

Kirie WRP - Goals and Objectives for 2017

Goal – Installation of a Pilot Fine Screen to Improve the Quality of Activated Sludge (and Waste Activated Sludge)

Objective

Improve the quality of activated and waste activated sludge.

Description

While studying the process parameters in the pilot Bio-P tanks at Kirie (Tanks 5 and 6), a significant amount of rags and stringy material has been observed in the return activated sludge (and waste activated sludge). It is speculated that this material may be resulting from an inefficient fine screen operation. The fine screen systems at Kirie are original to the plant (1980) and show a significant amount of wear and aging.

Measurability

Operate two existing fine screens for a few months and establish a baseline of screening material discharging to the dumpsters. Operate the pilot fine screen along with an existing fine screen for a few months and calculate the amount of material discharging to the dumpsters. Compare activated sludge characteristics when new fine screen is in and out of service.

Affect to Biosolids Production

Improve the quality of WAS by removing the inorganic stringy material that is sent to Egan for processing.

Relevant EMS Outcomes

Environmental Performance, Quality Management Practices.

Action Plans

Initiate a pilot test to install a new fine screen (smaller opening (from 5/8" to 3/16") with improved raking mechanism) - \$110,000.

- a. Work with Mechanical Treatment M&O to furnish and deliver a pilot fine screen, Contract 16-701-21.
- b. Receive delivery of a new pilot fine screen in late 2016 or early 2017.
- c. Utilize in-house trades to remove existing Kirie Fine Screen Number 4 and install the new pilot fine screen (2nd or 3rd Quarter 2017)
- d. Compare quantity of screenings between new and existing fine screen systems (operate during different flow conditions) – 4th Quarter 2017 into 2018.
 1. Operate two existing fine screens for a few months and establish a baseline of screening material discharging to the dumpsters.
 2. Operate the pilot fine screen along with an existing fine screen for a few months and calculate the amount of material discharging to the dumpsters.
- e. Compare activated sludge characteristics when new fine screen is in and out of service.

Tracking Progress Towards Implimentation

Section 722 Principal Mechancial Engineer, Section 722 Associate Mechanical Engineer,
 Section 783 Principal Engineer

Responsible Person(s)

Section 722 Principal Mechancial Engineer, Section 722 Associate Mechanical Engineer,
 Section 783 Principal Engineer

Funds/Resources

M&O funded and administered Contract.

Target Date

December 2017.

Table 1 – Implimentation Milestones

Completion Dates: Estimate vs. (Actual)

Description	11/1/16	10/1/17	4/1/18
Receive Fine Screen			
Install Fine Screen			
Pilot Test Fine Screen			