Requirements:**

- The Screening Capture Rate (SCR) / Efficiency: must have a minimum 85 Percentage of all material captured by the screen as documented by the National screen evaluation facility at Chester Lee Street in England by TRPM and Northumbrian Water. A documented report of the test results must be provided.
- Perforated Filter panels shall be cleaned by means of an automatic adjusting rotating cleaner brush. Screens that do not have an automatic adjusting rotating cleaner brush will not be accepted.
- Equipment must meet the following standards:
- AISI,ANSI,ABMA,AGMA,NEMA,NFPA,ASTM,WSC,ASME,NEC and UL.

<b>Conditions</b>	<b>Unit</b>
Number of screens	1
Influent Type	Municipal Wastewater
Peak Flow per Screen (MGD)	65
Downstream Liquid level at peak flow (in)	49.5
Headloss at Peak Flow @ 30% Blinding (in)	12
Screen Panel Perforation Diameter (mm)	6
Channel Width (ft.)	7
Channel Depth (ft.)	7
Screening Discharge height from top of channel (ft.)	5
Minimum Screening capture ratio (SCR)	85%

Spray water flow and pressure	50gpm @ 45 psi
Power supply (V/P/HZ)	460/3/60
Screen Installation Location	Outdoor
Screen NFPA Classification Requirement	Non-hazardous

**Manufacturers Requirements:**

Manufacturer shall have a minimum of ten years of experience in producing substantially similar equipment and shall be able to show evidence of successful and satisfactory operation of equipment at other facility's for at least five years.

Provide references and contact information from successful installations.

**Materials of Construction:**

All moving wetted parts, all wetted parts on which moving parts ride, all filter belt components under guiding, bearing, or driving loads shall be 304SS, wear resistant heat treated, high tensile, wear resistant steel, or UHMW-PE.

Frame shall be minimum 4mm thick type 304SS. All other equipment should be constructed of 304SS when possible.

**Equipment Design Features:**

The screen shall be designed to provide maximum solids filtration and thus maximize capture of debris and minimize rate of head loss increase through the screen. The maximum perforated opening shall be 6 mm. The screen will be operated intermittently by means of differential head measurement. The influent screening system shall include a perforated plate screen and a washer/compactor system. The screen must be designed to allow bypass under the screen by raising the screen with hydraulic cylinders. A Screw wash compactor is preferred over hydraulic ram design.

Removal of existing equipment, installation, materials and equipment needed and all other associated cost should be included in proposal.

**ACPSA Evaluation:**

Design and performance requirements	50%
ACPSA review of past installations	25%
Total cost	25%

**PLEASE SUBMIT ONE ORIGINAL AND FOUR (4) COPIES.**