

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PTR SECTION STAFF GUIDANCE

**ALTERNATE DISINFECTANTS - STANDBY UNITS/SPARE PARTS**

**Rules Affected:** 30 TAC, §290.39(d)(2) and 290.42(e)(3)(C)

**Background:**

Systems which are treating surface water or groundwater which is under the direct influence of surface water must provide continuous disinfection in order to meet the treatment technique requirements of the Surface Water Treatment Rule. Consequently, these treatment plants must provide standby disinfection equipment to ensure uninterrupted operation.

**Guidance:**

Systems which use free chlorine as the disinfectant must provide a backup unit for each different size disinfecting unit as required by 30 TAC §290.42(e)(3)(C). However, there are a variety of reasons why this requirement is not strictly applicable to utilities which use alternate disinfectants such as chloramines, chlorine dioxide or ozone. For example, while ammonia is useful in reducing the formation of certain disinfection by-products, it is not an essential component of the disinfection process. On the other hand, providing duplicate units may be prohibitively expensive for alternate disinfectant installations such as ozone or chlorine dioxide. In addition, facilities which utilize alternate disinfectants are often able to convert to a free chlorine disinfection protocol in the event of an equipment failure. Therefore, facilities which utilize alternate disinfectants will not be required to provide duplicate facilities as long as they are able to maintain an adequate level of disinfection in the event of equipment failure.

Duplicate ammonia feeders will not be required under the following conditions:

- The utility has a backup chlorinator or replacement parts (including diaphragms, regulators, injectors, pumps, etc) for each chlorinator which is used for disinfection;
- The plant's operations manual must document the procedure which will be followed in the event of an ammonia feeder failure;
- The utility must notify the local TCEQ regional office by the end of the next business day following the equipment failure;
- The utility must notify the local TCEQ regional office by the end of the next business day after the equipment is returned to service.

Duplicate chlorine dioxide and ozone facilities will not be required under the following circumstances:

- The utility has the ability to meet the disinfection requirements using a free chlorine disinfectant;
- The utility has replacement rotameters for each size used in the generator;
- The utility has have a backup chlorinator or replacement parts (including diaphragms, regulators, injectors, pumps, etc) for each chlorinator which is used for disinfection;
- The plant's operations manual must document the procedure which will be followed in the event of a generator failure;

- The utility must notify the regional headquarters by the end of the next business day following the equipment failure;
- The utility must notify the local TCEQ regional office by the end of the next business day after the equipment is returned to service.

Since the disinfection by-product concentration will be affected by the inability to feed an alternate disinfectant, sample collection contractors, if possible, may delay collecting a compliance trihalomethane sample in the event of an equipment failure. However, **the sample must always be collected in the proper quarter even if the failure has not been repaired.**

*Finalized and Approved by:*

*Ada Lichaa*

*Ada Lichaa, Plan and Technical Review Section Manager, 7/26/2013*

If no formal expiration date has been established for this staff guidance, it will remain in effect until superseded or canceled.

***Revision History***

<b>Date</b>	<b>Action</b>	<b>Action by</b>
4/1/2004	Approved	Buck Henderson
11/29/2012	Revised	Cindy Haynie
12/12/2012	Revised	Joel Klumpp
7/2/2013	Revised	Katherine Quinlan
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