SECTION 15800

odor control canister

# GENERAL

## SCOPE

### Work under this section includes an odor control canister with top mounted fan for the control of hydrogen sulfide. The system shall consist of a high flow stand alone canister, initial load of activated carbon, cast aluminum fan, pressure differential indicator, electrical package for fans and controls, and any other appurtenances recommended by the manufacturer. All materials shall be provided in accordance with these specifications.

### All components of the system shall be compatible with the conditions and chemicals to which they are subjected to during the normal operation of the system. Compounds with which the materials must be compatible include, but are not limited to:

#### Hydrogen Sulfide

#### Activated Carbon

## MANUFACTURER

### All components of the odor control canister system shall be provided by a single manufacturer who shall have sole-source responsibility for the system.

### The manufacturer of this equipment shall be one recognized and established in the design, production, and operation of the odor control system. The manufacturer shall provide, with the submittal data, a list of 10 systems in operation using equipment for the control of hydrogen sulfide and other odor causing components associated with municipal wastewater.

### The system shall be provided by ECS Environmental Solutions, Belton, TX or equal.

## SUBMITTAL

### The manufacturer shall submit complete shop drawings and engineering data to the Engineer, for review and approval. These submittals shall include, at a minimum:

#### Drawings showing plan and elevation views of the odor control canister and top mounted fan.

#### Control system layout drawing

#### Control systems electrical diagram

#### Manufacture’s catalogue information on major system components including, but not limited to:

##### Odor Control Canister

##### Top Mounted Fan

##### Activated Carbon to be used

#### Statement of design conditions and performance guarantee

#### Statement of warranty

#### Reference list as described in section 1.03, B above

### The manufacturer shall submit complete Operation and Maintenance manuals to the Owner. These manuals shall include at a minimum:

#### Information in hazards associated with the system and the appropriate safety precautions

#### Material Safety Data Sheet- Activated Carbon

#### Equipment installation instructions

#### Equipment startup instructions

#### Equipment maintenance procedures

#### Troubleshooting guide

#### Individual operation and maintenance information on major system components, including but not limited to:

##### Odor Control Canister

##### Top Mounted Fan

##### Activated Carbon to be used

## SUBSTITUTIONS

### Any substitutions or deviations in equipment or arrangement from that shown on the drawings specified herein shall be the responsibility of the Manufacturer or Contractor. Any deviations must be accompanied by detailed structural, mechanical and data for review by the Engineer. All costs associated with review of the substitutions or deviations and costs associated with project drawing changes as a result of approval shall be borne by the Manufacturer or Contractor. There shall be no additional costs to the Owner due to substitutions or deviations.

# PRODUCTS

## PRODUCT INFORMATION

### Technical Requirements

#### A stand alone canister with top mounted fan,

#### The adsorber system shall provide continuous treatment when fan is in service

#### Features:

##### 316-stainless steel ground rod assembly

##### Initial load of activated carbon, Centaur HSV type carbon, or equal. The quantity to be supplied is (xx) cubic feet. The activated carbon shall be manufactured in the USA.

##### Carbon Bed Support System: FRP with polypropylene carbon retaining screen

##### Combined drain/fill: 2” FNPT with polypropylene ball valve

##### Water regeneration overflow 2” FNPT fitting with plug

##### Lockable removable canister top

#### (x)” 150# flanged, Air Inlet Connection

#### (x)” Plain End Air Outlet with rain cap and bird screen

#### Carbon sample port: 1-1/2” with polypropylene ball valve

#### Each system shall be supplied with a cast aluminum fan factory mounted directly to the carbon adsorber outlet.

#### The fan motor shall be AMCA Certified, [xx] HP [xx] phase, [60] Hertz, [xxx] Volt, TEFC direct driven inlet mounting flange. Motor cover to be provided. Fan is rated for [xx] cfm, with a pressure drop of [xx]-inches of water column.

\*Note to the Engineer: design criteria shown above with [xx] shall be populated with project specific information.

#### **Pressure Gauge:** (2) differential pressure gauge

#### Pressure relief valve

### Optional Features to be provided:

#### Explosion-proof electrical package for fan and controls (On/Off switch shall be explosion proof)

#### Grease filter/mist eliminator

#### Sound attenuation

#### Rain cap with bird screen

### Safety Requirements

#### The material shall contain no hazardous substances as defined by both the Federal EPA's and State CERCLA lists.

#### Recommended handling procedures for the material shall require protective gloves and safety glasses only. Any material recommending more sophisticated equipment (i.e., face shield, body suit, etc.) during routine handling shall not be considered.

# EXECUTION

## SITE AND UTILITIES

### The odor control canister and other appurtenances shall be located on a 6-inch concrete pad adjacent to the wet well top slab as shown on the drawings. The following utilities shall be provided at the feed system site and located as shown on the drawings. Site preparation, utility service, and installation are not provided by the Manufacturer under these specifications.

### Electrical. One [xx] VAC, 60 Hz, [xx] amp [xx] phase electrical service shall be required.

\*Note to the Engineer: design criteria shown above with [xx] shall be populated with project specific information.

### Concrete Foundation

### Wet well air inlet/outlet connection.

## EQUIPMENT SHOP TESTING

### Before shipping the equipment, the Manufacturer shall perform shop tests. These tests shall include at a minimum:

#### Visual inspection of all equipment.

## INSTALLATION

### No on-site assistance shall be required. The system shall be installed in accordance with the manufacturer’s installation instructions. All installation personnel shall be trained and qualified in the areas of plumbing, electrical work, and instrumentation as required to complete the installation.

## FIELD TESTS

### The performance of the system shall be demonstrated to reduce hydrogen sulfide to meet with the odor control levels set forth per manufacturer’s standard practice.

## WARRANTY

### The Manufacturer shall guarantee that the odor control system will perform as described in these Specifications. The Manufacturer shall warrant the system, complete, to be free from defects in materials or workmanship for a period twelve (12) months from acceptance by the County of the SLS major equipment and systems. The Manufacturer shall repair or provide replacement for any defective components under this warranty.

**END OF SECTION**