

Monthly Operating Report
April, 2013
Concord Wastewater Treatment Facility
Operated by Woodard & Curran

Date: May 14, 2013

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 April all treatment processes were either operational or in ready standby. Flow through the facility in April averaged 1.34 million gallons per day (MGD) and the permit critical 12-month average flow increased to 1.07 MGD. This is the 3rd month that the 12-month average flow increased and moved towards the 1.20 MGD limit for 12-month average flow.

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

April 22nd, 2013: Staff turned on water for “Summer Mode” on the odor control system.



Concord WWTF odor control system.

April '13 WWTF MOR

Health and Safety Activities or Training:

During April, all plant staff participated in a 30 minute on site safety meetings on “Tick Guidance”.

Maintenance Management

The following is a brief list of a portion of maintenance items completed in April:

April 9th, 2013: Staff calibrated inline pH meters.

April 13th, 2013: Staff cleaning mixing chamber in CoMag polymer system.

April 16th, 2013: DEP Representative Gregory Tomaszewski onsite for plant inspection.

April 22nd, 2013: Staff turned on water for “Summer Mode” on the odor control system.

April 24th, 2013: Staff completed annual landscaping duties on the bushes and garden in front of the facility.

April 24th, 2013: Plant temporarily lost power. All processes returned to normal when generator power transferred.

April 25th, 2013: Boiler shut down for the season.

April 30th, 2013: Power washing the inside walls of the trickling filter.



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Environmental Compliance

Parameter	Monthly Avg.	Permit Limit	Notes
Flow, MGD	1.07 MGD (12-month avg.)	1.2 MGD	April avg. = 1.34MGD Max. Daily Flow = 2.74 MG on Thu. 04/04
BOD5 (mg/l)	4 mg/l	30 mg/l	98% average BOD removal in April
TSS (mg/l)	3 mg/l	30 mg/l	98% average TSS removal in April
Coliform, Geo.Mean #/100ml	1 cfu*/100ml	200 cfu/100ml	4 f-coliform counts daily max on Mon. 04/01
Phosphorus	0.1 mg/l	0.2 mg/l Apr '13– Oct '13	0.2 mg/l daily max. occurred on Weds. 04/03
Total Ammonia Nitrogen	0.55 mg/l	Report Only	0.60 mg/l daily max. on Mon. 04/03

*cfu =coliform forming unit or colony.

During April, the Concord WWTP performed continuous two-stage total phosphorus (TP) removal using aluminum sulfate. First stage chemical TP treatment occurred in the secondary clarifiers and second stage TP treatment took place within the CoMag® advanced treatment process. The monthly average effluent TP concentration in April is 0.1mg/l, thereby meeting the CWWTP's summer permit limit not to exceed 0.2 mg/l TP as a monthly average.

Additionally, during April all effluent disinfection was 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.

Concord WWTF Off-Hours Alarm Log

Date	Time	Alarm Source	Observations/Corrective Action/Comments
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.
May '12	NA	NA	No off hours alarms in May.
Jun. 17, '12	8:30 PM	Numerous	Plant water alarm came in. Plant staff cleaned intake screens and reset system. (All OK)
Jul. 28, '12	8:00 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.
Aug. 5, '12	8:00 AM	Numerous	Corridor motion detectors triggered nuisance alarms. Staff reset alarm - so far so good.
Sept. 9, '12	8:00 AM	Numerous	Intrusion alarm clarifier room south motion sensor- no apparent reason other than windy outside.
Oct. 29, '12	5:45 PM	Numerous	A loss of utility power lead to a number of motor faults that required reset by an onsite operator who was performing Hurricane Sandy coverage.
Nov. '12	NA	NA	No off hours alarms in November.
Dec. '12	NA	NA	No off hours alarms in December.
Jan. 30, '13	6:56 PM	Numerous	Plant water alarm due to break in the plant water feed line in the brick building by the effluent parshall flume.
Feb. 17, '13	7:00PM	Numerous	A loss of utility power lead to a number of motor faults that require to be reset by an on-call operator.
Mar. 03, '13	12:00PM	Numerous	A loss of utility power lead to a number of motor faults that require to be reset by an on-call operator.
Apr. '13	NA	NA	No off hours alarms in April.

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Septage Receiving

The Concord WWTF receives septage only from in-Town sources. A total of 157,350 gallons of septage received at the Concord WWTF in April.

WWTF Septage Receipts in gallons:

	2013	2012	2011
January	27,500	56,000	44,050
February	35,700	34,000	31,750
March	50,000	83,000	102,950
April	157,350	111,500	139,750
May		110,250	113,500
June		112,750	130,000
July		137,750	73,750
August		71,000	69,500
September		84,250	98,750
October		124,150	82,250
November		111,700	90,250
December		93,500	117,250
Annual Totals:	272,350	1,129,850	1,093,500

Sludge Production

During April, 103,882 gallons of liquid sludge, equivalent to 23.03 dry tons, transported to Upper Blackstone Water Pollution Abatement District (UBWPAD) in Millbury, Massachusetts.

	WWTF Sludge Production in gallons /dry tons		
	2013	2012	2011
January	109,811/22.44	112,896/17.12	98,309/16.78
February	82,650/17.31	62,183/11.1	72,916/13.5
March	79,918/18.48	99,452/13.71	72,617/13.89
April	103,882/23.03	97,796/11.75	81,000/14.90
May		107,500/16.66	108,000/27.85
June		116,530/18.53	108,000/19.67
July		116,141/22.36	106,060/17.69
August		113,340/18.71	135,224/18.83
September		104,302/18.64	108,008/15.10
October		123,425/20.70	141,003/23.05
November		80,786/14.44	114,905/20.28
December		80,804/16.58	105,573/18.56
Annual Totals:	376,261/81.26	1,214,155/200.34	1,251,615/205.18