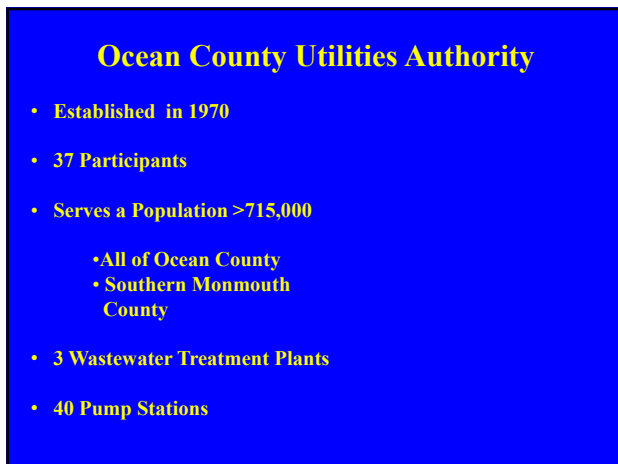




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REGULATIONS
(OR WHAT GOT US INTO THIS MESS)

N.J.A.C. 7:14-5.1 et seq. – 1980

Created Regulations Concerning the Statewide Management of Septage Disposal

Established a Statewide Septage Management Plan (SWSMP)

Comprehensive Septage Management Plan for Ocean County – 1982

Established CWPCF as the receiving facility for septage generated within its service area.

The Ocean County Health Department monitors the septage as it is travels from the homeowner's septic tank to the disposal site

Tracked by the 5 part septage manifest

OCUA Sewer Use Rules and Regulations, Section 12.01, Septage Management

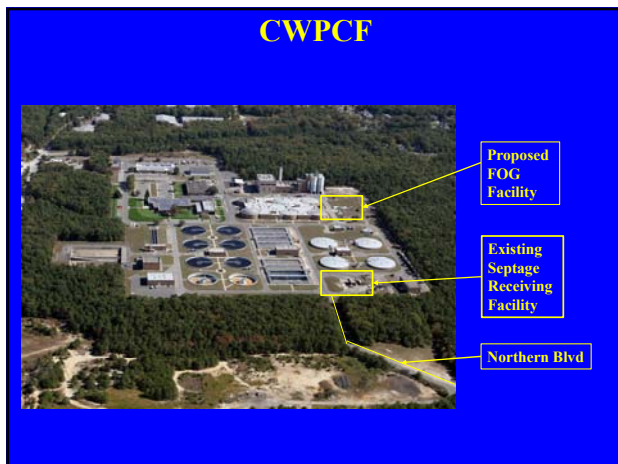
The Authority has constructed facilities for the acceptance of domestic septage at these septage facilities and the material which may be discharged is set forth in agreements that the Authority has with the individual septage haulers. All tracked in wastewater to the Authority septage facilities shall be accompanied by a completed manifest.

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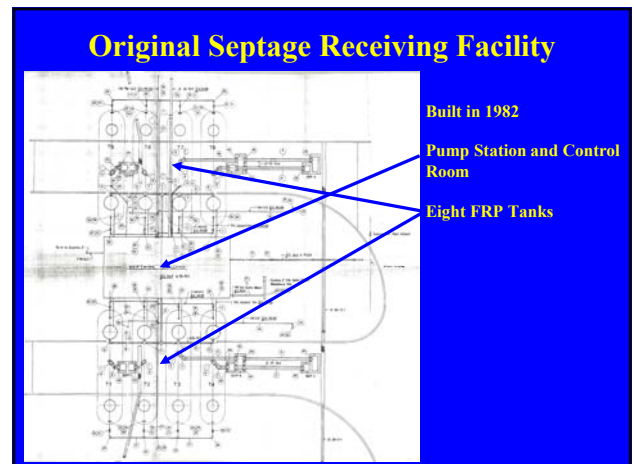
Agreement (relevant passages) for Septage Haulers

- The Authority will accept septage from the Hauler in accordance with the terms of this Agreement
 - and in conformance with the applicable Rules and Regulations of the DEP, and Ordinances and Rules of the Ocean County Board of Health (OCHD).
- "Septage," as defined in the DEP Septage Regulations, means the combination of liquid and solid residues resulting from the treatment of waterborne domestic waste in on-site treatment systems.
- Septage may include wastes generated from restaurants, professional buildings, etc.
- The characteristics of domestic septage for the purposes of this Agreement are defined by the USEPA, in a study entitled "Alternatives for the Treatment and Disposal of Residuals from On-site Wastewater Systems, August 1980"
- If the Hauler has discharged septage that has been determined by the to be unacceptable, in that it interfered with the treatment process and/or its operation and maintenance, the OCHD, with the assistance of the Hauler and the OCUA, shall determine which generator is responsible for such unacceptable septage.
- The OCUA, with the assistance of the OCHD and the Hauler, will recoup the amount of money incurred by as costs for the restoration of the treatment process and normal operations, including any associated administrative and legal costs.
- The OCUA reserves the right to refuse to accept any septage if conditions of its treatment process and/or septage facilities make it inadvisable to accept the septage, or if other emergent conditions preclude acceptance of the septage.
- If possible, the OCUA shall assist the Hauler in disposing of the septage in an alternate acceptable manner.

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FOG at CWPCF

- Existing Conditions
- FOG + Septage processed through single receiving unit
- Clogging of pipe lines, FOG deposits in unit process tanks
- Unable to process large amounts of FOG
- Unable to separate FOG from septage and scum

11



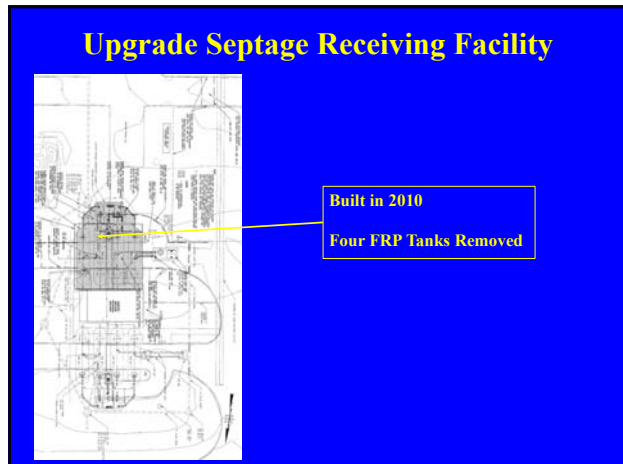
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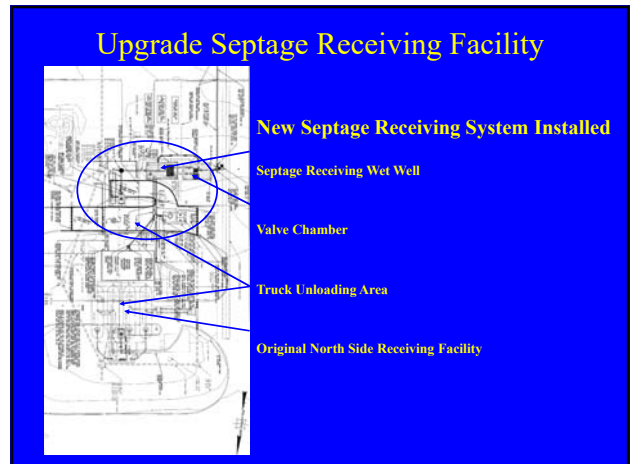
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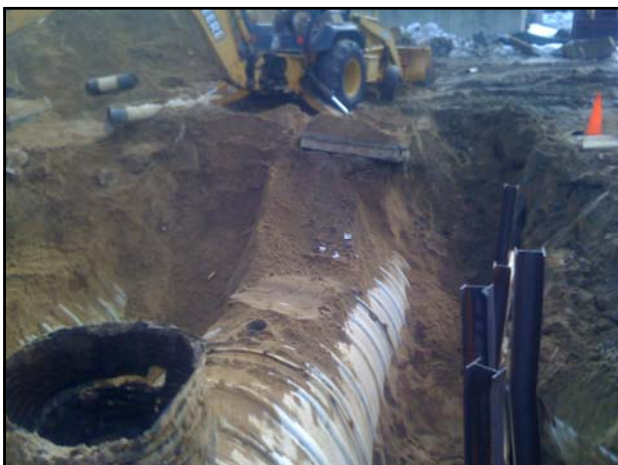
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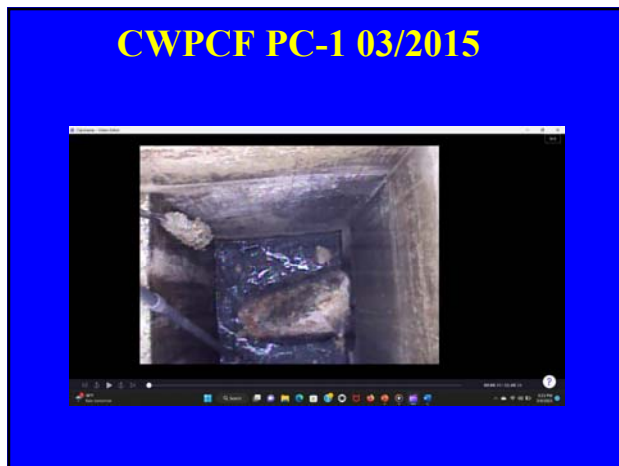
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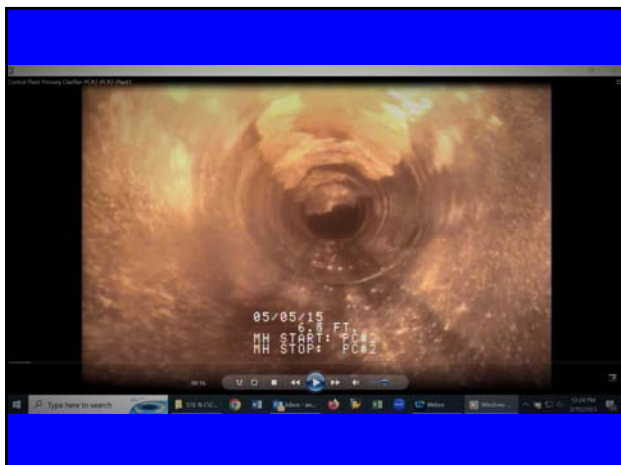
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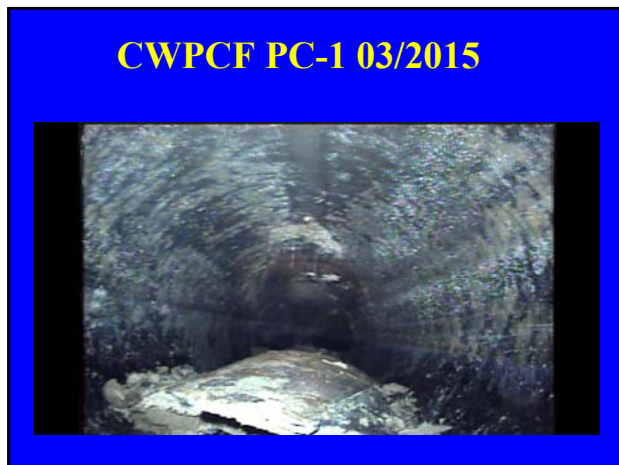
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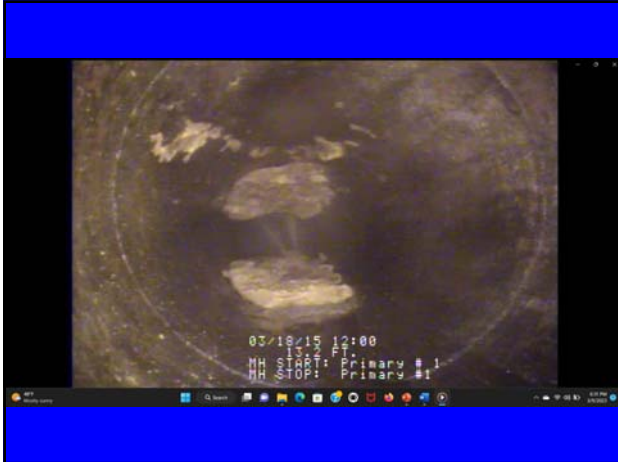
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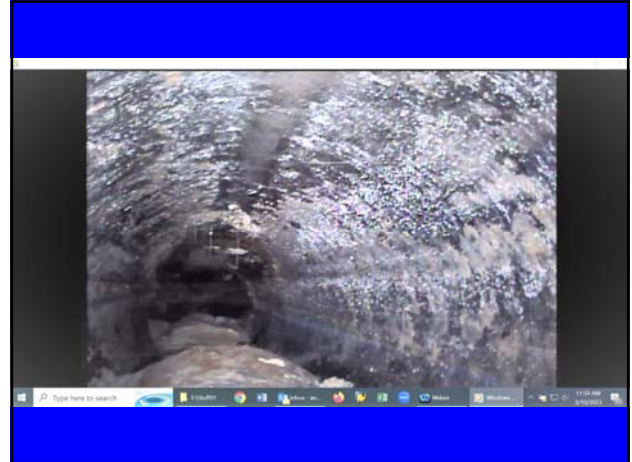
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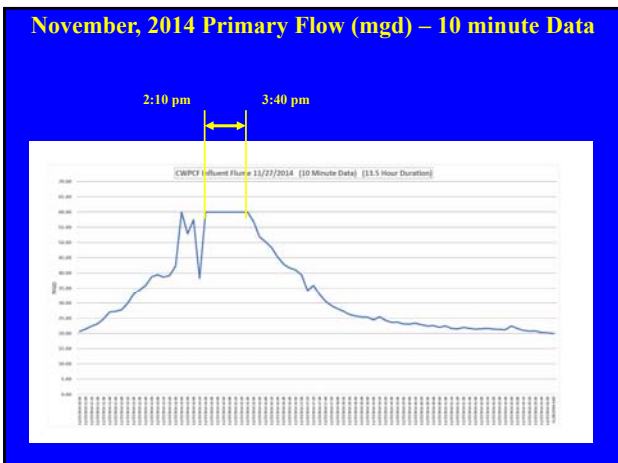
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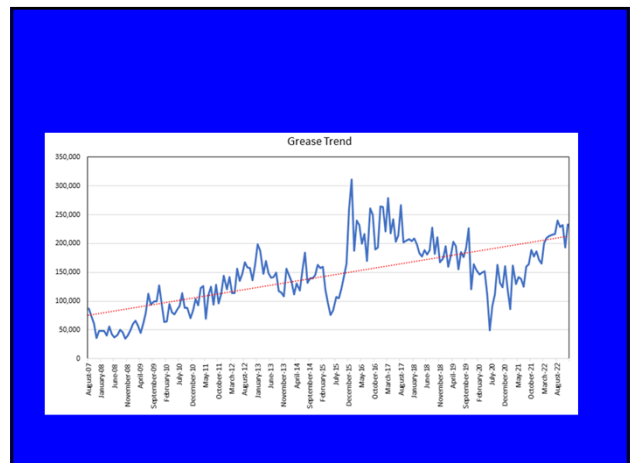
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Temporary Grease Receiving Facility



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March 2017 Seminar

Held with Septage Haulers

22 Haulers Invited

3 Haulers Attended

Reviewed Information as Presented Herein

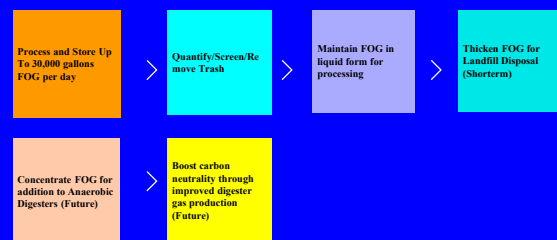
32

Future Facility

- Process Septage and Scum through Existing Facility
- Provide FOG Processing Building for FOG Haulers only
- FOG to be Thickened for Landfill Disposal (short-term)
- FOG Facility to be Located Near Solids Handling Facility
- Future Consideration to Concentrate and Feed to Anaerobic Digesters to Boost Gas Production (future)
- To Be Designed as a Part of Contract CD1008 CWPCF Process Improvements

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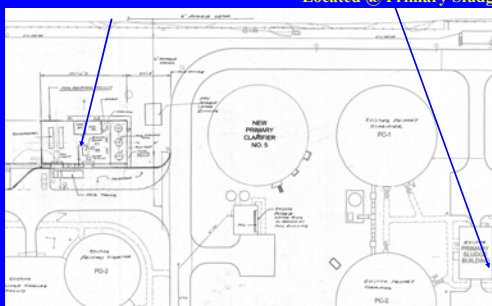
Project Objectives



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Future FOG Receiving Facility

Future FOG Facility
Existing FOG Facility Located @ Primary Sludge Bldg.



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Central WPCF Site Plan



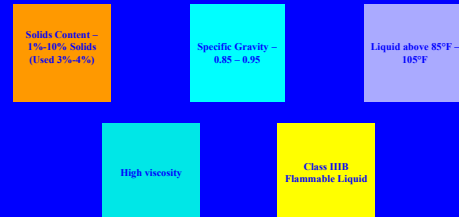
36

What is FOG?



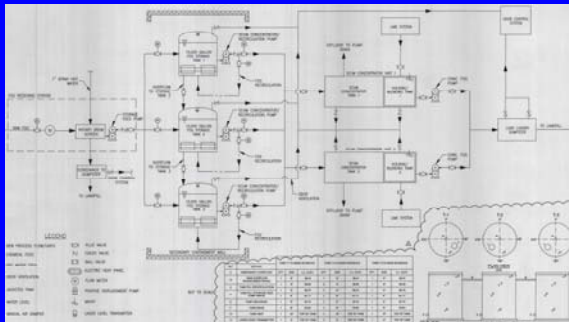
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Characteristics of FOG



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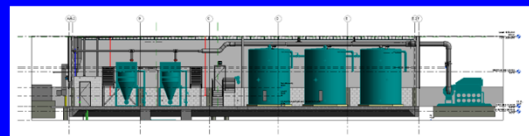
Process Flow Diagram



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Storage and Pumping

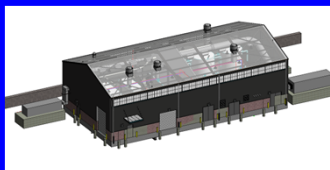
- Storage**
 - (3) 10,000 gallon storage tanks
 - FRP tank with heat panels
 - Heat tank contents between 85F – 105F
- Pumping**
 - Recirculation within tank for mixing
 - Transfer to FOG concentrators for thickening
 - Rotary lobe pumps
 - PVC piping – easy to replace when needed
 - Hot water flushing connections



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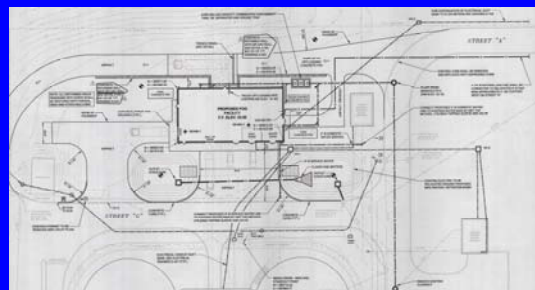
Other Design Considerations

- Provided trench drains in place of floor drains @ slopes of 1/8"/ft – 1/4"/ft
- Provided grease trap on building drain line to prevent return of FOG to head of plant
- Knockout panels for future tank removal
- Odor Control Unit/Activated Carbon units
- Covers and takeoffs from unit processes – Minimizing Full Building Ventilation

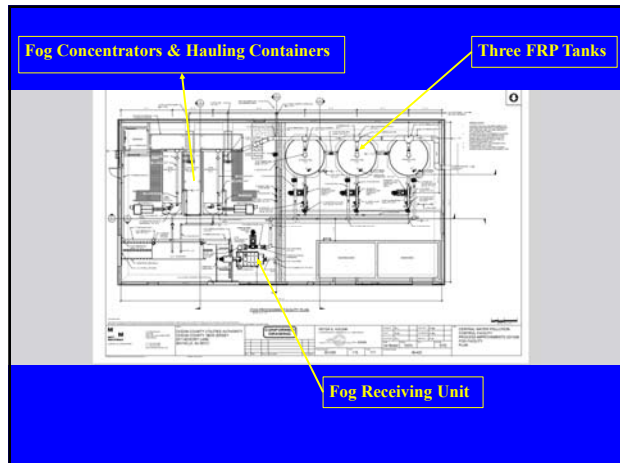


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Site Plan



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Safety in Design Considerations

Code Analysis

NFPA 820

- Class 1 Division 2 space without ventilation

IBC

- Sprinklers required for storage of greater than 10,000 gallons of Class IIIB flammable liquid

The table shows the classification of various solids treatment processes. It includes columns for 'Location and Process', 'Pre and Post Treatment', 'Ventilation', 'Storage', and 'Hazardous Materials'. The table is used to determine the required safety measures for different types of solids treatment processes.

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Safety in Design Considerations

Sprinkler System

Physically Separate Spaces

Means of Egress

The floor plan shows the layout of the facility with different areas color-coded: brown for Class 1 Division 2, blue for Class 1 Division 2 w/ Sprinklers, and grey for Unclassified. The plan includes labels for 'GROUND FLOOR - LIFE SAFETY' and 'Fog Receiving Unit'.

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Construction Phase

- Project Funded by New Jersey Infrastructure Bank
- Pre-Bid Estimate = \$29.4 mil
- Bid for Contract No. CD1008 CWPFC Process Improvements opened August 17, 2022
- Eight (8) bids were received
- Ranged from low of \$37,500,000 (Quad Construction Company) to a high of \$59,840,000 (Clyde N. Lattimer & Son Construction Co., Inc.).
- The bid was deemed responsive/award recommended Quad Construction Company in the amount of \$37,500,000.
- Notice-To-Proceed issued 11/16/2022/Final Completion 11/15/2025
- Schedule of Values, \$ 9 mil for Fog Facility

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Receiving Station and Screening/Degritting

- OCUA accepts FOG Monday – Friday during staffed operational hours
- No need for key card system at this time
- Grease trap waste only
- Did not feel rock trap was necessary
- Hot water spray wash to keep screen from Blinding
- Direct connection of pump to receiving unit
- Eliminated need for wetwell, maintains area classification at Class 1 Div 2

The photograph shows the FOG Receiving Station equipment, which is a large, white, industrial machine with a hopper for FOG and a rotating drum screen for screening and degritting. The machine is mounted on a concrete base and has various pipes and valves connected to it.

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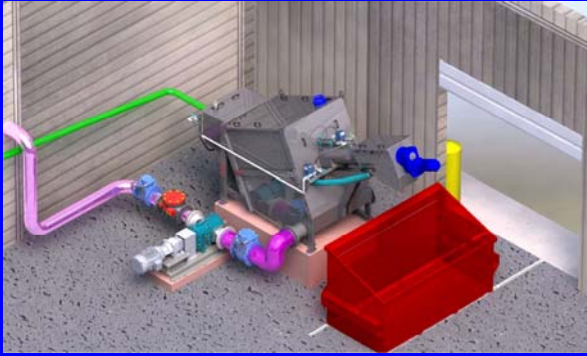
SECTION: 11330-FOG Receiving Station

SAVI Beast FOG Receiving Station, Model VFA-1200-DM, to include:

- Fully automatic, self-cleaning, dual drive, FOG receiving system incorporating a perforated plate rotating drum screen and an integral screening washing, conveying, and dewatering/compacting
- Supplied with two-stage tank inlet section sloped to screen to prevent sedimentation
- Second stage of tank houses rotating drum screen conveying and dewatering system perforated plate media type 304 stainless steel with 6 mm
- Drum gear reducer drive unit with 2.0 HP TEFC (Class I, Division 2) motor suitable for 460/3/60 electrical supply.
- cleaning brush and spray bar located on the outside of screen drum to reduce screenings recycle.
- Screw drive unit with 2.0 HP TEFC (Class I, Division 2) motor
- One (1) Börger Rotary Lobe Pump rated for a maximum of 650 gpm of FOG with 15% TSS

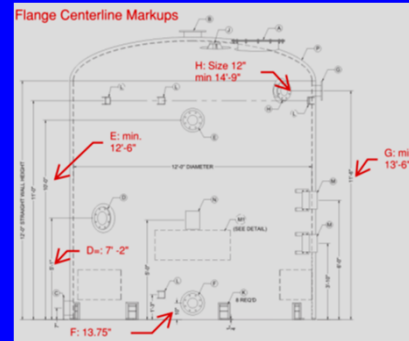
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Manufacturer's Rendition of Installation



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10,000 Gal. FRP Storage Tank



12 ft. Diameter
12 ft. Straight Side Wall Ht.
Vinyl Ester Resin
Grey Exterior
Wax Containing Surface Coat
UV-9 Light Absorber

50

Concentration and Thickening

Scum Concentrators

- Dual units for redundancy
- Heated/mixed concentrated FOG tank
- Open-throat style progressive cavity pump to dumpster

Lime Feed System

- Automatic augured system
- Add lime to achieve 'toothpaste' consistency



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Thank You

Questions and Answers

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