

JKD
5-10-14

Direct Potable Water Reuse Standard Operating Procedure

Wichita Falls, Texas

HIGH DISSOLVED OXYGEN DEMAND WW-08

This SOP supersedes any previous SOP on this topic. Affective on the date signed approved below

INTRODUCTION

This is the Standard Operating Procedures for maintaining adequate Dissolved Oxygen in the Biological treatment of the River Road WWTP

OBJECTIVE

The objective of this document is to try and detect artificial Oxygen demand.

In the event that there is a high dissolved Oxygen demand in two or more Aeration Basins expressed by requiring an increase of air SCFM output greater than 40% (based on the last eight hours of flow and loading) for more than four hours to maintain the established D.O. set point. In addition, the cause of the increase in D.O. demand cannot be traced to any operational process or malfunction of equipment.

- The River Road WWTP will begin to take samples from the outfall of the affected aeration basins and test for abnormal pH, Alkalinity.
- An Oxygen Uptake Rate (OUR) measurement will be performed on each affected basin.
- If the pH is less than or greater than 1 of the daily reported average, or the Alkalinity is less than or greater than 50 mg/l, or the OUR is less than or greater than 40% of the daily uptake rate the test will be repeated in one hour.
- If after the second testing the results are in the same range, a microscopic exam will be done on each of the affected basins to confirm if there is any toxic effect on the organisms.
- If a toxic effect is observed refer to section on Microscopic exam.
- If the microscopic exam does not show any substantial die off of organisms, a portion of each of the secondary clarifier composite samples will be kept in approved sample containers for toxicity testing.
- The Cypress DPR will be notified of the situation.
- If after eight hours from the start of the event there has been no recovery of the D.O demand as indicated by the return to normal airflow SCFM in the aeration basins the Operations Supervisor will be notified and the decision to shut down will begin.

Alkalinity - still doesn't make sense. 50 mg/l is considered a weak concentration for untreated ww

WWTP

Related SOP: RIVER ROAD SHUTDOWN COMMUNICATION PROTOCOL

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Prepared Date: 5-9-14

Approved by: [Signature]

Approved Date: 5/9/14