Process Description

The digester is fed three times per day, each time for a one hour period, with a 7.5-Hp J. Houle & Fils, Inc. piston pump. A 7.5-Hp J. Houle & Fils, Inc. impeller agitator is used to blend the influent pit contents for 20 minutes prior to feeding the digester.

Benefits and Considerations

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Considerations</th>
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<tbody>
<tr>
<td>• Odor control</td>
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</table>
| • Potential revenue from:  
  1) Value-added products  
  2) Reduction of purchased energy  
  3) Sales of excess energy  
  4) Efficient use of biogas production  
  5) Carbon credit sales  
  • Conversion of nutrients from organic to inorganic form, allowing them to be readily utilized by plants as a natural fertilizer, if effluent is spread at an appropriate time  
  • Pathogen reduction | • Possible high initial capital and/or high operating costs  
• Long and tedious contracts with the local utility; may require special equipment for interconnection  
• Dedicated management of the digestion system  
• Careful attention to equipment maintenance and safety issues due to the characteristics of raw biogas |

Legend:
- Agitator
- Blower
- Pump
- Long-term Earthen storage
-消化器进料
- Plug-flow Digester
- 230 kW Engine/Generator
- Electricity
- Flare
- Heat
- Milking center waste water
- Substrates: vegetable oil filtering sludge
- Effluent
- Influent
- Digester effluent
- Water column levels in these buckets regulate the maximum biogas pressure
- Excess biogas is flared