



## TECHNICAL COMMITTEE MEETING MINUTES

Wednesday 3/10/2021

4:30PM

Via VIDEO/TELECONFERENCE

### Attendees:

Merritt Nesin, P.E.	Chairman, Technical Committee
Edward Kelly	Committee Member
Mark McGrath	Committee Member
Rob Barocas	Committee Member
William Brink, PE	Executive Director, WPCA
Ann Brown, PE	Supervising Engineer, WPCA
Rob Pudelka	Plant Supervisor, WPCA
Ed Kowalski	Arcadis
Casey Ann Sarli	Arcadis

### 1. Call to Order and Roll Call.

M. Nesin called the meeting to order at 4:35pm and announced attendees as listed above.

### 2. Approval of February 17, 2021 Meeting Minutes.

E. Kelly made a motion to approve the minutes of the February 17, 2021 Technical Committee Meeting; seconded by M. McGrath. Motion carried 4-0-0.

### 3. Public Comments – None.

### 4. Update from Arcadis on Plant Cyber Security.

E. Kowalski and C. Sarli from ARCADIS were asked to present additional security measures that SWPCA could take in response to the EPA Cybersecurity memo which was briefly discussed last month. It was made clear that SWPCA currently has a very secure system which meets all the bullets listed in the EPA memo. However, there are additional measures for continual system monitoring, patch management and continuous compliance of the system that could be added. ARCADIS, who has the contract to maintain the SCADA system partners with a firm called Virtual Armour. SWPCA could add these services to the existing contract and receive alerts if someone tries to penetrate the firewall. R. Barocas asked about the risk to the WPCA if we did not do this. W. Brink explained that an intruder might remotely turn off equipment shutting down the treatment systems. This would cause untreated sewage to be discharged to the Long Island Sound. If they shut down pumps, etc., the sewage could backup in the system causing surcharging in basements and in the streets. All agreed the risk is real. E. Kelly said that in addition to a wastewater spill, we could lose the public's trust which is a serious matter. All agreed to add services to the ARCADIS contract.

### 5. SWPCA Operations During COVID-19 Pandemic

W. Brink provided an update on the plant and staff regarding COVID-19. Everyone at the plant eligible to receive the vaccine except one employee has been vaccinated at least with one shot. There are no new cases of COVID in the last month. We are submitting the employees eligible to receive the vaccine in the next round.

### 6. Update on Force Main Repairs

W. Brink stated that the 20' section of force main where the break was found has been replaced. The WPCA did a video inspection of about 120' of pipe and found that the erosion extended beyond the area of

the break. The video showed a groove in the pipe. WPCA does not want to put the 42" force main back into service for fear that another break will occur. We are installing (2) 24" HDPE pipes to be used to convey sewage from the raw sewage pump station to the primary clarifiers. The 42" DIP force main can remain out of service allowing WPCA to evaluate the remainder of the force main and plan for either replacing the pipe or lining it. E. Kelly asked if time was a factor with the by-pass pumping and would this temporary system have the capacity to address high flows during wet weather. W. Brink indicated that the contractor is keeping the by-pas pumps in place till mid-July. With the (2) 24" pipes and the contractors (3) 18" pipes and 5 pumps, we can handle flow in the low 60,000 MGD range. The cost of replacing the force main along with the temporary piping could range from \$2–2.5M.

## **7. Update on UV Disinfection Treatment System**

M. Nesen expressed his frustration with the TROJAN system. He has researched the system and feels that the ultrasonic sensor is the issue. He would like to see the sensors replaced with a radar system. R. Pudelka explained that TROJAN could not define what caused the erroneous sensor readings. The TROJAN technician spent several days at the site to check wiring and caulk all openings to prevent moisture from getting into the system. W. Brink said that WPCA will pursue with Hazen, CH Nickerson and TROJAN replacing the ultrasonic sensor with radar.

## **8. Discussion on Plant Operations**

R. Pudelka provided the March 2021 Monthly Operating Report which is attached and made part of these minutes.

## **9. Update on Engineering Studies and Designs**

A. Brown was not in attendance but provided the board with an update on engineering studies and design which is attached and made part of these minutes. W. Brink presented the report and answered questions.

- 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

## **10. Update on Construction Projects**

A. Brown was not in attendance but provided an update on construction projects which is attached and made part of these minutes. W. Brink presented the report and answered questions.

- 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

## **11. Old Business**

M. Nesen asked for the status of the sludge dryer air permit modification request to CTDEEP to change the limit on transports per hour. W. Brink stated that part of the permit requires a stack test to be done. Synagro was prepared to do this in September of 2019. The explosion occurred in August and they could not do the test. Now that the system is running, they are rescheduling the stack test for April 2021.

## **12. 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 4-0-0. The meeting was adjourned at 5:55pm.



# TECHNICAL COMMITTEE REPORT FOR MARCH 2021

Monthly Operating Report data:	February			
	This month (Feb)	Last month (Jan)	10 Year Monthly AVG	Permit Limit
Q (FLOW) DAILY AVG MGD	15.8	16.1	16.8	24 MGD DESIGN AVG
Q PEAK DAILY MGD	29.9	26.1	30.7	58 MGD MAX AVG
BOD INFLUENT AVG MG/L	245	190	202	
BOD INFLUENT AVG LBS/D	32,284	25,512		
BOD EFFLUENT AVG MG/L	4	3	4	
BOD EFFLUENT MAX MG/L	5	4		20 mg/L
BOD REMOVAL %	98.3	98.2	98.2	85%
TSS INFLUENT AVG MG/L	279	218	269	
TSS INFLUENT AVG LBS/D	36,764	29,272		
TSS EFFLUENT AVG MG/L	9	8	8	
TSS EFFLUENT MAX MG/L	14	11		20 MG/l
TSS REMOVAL %	96.3	96	96.8	85%
TOTAL N INFLUENT AVG MG/L	36.2	30.9	33.2	
TOTAL N INFLUENT AVG LBS/D	4770	4149	4538	
TOTAL N EFFLUENT AVG MG/L	2.18	2.68	2.6	
TOTAL N EFFLUENT LBS/D	288	356	352	926 LBS/D
N REMOVAL %	93.9	91.3	92.2	
TOTAL P INFLUENT AVG MG/L	5.61	3.26	4.45	
TOTAL P EFFLUENT AVG MG/L	0.52	0.59	0.52	
P REMOVAL %	90.7	81.9	86	
UV EXCEEDANCES <30 mJ/cm2	0	1		

### Equipment Update

NRCY Pump#5

LEPPERT NUTMEG WAITING ON PARTS

### SAFETY

No new Covid-19 cases or lost time to injury  
No Lost time due to injury reported



**UPDATE OF CAPITAL PROJECTS  
TECHNICAL COMMITTEE MEETING  
March 10, 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**

No change to this item. Gannett Fleming has completed the bid documents. They sent the bid documents to the WPCA. We anticipate bidding this project in 2021 and will schedule a meeting with Gannett Fleming to discuss in the future.

**c. Sludge Management Plan**

WPCA has provided information and data regarding the process to Hazen. A site visit has been scheduled for this week.

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

RFP for engineering design services of the above systems has been advertised. Proposals are due April 15<sup>th</sup>.

**2. UPDATE ON CONSTRUCTION PROJECTS**

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

Pump and motor are still out for repairs. The pump is in the process of being sandblasted, lined with a new metal ring, and coated with ceramic epoxy to avoid future wear. They will also install zincs as cathodic protection. The motor is being overhauled. The whole unit is expected to be completed and reinstalled over the next month.

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

No change since last meeting. The comments received last month from EPB and Engineering are being addressed and will be submitted for approval.

**c. Preliminary, Secondary and Disinfection Treatment Improvements**

Construction is ongoing. A plan is in place for a temporary force main to be used until the 42" force main can be examined and a repair is determined.

42" Force Main:

- (2) 24" HDPE pipes are being constructed and installed parallel to the (3) 18" by-pass HDPE pipes currently in use.
- The 24" pipes will tie into a header system outside the RSPS and run to the distribution box at the primary clarifiers.



- The 24” pipes with the (3) 18” pipes will allow the wet well, existing bar screens and pumps to go back online with two channels to be used. It will also allow the existing 42” DIP force main to be offline to examine the pipe, determine the cause of the failure and conduct the repair/replacement.

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.
- All pumps have been installed for the bypass pumping operation. We are operating in full bypass mode.
- Two of the existing pumps (D&E) have been removed with all piping and concrete supports.
- Channels have been cleaned and concrete repairs done. The common channels have been coated.

Aeration/Blower Building:

- Two new blowers have been installed. The last spool piece from the noise attenuators to the blowers has been installed.
- Electrical wiring is being completed and VFD’s are being connected.

UV System:

- We have been operating two channels.
- TROJAN is looking into the cause of issues with the Siemens ultrasonic level sensor.
- Basin 2 Channel has been poured and brackets for the TROJAN system are being installed.
- Additional concrete repairs are ongoing.
- Canopy over the new system is being constructed and installed.

**d. Clay Hill Pump Station Generator**

No change in the status. Construction of the engineering department’s drainage improvements project has begun by ordering materials. The Contractor will wait for the spring and better weather to continue with the project. The concrete pad and conduit for cables will be installed as part of the Clay Hill Drainage project. When we bid the generator and pad as one WPCA project, the bids were greater than our budget and we did not award. With the infrastructure in place from the drainage project, we will look at purchasing a generator.

**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 completed three buildings to date and one pump station to date.

**Change Order Log as of 3-10-21**

Copy of Change Order log for construction projects attached. In summary, 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  
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

Percent of total project = 10.5%

Electrical Preventive Maintenance (Contractor – Siemens)

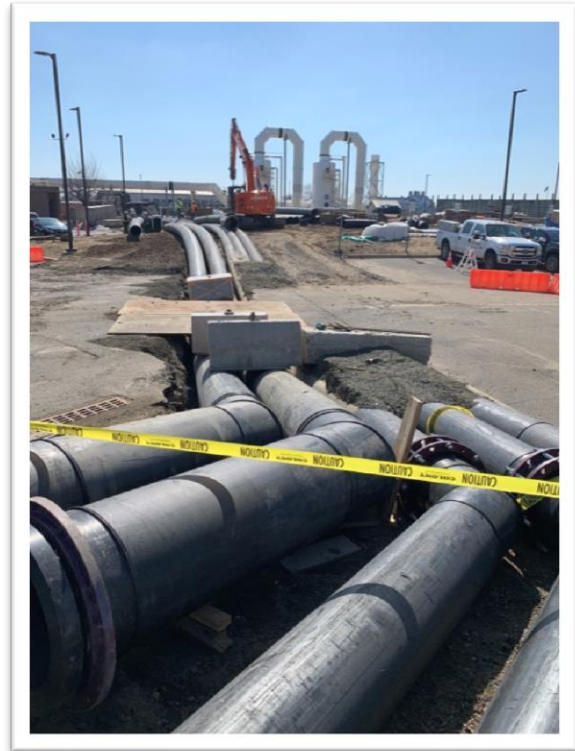
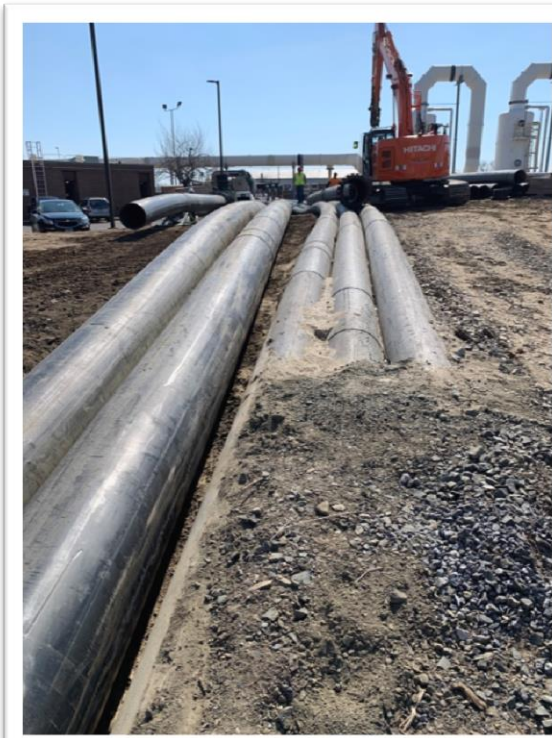
Original Value of Contract = \$95,732.00

Total Approved CO Amount = \$ 7,854.00

Percent of total project = 8.2%

## **ONGOING CONSTRUCTION PHOTOS**

### **42” Force Main Repair**



(2) 24” HDPE pipes parallel to (3) 18” HDPE by-pass pumping pipes





## Raw Sewage Pump Station



New Bar Screen in Channel 3



Removal of (2) existing pumps, piping and supports



**Raw Sewage Pump Station**

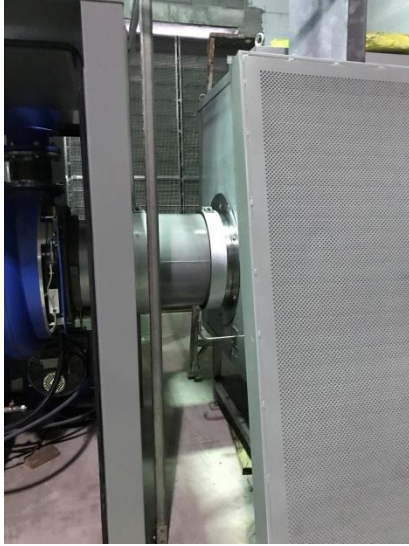


Coating of channels



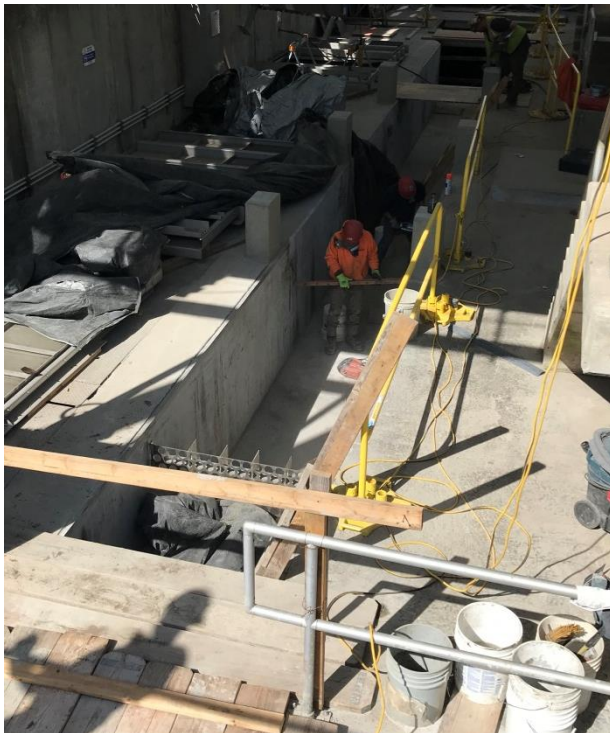


## Aeration/Blower Building



Spool piece between blower and noise attenuator installed

## UV Disinfection System



Brackets installed in new channel for TROJAN system



Canopy sections for over the new UV system

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							



