



## **Best Management Practice (BMP) for Alcohol Beverage Manufacturing**

July 1, 2016

### 1. Purpose

This BMP was developed to protect public health and prevent degradation of the sanitary sewerage system by facilities involved in the manufacturing of alcoholic beverages.

### 2. General Information

pH is the negative base 10 logarithm of the hydrogen ion concentration in a aqueous solution. A neutral pH, such as that of pure water, is 7.0 standard units (s.u.). A pH below 7.0 s.u. is considered acidic, while a pH above 7.0 s.u. is considered basic. If the wastewater has an acidic pH, it can have negative effects on the wastewater collection system. The acidic pH can produce hydrogen sulfide gas, which is the cause of most sewer odors and can create explosive conditions, endangering workers and the public. Eventually, the hydrogen sulfide gas converts to sulfuric acid, which degrades sewer pipes causing corrosion, failures, and/or collapsing of the sewer pipes and pump stations. These issues can lead to an uncontrolled release of wastewater and disruption of service.

Manufacturing alcoholic beverages requires the use of acidic and/or caustic cleaners as part of the cleaning process. Wastewater with a pH lower than 5.0 s.u. is prohibited from discharge to the sanitary sewer [Title 40, Part 403.5(b)(2)]. Any wastewater with a pH greater than or equal to 12.5 s.u. is considered hazardous waste and must be reported to the wastewater treatment authority, HRSD [Title 40 Part 261.22(a)(1)].

HRSD's Industrial Wastewater Discharge Regulations provide requirements for control of the discharge of industrial wastewater into the sanitary sewer. Section 301 of the regulations states that "No person shall discharge or cause to be discharged into any portion of the sewerage system, directly or indirectly, any wastes which may violate any law or governmental regulation or have an adverse or harmful effect on the sewerage system, maintenance personnel, wastewater treatment plant personnel, processes, or equipment, treatment plant effluent quality, biosolids quality, air quality, public or private property, or which may otherwise endanger the public, the local environment or create a nuisance, or which may interfere with or adversely impact wastewater treatment and/or biosolids technology, as determined by HRSD."

Additionally, any person or discharger who violates any provision of this BMP shall also be financially responsible and liable to HRSD, for all costs incurred by HRSD associated with the violation(s).

### 3. Waste Disposal

Prior to the discharge of wastewater to the sanitary sewer, the wastewater pH shall be measured using an electronic pH measuring device or pH strips. If an electronic pH measuring device is used it must be calibrated prior to use in accordance with manufacturer's specifications and documented in a logbook in compliance with section 4.1. Once the initial pH of the wastewater has been measured the wastewater can be disposed of based on the following criteria:

1. If the pH is equal to or greater than 5.0 s.u and below 12.5 s.u. the wastewater can be discharged into the sanitary sewer.
2. If the pH is below 5.0 s.u. it must be adjusted to a pH equal to or greater than 5.0 s.u. prior to discharging it to the sanitary sewer. Upon adjustment if the pH is greater than or equal to 12.5 s.u. refer to 3.3a-3.3b

3. a. If the pH is equal to or greater than 12.5 s.u. it is considered hazardous waste and must be reported to HRSD. Or  
b. To eliminate the need to report to HRSD, the pH shall be adjusted to equal to or greater than 5.0 s.u. and below 12.5 s.u. prior to discharge.
4. In lieu of pH adjustment or in the event the waste is deemed unsuitable for discharge to the sanitary sewer, an appropriate alternative disposal method shall be used. All copies of receipts/manifests must be maintained on-site and available for review for a minimum period of three (3) years.

#### 4. Record Keeping

1. A calibration logbook for the electronic pH measuring device must be maintained indicating the employee initials, unique meter identification, date, time and results of all buffer solution standards measured to include pH value obtained, temperature, and if the calibration check met acceptance criteria. The log should not be submitted to this office, but shall be maintained on file for a period of at least three (3) years. The log shall be available for review by HRSD personnel at all times.
2. The pH logbook must include the discharge pH, date and time of analysis, and initials of person who took the measurement. The log book must be maintained onsite and available for review at all times and shall be kept for a minimum of three (3) years.

#### 5. Access

In accordance with section 506 of the Industrial Discharge Wastewater Regulations; "Authorized HRSD personnel shall be provided reasonable access to all facilities which directly or indirectly discharge to HRSD's sewerage system at all times, including those occasioned by emergency conditions, and shall be allowed to perform inspections and take independent samples for compliance purposes at all times. Such inspections shall include all records of wastes and Inflow and Infiltration managed, whether disposed to the HRSD sewerage system or otherwise."

#### 6. Enforcement Actions

Enforcement actions resulting from non-compliance with any portion of this BMP shall be applied in accordance with the HRSD Industrial Wastewater Discharge Regulations and the HRSD Pretreatment & Pollution Prevention Enforcement Response Plan (ERP). A copy of the Regulations and ERP can be found at [www.hrsd.com](http://www.hrsd.com).

#### 7. Special Conditions

Any waste removed from the alcohol beverage manufacturing process cannot be discharged directly or indirectly to the HRSD sewerage system. This includes spent mash and wastewater or residual materials removed from any pretreatment device.

#### 8. Optional Bill Deduction

Due to the nature of the alcohol manufacturing business, HRSD understands that a good portion of water utilized at the facility is not discharged to the sanitary sewer. Considering most of the facilities under this BMP are billed on influent meter readings, an optional deduction for water contained in the final product may be applicable.

In order to receive this deduction, a copy of the prior year's Quarterly Department of the Treasury Brewer's Reports must be submitted annually to our office by January 31<sup>st</sup>. For example, the four quarterly reports for the calendar year 2015 must be submitted to HRSD by January 31, 2016. Upon request, a refund may be issued or a credit adjustment will be applied to the account. Forms may be submitted via email to [p3data@hrsdc.com](mailto:p3data@hrsdc.com) or mailed to:

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