

Route: Ahmad Laban
Future Thermal

INTEROFFICE MEMORANDUM

Metropolitan Water Reclamation District Of Greater Chicago

DEPARTMENT: M&O – Kirie WRP

DATE: September 26, 2018

TO: Sergio Serafino, Acting Director of Maintenance and Operations
FROM: Katarzyna A. Lai, Managing Engineer
SUBJECT: Environmental Management System (EMS) for Biosolids 2019 Goals & Objectives – Element 5

In response to your memo dated August 28, 2018, on the above subject, Kirie WRP's Goals and Objectives for 2019 and are as follows:

Kirie WRP - Goals and Objectives for 2019

Goal – Increase the Amount of Fine Screenings to Improve the Quality of Activated Sludge (and Waste Activated Sludge)

Objective

Improve the quality of activated and waste activated sludge.

Description

During return activated sludge channel cleaning at Kirie, a significant amount of rags and stringy material has been observed. It is speculated that this material may be resulting from an inefficient fine screen operation. The fine screen system at Kirie is original to the plant (1980) and shows a significant amount of wear and aging. Following a pilot installation and operation of new replacement Fine Screen, an increase in fine screening was observed indicating an improved performance.

Measurability

Increase the amount of fine screenings to 48 dumpster loads per year.

New pilot fine screen #4 was installed in 2017 and went into service in September 2017, additional fine screens are planned to go in service in 2019 and 2020. Compare the amount of screening dumpster loads removed to the average loads of base line years 2014-2016 with a goal of removing an additional 24 dumpster loads per year. The average removal during the 2014-2016 was 24.3 dumpsters of fine screenings or approximately 2 dumpsters per month. Monitor monthly fine screen dumpster removals and compare to the baseline. Report quarterly.

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 installation of remaining three new fine screens #1, #2 and #3 (smaller opening (from 5/8" to 3/16") with improved raking mechanism) - \$1,350,000.

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- a. Work with M&O Asset Management Group - Mechanical Treatment engineers to furnish, deliver and install three fine screens, Contract 18-706-21 advertise late 2018.
- b. Accept installation of the first of three fine screens in mid-2019 or late 2019. Witness 60 day performance testing.
- c. Accept installation of the second of three screens in late 2019 to early 2020. Witness 60 day performance testing.
- d. Accept installation of the third and last of the three screens in early to mid-2020. Witness 60 day performance testing.
- e. Monitor operation of fine screens and compare quantity of screenings as new screens come on line.
- f. Compare activated sludge characteristics when new fine screens are in service.
- g. Observe amount of rags and stringy material in return activated sludge channel following the installation and subsequent channel cleaning.

Tracking Progress Towards Implimentation

Section 681 Principal Mechanical Engineer, Section 681 Assistant Mechanical Engineer
Section 783 TPO III and Section 783 ACOE

Responsible Person(s)

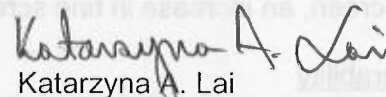
Section 681 Principal Mechanical Engineer, Section 681 Assistant Mechanical Engineer
Section 791 Managing Engineer

Funds/Resources

M&O funded and administered Contract.

Target Date

December 2020.


Katarzyna A. Lai
Managing Engineer

cc: Laban

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