
CMSA Monthly Report

Central Marin Sanitation Agency

January 2004

GENERAL

Potential Discharge

Exceedance We had power outage on Wednesday 1/14/04 that lasted a minimum of three minutes and a maximum of four minutes. The power was shut down to the sodium bisulfite pump that was used to dechlorinate our effluent during that brief period. As current practice, we had an excess amount of sodium bisulfite in the effluent at the time the pump stopped.

The information has been reported to the Regional Board and it will be included in detail in the monthly discharge monitoring report. They have reviewed the situation and have provided no direction as to how they will react to this incident. We expressed our belief, which is supported by a detailed analysis and calculations, that this is not a discharge exceedance due to the excess sodium bisulfite preceding and following the discharge, the extended period of time the effluent will be in the outfall (4.5 hours) prior to discharge into the bay, the small quantity of chlorinated effluent discharged, and the potential for enhanced mixing in the outfall.

A very similar situation occurred about 18 months ago and we performed the

same calculations which supported our belief that the occurrence wasn't a permit exceedance. The Regional Board agreed.

Security The new entrance gate has been installed at the front entrance driveway and has been in manual use since January 5th. The gates are opened at 5:00 a.m. and closed by 6:00 p.m. on weekdays and remain closed during the weekends and holidays. It has been a smooth transition for staff. We are seeking grant funding from the Marin County Office of Emergency Services for equipment to automate the front gate, extension of our security fences to the gate, and surveillance cameras.

We have ordered a light pole to be installed out front at the new front gate. A contractor has been lined up, Tresch Electric of Novato, who installed all of the electrical systems during the original construction of the facilities in San Rafael. We've taken a top-down view of the remaining project and selected a nice spot for the lamp out front. Our staff is digging into placement issues for the automatic gate opener, camera, card reader, data line, and telephone hook-ups and we are keeping close tabs on grant monies for these security changes which we hope to complete this year.

The Electrical/Instrumentation staff completed installation of

the new card access system for the front and side gates. Card access is always required to enter the side gate. The front door automatically opens during business hours and remains locked during the evenings, holidays and weekends. Staff has the ability to inactivate the front door locking system to allow public access during non business hours. The new front gate is currently closed during non business hours.

Safety The safety committee is currently working on proposals for an ergonomic analysis to be completed on various workstations throughout the plant. These would include office spaces that staff work at full time. Our safety director will be assisting staff to identify workstations that need review by a licensed safety officer and will solicit bids for the work.

Effluent Pond Pumping

Experiment The effluent pond is designed to store excessive flows during extremely high storm flows occurring simultaneously with high tides. The plant is designed to discharge 125 MGD during a zero tide and the maximum effluent flow drops to 90 MGD during a six foot high tide. There have been two storm events this winter that caused the influent flows to exceed 105 MGD. During one of the storm events, operations filled

the effluent pond two thirds full, which prevented flooding of the secondary process. The question was raised as to how fast a completely filled effluent pond could be emptied and ready to use if subsequent storms were to occur.

A trial was conducted the week of January 19 and we learned it requires 48 hours to empty the effluent pond when completely full. The effluent pond has a capacity of 4 million gallons (MG) and during high influent flow periods can be filled in just a matter of hours. Therefore, two consecutive storm events, where the first storm event required filling the pond would eliminate the option of using the emergency storage capacity of the pond for the second storm event.

We will be evaluating improvement options to increase the pumping capacity to allow emptying the pond between high tide events.

CASA Mid-Year Conference

The CASA conference was held in Palm Springs between January 21st - 23rd. Topics included current issues associated with land, air, and water, achievement awards, and a panel discussion on "Keeping the Public Trust" and "How to work with your Regulators".

The land issue forum discussed biosolids management practices in the

state, updates on County restrictions on biosolids land application, and recent negative publicity from radio and television. KQED aired one of their "2-minute perspectives" that characterized biosolids as a toxic hazardous material that is detrimental to the environment and the public health. CASA's biosolids program manager has prepared a rebuttal that will be aired on KQED in the near future and will discount what was stated in the negative perspective and provide scientific based information on the safety and beneficial reuse aspects of biosolids. CMSA's biosolids are beneficially reused at the Redwood Landfill and at a Sonoma County land application site.

The water forum updated us on the EPA's draft blending policy, and CASA and AMSA's concerns with some of it's specific provisions. CMSA previously sent a letter to the EPA stating our concerns with the draft policy. Additionally, the forum presented the revisions to the Basin Plan, which is the water quality policy document used by Regional Board, and the 303d listing changes. The 303d list summarizes the State's water bodies that are identified as being impaired with a chemical compound or element, such as mercury in the S.F. Bay.

The discussion on "Keeping the Public Trust" featured the reporter from the Sacramento Bee that has written several articles on the inappropriate

travel and expense reimbursements of the Sacramento Suburban Water District and other special districts in the vicinity of greater Sacramento. He also reported that several "whistle blowers" have contacted him since these articles were released to inform him of similar type abuses at southern California special districts. He stated that these activities, expensive meals, stipends for non-district related meetings, and credit card abuses, occur throughout the State. His investigative efforts have resulted in proposed legislation by State Senator Ortiz that will be considered by the State's Legislative Committee. The proposed draft legislation contains several provisions to minimize these abuses, and include limiting governing body annual stipends, paying stipends for only publically noticed meetings, and requiring audits for management and board travel and expense reimbursements.

CAPITAL PROJECTS

Cogeneration Project An unexpected delivery made its way to CMSA's Solids Handling facility on January 12th, namely, the new engine generator set. Unexpected because the delivery had been scheduled for the end of the month. Stewart and Stevenson had qualified that by saying the Waukesha was doing everything it could to

“get it out the door.” On one day’s notice the contractor was able to get a crane operator on site to lift the 23-ton unit off the 18-wheeler. We were fortunate to have the expertise of a crane operator who had unloaded several of these engines from Waukesha over the years, most recently at Union Sanitary District. Over several days the engine-generator had been exposed to the elements with only duct tape across the generator vents to protect it from blizzards in Wyoming. CMSA staffers immediately covered it with a blue tarp to keep the rain off.

The contractor’s mechanical subcontractor coordinated with CMSA for several ‘tie-ins’ (new connections) between the new natural gas and sludge gas plumbing and the old plumbing. Lines were purged and isolated. Two of the tie-ins required most or all of a day to complete due to cutting and welding requirements. One key objective in coordinating the construction work has been to keep the operation down-time of the existing generator set to a minimum since it saves us about \$1,000 a day when its working.

The filters and piping manifolds arrived here several months ago. When the contractor laid them out on the new equipment pad they discovered that flanges did not meet or line up the way they should. We contacted the manufacturer, Applied Filter Technology, and they approved our contractor’s work needed to correct the

pipng. The contractor has corrected the problem and Applied Filter has agreed to pay for the corrective work.

The last significant concrete pour took place on Wednesday, January 29th. All went smoothly. This pour was for the drainage structures around either side of the new fuel gas pre-treatment equipment pad and for the drive-up structures to the new doors in front of the engine bays. Previous concrete test results nearing 6,000 psi were well ahead of the contract requirements of 4,000 psi.

Our design engineer discovered, to their and our dismay, that the engine supplier had not released authorization for their control panel supplier to purchase the components needed to assemble the new switchgear system. That has now been straightened out and the vendors are working toward getting approval on their technical submittals as required by the contract. The submittal process is used to verify that the suppliers are meeting the requirements of the contract specifications.

There has been a change at CH2MHills engineering design team. Tom Hendrey, the project leader for the designer, has switched to working for another Bay Area consulting firm. Though he has been replaced by the very capable Mike Walkowiak, the two consulting firms have reached agreement so that Tom will continue to assist us as-needed for the duration of the project.

BUSINESS SERVICES

Budget Our new departmental based budget model for the upcoming two-year budget, FY05 & FY06, has been completed. The management team will continue to make refinements as necessary to clarify departmental responsibility. The new format breaks down account categories to each of four departments- Administration, Environmental Services, Maintenance, and Operations. Staff is currently working on estimates for the upcoming two year period based on departmental needs. A draft budget will be brought to the Commission by the May board meeting for review and comment.

Customer Service A customer service group has been established to look at better ways to serve customers such as vendors, contractors, and the community. Currently, the group has installed a door chime on the front administration door to better notify staff members that someone has entered or exited the building. In addition, the group is currently looking at updating the phone system to better serve customers when they call in to the plant such as updating the voice mail message system and system path, adding better phone sets for administration staff, etc.

Mid Year Budget Staff has been working with the General Manager to create a mid-year budget summary for the upcoming Commission meeting on February 10th. Overall, CMSA is on target with regards to expenses and revenues for current year. Any indicators that show over or below the mid year threshold have been isolated and explained. The overall figures are on track and give the management team much clearer information for creating their preliminary figures for the upcoming two-year budget cycle.

MAINTENANCE

Centrifuge Repairs The remaining punch list items for the Dewatering Project were completed in early January 2004. Prior to the end of the one year warranty period Maintenance Staff inspected the #1 centrifuge main and scroll bearings which had failed twice in the past year and were replaced on warranty. Both bearings were in good condition.

Sodium Hypochlorite Tank (Bleach Tank) Replacement One of the five hypochlorite tanks developed a leak last year and was replaced in the fall of 2003. Staff initiated an inspection program for the remaining four sodium hypochlorite and two bisulfite tanks. One additional sodium hypochlorite tank has the inner liner separating from the

outer shell. This tank will be replaced at the start of the next fiscal year.

Belvedere Pump Station

Telemetry Kit Groves, our Instrumentation System Supervisor, will assist the contractor hired by the City of Belvedere in converting the alarm system for the Belvedere Pump stations from telephone lines to radio telemetry. The aging telephone system has resulted in increased maintenance costs and a greater incidence of down time (the inability of staff to monitor the stations and call out repair staff during equipment failures). If a prolonged equipment failure were to occur and staff failed to receive notification due to a telemetry system malfunction it could result in sanitary system overflow (SSO). The conversion should be completed this spring.

New Field Computer Work

Station The Electrical and Instrumentation (E/I) staff have installed a new computer work station in Area 9 at the junction of B and C underground galleries, adjacent to the Chlorine Contact Tank (CCT) titration station. While operators check the chlorine residual, which is required twice a shift, they can now respond to alarm conditions and/or make chemical adjustments at the site (improves staff efficiency).

Polymer Optimization Test

Staff has been investigating alternative types of polymers for the dewatering process (new centrifuges). Polymer is an essential chemical used to coagulate digester feed sludge before entering the centrifuges. Now that we have new centrifuges it is prudent to see if any of the new polymer products are more effective at dewatering the sludge, which will result in reduced biosolids hauling and disposal costs. Last month Operations tested two different emulsion polymers. Both products failed to produce operational and/or cost advantages. We now have two more emulsion products that we will be testing on January 27, 2004. On January 16th and 17th, Dr. George Tichenor, with Polydyne, Inc was in testing various polymer emulsion products.

Operator In Training (OIT)

Recruitment Koff and Associates assisted staff in the recruitment process for an entry level operator position to replace two existing vacancies. Advertisements were run in the local newspapers and on college campuses to attract well qualified local applicants. Applications were due by the end of November and an independent oral board interviewed 16 candidates in December 2003. Staff conducted follow up interviews of the top six (6) candidates. The two new

OPERATIONS

OIT's will be starting in mid-February.

Computerized Maintenance Management System (CMMS)

The operators are installing new identification tags at the Emergency Eye Wash Stations, Lock Out Tag Out Stations, Fire Extinguishers and Self Contained Breathing Apparatus (SCBA) Stations for entry into the new CMMS data bank.

LAB

Laboratory Our NPDES testing for January showed no violations. We had 100% survival of the fish in our bioassay this month. Our NPDES permit requires us to remove 85% of the solids and oxygen demand coming into the plant and it is based on a monthly average. With the high flows we have been experiencing, the influent solids and oxygen demand of the water coming into the plant are low because of dilution with the rainwater. In response, we have increased sampling during the dry weather to help boost our monthly average percent removal of solids and biochemical oxygen demand.

Reclaimed Water We compiled a report for MMWD on our effluent data in order to provide reclaimed wastewater to Marin Sanitary Service for dust control. MMWD inspected our facility, reviewed the report, and what requirements we will have to meet in order to provide

reclaimed water using a permit MMWD currently has with the Regional Board. We will provide monthly reports to MMWD and they will submit them to the regional board on the quality of our reclaimed water and the amount Marin Sanitary is using for dust control. We still need to inspect Marin Sanitary and work out further details on a system that can provide the volume of water Marin Sanitary will want that will not impact reclaimed water usage at CMSA.

Lab Internship We are sponsoring an internship with Academy X at Sir Francis Drake High School. This is the second year we have participated in this program and it runs from January through April. Our intern, Alex Williams, will be learning about what it is like to work in an analytical laboratory and the careers available in the wastewater industry. We will develop a specific project for him to work on and he will give a presentation on his findings at the end of the internship.

LGVSD Assistance Bob Adamson has completed a draft Annual Pollution Prevention report for review by LGVSD pursuant to our recently executed management agreement. Preparing their annual report required extensive review of past data and annual reports to model it after their program and requirements.

Public Education CMSA and LGVSD participated in a booth

at the Bay Area Environmental Education Resources Fair at the Marin Center. The fair is designed to exhibit environmental education resources available to teachers. The event is a Bay Area/Northern California wide event and it is an excellent opportunity to reach teachers in our area about what services and programs we offer and to find out what programs EBMUD, CCCSD, MMWD, SCWA, and other public agencies are offering.