



TECHNICAL COMMITTEE MEETING MINUTES

Wednesday, February 23, 2022

4:30PM

Via VIDEO/TELECONFERENCE

Attendees:

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

1. Call to Order and Roll Call.

M. Nesin called the meeting to order at 4:30 pm and announced the attendees as listed above.

2. Approval of November 10, 2021 Meeting Minutes.

E. Kelly made a motion to approve the minutes of the January 19, 2022 Technical Committee Meeting; seconded by S. Bagwin. Motion carried 3-0-0.

3. Public Comments – None.

4. Update on SWPCA's Response to the BOR Resolution No. 4113 re Upgrading of Drainage and Related Infrastructure

W. Brink reported that the Director of Operations requested short and long term bullet points to present to the Board of Representatives Operations Committee. He provided him with a list including the following:

- Continue with the annual I/I program;
- Design Build Greenwich Avenue Generator to elevate the generator out of the flood plain;
- Follow through with recommendations from Stantec's Assessment Report for the three storm water pump stations;
- Update the Hydraulic Analysis of the plant done by Hazen;
- Look at measure that can be taken so the plant does not surcharge;
- Look at resiliency measure at all pump station in flood prone areas;
- Work with the Army Corp to review hurricane barrier, pump station capacities and the height of the hurricane barrier;
- Continue the program to install backflow preventers on laterals of homes in low lying areas where if the main line surcharges, sewage can back up into a house.

A discussion ensued about how to prevent storm water from entering the sanitary sewer system. W. Brink explained that currently there are measures being taken with the I/I program however, all measures need to be implemented cost effectively.

5. Discussion on Sludge Management Plan

W. Brink reviewed the Hazen work sessions to date including the market analysis, weighted criteria, world of options, and costs of each alternative with the dashboard tool which compares alternatives against one

another. W. Brink went through the options outlined at the last workshop and indicated that Hazen will host another workshop to reexamine the weighted criteria.

6. Discussion on Raw Sewage Pumps/Shafts Vibration Testing

A. Brown indicated that the raw sewage pumps have been experiencing vibrations since startup. There was vibration testing done in December 2021. The data was collected at percent's of operating speed. Flygt, the pump manufacturer, felt the data is only valid if the pump is running within the allowable operating range of the pump. Pump speed alone is not sufficient. The vibration test was repeated in February collecting all the pump operating data requested. The report of the result has not yet been submitted. W. Brink indicated that he believes it is the shaft and support column that is vibrating and we may need to reinforce the columns. He is waiting for the report and recommendations from Wright-Pierce.

7. Discussion on Abandoned Pipes at Cove Island

E. Kelly reported there are large exposed abandoned pipe at Cove Island Park located near the kayak launching area. He indicated that if this is part of an abandoned sanitary sewer system belonging to the WPCA, we should remove the pipes. W. Brink stated that maps of this area show the pipes and label them as old boiler pipe indicating they would be from an old industrial use, not belonging to WPCA. It was determined that WPCA is not be responsible for removing the pipe.

8. Discussion on Plant Operations

R. Pudelka provided a summary of plant operations for February 2022. He reviewed the Monthly Operating Report and Equipment Update with the Committee which is attached and made part of these minutes.

9. Update on Engineering Studies and Designs

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

- a. Infiltration & Inflow Removal Project – CDM Smith to start design of next phase of sewer rehabilitation.
- b. Sludge Management Plan – next step is to reexamine and refine the weighted criteria.
- c. Engineering Design Services for Plant Water System and the RAS/WAS Pumping Systems – Contracts are being prepared.
- d. RFQ for Evaluation of the Alvord Lane, Commerce Drive and Saddle Rock Pump Stations – RFQ is advertised in March.

10. Update on Construction Projects

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

- a. Standby Generator for the Greenwich Ave. Pump Station –Coastal Site Plan Approval is on the February 28th Planning Board meeting for approval.
- b. Preliminary, Secondary and Disinfection Treatment Improvements – New septage receiving station is now in service. Painting in raw sewage pump station and site restoration is ongoing.
- c. Clay Hill Pump Station Generator – Advertise for bids in March.
- d. Electrical Preventive Maintenance and Arc Flash Evaluation – Siemens has one (1) more MCC panel to complete their electrical preventive maintenance (EPM) work. EPM findings have been sent to Tighe & Bond for completion of Arc Flash Study.
- e. Sludge Degritting System Upgrade – Bids will be received the beginning of March.

11. Old Business – A. Brown provided an update of Perna Lane indicating that the neighborhood said that have collected signatures from 2/3 of the property owners as needed. They will continue to get as many signatures as they can. This will be presented to the Board within the next few months.

12. New Business – None.

There being no further issues to discuss, E. Kelly made a motion to adjourn the meeting, seconded by S. Bagwin; motion carried 3-0-0. The meeting was adjourned at 5:41 PM.



FEBRUARY 2022 TECHNICAL COMMITTEE REPORT

Monthly Operating Report data:	January Results			Permit Limit
	This month (Jan)	Last month (Dec)	10 Year month's Monthly AVG	
Q (FLOW) DAILY AVG MGD	14.5	13.5	17.1	24 MGD DESIGN AVG
Q PEAK MGD	26	22.4	33.5	58 MGD MAX AVG
BOD INFLUENT AVG MG/L	309	295	199	
BOD INFLUENT AVG LBS/D	37,367	33,214		
BOD EFFLUENT AVG MG/L	3	3	4	
BOD EFFLUENT MAX MG/L	5	4		20 mg/L
BOD REMOVAL %	98.9	98.8	98.1	85%
TSS INFLUENT AVG MG/L	446	407	273	
TSS INFLUENT AVG LBS/D	53,934	45,824		
TSS EFFLUENT AVG MG/L	7	8	9	
TSS EFFLUENT MAX MG/L	9	10		20 MG/l
TSS REMOVAL %	98.3	97.9	96.6	85%
TOTAL N INFLUENT AVG MG/L	37.6	45.2	33.1	
TOTAL N INFLUENT AVG LBS/D	4547	5089	4539	
TOTAL N EFFLUENT AVG MG/L	2.18	2.22	2.82	
TOTAL N EFFLUENT LBS/D	267	251	387	926 LBS/D
N REMOVAL %	94.2	95.1	91.5	
TOTAL P INFLUENT AVG MG/L	5.46	6.51	4.55	
TOTAL P EFFLUENT AVG MG/L	0.5	0.31	0.72	
P REMOVAL %	90.8	95.2	84.3	
UV EXCEEDANCES <30 mJ/cm2	2	0		

Equipment Update

NRCY Pumps
 BANANA MIXER
 RAS Pump #1
 FINAL EFFLUENT PUMP
 BELT REPLACEMENT
 RAS Pump #5
 Secondary Clarifier #3

One pump out at REM - no change, waiting on parts.
 Both mixers operational. Fleet to replace control panels
 in service after replacing pumps bearings and seals
 SPARE OUT FOR SERVICE - no change waiting on parts.
 1 BFP BELT REPLACED
 Re-pack seal
 OOS - replacement of scum trough by Northeast Water



**UPDATE OF CAPITAL PROJECTS
TECHNICAL COMMITTEE MEETING
February 23, 2022**

A. Brown presented the following project updates:

1. UPDATE ON ENGINEERING STUDIES AND DESIGNS

a. Infiltration Inflow Study

No change to this item. CDM Smith will begin the next phase of the Infiltration and Inflow Removal Project which includes the design of the sewer rehabilitation in subareas F1-1 and B1-3. These subareas were ranked 4th and 5th for subareas having the most infiltration. The work needed in these areas includes sewer and manhole cleaning, manhole rehabilitation, sewer spot replacement and CIPP lining. The sewer rehabilitation is expected to be performed in FY 22-23.

b. Sludge Degritting System Upgrade

Bids for this project are scheduled to be received March 3, 2022.

c. Sludge Management Plan

A workshop was held to discuss the mass and energy balances for the shortlisted alternatives and Life-Cycle costs of each alternative. Hazen presented preliminary Energy Balance and Analysis Tool (EBAT) and Dashboard which compares alternatives against one another. A follow up meeting will be scheduled to refine criteria weighting.

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

No change to this item. We are reviewing the scope of services submitted by Gannett Fleming. Once the scope is agreed to, Gannett Fleming will submit a fee schedule.

e. Storm Water Pump Station Study for FEMA BRIC Grant

Stantec completed the needs assessment, cost estimate, project schedule and benefit cost analysis required for the FEMA BRIC grant application. The grant was submitted on November 29th. The recommended improvements include replacement of the pump stations' aged electrical switch gear and pump motors. We would also like to include the addition of an emergency standby generator.

2. UPDATE ON CONSTRUCTION PROJECTS

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

The Costal Site Plan Review for this project is on the Planning Board's February 28th agenda for approval. Once approved, a permit for construction will be issued.

b. Preliminary, Secondary and Disinfection Treatment Improvements

Most of the work for this project is complete. The equipment has been installed and is operating. There are still issues with the controls for equipment. Painting, cleanup and site restoration is being done.

c. Clay Hill Pump Station Generator

This project will be out for bids for sizing, purchasing and installing a generator in March.

d. Electrical Preventive Maintenance / Arc Flash



No change to this item. Siemens has completed electrical preventive maintenance portion of the project. They are finalizing all the information compiled and will be providing it to Tighe & Bond for the Arc Flash Study to be prepared.

Change Order Log as of 12-14-21

Copy of Change Order log for construction projects is attached. With the unforeseen repairs to the force main, the Change Orders are 11.3% of the total contract amount.

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

Original Value of Contract = \$ 26,751,500.00

Total Approved CO Amount = \$ 3,019,026.81

Contract Sum to Date = \$ 29,770,526.81

Percent of total project = 11.3%

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

CHN PCCOR No.	CHN PCCOR Date	Description	Contractor Amount	Status	Included in CD#	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	\$ -										
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 Plank Support Framing & Planking 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 Pflasters	\$ 2,689.46	Approved	3	\$ 2,689.46			\$ 2,689.46							
09	1/28/2020	Remove and Reinstall drain piping and electrical conduits in Blower Room to install new fire rated wall. Plans do not call for this work	\$ 28,473.69	Approved	3	\$ 28,473.69			\$ 28,473.69						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								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						H-01	12/19/2019
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							
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 Users per City Request	\$ 23,618.32	Approved	4	\$ 23,618.32			\$ 23,618.32							
16	4/6/2020	Credit for Redundant Breaker @ ATS	\$ (17,296.74)	Approved	5	\$ (17,296.74)			\$ (17,296.74)							
21	6/7/2020	Add External Breaker for RSP-2	\$ 9,061.48	Approved	5	\$ 9,061.48	\$ 9,061.48									
24	8/28/2020	Additional Tags for The GE Historian	\$ 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 #3 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		
29	9/22/2020	Replace Missing WML support rods in Aeration tank 1-REARV	\$ 4,869.75	Approved	5	\$ 4,869.75			\$ 4,869.75							
31	9/22/2020	Test Sods for City Storage tent	\$ 1,525.86	Approved	5	\$ 1,525.86			\$ 1,525.86							
20	6/21/2020	Cut Sumps in Aeration Tank Floors	\$ 37,083.78	Approved	6	\$ 37,083.78			\$ 37,083.78							

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

Item #	Start Date	Description	Estimate #	Approved	Estimate	Approved	Estimate	Approved	Estimate	Start Date	Estimate	Approved	Estimate	Start Date	Estimate	Approved	Estimate
62	5/10/2021	(RFI-157A) Grating Grounding at UV Basins	\$ 5,492.86	Approved	\$ 5,492.86	9	\$ 5,492.86		\$ 5,492.86	5/11/2021	\$ 5,492.86	157A	\$ 5,492.86				
64 (rev)	5/12/2021	(RFI-126) Accessibility of UV Transmittance Sensor	\$ 9,493.96	Approved	\$ 9,493.96	9	\$ 9,493.96		\$ 9,493.96	5/13/2021	\$ 9,493.96	126	\$ 9,493.96				
65	5/12/2021	Sawcut Overhead in Stern in RSPS	\$ 900.43	Approved	\$ 900.43	9	\$ 900.43		\$ 900.43		\$ 900.43		\$ 900.43				
66	5/12/2021	Rework Removable Railings at AT Moors	\$ -	Approved	\$ -	9	\$ -		\$ -		\$ -		\$ -				
67	5/12/2021	Add Supports @ Inlet Channel for Aluminum Piping	\$ 5,315.63	Approved	\$ 5,315.63	9	\$ 5,315.63		\$ 5,315.63		\$ 5,315.63		\$ 5,315.63				
68	5/12/2021	Notch Framing around new influent pump shafts @ 5 Locations	\$ 1,009.50	Approved	\$ 1,009.50	9	\$ 1,009.50		\$ 1,009.50		\$ 1,009.50		\$ 1,009.50				
70	5/17/2021	(WCD-H-403) Encase Electrical and Hydraulic Conduit in Basin #2 (1&M)	\$ 23,166.63	Approved	\$ 23,166.63	9	\$ 23,166.63		\$ 23,166.63		\$ 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	\$ 4,372.78	9	\$ 4,372.78		\$ 4,372.78	5/26/2021	\$ 4,372.78		\$ 4,372.78				
72 (rev)	5/21/2021	(RFI-222-H) Basin 2, Channel 3 Existing Wall Inconcretes	\$ 6,436.33	Approved	\$ 6,436.33	9	\$ 6,436.33		\$ 6,436.33	6/6/2021	\$ 6,436.33	222	\$ 6,436.33				
74	5/28/2021	(RFI-167) Repair to Existing Concrete Beam at UV Effluent PS	\$ 42,048.45	Approved	\$ 42,048.45	9	\$ 42,048.45		\$ 42,048.45	6/6/2021	\$ 42,048.45	167	\$ 42,048.45				
63 (rev)	7/15/2021	Investigate/Repair Failed 42" Force Main	\$ 209,722.28	Approved	\$ 209,722.28	10	\$ 209,722.28		\$ 209,722.28		\$ 209,722.28		\$ 209,722.28				
69 (rev)	7/15/2021	Install Temporary 24" HDPE Force Main & Manifold	\$ 367,747.46	Approved	\$ 367,747.46	10	\$ 367,747.46		\$ 367,747.46		\$ 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	\$ 24,700.84	11	\$ 24,700.84		\$ 24,700.84	6/10/2021	\$ 24,700.84	237	\$ 24,700.84				
75	6/9/2021	Replace Meter Metric Connector to Match New Meters	\$ 7,330.29	Approved	\$ 7,330.29	11	\$ 7,330.29		\$ 7,330.29	6/10/2021	\$ 7,330.29		\$ 7,330.29				
77	7/12/2021	Re-align Pumps 4 and 5 per GA Fleets Recommendation	\$ 2,924.56	Approved	\$ 2,924.56	11	\$ 2,924.56		\$ 2,924.56		\$ 2,924.56		\$ 2,924.56				
78	7/15/2021	Bypass Force Main Rental/ops Costs 4/21/21 through 6/18/21	\$ 136,711.13	Approved	\$ 136,711.13	11	\$ 136,711.13		\$ 136,711.13	8/11/2021	\$ 136,711.13		\$ 136,711.13				
60	7/29/2021	Paint Existing Bridge Crane runway beams and crane rail at UV Basin #2	\$ 8,221.33	Approved	\$ 8,221.33	11	\$ 8,221.33		\$ 8,221.33	7/29/2021	\$ 8,221.33	6	\$ 8,221.33	7/29/2021			
61	8/13/2021	Radar Level Sensor	\$ 2,407.75	Approved	\$ 2,407.75	12	\$ 2,407.75		\$ 2,407.75	8/18/2021	\$ 2,407.75		\$ 2,407.75	8/18/2021			H-04
63	8/13/2021	Delete Blower Room Floor Paving	\$ (12,915.20)	Approved	\$ (12,915.20)	12	\$ (12,915.20)		\$ (12,915.20)	8/25/2021	\$ (12,915.20)		\$ (12,915.20)	8/25/2021			
64	8/16/2021	WCD-05-H UV PLC Programming Modifications Add channel out of Service Status	\$ 7,691.61	Approved	\$ 7,691.61	12	\$ 7,691.61		\$ 7,691.61	8/24/2021	\$ 7,691.61		\$ 7,691.61	8/24/2021			H-05
65	8/24/2021	(RFI-256) Protection around Fixed Ultrasonic Sensors at UV	\$ 3,053.06	Approved	\$ 3,053.06	12	\$ 3,053.06		\$ 3,053.06	9/2/2021	\$ 3,053.06	256	\$ 3,053.06	7/8/2021			
69	8/27/2021	Add WFI to Aerobion Tank Instruments	\$ 15,421.01	Approved	\$ 15,421.01	12	\$ 15,421.01		\$ 15,421.01	8/30/2021	\$ 15,421.01		\$ 15,421.01				
90	8/27/2021	Replace Existing Plastic JBs on Aerobion	\$ 10,997.74	Approved	\$ 10,997.74	12	\$ 10,997.74		\$ 10,997.74		\$ 10,997.74		\$ 10,997.74				

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

					Approved	12	\$ (15,107.00)			\$ (15,107.00)				
		Credit for Remaining Unit Price Item 4C - Surface Spall Repair			Approved	12	\$ (35,000.00)			\$ (35,000.00)				
		Credit for Remaining Unit Price Item 5C - Formed Spall Repair			Approved	12	\$ 875.00			\$ 875.00				
		Additional Unit Price Item 6C - Type I Crack Repair			Approved	12	\$ (3,750.00)			\$ (3,750.00)				
		Credit for Remaining Unit Price Item 7C - Type II Crack Repair			Approved	12	\$ (13,855.00)			\$ (13,855.00)				
		Credit for Remaining Unit Price Item 8C - Type III Crack Repair			Approved	12	\$ (14,250.00)			\$ (14,250.00)				
		Credit for Remaining Unit Price Item 10C - Disposal of Contaminated Soils			Approved	12	\$ (21,750.00)			\$ (21,750.00)				
15	3/18/2020	Remove roof debris from Screenings Building as required by the Stamford Building Department. Approved materials only. Labor to right to 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 in Contact Drawing	\$ 5,893.76		Revisions Required									
76	6/15/2021	Increase Influent Pump VFD and Cabling	\$ 132,196.26		Pending Discussion with WPCA to Determine Amount Weight-Pierce to Pay	TBD	TBD	TBD						
73	11/23/2021	Replace Primary D-Box Gates and Actuators	\$ 96,748.25		Approved	13	\$ 96,748.25	\$ 86,748.25			11/22/2021	01		
84	11/23/2021	Realign RSP 1.2 & 3	\$ 4,067.19		Approved	13	\$ 4,067.19	\$ 4,067.19					37	
95	11/23/2021	Add light to CP-96	\$ 762.80		Approved	13	\$ 762.80	\$ 762.80					28	
98	11/23/2021	Configure Hach Controller for WiFi Use	\$ 6,102.42		Approved	13	\$ 6,102.42	\$ 6,102.42					31	
99	11/23/2021	Add Aerabon Blower VDV Alarm	\$ 2,674.05		Approved	13	\$ 2,674.05	\$ 2,674.05					51	
105	11/23/2021	Add Neoprene Pads on Roof	\$ 2,370.74		Approved	13	\$ 2,370.74	\$ 2,370.74				258	36	
108	11/23/2021	Provide Additional Roof Duct Supports	\$ 7,956.42		Approved	13	\$ 7,956.42	\$ 7,956.42				258	54	
107	11/23/2021	Change Pipe Colors in RSPS	\$ 1,762.00		Approved	13	\$ 1,762.00	\$ 1,762.00				269		
109	11/23/2021	SHEET Services Assist City	\$ 4,014.79		Approved	13	\$ 4,014.79	\$ 4,014.79						
79	11/23/2021	Force Main Repair and Slip Lining Assistance	\$ 1,302,438.55		Approved	14	\$ 1,302,438.55	\$ 1,302,438.55						
		Additional Work at State Parts Building Exterior Door			Pending									
										Total	\$ 3,619,026.81	\$ 2,269,780.54	\$ 448,673.02	\$ 300,363.25