San Francisco International Airport
Mel Leong Treatment Plant
860 Clearwater Drive
South San Francisco, California

I. Respondent:

George Engel, Superintendent

II. Treatment Plant Characteristics:

- Wastewater Treatment – 2.2 MGD Sanitary Wastewater & 1.2 MGD Industrial Wastewater
- 12,000 population equivalent (>50 million annual passengers plus full-time personnel)
- ~20 employees

III. Innovation:

A. Description

We share a common de-chlorination facility (located at the South San Francisco/San Bruno Plant) and effluent outfall to the Bay through agreement with the North Bayside System Unit (NBSU). We are an airport that owns and operates three different collections systems on one campus: sanitary, industrial, and storm water. We are in the process of building a new industrial plant, potentially an advanced water treatment facility, and a laboratory/administration building.

The average annual TSS loading at our sanitary plant is ~1000 mg/L and the average annual CBOD loading is ~800 mg/L. We treat very concentrated wastewater, due to industry dynamics and water conservation efforts, and still achieve 98% TSS and CBOD removal.

The industrial plant is completely different with TSS ~50 mg/L and BOD ~10 mg/L.

B. Type of Innovations

- New treatment process
- Inter-agency agreements or other administrative changes

C. Motivation for Innovations

The useful life of the existing industrial plant has passed, and the new industrial plant is being designed with recycled water in mind as part of sustainability commitments at the airport. Due to our small size, we are looking for a regional effort with larger organizations.

D. Barriers/Challenges

Budget, FAA regulations, small-scale facility with big plans.

E. Benefits

The airport has benefitted from the relationship with NBSU by sharing assets and allowing our bigger neighbor to manage the outfall.

F. Effect on Staff Training

With an eye on recycled water, the nutrient load to the Bay may be greatly reduced and the potential to become a zero-discharge plant during dry weather is achievable. Our operators will be brainstorming strategies to achieve higher quality effluent while focusing on energy consumption. A consultant is onboard to discuss process changes and to view the plant's organisms in real time as we make decisions.

IV. DROUGHT RESPONSE

Dispense recycled water and plan for advanced water treatment in the future.

V. INFORMATION-SHARING

Would be willing to visit another regional water/wastewater facility to provide a presentation on our process/innovation.

Would be willing for a staff member from another water/wastewater utility to conduct a follow-up visit to your utility to learn more about your innovation

- Contact George Engel– phone: 650-821-8350 – email: george.engel@flysfo.com

VI. INTERESTS

Would like to visit Bay Area agency or agencies that have large thermal bio-solids drying facilities

- Contact George Engel (see above)