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A. Plant Facility Operation Report

SOUTH BAY WATER RECLAMATION PLANT 2006 ANNUAL FACILITY REPORT
[Prepared under the direction of Plant Superintendent Michael Roe.]

This facility report summarizes some of the key operational considerations involved in the facility operation of the South Bay Water Reclamation Plant (SBWRP) during calendar year 2006. Numerical data and analysis presented in this section are based on plant staff work. Refer to the laboratory data in this document for validated results for official reporting purposes.

Influent Flows:

The design capacity of the plant is 15 million gallons per day (MGD), with a peak capacity of 18 MGD. The average daily influent flows treated during 2006 were approximately 6.05 with 4.95 MGD discharged to ocean outfall and with 0.21 MGD reclaimed water (RW) distributed. The average influent flow during 2006 was gradually increased from 4.5 MGD to 9.0 MGD to meet the increased RW demand in 2007. Plant staff continues to routinely rotate basins and channels in use to identify and correct any problems in anticipation of increased influent flows.

Influent Sampling:

Plant staff continues to implement a preventive maintenance program of switching and cleaning of the sample delivery pumps on a regular basis to ensure consistency in samples.

Basin Utilization:

Additional basins were put on line in order to handle the incremental increased influent flows. Primary basins on line were increased from 2 to 4 basins, 3 to 5 basins for aeration, and 4 to 6 clarifiers for secondary. Each process (primary, aeration, and secondary) always have a readily available backup basin.

Solids Handling:

The influent screening and washer/compaction units operated well, with adequate on-site hopper capacity. Approximately 14.15 tons of screenings were disposed of through the end of December 2006. Grit storage capacity was also adequate with 3.55 tons of grit hauled off site. All primary scum was returned to the MWWD collection system (for treatment at the Pt. Loma WWTP facility) by routing the scum collection discharge to the blended sludge pump wet well. Primary and secondary sludge is also routed to the collection system via the blended sludge pumps. The activated sludge process was maintained through the use of high capacity wasting directly from the aeration basins to the blended sludge pumps during the full period of 2006 operation. Average daily totals for blended sludge volumes returned to the Pt. Loma facility via the South Metro Interceptor were 0.94 MGD.

Secondary Performance:

Secondary treatment performance for TSS and BOD has been an average TSS of 1.63 mg/L and BOD of 2.75 mg/L for 2006. Average secondary effluent turbidity was 3.17 NTU. MCRT has typically been maintained between 6 to 10 days.

Tertiary Processes:

The anthracite media for the tertiary filters did not experience any losses for 2006 after adjustment were made to the backwash operating parameters. Five out of seven filters were available for operation. And 2 to 3 filters were on line to meet the RW demand

Prior to RW delivery on July 6, 2006, the UV system was continually fine tuned to ensure continuous operation of the UV system. Strategies and interlocks were implemented to prevent delivery of non compliance RW.

Water Reclamation & Distribution:

The first delivery of RW to IBWC (International Boundary Water Commission) plant occurred on July 6, 2006. Extensive testing of the delivery system was performed prior to delivery so no problems were encountered during start-up. The delivery process consists of pumping to a 750 K gal. storage tank using the plant utility water pumps. Then a separate pumping system from the storage tank delivers RW to IBWC. Control strategies with interlocks were developed and implemented to ensure only compliant RW gets delivered.

Discussion of compliance record:

Ocean Discharge:

The plant complied with all the requirements of the ocean discharge permit. No violations were incurred for 2006.

Recycled Water:

A seven day median bacti violation occurred on August 17, 2006. Mitigation plans were implemented to prevent reoccurrence. It was suspected that the algae growth in the UV lamps and channel is diminishing the exposure of microorganism and bacteria to the UV light. It is difficult to control algae growth because UV rays actually promote its growth. Weekly lamp cleaning and monthly channel cleaning was implemented to control or remove algae. Increasing the number of banks on line was also implemented to increase the exposure area for the bacteria and microorganisms. These actions were somewhat successful but, bacti violations continue to occur in 2007. The addition of chlorine at the UV influent to control algae growth was implemented on 5/18/ 2007 and no further non-compliance incidents have occurred since. The residual at the UV effluent is maintained at 0.5 mg/l and the resulting residual at the RW wet-well and outfall is non-detectable.

Vector Control:

Since early in the plant start-up, the presence of midge flies has been an on-going issue with the potential to adversely affect effluent quality, primarily at the secondary clarifiers and tertiary filters. Plant staff continues to utilize the services of a City entomologist who has been working with a number of products designed to disrupt the life-cycle of the insects. Additionally, plant staff continues to rotate secondary clarifiers to disrupt midge flies larvae production. Control measures also include lowering the water level of a secondary clarifier to expose the larvae adhering to the side walls so they can be hosed down and removed. The efforts to gain full control over this problem continue.

Engineering Projects:

During 2006, the Plant staff has referred several issues back to the Engineering Projects Management (EPM) to be worked under the Capital Improvement Projects (CIP) program. Numbers of deficiencies in the plant were addressed; a number of control system problems were resolved; and number of problems related to the delivery of RW was resolved.

The Treatment Plant Engineer, working with Plant staff and EPM division, completed a number of projects including:

- 1 - Expose of manhole
- 2 - Repaired chemical pipe and conduits
- 3 - Repaired conduits duct bank
- 4 - Fixed sampling line
- 5 - Fixed sampling pumps
- 6 - Changed check valve on P. sludge pumps
- 7 - Bought Rota meter for air into grit tanks
- 8 - Fixed the VFD on Blended Sludge (BSL) pumps
- 9 - Worked on latent defect issues
- 10 - Fixed the manholes
- 11 - Dealt with the contractor on the Cathodic protection issues
- 12 - Dealt with and resolved the painting requirement on piping
- 13 - Worked on the Surge Anticipator Valve (SAV)
- 14 - Worked on the third RW pump
- 15 - Completed the installation of the pallet lifter
- 16 - Bought gaskets for the flanges of Sec. Sludge meters

Maintenance Report:

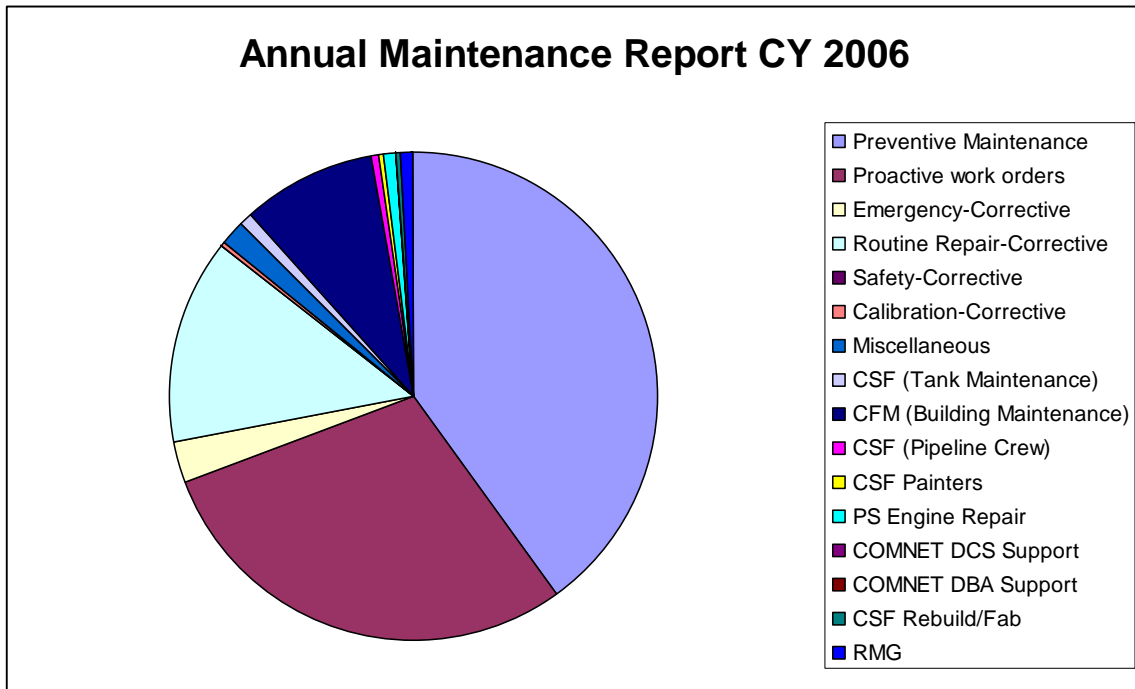
South Bay Maintenance Crew Activity Work Orders

Preventive Maintenance	2,073
Proactive work orders	1,515
Emergency-Corrective	153
Routine Repair-Corrective	693

Safety-Corrective	5
Calibration-Corrective	10
Miscellaneous	94

O&M Divisional Central Support Crew Activity at South Bay

CSF (Tank Maintenance).....	44
CFM (Building Maintenance).....	460
CSF (Pipeline Crew).....	32
CSF Painters.....	16
PS Engine Repair	36
COMNET DCS Support	6
COMNET DBA Support.....	0
CSF Rebuild/Fab.....	9
RMG	45



B. Report of Operator Certification.

Operator Certifications:

The following lists all Wastewater Treatment Plant Operators working for the Operating Units of the Metropolitan Wastewater Department and their California State certification status as of May 2007. Name, Classification, Certification Grade, Certification Number, and expiration date are shown for each operator.

South Bay Wastewater Reclamation Plant

First Name	Last Name	Classification	Grade	Number	Expiration Date
Michael	Roe	Superintendent	V	6290	06/30/08
Ernesto	Molas	Senior Wastewater Ops Supv	V	7227	12/31/07
Ken	McCown	Senior Wastewater Ops Supv	III	2312	12/31/07
Linda	Ruiz-Lopez	Wastewater Ops Supv. - PC	III	5660	12/31/07
Bob	Owings	Wastewater Ops Supv. - SP	III	5388	06/30/07
Arlene	Frank	Wastewater Ops Supv.	V	5922	12/31/08
Doyle	Shankles	Wastewater Ops Supv.	III	7232	06/30/08
Cesar	Sanchez	Wastewater Operator	V	10083	06/30/07
Al	Johnson	Wastewater Operator	III	9638	06/30/08
Douglas	Evans	Wastewater Operator	II	9844	06/30/08
Carol	Brassfield	Wastewater Operator	II	9383	12/31/07
Romeo	Millan	Wastewater Operator	II	9846	06/30/08

C. Discussion of Compliance Record

The South Bay Water Reclamation Plant operates with two separate permits. NPDES Permit No. CA0109045/ Order No. 2000-129 (with addenda) provides for the treatment and disposition of wastewater via the shared South Bay Ocean Outfall and Reclaimed Water Permit No. 2000-203 (with addenda) provides for water reclamation.

NPDES Requirements:

Effluent parameters were within discharge limits at all times.

Reclamation Requirements:

All measured parameters were within limits.

See summary table of compliance issues on next page.

This is the first year of operating where reclaimed water was produced and distributed. As noted earlier, the influent flows were steadily increased in the startup phase to about 9 MGD, in order to accommodate increasing production.

Compliance Issues by Month - 2006

Month	Number of measures that exceeded Permit Limits.		Comments: (see monthly report for further details if desired.)
	NPDES Permit No. R9-2006-0067	Reclaimed Permit No. 2000-203	
January	None	None	
February	None	None	Daily Maximum Limit for BOD of 50 µg/L was exceeded on February 4, 2006, but the sample was from an alternative sample site and is not representative. The normal sampling point for NPDES Compliance Monitoring was off-line from February 2 to February 25, 2006 due to equipment failure.
March	None	None	
April	None	None	
May	None	None	
June	None	None	
July	None	None	
August	None	None	- No reclaimed water produced or distributed between August 18 and August 31, 2006. - An error in sampling resulted in a high TSS (49.8 mg/L) which would appear to be over the limit of 45 mg/L. However, since the discharge to ocean outfall had a TSS of ND (<1.6 mg/L), we believe the actual reclaimed water value was best represented by the effluent value (i.e. "ND").
September	None	None	No reclaimed water produced or distributed between September 1 and 6.
October	None	None	
November	None	None	
December	None	None	- Mechanical and system failures lead to a handful of missed or unrepresentative samples that resulted in less data points than stipulated, such as the missed TSS on December 17 and no TDS determinations for December. No limits were exceeded.