



TECHNICAL COMMITTEE MEETING MINUTES

Tuesday 9/14/2021

4:00PM

Via VIDEO/TELECONFERENCE

Attendees:

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

1. Call to Order and Roll Call

M. Nesin called the meeting to order at 4:00pm and announced the attendees as listed above.

2. Approval of August 11, 2021 Meeting Minutes

M. Nesin made a motion to approve the minutes of the July 14, 2021 Technical Committee Meeting; seconded by E. Kelly. Motion carried 4-0-0.

3. Public Comment

None

4. SWPCA Operations During COVID-19 Pandemic

W. Brink stated that 4 WPCA employees have not been vaccinated. There are no new cases of Covid to report.

5. Update on Force Main Repairs and Cured In Place Pipe Liner

A. Brown stated that the force main liner installation is complete. The leaks have been repaired and the liner was put into operation on 9/1. The contractor still has to take the force main offline and by-pass pump one more time to replace the 90° elbow. Once that is done, the temporary by-pass piping and pumps will be removed and the areas where the pits were dug for lining installation will be restored.

6. Impact of Tropical Storm Ida on Plant and Collection System

W. Brink indicated that tropical storm Ida was worse than the July 9th storm. The rain was hardest from 10:00pm to 12:00am. The WPCA rain gauge recorded 2-1/2" of rain between 10:15pm and 10:45pm. There were some sanitary sewer backups into the same homes as reported on July 9th. W. Brink indicated that the collection system mechanics have investigated the property damage claims to confirm they were caused by a sanitary sewer backup. If they are from street or yard flooding or a sump pump, the claim is denied by WPCA. S. Pietrzyk reviews the damage and claims with the claims adjustor. There has been suggestions of putting a backflow preventer on the laterals of building that have had repeated sewer backups. We are looking at the operation of the storm water pumps at Dyke Lane which had issues during the storm. The Committee asked if these events help identify areas of I/I. W. Brink said there are no meters in the system which would locate the problem areas. R. Pudelka indicated that the peak plant capacity is 68 MGD. The plant saw a peak flow of 77MGD which surcharged some tanks and overflowed channel walls. The mixers and blowers were shut off when flow reached about 55-60 MGD to prevent solids from leaving the plant. The plant performed well. There was a 10 second exceedance at UV; an over-rotation of one bar screen unit which bent two teeth on the unit; and, the arm on the Primary Clarifier No. 1 was damaged. The mixers and blowers were put back into service on 9/2 around 2:00pm when flow dropped to 60MGD. The Committee agreed that WPCA should continue to identify points of I/I and remove them from the system.

7. Discussion on Repair of Primary Clarifier No. 1

A. Brown explained that the skimmer arms on Primary Clarifier No. 1 were very old and rusty. One arm collapsed and broke during the storm. We need to replace the entire unit and asked the manufacturer for quotes on repairing the arm and then replacing the entire unit. Based on the cost and lead times, we can determine if we should fix the broken side temporarily and include the replacement of the entire unit in the Sludge Degritting bid or replace the entire unit now. It will be reviewed once all costs and equipment lead times are provided.

8. Discussion on Change Order Request to Resize and Replace VFD's & Increase Motor Feeder Conductor Size for the Raw Sewage Influent Pumps

W. Brink indicated that during installation of the five (5) raw sewage pumps it was realized that the specified variable frequency drives (VFD's) for the raw sewage pumps were undersized. The raw sewage pumps have 250 hp motors, which would normally require a 250 hp VFD. But because these motors are low speed (900 rpm) they have higher full load amps, and require a larger, 350 hp VFD. This required replacement of the 250 hp VFD with a 350 hp VFD as well as larger wires from the VFD's to the pump motors. The change also delayed the start-up of the raw sewage pumps, resulting in additional costs to rent the bypass pumps and piping. Wright-Pierce brought this to our attention as a change that was caused by their error. They proposed to provide WPCA a credit for the additional cost, less the cost differential between the specified 250 hp VFD and the 350 hp VFD that was provided. The total cost of the change is \$132,196. The cost to upsize the VFD is \$56,441. Wright Pierce will provide a credit to the WPCA in the form of engineering services totaling \$75,755. W. Brink indicated this is reasonable, as it would have been added to Nickerson's bid price if it had been specified in the bid documents. The Technical Committee agreed and commended Wright-Pierce for taking responsibility and bringing it to the WPCA's attention.

9. Discussion on Plant Operations

R. Pudelka stated that the plant is doing well. He reviewed the Monthly Operating Report with the Committee which is attached and made part of these minutes.

10. Update on Engineering Studies and Designs

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

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

11. Update on Construction Projects

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

- a. Standby Generator for the Greenwich Ave. Pump Station
- b. Preliminary, Secondary and Disinfection Treatment Improvements
- c. Clay Hill Pump Station Generator
- d. Electrical Preventive Maintenance and Arc Flash Evaluation

12. Old Business

13. New Business

M. Nesin advised the board that he received questions from a resident regarding the status of the Perna Lane project. He asked if the WPCA had any documentation indicating that the septic systems in the area were polluting the river. There is no documentation on this.

There being no further issues to discuss, E. Kelly made a motion to adjourn the meeting, seconded by M. McGrath; motion carried 4-0-0. The meeting was adjourned at 4:58pm.



TECHNICAL COMMITTEE REPORT FOR SEPTEMBER 14, 2021

Monthly Operating Report data:	AUGUST			
	This month (AUGUST)	Last month (JULY)	10 Year Monthly AVG	Permit Limit
Q (FLOW) DAILY AVG MGD	14.6	19.7	14.5	24 MGD DESIGN AVG
Q PEAK DAILY MGD	45	58.9	31	58 MGD MAX AVG
BOD INFLUENT AVG MG/L	246	224	229	
BOD INFLUENT AVG LBS/D	29,954	36,802		
BOD EFFLUENT AVG MG/L	3	2	2	
BOD EFFLUENT MAX MG/L	4	3		20 mg/L
BOD REMOVAL %	98.7	99	99	85%
TSS INFLUENT AVG MG/L	381	275	363	
TSS INFLUENT AVG LBS/D	46,392	45,182		
TSS EFFLUENT AVG MG/L	4	5	5	
TSS EFFLUENT MAX MG/L	7	8		20 MG/l
TSS REMOVAL %	98.7	97.9	98.4	85%
TOTAL N INFLUENT AVG MG/L	33.7	28.8	36.2	
TOTAL N INFLUENT AVG LBS/D	4103	4732	4263	
TOTAL N EFFLUENT AVG MG/L	1.75	1.59	2.27	
TOTAL N EFFLUENT LBS/D	218	245	268	926 LBS/D
N REMOVAL %	94.8	94.3	93.6	
TOTAL P INFLUENT AVG MG/L	4.56	3.82	4.83	
TOTAL P EFFLUENT AVG MG/L	0.21	0.24	0.66	
P REMOVAL %	95.4	93.7	88.1	
UV EXCEEDANCES <30 mJ/cm2	1	1		

Equipment Update

NRCY Pumps	TWO PUMPS OUT TO REM FOR CLEANING
BANANA MIXER	OUT OF SERVICE TO FLEET
PRIMARY TANK #1	OUT OF SERVICE. ARM AND RAKE ASSEMBLY NEED REPAIR
SECONDARY CLARIFIER #1	IN SERVICE. NEED TO REPLACE MOTOR AND GEARBOX
UV BASIN #2	OUTLET GATE ACTUATOR NEEDS REPLACEMENT
PRIMARY PUMP #2	NEEDS NEW MECHANICAL SEAL



**UPDATE OF CAPITAL PROJECTS
TECHNICAL COMMITTEE MEETING
September 14, 2021**

A. Brown presented the following project updates:

1. UPDATE ON ENGINEERING STUDIES AND DESIGNS

a. Sludge Degritting System Upgrade

The project is scheduled to be advertised for bids this month. This project includes replacing the primary sludge pumps and sludge degritting equipment, as well as the sludge withdrawal piping from the primary settling tanks, with an estimated construction cost of \$4 million. We are reviewing the replacement of skimmer components and drive to determine if the replacement should be included in this contract. The skimmer arm was damaged in tropical storm Ida and needs to be repaired in the immediate future and replaced eventually.

b. Sludge Management Plan

Hazen is now performing a more detailed analysis on the remaining sludge management technologies. This would include a detailed look at the equipment sizing and costs. This part of the plan should take a few months to analyze.

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

WPCA met with Gannett Fleming to discuss the scope of services. They submitted their scope and fee which is under review.

2. UPDATE ON CONSTRUCTION PROJECTS

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

The contractor addressed comments sent by Stamford EPB and Engineering. EPB has approved and engineering is under review. Once approved, the necessary permits for this work can be obtained.

b. Preliminary, Secondary and Disinfection Treatment Improvements

Construction is ongoing and construction updates are as follows:

42" Force Main:

- The lining operation is complete. The repairs of the leaks were done and the lining passed a pressure test. The lining was put into service on September 1st. The piping that was in conflict with the lining operation is being repaired and the pits are being backfilled and areas restored.

• **Raw Sewage Pump Station:**

All three bar screens have been installed. Two of the three units are in operation. The conveyor from the bar screens is installed by not yet in use.

The five new RSPS pumps were put into operation on September 1st. The 90° header pipe out of the RSPS is being replaced with (2) 45° pipes. After this is replaced, the by-pass pumps and piping can be removed.

Aeration/Blower Building:

- The three new blowers are installed and running. There are some issues with Blower #2 faulting out. The controls for this system are being addressed.

UV System:

- The TROJAN system is in place in three channels. There have been no major issues.



c. Clay Hill Pump Station Generator

The generator pad has been installed. The next step is for the WPCA to purchase a generator for this site. No change to this item.

d. Electrical Preventive Maintenance / Arc Flash

Siemens has one building to complete the electrical preventive maintenance. This is the operations building and this work will require shut downs that need to be coordinated with the contractor work. It will be scheduled for later in the summer after all the work at the UV system is complete. The information will be provided to Tighe & Bond for the Arc Flash Study to be prepared.

Change Order Log as of 9-14-21

Copy of Change Order log for construction projects attached. The value of Change Orders for Preliminary, Secondary and Disinfection Treatment Improvements has increased to account for work done on the 42" force main repairs. The value of Change Orders for Capital projects to date are as follows:

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

Original Value of Contract = \$ 26,751,500.00
Total Approved CO Amount = \$ 1,590,129.60
Contract Sum to Date = \$ 28,341,629.60
Percent of total project = 5.9%

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 Date	Description	Contractor Amount	Status	Included in CDP	Total Approved Amount	Approved to Preliminary	Approved to Secondary	Approved to UV	RFI		RFP		WCD	
										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	\$ 36,562.00						
02 (rev)	1/20/2020	Additional Plant Support Framing & Planning at UV Basin 1 Outfall	\$ 35,257.23	Approved	3	\$ 35,257.23			\$ 35,257.23			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		H-019				
05	11/19/2019	UV Pilesters	\$ 2,659.46	Approved	3	\$ 2,659.46			\$ 2,659.46						
09	1/28/2020	Remove and Reinstall drain piping and electrical conduits/cables 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							W-06 11/20/2019
11	2/1/2020	Add steel pipe to Sillage Area	\$ 1,214.84	Approved	3	\$ 1,214.84	\$ 1,214.84								W-03 1/29/2019
13	3/9/2020	Additional Rebar at UV Basin 1	\$ 21,447.91	Approved	3	\$ 21,447.91			\$ 21,447.91						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 4/9/2020				
14	3/18/2020	Relocate Generator and Modify Bridge Crane per Building Department Request	\$ 83,060.40	Approved	4	\$ 83,060.40		\$ 83,060.40							
18	6/19/2020	Replace Missing Hardware @ AT Bridges	\$ 5,082.33	Approved	4	\$ 5,082.33		\$ 5,082.33							
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)							
21	8/7/2020	Add External Breaker for RSP-2	\$ 9,061.48	Approved	5	\$ 9,061.48		\$ 9,061.48							
24	8/26/2020	Additional Tags for The GE Hoboken	\$ 8,590.02	Approved	5	\$ 8,590.02	\$ 2,863.34	\$ 2,863.34	\$ 2,863.34		H-164 8/19/2020				
25	9/14/2020	Replace UV Channel F3 Inlet Gate	\$ 37,004.86	Approved	5	\$ 37,004.86			\$ 37,004.86			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							
28	9/15/2020	New Sampler Location at UV	\$ 5,232.89	Approved	5	\$ 5,232.89			\$ 5,232.89		H-154 9/8/2020				

Siamford WPCF Preliminary Secondary and Disinfection Treatment Improvements
Change Order Summary

29	9/22/2020	Replace Missing W/L support rods in Aeration tank 1-4E/W	\$ 4,869.75	Approved	5	\$ 4,869.75	\$ 4,869.75		9/23/2020		
31	9/22/2020	Test Sols for City Storage Int.	\$ 1,525.86	Approved	5	\$ 1,525.86	\$ 1,525.86		9/23/2020		
20	8/21/2020	Cut Sump 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 Falling Strain 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		
37 (rev)	12/8/2020	Trench Cover at Spare Parts Building	\$ 25,055.44	Approved	7	\$ 25,055.44	\$ 25,055.44		12/17/2020	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		12/17/2020	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		12/17/2020	RFI-159	8/4/2020
44	12/22/2020	Electrical Power in Spare Parts Building	\$ 13,554.20	Approved	7	\$ 13,554.20	\$ 13,554.20		1/8/2021		
43	1/11/2021	Relocate Fire Alarm Conduit Around Door 1010c	\$ 5,410.15	Approved	7	\$ 5,410.15	\$ 5,410.15		1/8/2021		
45	1/11/2021	Increase Conduit Size to CP-11	\$ 1,191.24	Approved	7	\$ 1,191.24	\$ 1,191.24		1/12/2021		
48	1/21/2021	Add Basing Cooling Water Giled to Inluent Pumps	\$ 16,267.28	Approved	8	\$ 16,267.28	\$ 16,267.28		3/1/2021		
49	1/29/2021	Unforeseen Below Grade Conditions @ RSFS	\$ 19,244.40	Approved	8	\$ 19,244.40	\$ 19,244.40		3/1/2021		
46	4/8/2021	Demo Existing Embed at New Channel #3	\$ 5,163.56	Approved	9	\$ 5,163.56	\$ 5,163.56		5/2/2021		
50 (rev)	2/3/2021	(RFI-186) Heat Trace and Insulate 2" CW	\$ 4,734.43	Approved	9	\$ 4,734.43	\$ 4,734.43		5/26/2021		
52	3/15/2021	Control Mods to Ex. NRCY Pumps to Meter Code	\$ 2,924.08	Approved	9	\$ 2,924.08	\$ 2,924.08				
53	3/15/2021	Add EXP Motor to OH Door at RSFS	\$ 2,815.39	Approved	9	\$ 2,815.39	\$ 2,815.39				
54	3/15/2021	Relocate HVAC Duct to Install Pump VFDs	\$ 1,670.90	Approved	9	\$ 1,670.90	\$ 1,670.90				

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

55	4/8/2021	Assist in Opening Gate 5030	\$ 3,710.78	Approved	9	\$ 3,710.78		\$ 3,710.78	5/2/2021	
56	4/9/2021	Separate Power Control on Existing Mixer and Pumps to Maintain Current Code Compliance	\$ 19,078.76	Approved	9	\$ 19,078.76	\$ 19,078.76			
57	4/9/2021	Add Missing Wiring to New Armored Air Blast Kits	\$ 9,299.78	Approved	9	\$ 9,299.78	\$ 9,299.78			
58	4/9/2021	Delete UPS's @ Blower LCPs	\$ (2,057.30)	Approved	9	\$ (2,057.30)	\$ (2,057.30)			
60	4/20/2021	Emergency repair Assistance - Failed Gate at Primary DBox	\$ 6,483.32	Approved	9	\$ 6,483.32	\$ 6,483.32			
61	4/30/2021	Handrail Around Opening at RWG for UV Channel #3	\$ 2,105.85	Approved	9	\$ 2,105.85		\$ 2,105.85	5/19/2021	
62	5/10/2021	(RFI-157A) Grating Grounding at UV Basins	\$ 5,492.86	Approved	9	\$ 5,492.86		\$ 5,492.86	5/11/2021	157A
64 (rev)	5/12/2021	(RFI-126) Accessibility of UV Transmittance Sensor	\$ 9,493.96	Approved	9	\$ 9,493.96		\$ 9,493.96	5/13/2021	126
65	5/12/2021	Sawcut Overhead in Stairs in RSPS	\$ 900.43	Approved	9	\$ 900.43	\$ 900.43			
66	5/12/2021	Rework Removable Railings at AT Meters	\$ -	Approved	9	\$ -	\$ -			
67	5/12/2021	Add Supports @ Inflow Channel for Aluminum Plating	\$ 5,315.63	Approved	9	\$ 5,315.63	\$ 5,315.63			
68	5/12/2021	Notch Framing around new influent pump shafts @ 5 Locations	\$ 1,009.50	Approved	9	\$ 1,009.50	\$ 1,009.50			
70	5/17/2021	(WCD-4-03) Encase Electrical and Hydraulic Conduit in Basin #2 (T&M)	\$ 23,166.63	Approved	9	\$ 23,166.63	\$ 23,166.63			H-03
71	5/21/2021	Provide 7 MGD Clean Recirculated Flow at UV Basin #2	\$ 4,372.78	Approved	9	\$ 4,372.78		\$ 4,372.78	5/26/2021	
72 (rev)	5/21/2021	(RFI-222-4) Basin 2, Channel 3 Existing Wall Inconsistencies	\$ 8,438.33	Approved	9	\$ 8,438.33		\$ 8,438.33	6/6/2021	222
74	5/28/2021	(RFI-167) Repair to Existing Concrete Basin at UV Effluent PS	\$ 42,048.45	Approved	9	\$ 42,048.45		\$ 42,048.45	6/6/2021	167
63 (rev)	7/15/2021	Investigate/Repair Failed 42" Force Main	\$ 209,722.28	Approved	10	\$ 209,722.28	\$ 209,722.28			
69 (rev)	7/15/2021	Install Temporary 24" HDPE Force Main & Manhole	\$ 367,747.46	Approved	10	\$ 367,747.46	\$ 367,747.46			
59	4/16/2021	Add Current Transformers to Blowers to Accept signal and monitoring of Amperage	\$ 24,700.84	Approved	11	\$ 24,700.84	\$ 24,700.84		6/10/2021	237
73	6/9/2021	Replace Manr Metic Connector to Match New Mirars	\$ 7,330.29	Approved	11	\$ 7,330.29	\$ 7,330.29		6/10/2021	

