

**Monthly Operating Report
May, 2012
Concord Wastewater Treatment Facility
Operated by Woodard & Curran**

Date: June 19, 2012

To: Alan Cathcart, Concord Water & Sewer Superintendent
cc: Chris Whelan, Town Manager
Richard Reine, Director Concord Public Works

From: John Parkhurst and Staff

Key Activities This Month/Capital Program:

During May all treatment processes were either operational or in ready standby. Flow through the facility in May averaged 1.05 million gallons per day (MGD) and the permit critical 12-month average flow dropped slightly to 1.13 MGD. This is the third consecutive month that the 12-month average flow dropped and moved further from the 1.20 MGD limit for 12-month average flow.

Events that are more notable or tasks accomplished in May include:

Friday May 4th, 2012: Plant tour with Minuteman High School.

Monday May 7th, 2012: Concord WWTF completed the annual unannounced DEP inspection with DEP inspector Greg Tomaszewski. The inspection went over the entire facilities' process, plant staffing, lab analysis, compliance data, and maintenance. Mr. Tomaszewski, guided through the plant by Mike Thompson and John Parkhurst, seemed pleased in his findings. No additional follow-up is required.

Tuesday May 21st, 2012: Woodard & Curran's Brian McGrath onsite to discuss SPCC and SWPPP plans.



4000 gallon Above Ground Storage Tank Containing #2 Heating Oil

Thursday May 23rd, 2012: Constellation Energy called the plant for a load-shedding event. Plant was on generator power from 2:40PM – 5:15PM.

Health and Safety Activities or Training:

Tuesday May 29th, 2012: Plant staff reviewed and practiced confined space entry and rescue.

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Maintenance Management

Following is a brief list of a portion of maintenance items completed in May:

May 1st, 2012: Influent ultra-sonic flow meter rewired.

May 3rd, 2012: Loam and seed applied to bare spots on the lawn.

May 4th, 2012: Plant air-conditioner filters and belts replaced.

May 10th, 2012: Alum pump check valve replaced.

May 11th, 2012: Co-Mag polymer feed hose and suction strainer cleaned.

May 13th, 2012: Staff received low water alarm in odor control system. Staff cleaned roto-meter and reset alarms.

May 24th 2012: Outside contractor "NSC" in to quote the SCADA work on the plant water, high air pressure system, and polymer pumps.

May 25th, 2012: U.V. compressor serviced.

May 29th, 2012: Effluent Co-Mag caustic pump and feed line flushed out.

May 31st, 2012: Roto-meter repaired on odor control unit.

Environmental Compliance

Parameter	Monthly Avg.	Permit Limit	Notes
Flow, MGD	1.1 MGD (12-month avg.)	1.2 MGD	May avg. = 1.05 MGD Max. Daily Flow = 1.15 MG on Thu. 5/10/12
BOD5 (mg/l)	3 mg/l	30 mg/l	99% average BOD removal in May
TSS (mg/l)	4 mg/l	30 mg/l	98% average TSS removal in May
Coliform, Geo.Mean #/100ml	2 cfu*/100ml	200 cfu/100ml	10 f-coliform counts daily max occurred Wed. 5/09
Phosphorus	0.2 mg/l	0.2 mg/l Apr '12– Oct '12	0.33 mg/l daily max. occurred on Tue. 5/22
Total Ammonia Nitrogen	0.37 mg/l	Report Only	0.76 mg/l daily max. on Tue. 5/01

*cfu = coliform forming unit or colony.

Throughout May, the Concord WWTF performed continuous two-stage total phosphorus (TP) removal using aluminum sulfate. First stage chemical TP treatment occurred in the two secondary clarifiers, while second stage TP treatment took place within the CoMag® advanced treatment process. The monthly average effluent TP concentration in May is 0.2 mg/l, thereby meeting the CWWTf's summer permit limit not to exceed 0.2 mg/l TP as a monthly average.

Also during May, all effluent disinfection performed using ultra violet light.

Alarm Activity

This section provides the Town information on events that activate the facility's alarm response system. The events occur while the plant is unmanned and while both the plant's SCADA system and The *Lexington Alarm* are monitoring the facility's alarm system. This report identifies alarm activity from the start of the calendar year to the present.

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Concord WWTF Off-Hours Alarm Log

Date	Time	Alarm Source	Observations/Corrective Action/Comments
Jan. '12	Various	Intrusion	South Clarifier Rm. single door triggered several nuisance intrusion alarms in January. Plant personnel replaced wiring to the magnetic pickup on the door and slightly adjusted the position of the pickup- so far so good.
Feb. 11, 2012	3:28 AM	Numerous	A very brief loss of utility power lead to a number of motor faults that required reset by an onsite operator as the SCADA system was inaccessible too.
Mar. '12	NA	NA	No off hours alarms in March.
Apr. 29, '12	10:30 am	Numerous	A very brief loss of utility power lead to a number of motor faults that required reset by an onsite operator who was performing weekend (Sat.) rounds.

Septage Receiving

The Concord WWTF receives septage only from in-Town sources. A total of 110,250 gallons of septage received at the Concord WWTF in May.

WWTF Septage Receipts in gallons

	2012	2011	2010
January	56,000	44,050	32,500
February	34,000	31,750	25,750
March	83,000	102,950	171,750
April	111,500	139,750	211,500
May	110,250	113,500	125,950
June		130,000	184,950
July		73,750	90,800
August		69,500	173,250
September		98,750	182,250
October		82,250	210,250
November		90,250	194,100
December		117,250	132,750
Annual Totals:	394,750	1,093,500	1,735,800

Sludge Production

During May, 107,500 gallons of liquid sludge, equivalent to 16.66 dry tons, transported to Upper Blackstone Water Pollution Abatement District (UBWPAD) in Millbury, Massachusetts.

	WWTF Sludge Production in gallons /dry tons		
	2012	2011	2010
January	112,896/17.12	98,309/16.78	89,000/15.61
February	62,183/11.1	72,916/13.5	90,000/16.81
March	99,452/13.71	72,617/13.89	90,000/15.65
April	97,796/11.75	81,000/14.90	135,000/23.57
May	107,500/16.66	108,000/27.85	97,980/15.76
June		108,000/19.67	99,000/18.28
July		106,060/17.69	99,000/16.81
August		135,224/18.83	108,000/18.61
September		108,008/15.10	106,160/17.88
October		141,003/23.05	107,558/17.31
November		114,905/20.28	142,500/21.18
December		105,573/18.56	134,750/21.73
Annual Totals:	479,827/70.34	1,251,615/205.18	1,298,945/219.20