



TECHNICAL COMMITTEE MEETING MINUTES

Wednesday 4/14/2021

4:30PM

Via VIDEO/TELECONFERENCE

Attendees:

Merritt Nesin, P.E.	Chairman, Technical Committee
Edward Kelly	Committee Member
Mark McGrath	Committee Member
William Brink, PE	Executive Director, WPCA
Ann Brown, PE	Supervising Engineer, WPCA

1. Call to Order and Roll Call.

M. Nesin called the meeting to order at 4:33pm and announced attendees as listed above.

2. Approval of March 10, 2021 Meeting Minutes.

M. Nesin made a motion to approve the minutes of the March 10, 2021 Technical Committee Meeting; seconded by M. McGrath. Motion carried 3-0-0.

3. Public Comments.

M. Nesin disclosed that a resident contacted him and asked for a meeting to discuss Perna Lane sewers. The resident is in favor of the sewers and wanted to convince M. Nesin of the need for sewerage the area.

4. SWPCA Operations During COVID-19 Pandemic

W. Brink provided an update on the plant and staff regarding COVID-19. There was one staff member who tested positive, quarantined at home and after a Doctor's authorization, has returned to work. All but 3 employees have received at least one vaccination. One employee has declined the vaccine, 2 have not decided whether they want to get vaccinated.

5. Update on Force Main Repairs and Issuing RFP for Installing Cured-in-Place-Pipe Lining

M. Nesin stated that the Technical Committee received the report from Wright-Pierce (WP) with the Corrosion Probe investigation report attached. It was very comprehensive. E. Kelly stated that he was very impressed by the root cause analysis work done on the force main. W. Brink stated that Corrosion Probe had come out to the site twice and each time took a sample of the pipe back to their lab for investigation. They investigated the original broken section of pipe and the pipe at the raw sewage pump station including the 90° discharge elbow. There was evidence of similar wear in both sections of pipe.

W. Brink gave a brief overview of the pipe replacement option in the WP report indicating the recommendation for this option is to coat the Ductile Iron Pipe (DIP) with a ceramic epoxy which is more resistant to abrasion and corrosion than the cement lined pipe. Replacement has more risk than the other options. There are many unknowns such as: unsuitable soils, utility conflicts, lead time for materials (8-10 weeks) and continuing rental costs for bypass pumps and piping. The existing pipe is on piles that would likely have to be replaced. Cost for replacement was estimated to be \$3.1M.

The other option presented in report is lining the pipe. A Cured-In-Place-Pipe (CIPP) liner has similar abrasion and corrosion resistance and similar longevity to a DIP with ceramic epoxy coating. The only areas that would need to be excavated are the 45° bends therefore, less risk involved. Lining has a shorter lead time for materials (4-6 weeks) and half the cost of replacement. Lining is estimated to cost \$1.3M.

W. Brink stated that the critical path is to prepare a bid for lining the pipe and award to a lining contractor as soon as possible. Also, authorize CH Nickerson to perform the excavation and replacement of the 45° bends and 90° elbow since this work is within their current work zone and they are qualified to perform this work. The full board will be advised of WPCA proceeding with the CIPP lining approach.

6. Approval of Bid Waiver for the Purchase of (2) Two EBARA Submersible Axial Flow Pumps for an amount not to exceed \$170,570.00

A. Brown explained that the plant has space available for 8 axial flow pumps, 4 on each discharge end of the two aerobic trains. We currently have 5 pumps. Since the by-pass pumping operation has begun and the bar screens are bypassed, these pumps are continually getting clogged with rags and need to be pulled out of service to be maintained. WPCA would like to have spare pumps to put in place when needed. We are requesting a Bid Waiver to sole source these. We have 5 of the same manufacturer and would like to maintain a consistency for spare parts, ease of installation and wiring the control circuits. Time is of the essence since there is a long lead time for the units. The amount of the bid waiver would not exceed \$170,570.00. The committee agreed that a Bid Waiver would be recommended to the full board.

7. Request to Bid an 8" Portable Dri-prime Diesel Pump mounted on a highway trailer with DOT light kit

A. Brown explained that the WPCA is in need of a larger portable pump which can be used in the plant and pump stations. This pump could be used to empty a tank or clarifier quicker than the existing smaller pumps. Since the pump is on a trailer, it can be moved to areas where needed. We currently have a similar size old portable pump that breaks down whenever it is used. We received three quotes for this type of pump which range from \$59,107 to \$86,950. The pump will go out for bids. We will advise the committee when we receive bids and have a recommendation of award. The committee agreed.

8. Update on UV Disinfection Treatment System

W. Brink stated that TROJAN and Siemens have been out to the site to investigate the issues with the sensors. We still do not know what has caused the erratic sensor readings. Adjustments were made to the sensitivity. TROJAN was approached about replacing the ultrasonic sensors with radar. TROJAN is waiting for recommendations from Siemens. W. Brink explained that we have not accepted the system and do not want to change the sensors ourselves possibly voiding any support from TROJAN. M. Nesin said he has visited the site and that the system is running but, he is not confident there will be no further incidents. All agreed that we can try to install a radar sensor that will monitor flow in addition to the Siemens ultrasonic sensor for a comparison.

9. Discussion on Plant Operations

R. Pudelka was not in attendance but provided the April 2021 Monthly Operating Report which is attached and made part of these minutes. B. Brink explained that the plant had an exceedance the night before. The plant is operating with existing pumps using the 24" HDPE bypass force main to the primary clarifier distribution box. An open gate valve, which directs flow from the distribution box to the clarifier, detached from its stem and remained stuck in the closed position. Flow backed up over the wall of the distribution box causing a spill. The problem was discovered quickly, the gate to the effluent channel was opened and the 18" bypass piping system was started to direct flow to the effluent chamber shutting down the distribution box so the valve could be repaired.

10. Update on Engineering Studies and Designs

A. Brown provided the board with an update on engineering studies and design which is attached and made part of these minutes.

- a. Infiltration & Inflow Removal Project
- b. Sludge Degritting System Upgrade
- c. Sludge Management Plan
- d. RFQ for Engineering Design Services for Plant Water System and the RAS/WAS Pumping Systems

11. Update on Construction Projects

A. Brown provided an update on construction projects which is attached and made part of these minutes.

- a. Repair of Storm Water Pump #2 at Cummings Pump Station
- b. Standby Generator for the Greenwich Ave. Pump Station
- c. Preliminary, Secondary and Disinfection Treatment Improvements
- d. Clay Hill Pump Station Generator
- e. Electrical Preventive Maintenance and Arc Flash Evaluation
- f. Sludge Dryer Building Repairs

12. Old Business

A. Brown provided an update on the homeowner survey regarding Perna Lane. The homeowners are getting back into the community now with the warm weather and are hoping to have the survey completed soon. She also indicated that she and W. Brink met with Stamford Traffic Department and CTDOT to discuss the DOT bridge replacement project on High Ridge Road north of the Merritt Parkway. WPCA will investigate supporting the existing 4" force main from the Northeast School pump station on the bridge in a way that will also plan for future projects.

13. New Business

None

There being no further issues to discuss, E. Kelly made a motion to adjourn the meeting, seconded by M. McGrath; motion carried 3-0-0. The meeting was adjourned at 5:44pm.



TECHNICAL COMMITTEE REPORT FOR APRIL 2021

Monthly Operating Report data:	March			
	This month (March)	Last month (Feb)	10 Year Monthly AVG	Permit Limit
Q (FLOW) DAILY AVG MGD	16.4	15.8	18.1	24 MGD DESIGN AVG
Q PEAK DAILY MGD	28.7	29.9	24.4	58 MGD MAX AVG
BOD INFLUENT AVG MG/L	227	245	187	
BOD INFLUENT AVG LBS/D	31,048	32,284		
BOD EFFLUENT AVG MG/L	5	4	3	
BOD EFFLUENT MAX MG/L	7	5		20 mg/L
BOD REMOVAL %	97.4	98.3	98.2	85%
TSS INFLUENT AVG MG/L	314	279	261	
TSS INFLUENT AVG LBS/D	42,948	36,764		
TSS EFFLUENT AVG MG/L	11	9	7	
TSS EFFLUENT MAX MG/L	14	14		20 MG/l
TSS REMOVAL %	95.7	96.3	97.3	85%
TOTAL N INFLUENT AVG MG/L	35.3	36.2	32	
TOTAL N INFLUENT AVG LBS/D	4828	4770	4632	
TOTAL N EFFLUENT AVG MG/L	2.23	2.18	2.56	
TOTAL N EFFLUENT LBS/D	309	288	376	926 LBS/D
N REMOVAL %	93.7	93.9	91.9	
TOTAL P INFLUENT AVG MG/L	5.5	5.61	3.95	
TOTAL P EFFLUENT AVG MG/L	0.37	0.52	0.66	
P REMOVAL %	93.3	90.7	85.6	
UV EXCEEDANCES <30 mJ/cm2	0	0		

Equipment Update

NRCY Pumps

A NUMBER OF PUMPS HAVE HAD TO GO TO LEPPERT NUTMEG DUE RAGGING ISSUES CAUSED BY THE ABSENCE OF BARSCREENING.

MECHANICS PULLED DAILY TO CLEAN

BFP #1

SHAFT BROKE ON ROLLER, REPLACED WITH USED

DRYER ODOR CONTROL TOWER

VACON SOLIDS OUT OF SUMP

PLANT WATER PUMP #2

VIBRATION IN SHAFT, NEW UNIVERSAL

PRIMARY LINES

REPLACE PLUG VALVES AND CHAIN WHEEL

METHANOL BUILDING SUMP

CLEARED CLOG IN SIPHON

#1 TWAS PUMP

RE-PACK

BFP #2 FEED PUMP

NEW GEARBOX INSTALLED

T3 MIXERS

RAGGING AND REPLACED FRAYED CABLE

SAFETY

No new Covid-19 cases.

No Lost time due to injury reported



**UPDATE OF CAPITAL PROJECTS
TECHNICAL COMMITTEE MEETING**

April 14, 2021

A. Brown presented the following project updates:

1. UPDATE ON ENGINEERING STUDIES AND DESIGNS

a. Infiltration & Inflow Study

We will be scheduling the remainder of the work shortly. The Contractor is 80% complete with the project. The work remaining is to perform a CCTV inspection of the service laterals identified in the report. Clean and grout the service laterals identified in the report and those found with the CCTV inspections.

b. Sludge Degritting System Upgrade

We reviewed the final documents with the design engineers. We anticipate bidding this project in 2021.

c. Sludge Management Plan

Hazen has been gathering data and will schedule a meeting sometime in May to review the Sludge End-Use Market Assessment results with the panel.

d. Plant Water, Return Activated Sludge (RAS) and Waste Activated Sludge (WAS)

RFQ for engineering design services of the above systems has been advertised. Proposals are due May 6, 2021.

2. UPDATE ON CONSTRUCTION PROJECTS

a. Repair of Storm Water Pump #2 at the Cummings Pump Station

Pump and motor repairs are complete. We are arranging for the pump and motor to be returned to the station over the next week.

b. Design-Build Standby Generator for the Greenwich Ave. Pump Station

Northeast Generator has resubmitted documents addressing comments received last month from EPB and Engineering. The submittal is under review by the City awaiting approval.

c. Preliminary, Secondary and Disinfection Treatment Improvements

Construction is ongoing and construction updates are as follows:

42" Force Main:

- (2) 24" HDPE pipes have been installed parallel to the (3) 18" by-pass HDPE pipes. The 24" pipes tie into a header system outside the RSPS and run to the distribution box at the primary clarifiers. The 24" pipes allow the wet well, (2) two existing bar screens and (3) three existing pumps to operate. If the flows are too high, Nickerson's by-pass pumps and (3) 18" pipes will be used.

Raw Sewage Pumping Station:

- The new retaining wall was poured.
- New bar screen #3 has been installed. Manufacturer needs to inspect and certify the equipment installation. Running conduit to unit for power.



- (2) Two new pumps, piping and concrete supports have been installed in the area where the two existing pumps were been removed.

Aeration/Blower Building:

- Two new blowers have been installed. Electrical wiring is being completed and VFD's are being connected.

UV System:

- We have been operating the two new TROJAN channels.
- HAZEN is looking into replacing the Siemens ultrasonic level sensor with a radar sensor. They are waiting for concurrence by TROJAN.
- In Basin 2, the WEDECO system has been removed from one channel and the TROJAN system is being installed.
- Additional concrete repairs are ongoing.
- Canopy over the new system is installed.

d. Clay Hill Pump Station Generator

The City's drainage project has begun. Materials for the project have been brought to the site. I am waiting for a schedule from Engineering.

e. Electrical Preventive Maintenance / Arc Flash

Siemens has gathered the nameplate information on all the electrical equipment within the plant. The information gathered to date has been given to Tighe & Bond to use in the preparation of the Arc Flash Hazard Analysis. Siemens continues to perform the electrical preventive maintenance in several buildings throughout the plant. They have three buildings at the plant left to complete.

Change Order Log as of 4-14-21

Copy of Change Order log for construction projects attached. This has not changed since last month. The value of Change Orders for Capital projects to date is as follows:

Preliminary, Secondary and Disinfection Treatment Improvements (Contractor – CH Nickerson)

Original Value of Contract = \$ 26,751,500.00
 Total Approved CO Amount = \$ 715,274.94
 Contract Sum to Date = \$ 27,466,774.94
 Percent of total project = 2.70%

Biosolids Dryer System Selective Demolition (Contractor – A Secondino & Son)

Original Value of Contract = \$1,365,121.00
 Total Approved CO Amount = \$ 143,633.16
 Contract Sum to Date = \$ 1,508,754.16
 Percent of total project = 10.5%

Electrical Preventive Maintenance (Contractor – Siemens)

Original Value of Contract = \$ 95,732.00
 Total Approved CO Amount = \$ 7,854.00
 Contract Sum to Date = \$103,586.00
 Percent of total project = 8.2%

Stamford WPCF Preliminary, Secondary and Disinfection Treatment Improvements
Change Order Summary

CHN PCCOR No.	CHN PCCOR Date	Description	PCO								RFI		RFP		WCD	
			Contractor Amount	Status	Included in CO#	Total Approved Amount	Approved to Preliminary	Approved to Secondary	Approved to UV	Approved Date	No.	Date Issued	No.	Date Issued	No.	Date Issued
NA	NA	Replace the Issue for Bidding Specification Sections 00520 - Agreement and 00800 - Supplementary Conditions with the Attached Specifications	\$ -	Approved	1	\$ -					5/10/2019					
01 (rev)	6/21/2019	Programming Services Provider / Integration Services - Revised	\$ 194,922.00	Approved	2	\$ 194,922.00	\$ 48,340.00	\$ 110,000.00	\$ 36,582.00	7/9/2019						
02 (rev)	1/20/2020	Additional Plank Support Framing & Planking at UV Basin 1 Outfall	\$ 35,257.23	Approved	3	\$ 35,257.23			\$ 35,257.23	2/27/2020			H-01	11/19/2019		
03 (rev)	10/25/2020	Changes to Moment Connection at UV Canopy	\$ 4,076.36	Approved	3	\$ 4,076.36			\$ 4,076.36	12/12/2019	H-019					
05	11/18/2019	UV Pilasters	\$ 2,689.46	Approved	3	\$ 2,689.46			\$ 2,689.46	11/19/2019						
09	1/28/2020	Remove and Reinstal drain piping and electrical conduionboxes in Blower Room to install new fire rated wall. Plans did not call for this work	\$ 28,473.69	Approved	3	\$ 28,473.69		\$ 28,473.69		4/7/2020					W-06	11/20/2019
11	2/21/2020	Add spool pipe to Septage Area	\$ 1,214.84	Approved	3	\$ 1,214.84	\$ 1,214.84			2/27/2020					W-03	11/20/2019
13	3/9/2020	Additional Rebar at UV Basin 1	\$ 21,447.91	Approved	3	\$ 21,447.91			\$ 21,447.91	3/15/2020					H-01	12/18/2019
17	4/14/2020	UV Power Panel Relocation	\$ 23,740.56	Approved	3	\$ 23,740.56			\$ 23,740.56		H-095	4/8/2020				
14	3/18/2020	Relocate Generator and Modify Bridge Crane per Building Department Request	\$ 83,080.40	Approved	4	\$ 83,080.40		\$ 83,080.40		8/19/2020						
18	6/19/2020	Replace Missing Hardware @ AT Bridges	\$ 5,082.33	Approved	4	\$ 5,082.33		\$ 5,082.33		8/19/2020						
19	7/14/2020	Provide Additional Thin Client Licensing & Integrate Existing Mixers per City Request	\$ 23,618.32	Approved	4	\$ 23,618.32		\$ 23,618.32								
16	4/4/2020	Credit for Redundant Breaker @ ATS	\$ (17,296.74)	Approved	5	\$ (17,296.74)		\$ (17,296.74)		9/23/2020						
21	8/7/2020	Add External Breaker for RSP-2	\$ 9,061.48	Approved	5	\$ 9,061.48	\$ 9,061.48			9/23/2020						
24	8/26/2020	Additional Tags for The GE Historian	\$ 8,590.02	Approved	5	\$ 8,590.02	\$ 2,863.34	\$ 2,863.34	\$ 2,863.34	8/26/2020	H-164	8/19/2020				
25	9/14/2020	Replace UV Channel #3 Inlet Gate	\$ 37,004.86	Approved	5	\$ 37,004.86			\$ 37,004.86	9/15/2020			H-02	9/3/2020		
27	9/15/2020	Install Missing Wiring to MX 60-6 & 60-12	\$ 16,235.90	Approved	5	\$ 16,235.90		\$ 16,235.90		9/23/2020						
28	9/15/2020	New Sampler Location at UV	\$ 5,232.89	Approved	5	\$ 5,232.89			\$ 5,232.89	9/17/2020	H-154	9/8/2020				

Stamford WPCF Preliminary, Secondary and Disinfection Treatment Improvements
Change Order Summary

29	9/22/2020	Replace Missing WML support rods in Aeration tank 1-4E/4W	\$ 4,869.75	Approved	5	\$ 4,869.75		\$ 4,869.75		9/23/2020						
31	9/22/2020	Test Soils for City Storage tent	\$ 1,525.86	Approved	5	\$ 1,525.86		\$ 1,525.86		9/23/2020						
20	8/21/2020	Cut Sumps in Aeration Tank Floors	\$ 37,083.78	Approved	6	\$ 37,083.78		\$ 37,083.78		10/5/2020						
30	9/22/2020	Add Cable Tray and Bus Supports	\$ 57,017.98	Approved	6	\$ 57,017.98		\$ 57,017.98				12/2/2020				
33	10/2/2020	Replace Failing Straub Coupling (Existing)	\$ 5,513.98	Approved	6	\$ 5,513.98		\$ 5,513.98								
40	11/2/2020	Add Supports to Existing Pipe in Blower room	\$ 16,024.43	Approved	6	\$ 16,024.43		\$ 16,024.43		11/11/2020						
36	10/28/2020	Paint UV Steel Walkway at Basins 1 & 2 - Option 1	\$ 12,145.53	Approved	6	\$ 12,145.53		\$ 12,145.53		12/2/2020						
15	3/18/2020	Reroute roof drain from Screenings Building as required by the Stamford Building Department. Approved materials only. Labor to high so going T&M	\$ 6,912.20	Partial Approval	TBD	TBD	TBD			4/7/2020						W-01
23	4/24/2020	Replace Cables for Gates Not Shown on Contract Drawing	\$ 5,893.78	Revisions Required					TBD							
37 (rev)	12/8/2020	Trench Cover at Spare Parts Building	\$ 25,055.44	Approved	7	\$ 25,055.44		\$ 25,055.44		1/21/2021				H-03	10/5/2020	
41 (rev)	12/8/2020	Canopy Extension and Davit Crane	\$ 36,975.66	Approved	7	\$ 36,975.66		\$ 36,975.66		1/21/2021				H-05	10/22/2020	
42 (rev)	12/8/2020	Maintenance Access at UV Electrode Sensors	\$ 16,475.43	Approved	7	\$ 16,475.43		\$ 16,475.43		1/21/2021	RFI-159	8/4/2020				
43	12/17/2020	Increase Conduit Size to CP-11	\$ 1,191.24	Approved	7	\$ 1,191.24		\$ 1,191.24		1/21/2021						
44	12/22/2020	Electrical Power in Spare Parts Building	\$ 13,554.20	Approved	7	\$ 13,554.20		\$ 13,554.20		1/21/2021				H-04	10/22/2020	
45	1/11/2020	Relocate Conduit around new door 101c	\$ 5,410.15	Approved	7	\$ 5,410.15		\$ 5,410.15		1/21/2021						
	12/21/2021	Time Extension of 119 calendar days due to unforeseen underground conditions		Approved	8					3/5/2021						
48	1/21/2021	Provide Bearing Cooling Water to Influent Pumps	\$ 16,267.28	Approved	8	\$ 16,267.28	\$ 16,267.28			3/5/2021						
49	1/29/2021	Unforeseen Conditions at Headworks Excavation	\$ 19,244.40	Approved	8	\$ 19,244.40	\$ 19,244.40			3/5/2021						
					Total	\$ 715,274.94	\$ 61,479.66	\$ 374,093.02	\$ 279,702.26							

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41 (rev)	12/8/2020	Canopy Extension and Davit Crane	\$ 36,975.66	Approved	7	\$ 36,975.66		\$ 36,975.66		1/21/2021				H-05	10/22/2020	
42 (rev)	12/8/2020	Maintenance Access at UV Electrode Sensors	\$ 16,475.43	Approved	7	\$ 16,475.43		\$ 16,475.43		1/21/2021	RFI-159	8/4/2020				
43	12/17/2020	Increase Conduit Size to CP-11	\$ 1,191.24	Approved	7	\$ 1,191.24		\$ 1,191.24		1/21/2021						
44	12/22/2020	Electrical Power in Spare Parts Building	\$ 13,554.20	Approved	7	\$ 13,554.20		\$ 13,554.20		1/21/2021				H-04	10/22/2020	
45	1/11/2020	Relocate Conduit around new door 101c	\$ 5,410.15	Approved	7	\$ 5,410.15		\$ 5,410.15		1/21/2021						
	12/21/2021	Time Extension of 119 calendar days due to unforeseen underground conditions		Approved	8					3/5/2021						
48	1/21/2021	Provide Bearing Cooling Water to Influent Pumps	\$ 16,267.28	Approved	8	\$ 16,267.28	\$ 16,267.28			3/5/2021						
49	1/29/2021	Unforeseen Conditions at Headworks Excavation	\$ 19,244.40	Approved	8	\$ 19,244.40	\$ 19,244.40			3/5/2021						
					Total	\$ 715,274.94	\$ 61,479.66	\$ 374,093.02	\$ 279,702.26							

