

MINUTES
OPERATIONS & ENGINEERING COMMITTEE MEETING
JUNE 9, 2020 (VIRTUAL)

Attendants: Messrs. Boland, DiSantis, Hurst, Kester, Knapp, Lehman, Lucas, Monaghan, Pileggi, Pisani, Willert, and Mesdames Amadio, Bonnett, Caulk, and Sage.

1. ROLL CALL: Seven members of the DELCORA Board of Directors were present at the meeting constituting a quorum.

There were no members of the public present.

2. PLEDGE OF ALLEGIANCE: All parties present at the meeting recited the Pledge of Allegiance.

3. BID OPENING:

- Contract No. P2020-03 – Sodium Bisulfite (38%)

Ms. Caulk stated that there were two bids received and one “No Bid” letter received from Holland Company, Inc.

	<u>TOTAL BID AMOUNT</u>
Coyne Chemical Co., Inc.	\$ 31,530.00
Univar USA, Inc.	\$ 33,450.00

Mr. Boland stated that these bids will be reviewed by Staff and our Solicitor’s office, and consideration of award will be placed on the agenda for the June 16th Board meeting.

4. BID RESULTS RECEIVED ELECTRONICALLY THROUGH THE PENNBID PROGRAM ON JUNE 9, 2020:

- Contract No. TC-2005-C – Roof Replacements Project

Mr. Hurst stated that there were a total of seven bids received via the PennBid program. Mr. Hurst read the three lowest bidders.

	<u>TOTAL BASE BID AMOUNT</u>	<u>TOTAL BID AMOUNT WITH ALTERNATE</u>
Paneko Construction	\$1,598,600.00	\$1,661,300.00
Union Roofing Contractors	\$1,761,000.00	\$1,920,600.00
Detwiler Roofing	\$1,817,600.00	\$1,950,600.00

Mr. Boland stated that all bids will be reviewed by Staff and our Solicitor’s office, and consideration of award will be placed on the agenda for the June 16th Board meeting.

In response to a question from Mr. Kester as to whether DELCORA has used any of the bidding contractors before, Mr. Hurst stated that DELCORA has not previously contracted with any of the three lowest bidders. However, D'Huy, the engineering consultant on this project, has had prior experience with Detwiler Roofing.

5. MONTHLY REPORT – DIRECTOR OF OPERATIONS & MAINTENANCE: Mr. DiSantis highlighted certain items in the written report. Mr. DiSantis stated that as of the writing of last month's report for April there were no known violations at the WRTP. However, after compiling the data for the month and filing the monthly Discharge Monitoring Report, we determined that there was one violation for exceeding the weekly average loading for cBOD₅ at the WRTP. This was a one day event on April 13th when the total flow for the day was over 66 million gallons which made the average for the week above permit. He stated that all the data for May is not yet available but it is known that there were two violations due to a plant upset that caused an exceedance of the average weekly cBOD₅ and TSS concentrations. The cBOD₅ weekly average is 29 and we had a 42, and the weekly average for TSS is 45 and we had a 47. Mr. DiSantis explained that the COVID-19 effect could have caused these issues. During this time, the supply chain has been fractured meaning a lot of material from connected industries, as well as trucked industries, was being discharged instead of being sold to others under normal circumstances. The trucked waste area had to be closed for about a week and flow from Central Delaware County pump station was directed to Philadelphia to help the plant recover more quickly from the increased discharges. Mr. DiSantis congratulated the staff for their efforts during this time. Some of these issues still linger such as the sludge is normally 75% volatile but it has been between 85% and 90% volatile due to the increase in organic loading and, with the sludge being so volatile, it makes it difficult to incinerate.

Continuing, Mr. DiSantis stated that there were twenty-four reportable incidents during the month, all for visible emissions resulting from incinerator short stack openings and the COVID-19 effect. A few issues were equipment related but the majority was caused by handling the high volatile sludge. Typically, sludge is expected to dry out in hearth 1 and 2 but it was catching on fire causing operational difficulties. At the same time, operational changes were being instituted to better control these issues and they have been very successful. The PADEP was aware of these plant issues and the operational changes, particularly the trial and error aspect of implementation and the progress that was made. Mr. DiSantis also mentioned the continued safety steps being taken due to COVID-19 and the staffing limitations. As a result of the process issues, the trucked waste business was low during the month compared to other months at 17.4 million gallons but year-to-date revenue is still on budget. Mr. DiSantis had no additional comments to the written report. The Committee had no questions regarding the written report.

6. MONTHLY REPORT – DIRECTOR OF ENGINEERING: Mr. Hurst highlighted certain items in the written report. He reported that the WRTP Plant Upgrades project continues to draw to a conclusion by installing the new lakeside unit associated with the hauled sludges and cleanup of the new access road. Regarding the Marcus Hook Pump Station project, he stated that Philips Brothers was requested to investigate issues with

the automated transfer switch not transferring correctly. Those electrical connection issues were resolved. Mr. Hurst reported that the HVAC Energy Savings Upgrade project continues to move through work in B-3 and additional design work was done for B-3. He stated that there were several notable repairs completed under the Sewer Maintenance contract including replacing the broken air relief valve on Rt. 291. Under the Paving Restoration Services contract, Mr. Hurst stated that paving was installed on the temporary roadway for truck traffic. This road will eventually be converted to an employee access road which will improve traffic flow and safety at the site. Regarding the Springhill Farm Pump Station and Force Main project, Mr. Hurst reported that this project is still in the materials purchase phase but field activities will begin soon.

Under Design, regarding the ESA Alternatives, Mr. Hurst stated that the Value Engineering phase is drawing to a close. Value Engineering is a process where independent engineers are engaged to review the design and offer suggestions on how the value can be improved, such as greater level of service or lower costs. The Value Engineering team that reviewed this project in February suggested that we should consider replacing the pipelines (intended to be installed at grade through open trench excavation) with constructing a tunnel. To investigate this option, five bore holes were driven down about 200 feet in depth. It was discovered that the rock is shallower than expected and very good quality for constructing a tunnel. He also stated that using the tunnel option would save a lot of excavation of soils at grade, reduces the impact on traffic and noise, and alleviates concern about contaminated hazardous soil and water. From a long term performance perspective, the benefit of a tunnel that is about 10 ft. to 11 ft. diameter and 10 miles long would be that it could be used for conveyance and water tank storage during wet weather events until the event subsides to offset treatment costs, alleviating the need for a larger wet weather treatment plant. Several engineering firms have reviewed this option and offered their opinion on the cost of a tunnel versus a pipeline, and determined it would be a favorable budget alternative. So, it appears that the design will convert from pipelines to a tunnel. He will report more on this next week at the Board meeting. Mr. Hurst had no additional comments to the written report. The Committee had no questions regarding the written report.

Mr. Hurst also mentioned that the next public participation meeting of the Long Term Control plan is a virtual meeting scheduled for tonight using Zoom.com. Meeting content received a positive review from by EPA and PADEP. We are expecting to continue on the process to approve the Long Term Control Plan. If any Board member would like to participate, Mr. Willert stated that the Zoom.com meeting link can be emailed to the Board members. Ms. Amadio added that the meeting information is also posted on our website.

7. MONTHLY REPORT – ENGINEERING ADVISOR: Mr. Lehman highlighted several on-going projects on the written report, which had been provided to all Board members in advance of today's meeting. He stated that the SWMM modeling is ongoing and is submitted every month. The metering program continues with collecting data, processing it, and submitting it to DELCORA for review. Mr. Lehman reported that he met with Mr. Hurst about the Force Main Test Coupons and ARV Repair project to discuss the direction of the project and they are waiting for the value engineering to

complete their evaluation which should be completed in the next few weeks. Mr. Lehman had no additional comments to the written report. The Committee had no questions regarding the written report.

8. CHANGE ORDERS:

- Contract No. TC-1608-C – Solids Handling Upgrade 2016 – Part B – Electrical – Change Order No. 2 – Increase In Contract Time Only Of 481 Days Prior To Closeout (Philips Brothers Electrical)

Mr. Hurst stated that this is a request for an increase in time only to close out this project which was tied to the 2018 project. The work schedule on the 2018 project necessitated the additional time on this contract.

Following discussion, it was the consensus of the Committee to recommend Board approval of the above contract change order. This item will be placed on the agenda for the June 16th Board meeting.

9. REQUEST FOR APPROVAL OF CONTRACT CLOSE-OUT & FINAL PAYMENT:

Mr. Boland stated that there were no Contract Close-Outs at this time.

10. AUTHORIZATION FOR PROFESSIONAL SERVICES:

- A. D'Huy Engineering, Inc. – Proposal Dated June 8, 2020 – For Professional Engineering Services To Provide Additional Construction Management Services For The WRTP Plant Upgrades 2018 Project To Extend Full Time Onsite Coverage Until December 31, 2021, And Completion Of The 2018 Upgrade Project, And Also Includes Oversight Of The Roof Project And Full Coverage For The 2020 Upgrade Project – Total Additional Amount Not To Exceed \$416,500.00 (Capital Funds)
- B. D'Huy Engineering, Inc. – Proposal Dated June 8, 2020 – For Professional Engineering Services To Provide Construction Administration Services For The Roof Replacements Project – Total Amount Not To Exceed \$58,600.00 (Capital Funds)
- C. D'Huy Engineering, Inc. – Proposal Dated June 8, 2020 – For Professional Engineering Services To Provide Construction Administration Services For The WRTP Plant Upgrades 2020 Project – Total Amount Not To Exceed \$285,000.00 (Capital Funds)
- D. D'Huy Engineering, Inc. – Proposal Dated June 8, 2020 – For Professional Engineering Services To Provide Additional Design Services For The T-28 Final Clarifier Addition And Added Contingencies For Additional Permitting/Engineering Requirements For Site/Civil Work And For Any Resultant ESA Program Changes – Total Additional Amount Not To Exceed \$324,000.00 (Capital Funds)

- E. Gannett Fleming, Inc. – Proposal Dated June 8, 2020 – For Professional Engineering Services To Provide Additional Design And Associated Construction Services For The Sludge Cake Pump Design – Total Additional Amount Not To Exceed \$72,000.00 (Capital Funds)
- F. Trace Environmental Systems, Inc. – Proposal Dated April 28, 2020 – For Professional Engineering Services For CEMS Maintenance And Support Renewal – Total Amount Not To Exceed \$30,939.00 (Operating Funds)

Mr. Hurst provided an overview of the above proposals. It was the consensus of the Committee to recommend Board approval of the above proposals. These items will be placed on the agenda for the June 16th Board meeting.

11. AUTHORIZATION TO ADVERTISE FOR BIDS: Mr. Boland stated that there were no Authorizations to Advertise for Bids at this time.

12. ADVISOR APPOINTMENT:

- Engineering Advisor Services For The Third Quarter 2020 – Weston Solutions, Inc. – Total Amount Not To Exceed \$2,500.00 Per Quarter

Following discussion, it was the consensus of the Committee to recommend Board approval of the above Advisor Appointment. This item will be placed on the agenda for the June 16th Board meeting.

ADJOURNMENT: It was moved by Mr. Lucas, seconded by Mr. Knapp, and unanimously carried to adjourn the regular meeting at 4:06 p.m.



INTER-OFFICE MEMORANDUM

TO: Robert J. Willert, Executive Director
FROM: Michael J. DiSantis, Director of Operations and Maintenance
SUBJECT: Board Report for the June 9, 2020, O & E Committee Meeting
DATE: June 5, 2020

- I. PROCESS INFORMATION – There were two violations at WRTP during the month. Both the average weekly cBOD₅ and TSS concentrations were exceeded due to a process upset. All other parameters were in permit. Please note that cBOD₅ and cBOD₂₀ data is through 5/28. May data points of interest are:

A.	<u>Liquid Process Averages:</u>	<u>Month:</u>	<u>YTD:</u>
1.	Flow	31.59 MGD	35.20 MGD
2.	TSS	18 mg/L	17 mg/L
3.	cBOD ₅	16 mg/L	13 mg/L
4.	cBOD ₂₀ % Removal	95.53%	96.2%
5.	cBOD ₂₀ Loading	6,323 lbs.	5,703 lbs.

B.	<u>Solids Processing:</u>	<u>Month:</u>	<u>YTD:</u>
1.	Dry Tons Treated -	2,117.00	2,091.86
2.	Dry Tons/Day -	68.29	68.81
3.	Total Gallons Pumped -	11,710,885	12,231,754
4.	Average Feed Solids -	4.40%	4.14%
5.	Average Cake Solids -	24.00%	23.44%
6.	Pounds of Polymer/DT -	191.49	190.74
7.	MCF/DT -	2.61	3.70
8.	Monthly Cost/DT -	\$28.62	\$33.08

C. Station Meter Readings: (Total flow values are in mg and daily flow is in mgd.)

May 2020	Total Flow	Daily Avg	High Daily	Low Daily
Darby Creek	568.78	18.35	22.14	15.05
Muckinipates	125.06	4.03	5.33	3.33
Central Delaware	282.96	9.13	11.63	7.43
Chester	222.19	7.17	12.18	5.79
Marcus Hook	21.54	0.69	1.34	0.54
Eddystone	10.74	0.35	0.50	0.28
Naamans Creek	60.46	1.95	2.95	1.50
Chi Pit	16.59	0.54	0.75	0.43
Chester-Ridley	138.11	4.46	5.35	3.52
Edgmont	3.22	0.10	0.13	0.04

II. MONTHLY FACILITY ACTIVITIES

A. Operations Highlights/Key Events

1. Flow was diverted to PWD to help address the process upset at WRTP. As a result, the plant received 87.1% of the flow from the Central Delaware Pump Station.
2. There were 24 reportable incidents during the month, all for visible emissions resulting from incinerator short stack openings. The Covid-19 effect noted below on the volatility of the sludge, a few equipment issues, and the implementation of significant operational changes were the causes for these incidents. The only effective method for making changes was to perform them during live operation. This was done for both training and to fine tune the operational strategy. During this time, we have maintained an open dialogue with DEP regarding both the plant issues and the operational changes, specifically the trial and error aspect of implementation. At the time of this report, it has been a week since the last incident. It appears that the operational changes have been effective in both optimizing incinerator operation while providing a method to stabilize incinerator operation despite the high volatility of our sludge.
3. As of the writing of my report for April, there were no known violations. However, subsequently when compiling all of the data for the monthly regulatory agency reporting, we determined there was one violation for exceeding the weekly average loading for cBOD₅. This was due to the cBOD₅ result from 4/13 when the total flow for the day >66.5 MGD.
4. The average daily flows in May were down significantly as compared to April and lower than the YTD average. In Operations, the focus for the month revolved around a plant upset that affected both the treatment process and solids handling. We found that due to Covid-19's disruption of the supply chain, products typically used to make other products, or to be sold directly to end

users, were being disposed of instead of sold. This resulted in a significant increase in plant loading and increased the volatility of our sludge. This increase was more than the plant could process which resulted in poor effluent quality and sludge that was very difficult to incinerate as noted above. Based on the lab data that is available at the time of this report, there are two violations – one each for exceeding the weekly average concentration for cBOD₅ and TSS. On a good note, based on the available data, the monthly average concentration for both of these parameters are within permit. To address this issue, we stopped all trucked waste deliveries for about a week. Concurrently, we made significant operational changes to mitigate the impact on the plant and to return to compliance. While the loading issue's impact on solids handling made implementation of the new incineration operating strategy more difficult; the new operating strategy proved to be helpful in processing the high volatile solids content of our sludge. As the 2018 Plant Upgrade Project is winding down, tank outages, process interruptions and operation of interim equipment has been minimized. Primary clarifier performance was also affected by the process issues as it fell below the target with 57% TSS removal. Likewise, GBT performance did not meet the cake solids or TSS targets with 4.8% solids and 132 mg/L filtrate, respectively. In solids handling, incinerator up time was 77% to facilitate maintenance. As a result, there were 24 loads hauled to compost during the month. Polymer usage and natural gas usage were both in target. Due to the increased sludge volatility, gas usage was particularly low. Chemical addition for H₂S reduction and nutrient deficiency continued to be used as needed. Lastly, there were no violations at any of the remote facilities.

B. Maintenance Highlights/Key Events

1. As noted in prior reports, scheduling of staff during the pandemic has had some impact in the maintenance departments. We have been addressing this by extending the work day on a situational basis. There were no system failures during the month. In addition to routine planned facility and collection system O&M; work on in-house projects and support of capital projects remains a significant focus of the maintenance departments. During the month, Central Maintenance also worked on belt filter press repairs, incinerator and related systems repairs, primary clarifier inspections and repairs, various pump repairs, and providing labor to support plant operations. Sewer Maintenance continued to focus on area line cleaning and televising, air relief inspections and maintenance, response to One-Calls and sewer complaints, metering support, various line repairs and replacement, WRTP work, remote systems work, and support of capital projects.

C. Trucked Waste Business

1. During the month, 17.44MM gallons were received. Due to process issues, trucked waste acceptance was suspended for approximately a week. While the projected revenue for the month is not expected to meet our monthly target, the year-to-date revenue is still on budget.

MJD:bab

attachments (NPDES DMR/Strategic Plan Reports)

Monthly Board Report for May 2020
June 5, 2020
page 4 of 3

cc: M. Warholic
C. Lenton
W. Smith
C. Mariani
S. Gober
File

Cummings, Meghan

From: depgreenporthelpdesk@state.pa.us
Sent: Tuesday, May 26, 2020 8:24 AM
To: DiSantis, Michael; DiSantis, Michael; Raymond Rios; Piro, Ian; Mariani, Chris; Petrova, Mihaela; Cartafalsa, James
Subject: Your eDMR Report Has Been Received For Permit No. PA0027103

This email is to confirm that the following report was received by DEP through the eDMR system:

Facility Name: DELCORA STP
Permit Number: PA0027103
Report Frequency: Monthly
Report Type: DMR
Reporting Period: 04/01/2020-04/30/2020
Report Due Date: 05/28/2020

Submitted By: Michael DiSantis
Submission Id: 208197
Submission Status: Received
Submission Type: Original

To view the details of this report, access the eDMR system through DEP's [GreenPort](#) and select the link for View/Revise Submitted.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER
DISCHARGE MONITORING REPORT (DMR)

NAME: DELCORA
ADDRESS: 100 EAST FIFTH STREET P.O. BOX 899, CHESTER PA, 19016-0299
FACILITY: DELCORA STP
LOCATION: 3201 W FRONT ST, CHESTER PA, 19013-1829
STAGE: Final Effluent

PA0027103
PERMIT NUMBER

001
OUTFALL NUMBER

Reporting Frequency: Monthly
DMR Effective From: 04/01/2020
DMR Effective To: 04/30/2020
Permit Expires: 04/30/2018
Permit Application Due: 11/01/2017
No Discharge:

MONITORING PERIOD			
YEAR	MO	DAY	TO
2020	04	01	30

PARAMETERS REPORTED VALUES

PARAMETER	QUANTITY OR LOADING		QUANTITY OR CONCENTRATION		SAMPLING FREQUENCY	SAMPLING TYPE
	VALUE	UNITS	VALUE	UNITS		
PH (00400) Sample Measurement Permit Requirement	8.41	***	6.79	S.U.	1/day	Grab
	5.0	Inst Min	9.0	Inst Max	1/day	Grab
Total Suspended Solids (00503) Sample Measurement Permit Requirement	8867	lbs/day	16.0	mg/L	1/day	24-Hr Composite
	15000	Wky Avg	30.0	Wky Avg	1/day	24-Hr Composite
Oil and Grease (00556) Sample Measurement Permit Requirement	1527	lbs/day	< 5.0	mg/L	1/day	Grab
	5500	***	15.0	Inst Max	1/day	Grab
Ammonia-Nitrogen (00610) Sample Measurement Permit Requirement	6.04	***	6.04	mg/L	2/month	24-Hr Composite
	35	Monitor & Report Avg Mo	35	Monitor & Report Avg Mo	2/month	24-Hr Composite
Nitrite as N (00615) Sample Measurement Permit Requirement	< 1	***	< 1	mg/L	2/month	24-Hr Composite
	9.63	Monitor & Report Avg Mo	9.63	Monitor & Report Avg Mo	2/month	24-Hr Composite
Nitrate as N (00620) Sample Measurement Permit Requirement	1040	***	1040	mg/L	1/month	24-Hr Composite
	1040	Monitor & Report Avg Mo	1040	Monitor & Report Avg Mo	1/month	24-Hr Composite
Total Kjeldahl Nitrogen (00625) Sample Measurement Permit Requirement	1040	***	1040	mg/L	1/month	24-Hr Composite
	1040	Monitor & Report Avg Mo	1040	Monitor & Report Avg Mo	1/month	24-Hr Composite
Cyanide, Total (00720) Sample Measurement Permit Requirement	< .0005	***	< .0005	mg/L	1/month	Grab
	< .0005	Monitor & Report Avg Mo	< .0005	Monitor & Report Avg Mo	1/month	Grab
Chlorobenzene (04396) Sample Measurement Permit Requirement	< .0002	***	< .0002	mg/L	1/month	24-Hr Composite
	.0077	Monitor & Report Avg Mo	.0077	Monitor & Report Avg Mo	1/month	24-Hr Composite
Cadmium, Total (01027) Sample Measurement Permit Requirement	< .0010	***	< .0010	mg/L	1/month	24-Hr Composite
	< .0010	Monitor & Report Avg Mo	< .0010	Monitor & Report Avg Mo	1/month	24-Hr Composite
Copper, Total (01042) Sample Measurement Permit Requirement	< .0010	***	< .0010	mg/L	1/month	24-Hr Composite
	< .0010	Monitor & Report Avg Mo	< .0010	Monitor & Report Avg Mo	1/month	24-Hr Composite
Lead, Total (01051) Sample Measurement Permit Requirement	< .0010	***	< .0010	mg/L	1/month	24-Hr Composite
	< .0010	Monitor & Report Avg Mo	< .0010	Monitor & Report Avg Mo	1/month	24-Hr Composite
Zinc, Total (01052) Sample Measurement Permit Requirement	< .0010	***	< .0010	mg/L	1/month	24-Hr Composite
	< .0010	Monitor & Report Avg Mo	< .0010	Monitor & Report Avg Mo	1/month	24-Hr Composite
Dichlorobenzene (02101) Sample Measurement Permit Requirement	66.58	MGD	66.58	MGD	Continuous	Grab
	66.58	Monitor & Report Avg Mo	66.58	Monitor & Report Avg Mo	Continuous	Grab
Flow (00050) Sample Measurement Permit Requirement	< 4	***	< 4	mg/L	1/day	Grab
	5	Avg Mo	5	Avg Mo	1/day	Grab
Total Residual Chlorine (TRC) (00060) Sample Measurement Permit Requirement	1.0	Inst Max	1.0	Inst Max	Continuous	Grab
	1.0	Inst Max	1.0	Inst Max	Continuous	Grab



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER
DISCHARGE MONITORING REPORT (DMR)

Sample Measurement	Permit Requirement	502 Monitor & Report Avg Mo	620 Monitor & Report Daily Max	mg/L	1/week 2/month	24-Hr Composite 24-Hr Composite
Total Dissolved Solids (TDS)	***	***	***		1/day	24-Hr Composite
Fecal Coliform (F405)	***	***	307.6	NC/100 ml	1/day	Grab
	***	***	1000		1/day	Grab
	***	***	90%SAMPLES		1/day	24-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5) (60082)	502	200	23.0	mg/L	1/day	24-Hr Composite
	7000	Geo Mean	14.0		1/day	24-Hr Composite
	Avg Mo	19.0	25.0		1/day	24-Hr Composite
	7549	Avg Mo	***		1/week	24-Hr Composite
SCD, carbonaceous 20 day, 20 C (60087)	10500	***	***	***	1/week	24-Hr Composite
	Avg Mo	***	***		1/week	24-Hr Composite
Facility Sampling Point Comments						



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NAME: DELCORA
ADDRESS: 100 EAST FIFTH STREET P.O. BOX 999, CHESTER PA, 19076-0999
FACILITY: DELCORA STP
LOCATION: 3201 W FRONT ST, CHESTER PA, 19013-1829
STAGE: Percent Removal

PA0027103
PERMIT NUMBER

001
OUTFALL NUMBER

Reporting Frequency: Monthly
DMR Effective From: 04/01/2020
DMR Effective To: 04/30/2020
Permit Expires: 04/30/2018
Permit Application Due: 11/01/2017
No Discharges:

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
2020	04	01	2020	04	30

FROM

PARAMETERS REPORTED VALUES

PARAMETER	QUANTITY OR LOADING			QUANTITY OR CONCENTRATION			SAMPLING FREQUENCY	SAMPLING TYPE
	VALUE	UNITS	VALUE	VALUE	UNITS	VALUE		
BOD, carbonaceous, 20 day, 20 C (60087)	***	***	94.70	***	***	***	1/day	24-Hr Composite
Percent Removal	***	***	89.25	***	***	***	1/week	24-Hr Composite
Facility Parameter Comments	Per DRBC Order, data from 4/13 was excluded as flow was $=65$ MGD.							
Facility Sampling Point Comments								



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ADDRESS: 100 EAST FIFTH STREET P.O. BOX 999, CHESTER PA, 19016-0999
FACILITY: DELCORA STP
LOCATION: 3201 W FRONT ST, CHESTER PA, 19013-1829
STAGE: Raw Sewage Influent

PA0027103
PERMIT NUMBER

001
OUTFALL NUMBER

Reporting Frequency: Monthly
DMR Effective From: 04/01/2020
DMR Effective To: 04/30/2020
Permit Expires: 04/30/2018
Permit Application Due: 11/01/2017
No Discharge:

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
2020	04	01	2020	04	30

PARAMETERS REPORTED VALUES

PARAMETER	QUANTITY OR LOADING		QUANTITY OR CONCENTRATION		SAMPLING FREQUENCY	SAMPLING TYPE
	VALUE	UNITS	VALUE	UNITS		
Biochemical Oxygen Demand (BOD5) (00310)	79723	lbs/day	226.87	mg/L	2/week	24-Hr Composite
	Monitor & Report Avg Mo		Monitor & Report Avg Mo		1/week	24-Hr Composite
Total Suspended Solids (00500)	86347	lbs/day	251.99	mg/L	1/day	24-Hr Composite
	Monitor & Report Avg Mo		Monitor & Report Avg Mo		1/day	24-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5) (00082)	82558	lbs/day	244.27	mg/L	1/day	24-Hr Composite
	Monitor & Report Avg Mo		Monitor & Report Avg Mo		1/day	24-Hr Composite

Facility Sampling Point Comments



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER
DISCHARGE MONITORING REPORT (DMR)

ATTACHMENT DETAILS

File Name	Attachment Type	Uploaded Time	Attachment Comments
DMR Cover Letter_April 2020.doc	Cover Letter	2020-05-28T08:21:53-04:00	
ALS Analytical Lab Report (FOG)_4-14-16.PDF	Laboratory Analytical Report	2020-05-20T23:50:50-04:00	
ALS Analytical Lab Report (FOG)_4-16-NHF_4-17.PDF	Laboratory Analytical Report	2020-05-20T23:51:12-04:00	
ALS Analytical Lab Report (FOG)_4-18-19-20-21-22.PDF	Laboratory Analytical Report	2020-05-20T23:51:43-04:00	
ALS Analytical Lab Report (FOG)_4-23-NHF-24-25-26-27.PDF	Laboratory Analytical Report	2020-05-20T23:52:08-04:00	
ALS Analytical Lab Report (FOG)_4-28-29.PDF	Laboratory Analytical Report	2020-05-20T23:52:32-04:00	
ALS Analytical Lab Report (FOG)_4-30-NHF_5-1.PDF	Laboratory Analytical Report	2020-05-21T03:58:11-04:00	
WRTP Analytical Lab Report (Effluent)_April 2020.pdf	Laboratory Analytical Report	2020-05-21T03:58:57-04:00	
WRTP Analytical Lab Report (Effluent)_April 2020.pdf	Laboratory Analytical Report	2020-05-21T03:59:04-04:00	
Sewage Sludge : Biosolids Production and Disposal Form_April 2020.xls	Sewage Sludge / Biosolids Production and Disposal Form	2020-05-21T13:36:40-04:00	
Sludge Hauled_April 2020.xls	Other	2020-05-21T13:36:40-04:00	Sludge Hauled April 2020
Suphphates(609)_April 2020.pdf	Other	2020-05-18T04:32:46-04:00	Sludge Incinerated April 2020
ALS Analytical Lab Report (Effluent)_4-7-20.PDF	Laboratory Analytical Report	2020-05-18T04:33:09-04:00	
WRTP Analytical Lab Report (Effluent)_April 2020.pdf	Laboratory Analytical Report	2020-05-18T04:33:41-04:00	
WRTP Analytical Lab Report (Effluent)_April 2020.pdf	Laboratory Analytical Report	2020-05-18T04:34:14-04:00	
Daily Effluent Monitoring Form_April 2020.xlsx	Daily Effluent Monitoring Form	2020-05-18T04:34:54-04:00	
Daily Effluent Monitoring Form_April 2020.xlsx	Daily Effluent Monitoring Form	2020-05-18T04:35:15-04:00	
In-PRF Calculations_April 2020.xlsx	Other	2020-05-18T04:35:52-04:00	In-PRF Calculations April 2020
DMR In-PRF (CBOD, TSS, BOD)_April 2020.pdf	Other	2020-05-18T04:36:32-04:00	DMR In-PRF (CBOD, TSS, BOD) April 2020
Hauled in Municipal Waste Form_April 2020.xls	Hauled-in Municipal Waste Form	2020-05-18T04:37:23-04:00	
Hauler Trails_FORM443 & Trucked Waste_April 2020.xls	Hauled-in Municipal Waste Form	2020-05-18T04:38:30-04:00	Hauler Trails FORM443 & Trucked Waste April 2020
Hauled in Residential Waste_April 2020.xls	Hauled-in Residential Waste Form	2020-05-18T04:39:12-04:00	
Influent & Process Control_April 2020.xls	Influent and Process Control Form	2020-05-18T04:39:46-04:00	
Influent & Process Control_April 2020.pdf	Other	2020-05-18T04:40:14-04:00	Influent/Process Control April 2020
DMR Laboratory Accreditation ALS_April 2020.doc	Laboratory Accreditation Form	2020-05-18T04:40:40-04:00	
DMR Laboratory Accreditation MJR_April 2020.doc	Laboratory Accreditation Form	2020-05-18T04:41:11-04:00	
DMR Laboratory Accreditation WRTP_April 2020.doc	Laboratory Accreditation Form	2020-05-18T04:41:41-04:00	
April 2020 SMM Report.xlsx	CSO Data/Outfall Report Form	2020-05-18T04:42:48-04:00	
MJR Analytical Lab Report (Effluent)_4-7-20.pdf	Laboratory Analytical Report	2020-05-18T05:43:19-04:00	
MJR Analytical Lab Report (Effluent)_4-14-20.pdf	Laboratory Analytical Report		

PERMIT VIOLATIONS

Non-Compliance ID	Event Start Date	Event End Date	Parameter	Limit Type	Reported Value	Permit Limit	Unit	Sampling Point	Cause of Non-Compliance	Corrective Action	Comments
142730	04/01/2020	04/30/2020	Carbonaceous Biochemical Oxygen Demand (CBOD5)	Weekly Average	10888	10500	lbs/day	Final Effluent (001)	Hydraulic flow exceeding plant or unit design	See attached comments	Weekly loading was exceeded due to a flow of 66.69 MGD on 4/13.

UNAUTHORIZED DISCHARGES

Non-Compliance ID	Event Start Date	Event End Date	Date and Time Discovered	Substance Discharged	Event Location	Volume (gal)	Duration (hrs)	Receiving Waters	Impact On Waters	Cause of Discharge	Date and Time DEP Notified (Only)	Comments

OTHER PERMIT VIOLATIONS

Non-Compliance ID	Non-Compliance Type	Parameter	Reported Value	Permit Limit	Comments

COMMENT DETAILS

Non-Compliance ID	Comments	Operator Name	Operator Certification Number	Operator Contact Number
		Michael J. DiSantis	TM403	(610) 876-5523

SUBMISSION INFORMATION

SUBMITTED BY GREENPORT USER	DATE	TELEPHONE	DATE
disantism	05 26	(610) 876-5523	05 26
	YEAR	NUMBER	DAY
	MO	AREA CODE	MO

*Pursuant to the Pennsylvania Electronic Transactions Act - Act 69, effective January 15, 2002, you are about to engage in an electronic transaction with the Commonwealth of Pennsylvania. You are submitting official information. You certify under penalty of law that this document and all attachments were prepared under your direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted, based on your inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of your knowledge and belief, true, accurate and complete. You are aware that any false statement may be subject to substantial civil and criminal penalties, including 18 P.S. section 4904 (relating to unsworn falsification to authorities).

OPERATIONS STRATEGIC PLAN REPORT MAY 2020

Missed Samples Per Month	#	YTD
Goal is zero	0	0
Deviations from Required Sampling Or Analytical Protocol	#	
Goal is 100% compliance	0	0
Samples with Analytical Results Outside of QA/QC Standards	#	
Goal is 100% compliance	2	33
Hours in Training for Month	#	
Total	18.5	74.0
DEP Approved	0.0	0.0
DEP Certified Operators	#	
Regulations Require One	12	

CENTRAL MAINTENANCE MATRIX

MAY 2020

		CURRENT MONTH	YTD
Work Order Aging		#	
	31-60 days	25	
	61-90 days	18	
	Over 90 days	44	
Work order hours/Available hours		%	%
	**Mechanical Maintenance	90%	94%
	Electrical Maintenance	90%	92%
	Instrument Maintenance	86%	93%
	**Includes all Preventive Maintenance		
Work Ratio Hours		# / %	# / %
	Corrective	723 / 35%	4720 / 30%
	Preventive	1305 / 63%	10768 / 67%
	Predictive	32 / 2%	416 / 3%
System Failures		#	#
Hours in Training		#	#
	Mechanics/Helpers	NA	NA
	Electricians	NA	NA
	Instrument Techs	NA	NA
Call-Ins		#	#
	WRTP	40	132
	Pump Stations	11	53



**Work Order Summary Report for Date
Range: 5/1/2020 to 5/31/2020**

Asset Type	Work Order Type	Labor Hours	Labor Cost
FLEET_ASSETS		0	406.95
	GENERAL REPAIR	0	\$360.00
	OIL CHANGE	0	\$46.95
SCHAMBER		152	4,920.48
	CLEAN GRATES	106	\$3,464.70
	MISCELLANEOUS	19	\$596.55
	TIDE GATE/CHAMBER CLEANING	27	\$859.23
SCONTROLVALVE		62	1,914.59
	SERVICE AIR RELIEF VALVE	62	\$1,914.59
SCSOREGULATOR		257	8,068.83
	CSO INSPECTION	130	\$4,075.95
	REMOVE FLOATABLES/WASH DOWN CHAMBERS	127	\$3,992.88
SGRAVITYMAIN		298	9,584.91
	AREA LINE CLEANING	67	\$2,111.08
	CONTRACTOR ASSISTANCE	10	\$314.40
	EMERGENCY CALL IN	32	\$1,299.78
	GNET TV INSPECTION	30	\$908.70
	MONTHLY LINE CLEANING	27	\$848.88
	PA ONE CALL LINE LOCATING	88	\$2,741.71
	PIPE REPAIR	32	\$987.68
	ROOT CUT	12	\$372.68
SLATERALPOINT		147	5,972.45

Asset Type	Work Order Type	Labor Hours	Labor Cost
	EMERGENCY CALL IN	88	\$4,122.48
	MISCELLANEOUS	2	\$62.88
	SEWER COMPLAINT INVESTIGATION	53	\$1,647.33
	TV INSPECTION	5	\$139.76
SMANHOLE		20	756.86
	EMERGENCY CALL IN	8	\$377.28
	MANHOLE FRAME & COVER REPLACEMENT	3	\$93.17
	MANHOLE INSPECTION	3	\$95.47
	REPLACE COVER /REPAIR RING	6	\$190.94
SMUNICIPAL		8	377.28
	FOLCROFT ASSISTANCE DELCORA	8	\$377.28
STREATMENTPLANT		234	8,936.66
	CLEAN GRIT PIT/LOAD CONTAINER	33	\$1,039.82
	CONTRACTOR ASSISTANCE	10	\$377.28
	EMERGENCY CALL IN	18	\$835.08
	PS-6	42	\$1,308.98
	SLUDGE RECEIVING	12	\$503.04
	SLUDGE TRAILER SWITCH OUT	72	\$3,271.32
	T-3	21	\$668.29
	THE BEAST	18	\$555.57
	VAC DOWN GRIT CONTAINERS	8	\$377.28
SVARIOUS		248	7,693.64
	CLEAN SM GARAGE	16	\$503.04
	ENGINEERING SUPPORT	83	\$2,514.07
	EQUIPMENT MALFUNCTIONS AND REPAIRS	39	\$1,235.36
	MISCELLANEOUS	15	\$467.17
	PARTS /TOOLS/ EQUIPMENT PROCUREMENT	35	\$1,090.05
	TRAFFIC CONTROL	15	\$471.60
	VEHICLE INSPECTON	45	\$1,412.35
Grand Total:		1,426	\$48,632.64



INTER-OFFICE MEMORANDUM

TO: Robert J. Willert, Executive Director
FROM: Charles N. Hurst, Director of Engineering
SUBJECT: Board Report for the June 9, 2020 O&E Committee Meeting
DATE: June 8, 2020

CONSTRUCTION PROJECTS

1. INCINERATOR MAINTENANCE AND EMERGENCY REPAIRS (#TC-1801-C)

Funding:	Capital
Design:	In-House
Inspection:	In-House
Contractor:	Industrial Furnace Company, Inc.
Contract Amount:	\$686,750.00
Percentage Paid:	56.75% - through previous month
Notice of Award:	03/20/2018
Notice to Proceed:	04/04/2018
Substantial Completion:	03/31/2020
Final Completion:	05/30/2020

2. PS-6 CONSTRUCTION, PHASE I (#TC-1707-C)

Funding:	Capital
Design:	Gannett Fleming
Inspection:	In-house
Electrical (Part D):	Philips Brothers Electrical
Contract Amount:	\$4,140,900.00
Notice of Award:	01/23/2017
Notice to Proceed:	05/30/2017
Substantial Completion:	09/21/2018
Final Completion:	11/21/2018 (Part D Final Completion 1/29/2021)

Construction is complete. General, Plumbing and HVAC contracts are closed out. Fiber Communication work remains prior to initiating the close-out process for Contract Part D Electrical. Change Order #1 was approved by the BOD for an extension in contract time to accommodate the remaining Fiber Communication work.

3. SOLIDS HANDLING UPGRADE 2016 (#TC-1608-C)

Funding:	Capital
Design:	GHD & Weston
Inspection:	In-house
General (Part A):	Allan Myers.
Contract Amount:	\$6,495,555.00
Percentage Paid:	99.69% - through previous month
Electrical (Part B):	Philips Brothers Electric
Contract Amount:	\$1,833,200.00
Percentage Paid:	95% - through previous month
Notice of Award:	10/17/2017
Notice to Proceed:	12/04/2017
Substantial Completion:	01/03/2019
Final Completion:	02/01/2019

The contractors have completed preparing their as-built drawings and they have been turned over to the Design Engineer for integration into the project drawings. The close out process has been completed for Contract A. The close out process has been initiated for Contract B; the first step of which is a Change Order to extend the project time prior to close out.

4. WRTP Plant Upgrades (#TC-1717-C)

Funding:	Capital
Design:	D'Huy Engineering, Inc. & Gannett Fleming
Inspection:	D'Huy Engineering, Inc.
General (Part A):	Allan Myers.
Contract Amount:	\$14,905,555.00
Percentage Paid:	88.70% - through previous month
Electrical (Part B):	Philips Brothers Electric
Contract Amount:	\$6,220,777.00
Percentage Paid:	80.02% - through previous month

Notice of Award:	05/17/2018
Notice to Proceed:	06/04/2018
Substantial Completion:	12/25/2020
Final Completion:	02/23/2021

Allan Myers has completed work in T-18 and is proceeding with the Lakeside area re-design work. They have worked in the column repair in B-3 and installed the new stairs at the inlet to the chlorine contact tanks. They have conducted more earth work around the new entrance road. Philips Brothers replaced the motor control center in PS-2 and are continuing work on the wiring around the aeration tanks.

5. MARCUS HOOK PUMP STATION & CHESTER RIDLEY CREEK PUMP STATION ELECTRICAL UPGRADES (#PR-1804-C)

Funding:	Capital
Design:	In-House
Inspection:	In-House
Contractor:	Philips Brothers Electrical Contractors, Inc.
Contract Amount:	\$789,127.00
Percentage Paid:	67.10% - through previous month
Notice of Award:	09/19/2018
Notice to Proceed:	10/15/2018
Substantial Completion:	03/14/2019
Final Completion:	05/03/2019 - Maintenance Alternate: 10/31/2020

Philips Brothers continues to complete maintenance projects at various locations. Philips Brothers completed the replacement of two electrical poles and the 15kV feeder from the pole to the high voltage switch at Muck Pump Station. They removed pump motors at Chester pump station and performed some wire/conduit modifications. Most recently, they removed a vibrating motor from Darby Creek Pump Station so it could have bearing work performed on it. Additionally, Philips Brothers responded to a call out to Pocopson to investigate motors tripping out during ATS transfers. They identified loose screws in the ATS, fixed the issue and replaced the ATS controller.

6. HVAC ENERGY SAVINGS UPGRADE (#TC-1716-C)

Funding:	Capital
Design:	In-House
Inspection:	In-House
Contractor:	CM3 Building Solutions
Contract Amount:	\$6,134,716.00
Percentage Paid:	83.14% - through previous month

Notice of Award: 9/13/2017
Notice to Proceed: 9/13/2017

Phase 2 work continues. All roof fans in PS-3 and PS-4 installed; B-4 work has begun, and expected completion end of July. B-3 air quality project is ready for submittals work to begin the end of June. Chester Ridley submittals have been received. Work to begin in July.

7. SEWER MAINTENANCE (#SEW-1905-CO)

Funding: Capital
Design: In-House
Inspection: In-House

Contractor: A. J. Jurich, Inc.
Contract Amount: \$1,141,981.00
Percentage Paid: 56.90% - through previous month

Notice of Award: 06/19/2019
Notice to Proceed: 07/16/2019
Final Completion: 08/31/2020

May maintenance work included:

- Removal of Shoring and backfill for Water Leak at PS4 in WRTP
- New Pipe installation at 3rd and Townsend Street
- Soil and debris cleared and disposed of from Lagoon WRTP
- Road Closure set up on 291 for Air Relief 55 Repair

8. PAVING RESTORATION SERVICES – ANNUAL (#SEW-1902-CO)

Funding: Capital
Design: In-House
Inspection: In-House

Contractor: A. F. Damon, Inc.
Contract Amount: \$959,742.50 – 2 Year Contract
Percentage Paid: 65.43% - through previous month

Notice of Award: 11/20/2018
Notice to Proceed: 02/01/2019
Substantial Completion: 01/31/2021
Final Completion: 02/28/2021

May paving work included:

- Installed pavement on a portion of WRTP roadway needed for a detour needed for upcoming construction activities. After the detour, it will be converted to the employee access which will improve traffic flow and safety at the site.

9. WRTP SUBSTATION NO. 2 REPLACEMENT (#TC-1904-C)

Funding:	Capital
Design:	In-House
Inspection:	In-House
Contractor:	Philips Brothers Electrical
Contract Amount:	\$1,442,777.00
Percentage Paid:	70.30% - through previous month
Notice of Award:	04/16/2019
Notice to Proceed:	05/10/2019
Substantial Completion:	11/29/2019
Final Completion:	01/17/2020

Substation in service and online. SCADA fiber is completely pulled and tested, and ready for service. Turned over to Automation.

10. SPRINGHILL FARM WWTF PUMP STATION AND SANITARY FORCE MAIN PROJECT (#PFR-1903-C – RE-BID) - CONTRACT 1: GENERAL CONSTRUCTION

Funding:	Capital
Design:	Entech Engineering, Inc.
Inspection:	In-House
Contractor:	A. J. Jurich, Inc.
Contract Amount:	\$480,304.00
Percentage Paid:	0% - through previous month
Notice of Award:	12/17/2019
Notice to Proceed:	02/12/2020
Substantial Completion:	10/09/2020
Final Completion:	11/09/2020

PADEP WQM Permit was received. Contractor in procurement phase. Pettinaro has started work on the adjacent force main project on May 19, 2020. DELCORA has requested a revised schedule from the contractor.

11. SPRINGHILL FARM WWTF PUMP STATION AND SANITARY FORCE MAIN PROJECT (#PFR-1903-C– RE-BID) - CONTRACT 2: ELECTRICAL/SCADA CONSTRUCTION

Funding:	Capital
Design:	Entech Engineering, Inc.
Inspection:	In-House
Contractor:	AJM Electric, Inc.
Contract Amount:	\$198,543.00
Percentage Paid:	0% - through previous month
Notice of Award:	12/17/2019
Notice to Proceed:	02/12/2020
Substantial Completion:	10/09/2020
Final Completion:	11/09/2020

PADEP WQM Permit was received. Contractor in procurement phase. DELCORA has requested a revised schedule from the contractor.

DESIGN

1. CSO LONG TERM CONTROL PLAN UPDATE

The LTCP Semi-Annual Report No. 9 was submitted on December 30, 2019. On January 30, 2020, the USEPA issued a letter to respond to the LTCP Update that was submitted to USEPA on February 12, 2019. The letter identified 11 deficiencies and requested additional information in 11 other areas. The letter included an offer to meet to discuss items. DELCORA has requested this meeting and anticipates it will occur within a couple weeks.

2. ESA ALTERNATIVES

In response to escalated costs for the treatment of the Eastern Service Area (ESA) flow at Philadelphia's Southwest Water Pollution Control Plant, DELCORA determined that it will redirect its flow away from Philadelphia and instead send it to WRTP. A team of consultants to complete the design has been hired. The initial stages of design are underway as detailed on a Design Contract basis below. At the program level, HDR is leading permitting efforts to coordinate the Design Contract firms for a meeting with the Army Corps of Engineers regarding program-wide permitting. Gannett Fleming completed the drilling of 5 test borings at DELCORA facilities to inform design in May and are expecting lab testing results this month to inform design. In March, DELCORA and Aqua leadership met by virtual meeting to discuss the status of the project and review alternatives that were identified during the value engineering phase of the project.

A. Pipeline Contract 1 - Segments 1 and 2 (D19-01) – AECOM completed aerial surveys and windshield surveys to provide information for ongoing alignment studies. Alignment workshops have been held and the route alternatives have been presented and evaluated. Consultant had begun optimizing the routes and SUE-D evaluations. An Opinion of Probable Cost has been submitted.

B. Pipeline Contract 2 - Segments 3 and 4 (D19-02) – Mott MacDonald completed aerial surveys to provide information for ongoing alignment studies. Alignment workshops have been held and the route alternatives have been presented and evaluated. Consultant had begun optimizing the routes and SUE-D evaluations. An Opinion of Probable Cost has been submitted.

C. Pump Station Upgrades and Equalization Basin Design Contract (D19-03): Detailed Condition Assessments including lidar scanning and hazardous material testing were conducted at remote pump stations to inform design. HDR submitted their Condition Assessment report and Code Compliance Review technical memo to DELCORA for review this month. With the assistance of DCJA, HDR completed a walkthrough of the Darby Creek Joint Authority site adjacent to Darby Creek Pump Station to complete a Phase I site assessment to review available environmental information, required before any acquisition of land if deemed necessary to meet design needs of the ESA Program. Draft and Final Hazardous Materials Report and Final Asset Condition and Replacement Recommendation Report are expected this month. HDR submitted An Opinion of Probable Cost regarding portions of conveyance design options developed during the VE this month. A field visit is scheduled to the eastern pump stations this month for the purposes of informing environmental permitting and survey work to support design.

D. Western Regional Treatment Plant Expansion & WBTT Upgrades Design Contract (D19-04): Kleinfelder is proceeding with pre-selection of the high-rate biological wet weather treatment system equipment and are preparing an evaluation of the options. Kleinfelder has performed preliminary analyses of the results from all five wet weather sampling events and the potential of accepting flow from Upper Darby. They provided updated cost estimates for the upgrades to the main process at WRTP and continue to prepare a technical memorandum regarding incorporation of the value engineering results. They also conducted the preliminary wetland delineation survey of the area planned for the wet-weather biological treatment process.

3. CSO #5 PARTIAL SEPARATION – TOWNSEND STREET 48" COMBINED SEWER SEPARATION PROJECT

Engineer: Remington & Vernick Engineers
Design Project Kick-off Meeting: March 28, 2019

This project is a component of the LTCP Update. The engineer has submitted a Design Schedule projecting that the design will be prepared for construction bidding in April 2020. Project will not be finalized by April 2020.

Final acceptance of the H&H Study is contingent upon the Stormwater Authority of The City of Chester. Plans are now about 90% complete. Utility companies are being contacted regarding conflict resolutions and relocations. RVE is preparing to submit to PennDOT for plan approval. Plans and H&H study were submitted to SAC's design consultants, HDR, Inc. and AKRF, Inc. AKRF has met virtually with DELCORA engineering and RVE, and they understand the required effluent conditions out of Memorial Park and are incorporating them into their own H&H study – a copy of which will be provided to DELCORA.

4. CRUM CREEK PUMP STATION BYPASS FORCE MAIN – FINAL DESIGN

Engineer: Gannett Fleming, Inc.

Gannett Fleming and ERM are engaged in acquiring permission to access properties to continue design work. At this time, three of the five property owners have granted permission to enter their properties to survey. ERM has applied to PECO to the install force main through their easement. Engineer has surveyed and conducted SUE Level A and Geotechnical Investigation along north end of project (Crum Creek Pump Station to Amtrak. ERM has begun negotiations with Boeing for access. DELCORA has continued conversations with Boeing to acquire easement. Gannett Fleming has submitted to PADEP for WQM Part II permit on April 30th. Permit plans will include LIDAR survey in lieu of onsite survey due to COVID-19 and Boeing access licensing. ERM has been negotiating with AMTRAK for the access to survey and ultimately for the permanent easement required. The agreement for survey access has been returned for revision.

5. BOROUGH OF UPLAND SEWER UPGRADE – CHURCH AND TENTH STREETS

Engineer: Catania Engineering Associates, Inc. (CEA)

This project is a component of the LTCP Update. A proposal has been accepted for preparation of final design and preparation of construction documents in accordance with the March 13, 2019 Technical Memorandum issued by Greeley and Hansen. The kick-off meeting was held on January 13, 2020. Sewers have been televised and conditions reported to CEA. Exploration of the existing box culvert has shown that it crosses the sanitary sewer on a long skew. Plans will have to include a 50' storm sewer re-route and partial demolition, abandonment of the box culvert. CEA has surveyed the project site and is preparing plans.

6. WRTP – LOWER DELAWARE RIVER IMPROVEMENTS

Engineer: Gannett Fleming, Inc. (GF)

Gannett Fleming has completed a review of the Seaport Drive DRI Relief Pump Station and submitted a final report on its operation. GF has completed design of a section of 48" interceptor pipe from PS-6 to the ending manholes of the Delaware River Interceptor (DRI) and West End Interceptor (WEI). The plan is to remove a 1.4' step in the last manhole of the DRI and to remove a hydraulically inefficient crossing and connection of the two interceptors. This improvement will result in more efficient flows in the DRI, WEI and PRF pipes reducing dry weather and wet weather hydraulic issues. These improvements are required to facilitate the flow increases projected in the Long-Term Control Plan Update (LTCPU). DELCORA received the WQM Part II Permit No.2320401 on May 8, 2020. Contractor is proceeding with survey and procurement of materials.

PRETREATMENT/LABORATORY

1. RULES & REGULATIONS, LOCAL LIMITS DEVELOPMENT, ENFORCEMENT RESPONSE PLAN, & STREAMLINING

No updates at this time.

2. PERMIT ISSUES

No draft permits were issued in the month of May.

The following final permit was issued in the month of May:

- Esschem
- Eldredge
- Delaware County Linen

The following Industrial Users were issued a Notice of Violation in the month of May:

- Sunoco Partners Marketing & Terminal

3. INDUSTRIAL USER SAMPLING AND INSPECTIONS

The following Industrial Users were sampled in the month of May:

- Chester County Landfill
- ICS - SDS
- Oatly
- Refresco
- Qualawash Holdings

No Industrial Users were inspected in the month of May.

4. MISCELLANEOUS

The following were sampled during the month of May:

- Monthly Plant Sampling
- Weekly Sludge Metals
- Weekly Remotes
- Daily FOG Samples
- Hauled Waste Metals
- ESA WRTP Expansion Study
- Semiannual PCB (Dry) Sampling
- Bimonthly Nutrient Testing

All were sent to the contract laboratories for analysis.

REGULATORY FILINGS/ISSUES

- DRBC – Letter sent on February 12, 2018 addressing DRBC’s concerns about the acceptance of “out of basin” wastewater and the request for increased BOD and TDS waste load allocations.
- Met with DRBC on June 25, 2018 to discuss DRBC’s ongoing impact on DELCORA’s operations.
- Title V Permit was received December 21, 2018 – Effective December 17, 2018 – Expires December 17, 2023.
- DRBC Docket Modification for an increased cBOD20/cBOD5 Waste Load Allocation was posted for Public Comment on February 13, 2019.
- 2019 Chapter 94 Report for the Western Service Area was submitted to the PADEP via email link on April 28, 2020 (due to COVID-19 pandemic).
- WETT Report for the 2nd Quarter 2020 was submitted to PADEP on June 3, 2020.

CNH:bab

cc: (via email)
M. DiSantis
J. Pileggi
C. Lenton
I. Fitzgerald
S. Labrum
J. Centrone
D. Dutton
M. Sweeney
J. Yochim
T. Diewald
File



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610-701-3000 • Fax 610-701-3401
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3 June 2020

Mr. Robert Willert
Executive Director
DELCORA
100 East Fifth Street
P.O. Box 999
Chester, PA 19016

W.O. No. 05623.035.001.0001

RE: Summary of Activities for May 2020

Dear Mr. Willert:

The progress on current Weston Solutions, Inc. (WESTON®) authorized project assignments for DELCORA is summarized below.

ANNUAL SWMM MODELING

Proposal No.: 133462
WESTON WO No.: 05623.034.006
Start Date: August 2019
End Date: December 2020
Percent Complete: 52%

This project is for completion of monthly SWMM model runs and for submission of month-end reports and a year-end letter report for DELCORA's use and reference in the annual Chapter 94 Report. DELCORA's NPDES permit for the WRTP requires that information of the volume and duration of discharges from the Combined Sewer Overflows be reported monthly. PADEP accepts discharge information from a calibrated numerical model in lieu of measured flows. WESTON utilized the calibrated SWMM model created for the LTCP Revision.

During the month of May, WESTON simulated precipitation events for April and reported simulation results to DELCORA. The simulation is based on precipitation recorded on the rain gauge located at the WRTP. During the month of April, DELCORA experienced a total of 3.89 inches of precipitation over 9 separate days. This resulted in roughly 0 to 9 CSO overflow events per outfall depending on the sensitivity to rainfall. During small precipitation events, some outfalls with small drainage areas do not overflow, while other outfalls with large drainage areas overflow frequently. The results of the simulation are loaded into a PADEP form that is included in DELCORA's monthly DMR submission for the WRTP.

TRUST - PERFORMANCE - PEOPLE



Mr. Robert Willert
DELCORA

3 June 2020
Page 2

At the request of DELCORA staff, WESTON staff provided model output to the Delaware River Basin Commission for input to their water quality model. The data was the flow from each outfall every 15 minutes for four (4) specified years.

METERING PROGRAM

Proposal No.: 137102
WESTON WO No.: 05623.034.003
Start Date: March 19, 2019
End Date: Open
Percent Complete: 56%

This project is to assist DELCORA in implementation of the Delaware County Metering Program. This program was initiated in 2005 to provide more accurate distribution of sewage flows to contributing communities in Delaware County. The program maintains and collects data from 122 flow meters deployed in sewers and incorporates data from 12 meters at pump stations. The sewer meters capture approximately 75% of the flow discharged. The remaining unmetred areas did not have a capture point that would provide reliable and repeatable data so they are estimated based on EDU counts for the unmetred areas. The unmetred areas are estimated using the EDU count for that area and the flow per EDU for the metered areas in the same municipality.

During the month of May, WESTON received the sewer flow meter data from DELCORA's flow metering contractor and pump station data from DELCORA staff. The data was loaded summary flow data for April to the apportionment spreadsheets and reviewed for any potential discrepancies. WESTON also updated the county-wide summary spreadsheets, the eastern authorities' summary spreadsheets, and summary spreadsheets for select municipalities for 2020. The monthly report and spreadsheets were submitted to DELCORA.

FORCE MAIN TEST COUPONS and ARV REPAIR

Proposal No.: 137483
WESTON WO No.: 05623.034.004
Start Date: June 2019
End Date: December 2019
Percent Complete: 54%

The scope of services for this project include preparation of contract documents to obtain pipe coupons from the Eastern Force Main. The pipe coupons will be analyzed to determine the condition of the force main. The project also includes preparation of contract documents to clean and repair the ARV's located on the Central Bypass and Eastern Force Mains.



Mr. Robert Willert
DELCORA

3 June 2020
Page 3

WESTON has completed the Project Kick-Off Data Collection and the Field Investigation phases of the work. Follow-up field investigation will be required at a few ARV locations to further verify the existing design information with the existing conditions. WESTON is currently working on the Phase III Detailed Design scope of work.

In October, WESTON completed the design for one of the ARV locations, ARV-55, located on the Central By-Pass Force Main. Since this location does not have an existing ARV and it is located at a critical spot (creek crossing) along the force main the team decided to design and construct this ARV first. The results of this installation will be used to determine the improvements to the force main and the information will be implemented in the final design for the remaining locations. In December WESTON submitted an application to PennDOT for a Road Opening Permit. The permit approval was received on January 7, 2020; construction of the ARV will start when all material has been received. WESTON had no activity on this project during the month of May.

GENERAL ENGINEERING SUPPORT

Proposal No.: 37717
WESTON WO No.: 05623.021.107
Start Date: March 21, 2006
End Date: Open
Percent Complete: 96%

This project, a continuation of the previous “General Engineering” project, provides on-demand support to DELCORA for various services at the direction and approval of the Executive Director.

WESTON had no activity on this project during the month of May.

CENTRAL FORCE MAIN AND CHESTER FORCE MAIN EVALUATION

Proposal No.: 133118
WESTON WO No.: 05623.033.004
Start Date: July 2016
End Date: Open
Percent Complete: 75%

This project is to perform an engineering evaluation of the Central and Chester force mains to determine design parameters for sizing the future Crum Creek Pump Station equipment. The ultimate goal of the project is to determine how DELCORA can pump more flow from the CDPS to the Western Regional Treatment Plant (WRTP).



Mr. Robert Willert
DELCORA

3 June 2020
Page 4

WESTON prepared and conducted modeling to evaluate the flow characteristics of both the Central By-Pass and the Chester force mains. The model took into account flow, pump discharge pressure, static conditions, pipe material, and pipe length and diameter. Flow conditions for the two force mains as well as the Kimberly Clark Pump Station and the total influent flow to the WRTP was also incorporated into the evaluation.

WESTON ran several model scenarios for both dry weather and storm conditions. The modeling was conducted during 2018 and 2019 and approximately 20 scenarios were evaluated. Each scenario was run over a period of several hours and real time operating data from DELCORA's E-Ops was input into each model run. The results of each model scenario were consistent and showed that the performance of the Chester force main was very good and in line

After the first several model runs, WESTON and DELCORA staff performed a site assessment of the ARV locations. Where possible, the ARV's were cleaned, tested, and put back into service. Several of the locations could not be inspected due to faulty isolation valves. After this inspection additional model runs were conducted and the results were similar previous model results.

WESTON met with DELCORA and discussed conducting additional field investigations and modifications to existing air release valve location. After further investigation it was decided to prepare contract documents to repair isolation valves, clean ARV's, and install new ARV's at locations where valves are missing. This work will be conducted under a separate project. WESTON had no activity on this project during the month of May.

FORCE MAIN TRANSIENT ANALYSIS

Proposal No.: 132758
WESTON WO No.: 05623.032.007
Start Date: October 15, 2017
End Date: December 2018
Percent Complete: 90%

The scope of services for this project includes preparation of a transient analysis of the Eastern Force Main and Chester Force Main. The goal is to determine a maximum flow value from the CDPS to the WRTP without increasing the risk of a pressure surge.

DELCORA and WESTON met and reviewed the preliminary results of the analysis. The main pump stations were modeled for two scenarios and results indicate that additional vacuum relief valves are required on the force mains. WESTON completed the model for additional scenarios and submitted the draft report. During the month of August, WESTON and DELCORA discussed additional analysis associated with the project. The additional work will be a part of the Crum Creek Force Main project. The transient analysis that was part of another contract



Mr. Robert Willert
DELCORA

3 June 2020
Page 5

(Crum Creek Force Main) has been completed. The results indicated that there was no additional impact to the Chester and Eastern By-Pass Force Mains. WESTON has submitted a proposal to incorporate the recommendations included in the initial evaluation. WESTON had no activity on this project during the month of May.

WRTP AS-BUILT PLAN

Proposal No.: 133118
WESTON WO No.: 05623.032.006
Start Date: October 18, 2017
End Date: Open
Percent Complete: 97%

The scope of services for this project is to prepare a composite as-built plan of the WRTP in AutoCAD format that include both original plant information as well as new features added in recent years to document the existing site conditions specifically the underground utilities. The drawings are being prepared to facilitate a conversion to GIS for some of the features. WESTON had no activity on this project during the month of May.

UTILITY WATER SYSTEM REPLACEMENT BID & CONSTRUCTION PHASE SERVICES

Proposal No.: 127597
WESTON WO No.: 05623.031.003
Start Date: January 2016
End Date: Open
Percent Complete: 98%

This project is to provide bid support services and construction phase services relating to the Utility Water System Upgrade project at the WRTP. The existing system is at the end of its life and the system is critical to treatment operations. Bids were received on March 7, 2016.

WESTON had no activity for this project during the month of May. The construction has been completed and the remaining effort includes preparation of the record drawings after receipt of contractor marked-up drawings.



Mr. Robert Willert
DELCORA

3 June 2020
Page 6

Should you have any questions, please do not hesitate to contact me at (610) 701-3706.

Very truly yours,

WESTON SOLUTIONS, INC.

A handwritten signature in black ink, appearing to read "Roger W. Lehman". The signature is written in a cursive style and is contained within a light gray rectangular box.

Roger W. Lehman, P.E.
Technical/Project Manager

cc: DELCORA Board of Directors
C. Hurst, DELCORA