

Camden County Municipal Utilities Authority

2011 Environmental Management System Performance Report

VOLUME 2, ISSUE 1

APRIL 2012

SPECIAL POINTS OF INTEREST:

- CCMUA GENERATING POSITIVE RESULTS
- CCMUA CONDUCTS INTERNAL AUDIT

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The National Biosolids Partnership (NBP) is an alliance of the National Association of Clean Water Agencies (NACWA) and WEF, with advisory support from the U.S. Environmental Protection Agency (EPA).

Results of Independent Third Party Audit: CCMUA is Generating Positive Results

An Interim Audit was conducted September 7 to 9, 2011 and a Follow-up Audit was conducted on November 23, 2011 to verify correction of major nonconformances during the initial audit.

The audits were conducted by an independent third party auditor, DEKRA, to verify that CCMUA's Biosolids Environmental Management System is meeting the requirements of the NBP' Biosolids Management Program.

The results of the audit determined that: (1) No major nonconformances and two minor nonconformances remained open at the conclusion of the audit. Approved corrective action plans are in place to address each nonconformance; (2), All nonconformances from prior third party audits have been effectively corrected; and (3), CCMUA's biosolids management system is generating positive results.

In September, an interim audit was conducted over 3 days where key persons were interviewed, including Synagro and NJDEP, and documents and records were reviewed to assess systematic performance of the process being audited and consistency of the written procedures.



dures.

At the interim audit, DEKRA found nonconformances in the CCMUA management system that required correction.

As a result, corrective actions were taken and DEKRA reviewed them in a November 23, 2011 Follow-up Audit.

The two nonconformances remaining open are: (1) EMS Element #14 which requires tracking progress of corrective actions in response to nonconformances such as weekly meetings; however results were not recorded; and (2) EMS Element #5 requires action plans for activities to achieve biosolids goals and objectives. While the action plans are understood, they are not always clearly designated in schedules, milestones, resources and responsibilities.

The next scheduled Independent Third Party Audit is September 6 and 7, 2012 and will again be performed by DEKRA.

CCMUA Conducts Internal Audit

On November 17, 2011, CCMUA conducted an Internal Audit as required by the National Biosolids Partnership EMS Element #16.

The purpose of this audit was to:

Respond to the major nonconformances found in the September Interim Audit—the Internal Audit is to be considered corrective actions for the major nonconformances; confirm that CCMUA is consistent with NBP Code of

Good Practices; and, review nonconformances found in the interim audit and identify corrective actions (must be corrected within 90 days).

Three Auditors were selected that were not part of the day-to-day operations of the plant. A worksheet was developed and interviews with plant personnel were conducted to assess the plant's compliance with the 10 principles

of the NBP Code of Good Practice.

Based on the results of the interviews and visits to selected locations at the plant, the auditors concluded that CCMUA's practices conforms with the 10 NBP (following corrective actions taken after September audit).

“ Be a good neighbor to the surrounding community with a view to not only doing no harm, with respect to odor impacts, but also to undertake initiatives to improve the quality of life for our neighbors.”

Progress Towards Goals and Objectives

Camden County MUA continues to optimize achievement of its four main long term goals to help continually improve performance of its Environmental Management System. These goals are to:

1. Optimize water quality performance,
2. Optimize air quality/odor control performance
3. Minimize cost to ratepayers and
4. Improve community relationship

In addition, the CCMUA has a number of objectives which contribute to, and fall under, the overarching

umbrella of these main goals. 88% of these objectives established for year 2011 were completed and completed on time. Accomplishments include:

- Maintain Effluent TSS <10 PPM
- Maintain Effluent cBOD <5 PPM
- “0” Air Permit violations per year
- Less than 2 odor complaints/month
- Achieve 97% completion of PM work orders .

- Conduct at least one inspection of biosolids hauling destinations (i.e. landfill, land application sites) per year
- Conduct at least 2 Environmental Justice Projects per year
- 100% of cake storage building and sludge storage tank exhaust air treated by new biofilter

2012 Objectives

Each year CCMUA establishes objectives to help achieve its main goals and continually improve its Environmental Management System. Listed below are the current goals for 2012.

- Maintain Effluent TSS <10 PPM
- Maintain Effluent cBOD <5 PPM
- “0” Air Permit violations and odor complaints per year

- Conduct at least one inspection of biosolids hauling destinations (i.e. landfill, land application sites) per year
- Conduct at least 2 Environmental Justice Projects per year
- Achieve ratio of Preventive versus Corrective maintenance of 3/1
- Reduce energy use from

distribution grid by 10% by using solar power

- Update at all SOPs to reflect EMS requirements.
- Construct at least 10 new rain gardens/year.
- Maintain R&R requirements to \$3.5 million/year or less.

Continual Improvements - Green Energy

CCMUA strives to continually improve in all areas including reducing energy costs.

By April 2012, CCMUA is expected to complete the installation of 1.8 million watt solar panels on top of the treatment plant’s primary and final sedimentation tanks. The 1.8 million watts of electricity represents approximately 10% of the plant’s

energy needs. The projected savings are about \$300,000 in energy costs during the first year and about \$7 million over the life of the 15 year agreement period.

The 15 year agreement is with the contractor, Camden Solar Partners, who will be responsible for capital costs and ongoing maintenance costs.

Ultimately, CCMUA’s goal is to use 100% green energy within the next 5 years.



Regulatory Compliance

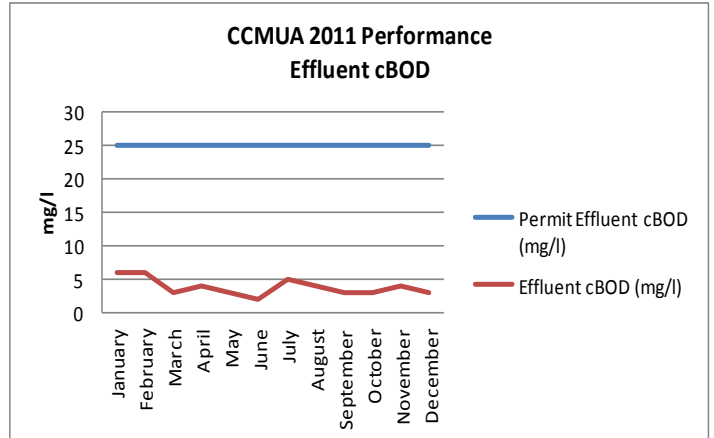
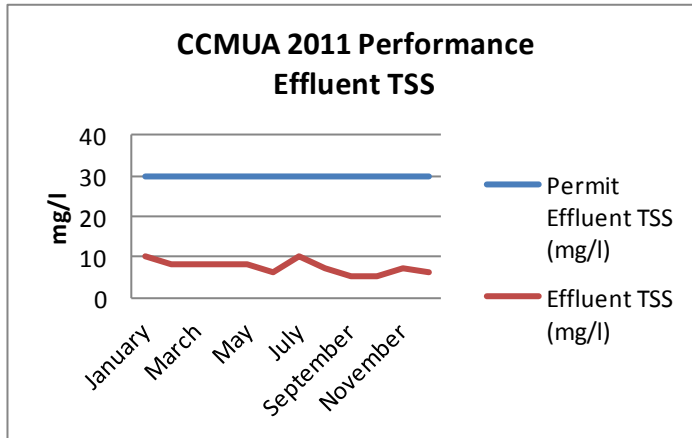
CCMUA's Environmental Management System complies with all applicable federal, state, and local requirements.

CCMUA's plant effluent concentrations of TSS and cBOD are averaging below 15

mg/l and 10 mg/l, respectively, which is significantly lower than the discharge permit requirements of 30 mg/l and 25 mg/l, respectively.

Biosolids produced at CCMUA met all

standards required by U.S. EPA for metal concentrations.



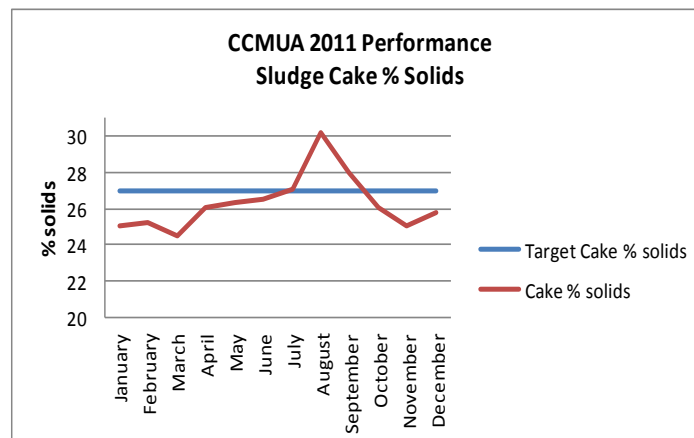
Environmental and Contractor Performance

One of the main priorities for CCMUA is to minimize adverse impact from odors emanating from the wastewater treatment and sludge disposal process---this is being done both through implementation of a "zero tolerance" policy for odors, and through capital improvements. The CCMUA has also been pursuing this goal through implementation of successful odor control strategies, such as assigning additional supervisors, operators

and maintenance staff on weekends, produce sludge cake with solids concentration of at least 27% to reduce the amount of sludge to be hauled out from plant, and minimization of off-site sludge hauling during off hours. In 2011 CCMUA had "0" air permit violations and averaged only two odor complaints per month.

In 2011 CCMUA representatives also performed random inspections of the truck hauling

process during biosolids loading and inspected a minor reclamation site which applies CCMUA biosolids. The inspections are conducted in order to insure that hauling contractors are following correct procedures and complying with CCMUA's established standards.



CCMUA Continues to Reduce Odors, Lower Fuel Costs and Disposal Costs

Biological Odor Control System

The CCMUA's new biofilter system began operation in January 2012. Since then there has been no observed or reported odors from the facility and it has been meeting all air permit requirements.

The biofilter replaces the 20-year old chemical scrubber system and will further reduce potential odors from the plant and will treat a wider range of odorous compounds and also increase mechanical output and reliability.

The biofilter services two facilities—the liquid sludge storage tanks and the sludge storage building. The biofilters are registering odor emissions that are 10 to 100 times lower than the required limits. The biofilters will be more reliable than the older, outdated chemical odor scrubbers.



CCMUA's new Biofilter System

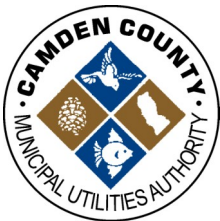
Sludge Drying Facility

The CCMUA's new Sludge Drying Facility is operating at 40% capacity as of April 2012. Originally the Dryer was anticipated to be at 100% capacity at this time; however, several problems arose during the commissioning period. The dryer is scheduled to be at 100% capacity by May 2012. At full capacity the dryer will process an average of 160 tons of sludge per day. The Dryer will reduce the quantity of sludge to 40 tons

per day and thereby significantly reduce disposal costs by 50 percent.

In addition to sludge disposal costs, odors will be reduced as a result of the reduction in truck traffic by at least 80%. This reduction will also help to improve the quality of life for the surrounding neighborhood.

Other benefits of the sludge drying facility include a reduction in carbon emissions. The sludge from the dryer will be converted to a renewable fuel to create energy and power manufacturing operations. For the first year of operation, CCMUA's sludge will be burned instead of over 6,000 tons of coal. This substitution of dried sludge for coal will reduce carbon emissions by 17,000 tons annually.



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MISSION STATEMENT

Total commitment to our customers, public health and quality wastewater management through teamwork and individual effort by participating in ongoing training, education and research, maintaining regulatory compliance, and striving for continuous improvement of systems and services.

