



STANDARD OPERATING PROCEDURE

UPSET DIGESTER CONDITIONS

Date Approved:
March 8, 2018

Approved By:
Glenbard Wastewater Authority
Executive Oversight Committee

PURPOSE: A guide to set strict operating procedures to follow in the event a digester upset should occur due to high strength waste addition.

SCOPE: This Standard Operating Procedure (SOP) covers steps the Glenbard Wastewater Authority will follow under upset digester conditions.

Part I	Staff Responsible: Laboratory /Operations
Upset Condition Definition	
<ol style="list-style-type: none"> 1. A digester will be considered upset if at least two of the three following conditions are observed at the Glenbard Wastewater Authority Primary Digesters: <ol style="list-style-type: none"> a. The acids to alkalinity ratio exceeding 0.25. b. The volatile acids exceeding 500 mg/L c. Excessive Foaming d. Persistent offensive odors being generated that are detectable beyond plant property e. pH below 7.0 	
Part 2	Staff Responsible: Operations/Laboratory
Steps Taken	
<ol style="list-style-type: none"> 1. If high strength waste addition has not already ceased, it shall be ceased immediately. 2. Temporary odor neutralizer units shall be placed in appropriate locations based on wind direction to attempt to neutralize as many odors as possible. 3. Operations shall use onsite emergency stock of sodium bicarbonate and add 1,500 pounds per day into Digester 1 if upset, and 1,000 pounds per day into Digester 2 if upset (calculations based on "Advanced Anaerobic Digestion Operation Manual"). 4. Laboratory staff shall start daily monitoring of digester health to observe acids/alkalinity ratio and volatile acid levels. 5. Operations shall increase dewatering of sludge to remove sour material from digester more expeditiously. Dewatered material will continue to be removed from plant site on a daily basis; all efforts shall be made to avoid storing material outside site overnight. If it is unavoidable, material shall be covered with tarps to minimize odors escaping. 6. If upset conditions, as defined in part one, persist longer than 7 days, operations staff shall contact a liquid hauler and neighboring treatment plants. Operations shall re-seed the digesters with healthy sludge from neighboring plant. The amount of sludge re-seeded shall be approximately one-third overall volume of the upset digester (Digester 1 = 311,000; Digester 2 = 175,000). 7. Digesters must be deemed "not upset" based on conditions in part one and maintain a proper health for 4 weeks after upset conditions have ceased prior to accepting high strength waste. 8. Daily monitoring of digester health shall continue for 8 weeks after upset conditions, as defined in part one, have ceased to ensure the digester health continue to trend in a positive direction 	

Part 3	Staff Responsible: Executive Director
Public Communication	Back-Up Staff: ERC
<ol style="list-style-type: none"> 1. Upon discovery of an upset condition the Executive Director shall send a mass email to all email subscribers notifying them of possible odors. 2. Information regarding the upset conditions shall be posted to the Glenbard Wastewater Authority's webpage. 3. Communications staff from each Village shall be contacted for any assistance needed with Public Relations. 4. Executive Director shall provide weekly updates summarizing the status of the situation, actions being taken, and any other relevant information until the upset conditions subside. 	