

City of Derby WPCA
Engineering Services
Monthly Engineering Report
November 19, 2025

2150155 Route 34 Sewer: CT DOT Project

- All main line piping installation complete. One manhole was paved over. CT DOT directed to uncover manhole and to revise as-built drawings. WPCA received all CCTV videos. Final walk thru scheduled for 8/11/2025. Arrangements are being made for material delivery.

ENG20-0334 I/I Removal

- Phase 6: (I/I Removal): Project includes manhole repairs, lateral liner, and defects observed from staff during CMOM inspections.
- National Water Main Cleaning Co. awarded contract in the amount of \$244,223.
- Construction began week of 9/22/25
- Point repair complete on Laurel Lane
- Nine (9) Manhole frames and covers raised on David Humpreys Road

ENG23-3287 NPDES Permit Renewal

- Prepared CTDEEP NPDES Permit renewal application for the discharged from the WWTP. Application submitted to DEEP on 2/29/24. Approval process underway.

ENG24-1371 WWTP Aeration Blower

- Three (3) blowers installed and operational. Controls being upgraded by Aaron & Assoc.
- Prepared and submitted grant application to the Connecticut Energy Efficiency Fund Energy Conscious Blueprint program for replacement of blowers. The estimated efficiency grant incentive is currently \$135,000 based on three (3) turbo blowers.

ENG24-1372 Naugatuck River Siphon Area Restoration

- Design and permitting assistance to address exposed inverted siphon piping system.
- Working with FEMA to investigate sources of project funding.
- Funding making its way through the FEMA approval process. Responded to questions.
- Met with DOT and Metro North Railroad.
- Will need easement agreement to cross tracks and occupy land in parking lot.
- Soil scientist completed wetland report which will be submitted to DEEP and Local IWWC

ENG24-1491 Wastewater Treatment Plant Upgrade

- 30% Design Preliminary Design drawings near completion
- Construction Sequencing of Plant Upgrades. Value Engineering Technical memo ongoing
- Hydraulic profile and process flow diagram.
- Updating Wastewater Treatment Design Computations
- 3D Model design underway
- Solids handling building design underway
- Structural and Architectural design underway
- Received CTDEEP Approval dated 10/23,2025 for the Wastewater Facilities Plan.
- CTDEEP will release final payment to the City's ACH account in the amount of \$4,975.47.

RECEIVED

By Marc J. Garofalo, MPA, MCC, MCTC at 1:40 pm, Nov 17, 2025

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FACILITY PLAN APPROVAL

October 23, 2025

Honorable Joseph L. DiMartino
City of Derby
Derby City Hall
1 Elizabeth Street
Derby, CT 06418
via email: mayor@derbyct.gov

Re: CWF-733PG
Wastewater Facilities Planning Study

Dear Mayor DiMartino:

The engineering report titled *Wastewater Facilities Planning Study*, dated March 2014, the report titled *2020 Wastewater Facilities Plan Supplement to the 2014 Wastewater Facilities Plan* dated June 30, 2020, and the Memorandum titled *City of Derby WPCA: 2023 Wastewater Facilities Plan Supplement 6/30/2023* dated January 11, 2024 all prepared for the City of Derby by Weston & Sampson, have been reviewed by the Department of Energy and Environmental Protection (DEEP).

These submissions comply with the DEEP Bureau of Water Protection and Land Reuse Consent Order No.AOWRMU15003 entered on August 3, 2015 and modified on May 20, 2019 and February 2, 2023, fulfilling the requirements of Step B.2.b. of the Order.

In accordance with the requirements of Section 22a-482-3 of the Regulations of Connecticut State Agencies, the report and memorandum are hereby approved. This letter represents final approval of this document.

This APPROVAL does not relieve you of the obligation to obtain any other authorizations as may be required by Federal, State or Local Laws or regulations.

If you have any questions regarding this matter, please contact Ann Straut at (860) 424-3137 or ann.straut@ct.gov.

Sincerely,

Nisha Patel

Nisha Patel, P.E.
Director
Water Planning & Management Division
Bureau of Water Protection and Land Reuse

e-copies: Jack Walsh, Chairman, Derby WPCA (johnwalshderby@comcast.net)
Robert Tedeschi, Weston & Sampson, (tedeschir@wseinc.com)
Kymberly Cianci, DEEP CWF Financial, (kymberly.cianci@ct.gov)

Tax ID No: 04-2601194

INVOICE

PLEASE MAKE CHECKS PAYABLE TO:

Weston & Sampson Engineers, Inc.



55 Walkers Brook Drive, Suite 100, Reading, MA 01867
westonandsampson.com Tel: 978.532.1900

November 04, 2025

Project No: ENG24-1491

Invoice No: 11250410

Edward Abel
Superintendent
DERBY CT, CITY OF
Water Pollution Control Authority
1 Elizabeth Street
Derby, CT 06418

Project ENG24-1491 DERBY - WWTP UPGRADES DESIGN

Professional Services from September 27, 2025 through October 24, 2025

Fee

Description	Contract Amount	% Work To Date	Amount Billed To Date	Previously Billed	This Inv. Billed
SURVEY	166,000.00	90.00	149,400.00	149,400.00	0.00
30% PREL. DESIGN	890,000.00	95.00	845,500.00	845,500.00	0.00
VALUE ENGINEERING	56,000.00	10.00	5,600.00	5,600.00	0.00
75% DESIGN DEVELOPMENT	1,060,000.00	15.00	159,000.00	21,200.00	137,800.00
GRANT ASSISTANCE	84,000.00	0.00	0.00	0.00	0.00
PERMITTING	119,000.00	0.00	0.00	0.00	0.00
90% FINAL DESIGN	743,000.00	0.00	0.00	0.00	0.00
100% BID DOCUMENT	162,000.00	0.00	0.00	0.00	0.00
Total Fee	3,280,000.00		1,159,500.00	1,021,700.00	137,800.00
Total Fee					137,800.00
TOTAL THIS INVOICE					137,800.00

Outstanding Invoices

Number	Date	Balance
10250483	10/7/2025	149,000.00
Total		149,000.00

Payment is due 30 days from Invoice Date

4

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Tax ID No: 04-2601194

INVOICE

PLEASE MAKE CHECKS PAYABLE TO:

Weston & Sampson Engineers, Inc.



55 Walkers Brook Drive, Suite 100, Reading, MA 01867
westonandsampson.com Tel: 978.532.1900

November 04, 2025

Project No: ENG24-0623

Invoice No: 11250428

Edward Abel
Superintendent
DERBY CT, CITY OF
Water Pollution Control Authority
1 Elizabeth Street
Derby, CT 06418

Project ENG24-0623 DERBY, CT - PHASE 6 I&I REMOVAL

Professional Services from September 27, 2025 through October 24, 2025

Fee

Description	Contract Amount	% Work To Date	Amount Billed To Date	Previously Billed	This Inv. Billed
PHASE A - DESIGN	24,000.00	100.00	24,000.00	24,000.00	0.00
PHASE B - BID	8,000.00	100.00	8,000.00	8,000.00	0.00
PHASE C - CONSTRUCTION	16,000.00	50.00	8,000.00	4,800.00	3,200.00
Total Fee	48,000.00		40,000.00	36,800.00	3,200.00
Total Fee					3,200.00
TOTAL THIS INVOICE					3,200.00

Outstanding Invoices

Number	Date	Balance
10250288	10/3/2025	1,600.00
Total		1,600.00

Payment is due 30 days from Invoice Date

6

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Tax ID No: 04-2601194

INVOICE

PLEASE MAKE CHECKS PAYABLE TO:

Weston & Sampson Engineers, Inc.



55 Walkers Brook Drive, Suite 100, Reading, MA 01867
westonandsampson.com Tel. 978.532.1900

November 04, 2025

Project No: ENG24-1372

Invoice No: 11250429

Edward Abel
Superintendent
DERBY CT, CITY OF
Water Pollution Control Authority
1 Elizabeth Street
Derby, CT 06418

Project ENG24-1372 DERBY NAUGATUCK RIVER RESTORATION AT SIPHON

Professional Services from September 27, 2025 through October 24, 2025

Phase A SURVEY
Fee

Description	Contract Amount	% Work To Date	Amount Billed To Date	Previously Billed	This Inv. Billed
SURVEY	7,000.00	100.00	7,000.00	7,000.00	0.00
HYDRAULICS	12,000.00	0.00	0.00	0.00	0.00
DESIGN	46,000.00	40.00	18,400.00	18,400.00	0.00
PERMITTING	44,000.00	60.00	26,400.00	17,600.00	8,800.00
Total Fee	109,000.00		51,800.00	43,000.00	8,800.00
Total Fee					8,800.00
Total this Phase					8,800.00
TOTAL THIS INVOICE					8,800.00

Payment is due 30 days from Invoice Date

8

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**City of Derby Water Pollution Control Authority
Monthly Report for the November 2025 Meeting**

❖ **Collection System (October 2025)**

- Responded to a total of 64 CBYD tickets with 1 emergency ticket.
- Responded to a total of 3 call outs with 2 emergency after hours call outs.

❖ **Waste-Water Treatment Plant (October 2025)**

- Average Flow = 1.05 million gallons per day
- Total Flow = 32.69 million gallons, Max Daily Flow = 2.25 million gallons per day
- Average Total Nitrogen = 38 lbs./day, Permit Limit = 71 lbs./day (Annual Avg = 72.7/day)
- Average Effluent BOD = 4.1 mg/l (permit <30 mg/l)
- Average Suspended Solids = 3 mg/l (permit = 30 mg/l)
- Average Turbidity = 1.6

❖ **Maintenance**

- West clarifier taken offline for maintenance and cleaning
- West clarifier section of baffle and brackets replaced
- Routine maintenance completed for aeration basin mixers
- Routine maintenance completed for secondary clarifier motors
- Routine maintenance completed for building heating units

❖ **General**

- Average % solids for July with new press 24.60%
- Continuing to work with FEMA for disaster damage assistance for East Derby Siphon
- Continuing to work with DEEP, CTDOT, and Metro North for all proper permits for East Derby Siphon repair
- ○ Plant pickup truck replacement
- ○ Air Quality Assessment

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APPLICATION AND CERTIFICATE FOR PAYMENT AIA DOCUMENT G702 (instructions on reverse side)

To (Owner): City of Derby Project: WWTP Solids Handling Upgrades Application No: Release of Retainage Distribution to
 Water Pollution Control Authority Derby, CT 06418 Period to: June 30, 2025 Owner
 Architect
 Contractor

From (Contractor): D'Amato Construction Company, Inc. VIA (Architect): Weston & Sampson Engineers, Inc.
 10 Main Street, Bristol CT 06010 7112 Brook Street Ste 103 Project: ENG24-0267
 Rocky Hill CT 06067

Contract for: Construction Contract date: November 22, 2024

CONTRACTOR'S APPLICATION FOR PAYMENT

CHANGE ORDER SUMMARY			
Change Orders approved in previous months by Owner		ADDITIONS	DEDUCTIONS
TOTAL		38,729.05	
Approved this Month			
Number	Date Approved		
2	05/08/25	\$ 38,874.16	
TOTALS		77,603.21	0
Net change by Change Orders		77,603.21	

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the work covered by this Application for Payment has been completed in accordance with the contract documents, that all amounts have been paid by the contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR: D'Amato Construction Company, Inc.
 By: _____ Date: 7.22.25

Application is made for Payment, as Shown below, in connection with the Contract. Continuation Sheet, AIA Document G703, is attached

1. ORIGINAL CONTRACT SUM.....	\$ 625,897.00
2. Net change by change Orders	\$ 77,603.21
3. CONTRACT SUM TO DATE (Line 1±2).....	\$ 703,300.21
4. TOTAL COMPLETED & STORED TO DATE	\$ 703,300.21
(Column G on G703)	
5. RETAINAGE:	
a. 0% of Completed Work \$	
(Column D+E on G703)	
b. 0% of Stored Material \$	0.00
(Column F on G703)	
Total Retainage (Line 5a +5b or Total in Column I of G703).....	\$ 0.00
6. TOTAL EARNED LESS RETAINAGE	\$ 703,300.21
(Line 4 less Line 5 total)	
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate).....	\$ 668,135.20
8. CURRENT PAYMENT DUE.....	\$ 35,165.01
9. BALANCE TO FINISH, PLUS RETAINAGE.....	\$ 0.00
(Line 3 less line 8)	

State of: CT County of: 120162
 Subscribed and sworn to before me this 2 day of July, 25
 Notary Public: Susan D Henne
 My Commission expires: _____
 NOTARY PUBLIC
 State of Connecticut
 My Commission Expires: _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the contract Documents, based on on-site observations and the data comprising the above application, the architect certifies to the Owner that to the best of the architect's knowledge, information and belief the Work has progressed as indicated, the quality of the work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED..... \$ _____
 (Attach explanation if amount certified differs from the amount applied for.)
 ARCHITECT

By: _____ Date: _____
 This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor this Contract.

Connecticut sales tax is included on material and services

10

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WPCA - October 31, 2025 YTD Update (Cash View)

Account Code	Account Title	FY 24-25 Actuals		FY 25-26 Budget	October 31, 2025 YTD
		FY 24-25 Budget	(Unaudited)		
3000	Revenue				
44902	Sewer Use Interest & Lien Fees	\$ 45,000	\$ 103,409	\$ 16,000	\$ 4,571
41105/41108	Back Taxes/Sewer Use & Capital Fees (2007-22 GL Years)	\$ 450,000	\$ 718,435	\$ 500,000	\$ 256,444
41902/41903	Back Taxes/Interest & Lien Fees (Sewer Use & Capital Fee)		\$ 178,745	\$ 130,000	\$ 89,956
44906	Ansonia Income	\$ 17,097	\$ 14,627	\$ 23,000	\$ -
44909	Orange Revenue	\$ 85,377	\$ 85,524	\$ 85,377	\$ 44,042
44910	Residential Revenue	\$ 1,723,831	\$ 1,574,171	\$ 1,700,000	\$ 968,235
44911	Commercial Revenue	\$ 561,359	\$ 565,619	\$ 500,000	\$ 221,780
44912	Mixed Use Revenue	\$ 91,208	\$ 87,377	\$ 85,000	\$ 43,921
44916	186 Derby Ave Repair Reimbursement	\$ -	\$ 773	\$ -	\$ 773
44926	Impact Fee - New Sewer Connections	\$ 415,000	\$ 430,350	\$ 210,000	\$ 3,600
44904	Other Revenue		\$ 9,929	\$ -	\$ 34
46101	Interest Earned	\$ 250,000	\$ 211,574	\$ 230,000	\$ 57,306
Total Operating Revenues		\$ 3,638,872	\$ 3,980,532	\$ 3,479,377	\$ 1,690,660
Capital Fees					
44914	Capital Fee Interest & Lien Fees	\$ 46,557	\$ 79,924	\$ 13,000	\$ 3,199
44917	Residential Capitol Improvement Re	\$ 1,210,393	\$ 1,080,890	\$ 1,100,000	\$ 682,499
44918	Commercial Capital Improvement Rev	\$ 275,247	\$ 369,504	\$ 270,000	\$ 143,483
44919	Mixed Use Capital Improvements Rev	\$ 34,926	\$ 33,924	\$ 33,000	\$ 18,617
Total Capital Fees		\$ 1,567,123	\$ 1,564,242	\$ 1,416,000	\$ 847,798
Total WPCA Revenues		\$ 5,205,995	\$ 5,544,773	\$ 4,895,377	\$ 2,538,458
Dept. 8410	Water Pollution Control				
51610	Regular	\$ 950,463	\$ 935,391	\$ 955,145	\$ 317,019
51630	Overtime	\$ 80,000	\$ 60,356	\$ 88,316	\$ 18,932
	Annual Stipend	\$ 6,000		\$ 6,000	\$ -
52200	Employer Share Social Security Contributions	\$ 63,889	\$ 49,065	\$ 64,695	\$ 17,634
52205	Medicare	\$ 14,942	\$ 11,520	\$ 15,130	\$ 4,124
52300	City Pension	\$ 20,609	\$ 137,575	\$ 137,575	\$ -
52700	Workers Compensation	\$ 100,000	\$ 280,099	\$ 50,000	\$ 7,403
52906	Employees Health Benefits	\$ 360,000	\$ 330,603	\$ 200,000	\$ -
52907	Insurance	\$ 36,575	\$ 31,553	\$ 33,000	\$ -
53020	Legal Services	\$ 12,000	\$ 780	\$ 12,000	\$ 200
53201	Office Instruction	\$ 1,000		\$ -	\$ -
53202	Plant Instruction	\$ 6,300	\$ 3,423	\$ 5,700	\$ 829
53310	Accounting/Bookkeeping	\$ 8,000	\$ 13,087	\$ 8,000	\$ 4,316
53400	Engineering Services	\$ 30,000	\$ 58,134	\$ 100,000	\$ -
53465	Atty Sheriff Title Search	\$ 20,000			\$ -
53495	Pump Station - Sanitary Sewer Design	\$ -			\$ -
53500	Computer Service	\$ 2,000	\$ 25,775	\$ 30,000	\$ -
53505	Plant Computer Service	\$ 5,000	\$ 3,624	\$ 5,000	\$ -
53515	Payroll Expense	\$ 5,000	\$ 4,064	\$ 6,000	\$ 1,441
54302	Property/Plant Maintenance	\$ 150,000	\$ 131,303	\$ 150,000	\$ 39,197
54325	Vehicle Maintenance	\$ 20,000	\$ 18,357	\$ 20,000	\$ 7,012
54413	Sludge Disposal	\$ 250,000	\$ 252,884	\$ 250,000	\$ 50,263
54925	Pest Control	\$ 1,000	\$ 201	\$ 1,000	\$ 190
54930	Collection System Maintenance	\$ 100,000	\$ 134,914	\$ 100,000	\$ 42,346

12

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54935	Collection System Rehabilitation	\$	300,000	\$	-	\$	275,000	\$	11,979
54940	Road Bond Sanitary Sewer Repair	\$	-	\$	-	\$	-	\$	-
54945	Pump Station Maintenance	\$	20,000	\$	10,403	\$	20,000	\$	3,728
55001	Ansonia Expense	\$	15,000	\$	16,537	\$	15,000	\$	35,638
55003	Griffen Hospital Expense	\$	36,200	\$	28,431	\$	36,200		
55004	Town Clerk Expense	\$	1,000						
55006	Interest Expense Dep	\$	-	\$	3,562				
55031	DEEP Fees	\$	6,000	\$	2,368	\$	6,000	\$	2,599
55300	Telephones	\$	10,000	\$	9,501	\$	10,000	\$	3,709
55301	Postage	\$	13,000	\$	2,250	\$	13,000	\$	-
55991	Expense Refunds	\$	3,100	\$	1,447	\$	3,100	\$	15,301
55999	Camera Truck Lease Purchase	\$	-	\$	40,976				13,659
56010	Office Supplies	\$	2,000			\$	2,000	\$	-
56015	Business Forms	\$	3,000			\$	-	\$	-
56025	Plant Supplies	\$	6,000	\$	8,190	\$	6,000	\$	1,152
56050	Rags Grit Grease	\$	25,000	\$	18,941	\$	25,000	\$	-
56210	Yankee Gas	\$	15,000	\$	8,871	\$	15,000	\$	1,100
56220	Electricity	\$	180,000	\$	181,041	\$	180,000	\$	42,556
56290	Water Co.	\$	15,000	\$	-	\$	-		
56908	Chemicals	\$	55,000	\$	56,587	\$	55,000	\$	29,873
56909	Lab Supplies	\$	65,000	\$	58,765	\$	65,000	\$	25,550
56911	Special Clothing	\$	11,160	\$	8,969	\$	9,000	\$	835
58015	RWA & Aquanon Consumption	\$	-	\$	10,514	\$	15,000	\$	2,640
58350	Capital Reserves	\$	200,000	\$	200,000	\$	200,000		
Total Expenses 8410		\$	3,224,238	\$	3,150,060	\$	3,187,861	\$	701,223
Operating Revenues Less Operating Expenses		\$	414,634	\$	830,471	\$	291,516	\$	989,437
Capital Account - Dept 8411									
				FY 24-25 Budget	FY 24-25 Actuals (Unaudited)	FY 25-26 Budget	October 31, 2025 YTD		
58355	Bond Capital Debt Service (Interest and Principal)	\$	1,374,575	\$	1,354,442	\$	1,252,825	\$	1,039,688
53400	Engineering Services	\$	-	\$	168,170	\$	-		
55081	Phase I Plant Improvem-Constructio	\$	1,300,000	\$	1,893,773	\$	1,853,000	\$	226,579
Total Expenses 8411		\$	2,674,575	\$	3,416,385	\$	3,105,825	\$	1,266,267
Capital Fees less Capital Expenses		\$	(1,107,452)	\$	(1,852,143)	\$	(1,689,825)	\$	(418,469)
55016	Depreciation Expense	\$	-	\$	1,277,607	\$	1,200,000	\$	1,200,000

City of Derby
 Check/Voucher Register
 05 - Enterprise Funds (WPCA)
 10400 - Cash WPCA
 APS
 From 10/7/2025 Through 11/12/2025

Check Number	Document Date	Vendor Name	Check Amount	Transaction Description
12815	10/8/2025	AARON ASSOCIATES OF CT	2,438.00	WWTP RTU-30 Pumping Control Pa Upgrade
	10/8/2025	AARON ASSOCIATES OF CT	5,323.00	WWTP Secondary Control Panel & Blower Upgrades
12816	10/8/2025	AMERICAN ROOTER LLC	2,560.00	WPCA Work Order#63628 Collectic System Maintenance
12817	10/8/2025	BLOXAM ENTERPRISES	4,830.00	WPCA Plant Maintenance (3) Asper Purifiers
12818	10/8/2025	CINTAS CORPORATION	93.78	WPCA Uniform Service
12819	10/8/2025	CONSTELLATION NEWENERGY	3,983.23	1 Caroline St (WPCA) Electricity 8/19-9/17
	10/8/2025	CONSTELLATION NEWENERGY	70.54	24 Division St (WPCA) Electricity 8/18-9/16
	10/8/2025	CONSTELLATION NEWENERGY	56.38	25 Burtville Ave (WPCA) Electricity 8/18-9/16
12820	10/8/2025	EDWARDS ANSWERING SEV INC	49.61	WPCA Answering Service 10/02-10
12821	10/8/2025	ERIC ZELANIN	114.00	CT Wastewater Treatment Operatc Class 1 PASS
	10/8/2025	ERIC ZELANIN	240.00	Reimburse Application Fee for Clas Certification I
12822	10/8/2025	FRONTIER	166.66	14 Patty Ann Ter (WPCA) Phone Sc 9/21-10/20
	10/8/2025	FRONTIER	174.74	WPCA Plant Phone Service 9/25-10
12823	10/8/2025	GENERAL MUFFLER	213.82	WPCA Plant Supplies
12824	10/8/2025	G & L WATER WORKS SUPPLY	1,802.51	WPCA Eclipse #2 Post Flushing Hyr
12825	10/8/2025	HEARST MEDIA SRVS CT LLC*	490.16	WPCA Legal Notice 9/26/25 Swer L Bills
12826	10/8/2025	PHOENIX ENVIRONMENTAL LAB	2.82	Finance Charge
	10/8/2025	PHOENIX ENVIRONMENTAL LAB	3,755.00	WPCA Lab Sample Analysis
12827	10/8/2025	Quality Data Service	907.06	WPCA Printing of Personal Property Declarations
12828	10/8/2025	USA BLUE BOOK	453.45	WPCA Lab Supplies
12829	10/15/2025	WESTON/SAMPSON ENGINEERS	96,100.00	Proj. ENG24-1491 6/28-7/25
12830	10/20/2025	AIRGAS USA *	61.65	WPCA Plant Maintenance: Argon ar Helium
12831	10/20/2025	AQUARION WATER COMPANY	33,003.26	Bill No. 2025-07-0500014 Derby W
12832	10/20/2025	BAHR SALES INC	7,672.12	WPCA Cable Assembly for Collectio System Maintenance
12833	10/20/2025	CALVERT SAFE & LOCK LTD	20.00	WPCA Keys
12834	10/20/2025	CINTAS CORPORATION	89.44	WPCA Uniform Service
12835	10/20/2025	EVERSOURCE	239.55	1 Caroline St (WPCA) Gas 9/11-10/
	10/20/2025	EVERSOURCE	90.38	140 Roosevelt Dr (WPCA) Gas 9/11-10/09
12836	10/20/2025	LOWES *	2,845.62	WPCA Plant Supplies
12837	10/20/2025	MIKE SADICK MACHINE	2,100.00	WPCA Plant Maintenance: Brackets
12838	10/20/2025	NATIONAL WATER MAIN CLEANING COMPANY	10,378.75	Sanitary Sewer Rehab Proj. Phase
12839	10/20/2025	PHOENIX ENVIRONMENTAL LAB	470.00	WPCA Lab Sample Analysis
12840	10/20/2025	STAMFORD WPCA REGIONAL	522.00	WPCA Lab Sample Analysis
12841	10/20/2025	STAPLES*	431.06	WPCA Plant Supplies: Chairs
12842	10/20/2025	SYNAGRO NORTHEAST INC	9,217.84	(WPCA) Waterbury Force Majeure Derby

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City of Derby
 Check/Voucher Register
 05 - Enterprise Funds (WPCA)
 10400 - Cash WPCA
 APS
 From 10/7/2025 Through 11/12/2025

Check Number	Document Date	Vendor Name	Check Amount	Transaction Description
	10/20/2025	SYNAGRO NORTHEAST INC	13,449.10	Sep 2025 Sludge Cake Disposal and Transport
12843	10/20/2025	BRAN HILL LLC	109.47	October 2025 SU & CF Refund 2025-17-0500158
12844	10/20/2025	STATE OF CT DEP OSBORNDALE STATE PARK	1,231.84	October 2025 SU & CF Refund 2023-17-0500030
12845	10/20/2025	Golden Hawk 2 LLC	237.74	October 2025 SU & CF Refund 2025-07-0500001
12846	10/27/2025	AMAZON CAPITAL SERVICES	23.10	WPCA Plant Maintenance: Coverall
	10/27/2025	AMAZON CAPITAL SERVICES	57.21	WPCA Plant Office/General Supplies
12847	10/27/2025	APOLLO SAFETY INC	3,000.00	WPCA Plant Maintenance: Calibration Services
12848	10/27/2025	C C M	316.25	Oct-Dec 2025 Drug & Alcohol Consortium
12849	10/27/2025	CINTAS CORPORATION	44.72	WPCA Uniform Service
12850	10/27/2025	COYNE CHEMICAL	4,977.00	WPCA Chemicals
12851	10/27/2025	FRONTIER	506.94	WPCA Phone Service 10/11-11/10
12852	10/27/2025	IDEAL ENGINE AND MOWER	77.40	WPCA Plant Maintenance Supplies
12853	10/27/2025	KINSLEY GROUP INC	455.00	WPCA Plant Preventative Maintenance
	10/27/2025	KINSLEY GROUP INC	462.25	WPXCA Plant Preventative Maintenance
12854	10/27/2025	New England Water Environment Association	475.00	2026 Conference/Exhibit: Edward J
12855	10/27/2025	PHOENIX ENVIRONMENTAL LAB	329.00	WPCA Lab Sample Analysis
12856	10/27/2025	Quality Data Service	1,524.03	WPCA Portion of October Delinquent Notices
12857	10/27/2025	REGIONAL WATER AUTHORITY	67.75	1 Caroline St (WPCA) Water 9/08-1
	10/27/2025	REGIONAL WATER AUTHORITY	35.25	Caroline st (WPCA) Water 9/08-10/
	10/27/2025	REGIONAL WATER AUTHORITY	700.78	Roosevelt dr (WPCA) Water 9/07-1
12858	10/27/2025	The Nutty Company	357.27	WPCA Plant Maintenance: Fastener
12859	10/27/2025	UNITED ILLUMINATING	4,712.71	1 Caroline St Pump (WPCA) Electricity 9/418-10/17
	10/27/2025	UNITED ILLUMINATING	864.42	145 Roosevelt Dr (WPCA) Electricity 9/17-10/15
	10/27/2025	UNITED ILLUMINATING	184.60	24 Division St Pump 2 Electricity 9/17-10/15
	10/27/2025	UNITED ILLUMINATING	247.11	25 Burtville Ave (WPCA) Electricity 9/17-10/15
12860	10/27/2025	USA BLUE BOOK	672.46	WPCA Lab Supplies: Chlorine Reagents for Analyzers
12861	10/29/2025	CAMPBELL FOUNDRY CO	4,656.00	WPCA Frame and Flowseal Cover
12862	10/29/2025	CT DEPT OF LABOR	200.00	Employer Filing Fee Case 2026-A-0 Rob Prihoda
12863	10/31/2025	AARON ASSOCIATES OF CT	4,630.00	WWTP RTU-30 Influent Pumping Control Panel OCT25
	10/31/2025	AARON ASSOCIATES OF CT	1,190.00	WWTP Secondary Control Panel Uç & Nueros Blowers OCT25
12864	10/31/2025	AMAZON CAPITAL SERVICES	29.99	WPCA Face Shield
	10/31/2025	AMAZON CAPITAL SERVICES	30.24	WPCA Plant Supplies: Batteries
	10/31/2025	AMAZON CAPITAL SERVICES	256.42	WPCA Plant Supplies: Face Shields, Gloves/Filters
12865	10/31/2025	BAHR SALES INC	5,315.55	WPCA Collections System Maintenance

(15)

10.6

City of Derby
 Check/Voucher Register
 05 - Enterprise Funds (WPCA)
 10400 - Cash WPCA
 APS
 From 10/7/2025 Through 11/12/2025

Check Number	Document Date	Vendor Name	Check Amount	Transaction Description
12866	10/31/2025	CAREY WIPER & SUPPLY CO	453.19	WPCA Plant Supplies: Paper Towels/Hand Soap/etc
12867	10/31/2025	CINTAS CORPORATION	44.72	WPCA Uniform Service
12868	10/31/2025	CONSTELLATION NEWENERGY	3,550.28	1 Caroline St Electricity 9/18-10/16
	10/31/2025	CONSTELLATION NEWENERGY	65.90	24 Division St (WPCA) Electricity 9/17-10/15
	10/31/2025	CONSTELLATION NEWENERGY	83.79	25 Burtville Ave (WPCA) Electricity 9/17-10/15
12869	10/31/2025	EDWARDS ANSWERING SEV INC	49.61	WPCA Answering Service 10/30-11
12870	10/31/2025	FRONTIER	178.32	14 Patty Ann Terr (WPCA) Phones
12871	10/31/2025	FUSS & ONEILL INC	4,902.00	WPCA Plant Maintenance
12872	10/31/2025	ORKIN INC	95.00	1 Caroline St Pest Control 10/10/25
12873	10/31/2025	PHOENIX ENVIRONMENTAL LAB	329.00	WPCA Lab Sample Analysis
12874	10/31/2025	THE MAHER CORPORATION	4,907.00	WPCA Plant Maintenance Supplies
12875	10/31/2025	The Nutty Company	81.66	WPCA Plant Maintenance: Fastener
12876	11/12/2025	New England Water Environment Association	400.00	NEWEA 2026 Conference: Edward

(16)

10.6

City of Derby
 Check/Voucher Register
 05 - Enterprise Funds (WPCA)
 10400 - Cash WPCA
 APV
 From 10/7/2025 Through 11/12/2025

Check Number	Document Date	Vendor Name	Check Amount	Transaction Description
12854	10/27/2025	New England Water Environment Association	(475.00)	2026 Conference/Exhibit: Edward /
		Total 10400 - Cash WPCA	257,058.50	
		Total 05 - Enterprise Funds (WPCA)	257,058.50	
Report Total			257,058.50	

(17)

10.6

**City of Derby Water Pollution Control Authority
Monthly Report for the November 2025 Meeting**

❖ **Collection System (October 2025)**

- Responded to a total of 64 CBYD tickets with 1 emergency ticket.
- Responded to a total of 3 call outs with 2 emergency after hours call outs.

❖ **Waste-Water Treatment Plant (October 2025)**

- Average Flow = 1.05 million gallons per day
- Total Flow = 32.69 million gallons, Max Daily Flow = 2.25 million gallons per day
- Average Total Nitrogen = 38 lbs./day, Permit Limit = 71 lbs./day (Annual Avg = 72.7/day)
- Average Effluent BOD = 4.1 mg/l (permit <30 mg/l)
- Average Suspended Solids = 3 mg/l (permit = 30 mg/l)
- Average Turbidity = 1.6

❖ **Maintenance**

- West clarifier taken offline for maintenance and cleaning
- West clarifier section of baffle and brackets replaced
- Routine maintenance completed for aeration basin mixers
- Routine maintenance completed for secondary clarifier motors
- Routine maintenance completed for building heating units

❖ **General**

- Average % solids for July with new press 24.60%
- Continuing to work with FEMA for disaster damage assistance for East Derby Siphon
- Continuing to work with DEEP, CTDOT, and Metro North for all proper permits for East Derby Siphon repair
- ○ Plant pickup truck replacement
- ○ Air Quality Assessment

Limited Indoor Air Quality Assessment Report

Assessment Date: October 8, 2025

Derby Wastewater Treatment Facility
1 Caroline Street, Derby, CT

City of Derby
Water Pollution Control Authority
Derby, CT

October 14, 2025

19

13.0

October 14, 2025

Edward R. Abel
Superintendent
City of Derby Water Pollution Control Authority
1 Elizabeth Street
Derby, CT 06418

**RE: Limited Indoor Air Quality Assessment
Wastewater Treatment Facility
1 Caroline Street, Derby, CT
Fuss & O'Neill, Inc. Project No. 20210206.A20**

Dear Mr. Abel:

Enclosed please find the report for the limited indoor air quality assessment conducted at the Wastewater Treatment Facility located at 1 Caroline Street, Derby, Connecticut (the "Site").

The services were performed on October 8, 2025 by a Fuss & O'Neill, Inc. representative and included a limited indoor air quality assessment and real-time measurements for IAQ indicators. The work was performed in accordance with our written agreement dated October 2, 2025.

If you have any questions regarding the enclosed report, please do not hesitate to contact me at (860) 783-4673. Thank you for this opportunity to have served your environmental needs.

Sincerely,



Eric Cooley
Senior Environmental Analyst

EWC/kr

Enclosure

20

Table of Contents

**Limited Indoor Air Quality Assessment
Wastewater Treatment Facility - Derby, CT
City of Derby Water Pollution Control Authority**

1	Introduction and Background	1
2	Building Description	1
3	Scope of Testing and Methodology	2
3.1	Temperature and Relative Humidity	2
3.2	Carbon Dioxide (CO₂)	2
3.3	Carbon Monoxide (CO)	3
3.4	Total Volatile Organic Compound (TVOC) Screening	3
3.5	Particulate Matter	4
3.6	Oxygen	4
3.7	Hydrogen Sulfide	4
3.8	Combustible Gas	4
4	Observations	4
5	Results	6
5.1	Temperature and Relative Humidity	6
5.2	Carbon Dioxide	7
5.3	Carbon Monoxide	7
5.4	Total Volatile Organic Compound (TVOC) Screening	7
5.5	Particulate Matter	7
5.6	Oxygen	7
5.7	Hydrogen Sulfide	7
5.8	Percent Lower Explosive Limit	8
6	Conclusions and Recommendations	8
6.1	Conclusions	8
6.2	Recommendations	10

Appendices

End of Report

- APPENDIX A LIMITATIONS
- APPENDIX B SITE DIAGRAM
- APPENDIX C INSTRUMENTATION LIST
- APPENDIX D DATA SHEET FOR TEMPERATURE, RELATIVE HUMIDITY, CARBON MONOXIDE, CARBON DIOXIDE, TOTAL VOCS, HYDROGEN SULFIDE, COMBUSTIBLE GAS, OXYGEN, AND PARTICULATES
- APPENDIX E SITE PHOTOGRAPHS

21

1 Introduction and Background

Fuss & O'Neill, Inc. (Fuss & O'Neill) was retained to conduct a limited indoor air quality (IAQ) assessment at the Wastewater Treatment Facility located at 1 Caroline Street, Derby, Connecticut. The purpose of this assessment was to provide data regarding a potential IAQ issue at the Site related to health concerns of occupants. The work was conducted for the City of Derby Water Pollution Control Authority (the "Client") in accordance with our written agreement dated October 2, 2025 and is subject to the limitations included in *Appendix A*.

Fuss & O'Neill's Senior Environmental Analyst, Eric Coley, conducted the assessment and sampling on October 8, 2025.

2 Building Description

The Site operates as the city's wastewater treatment facility. The Site has multiple building structures with two buildings (Primary & Secondary) that are regularly occupied by staff.

The primary building is a one-story structure with a full basement and contains office space, a shop area, locker rooms, and an attached garage/process area (Press Room) housing a vacuum truck and the filter press machine. The basement has two rooms, a pump room and mechanical storage room, with stairwells to the office area and press room. The building is heated with two separate gas-fired forced hot air furnaces, one serving the office area and one serving the garage/press area. Interior finishes are primarily concrete block and gypsum wallboard. The exterior is brick with a flat roof.

The secondary building is a two-story structure with a full basement. The main level contains decommissioned drum filter machinery, grounds maintenance equipment, electrical switch gear and used oil/parts storage space. The second floor has a laboratory space/office and a generator loft. The laboratory office space is cooled by wall mounted heat and air conditioning mini split units, while the main level is heated by a suspended gas unit heater. The basement contains process pumps on one side and three air blowers on the other side. Make-up air for the blowers comes through a floor grate from a wall louver on the main level. Former air-handling equipment/ducts remain in place and are no longer used. Interior finishes are primarily concrete block and gypsum wallboard. The exterior is brick with a flat roof.

The Waste Storage Building to the side of the Secondary Building is made up of two large concrete aerobic digester pits, with a steel walkway over the center of the two pits. The Pits are covered by a corrugated fiberglass shed roof, attached to the Secondary Building.

The Disulfate Room is a small sub-grade masonry pump room at the south end of the Site.

The Raw Sewage Building consists of a masonry constructed mechanical space, adjacent to an outside pit with galvanized stairs to access the lower level where the raw sewage enters the plant and flows through two large grates to catch large materials/objects before entering the plant.

A decommissioned digester consisting of two large cylindrical open top tanks with a connecting building all of masonry construction. The building has an upper level and a basement/former pump room with no windows or ventilation observed. The building is now used only for storage on the upper level.

Refer to *Appendix B* for the site diagram.

22

3 Scope of Testing and Methodology

The scope of work included visual and olfactory assessments in occupied areas of the Site buildings where IAQ concerns were reported (as identified by the Client). Based on information from Site contacts, the Primary Building Office Space and Secondary Building Lab Area are the only areas with potential full shift occupancy with all other areas included in the assessment are only occupied for short term inspection/procedures.

The assessment also included real-time measurements for typical IAQ indicators and comparison to recognized guidelines. Test parameters included measurement of temperature, relative humidity (RH), carbon monoxide (CO), carbon dioxide (CO₂), particulate matter with a diameter less than 10 microns (PM₁₀), total volatile organic compounds (TVOCs), hydrogen sulfide (H₂S), oxygen (O₂) and combustible gas - percent lower explosive limit (% LEL).

Measurements were obtained using the following calibrated portable equipment:

- TSI Q-Trak IAQ meter, Model 7575
- RAE Systems, model MultiRAE Lite; and
- TSI Dust Trak II Model 8530.

Refer to *Appendix C* for a complete instrumentation list and corresponding calibration information used in conducting this assessment.

3.1 Temperature and Relative Humidity

Temperature and relative humidity levels are indicators of thermal comfort. The American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) recommends that wintertime indoor temperature be maintained between 68°F and 74°F and summertime indoor temperature be maintained between 73°F and 79°F. ASHRAE also recommends that humidity be maintained in the range of 30% to 60%. Humidity below this range may cause stress through the drying of mucous membranes and skin. Humidity above this range may promote the growth of fungi spores with resultant contamination of the building and/or ventilation system.

According to its Standard 55-2023, Thermal Environmental Conditions for Human Occupancy, ASHRAE has defined the operative temperature (68°F to 79°F) as that temperature range at which at least 80% of the sedentary or near sedentary occupants will find the environment thermally acceptable.

3.2 Carbon Dioxide (CO₂)

Carbon dioxide (CO₂) is a product of human respiration. CO₂ concentrations in a building are used as a primary indicator of outside air exchange. CO₂ at very high concentrations (e.g., greater than 5,000 parts per million [ppm]) can pose a health risk. However, in most buildings, concentrations rarely rise to these levels and CO₂ at the concentrations commonly identified in buildings is not a direct health risk. At the activity levels in typical office buildings, steady CO₂ concentrations of about 700 ppm above outdoor air measurements indicate an outdoor air ventilation rate of about 15 cubic feet per minute (cfm) per person. CO₂ concentrations in outdoor air typically range from 300 to 500 ppm.

23

ASHRAE Standard 62.1-2022, Ventilation for Acceptable Indoor Air Quality, suggests an indoor CO₂ concentration of up to 1,000 to 1,200 ppm in spaces housing sedentary people is acceptable and an indicator of adequate outside air exchange.

3.3 Carbon Monoxide (CO)

Carbon monoxide (CO) is a colorless and odorless toxic gas that most often occurs as a by-product of incomplete hydrocarbon fuel combustion. The most likely sources of CO are from incomplete hydrocarbon fuel combustion inside a building, and from air intakes placed in, at, or near parking garages or street level that may entrain automotive exhaust gases into the air handling system. Back drafts from boiler flues may also provide a pathway for CO infiltration. In absence of any formal IAQ standard, Fuss & O'Neill uses the more conservative National Ambient Air Quality Standard (NAAQS) of 9 ppm for CO. The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) for carbon monoxide is 50 ppm, as an eight-hour time-weighted-average (8-hr. TWA).

3.4 Total Volatile Organic Compound (TVOC) Screening

Volatile organic compounds (VOCs) are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some that may have short and/or long-term adverse health effects. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors. VOCs are emitted by a wide array of products, numbering in the thousands. Some examples include the following:

- Disinfectants, cleansers and air fresheners
- Cosmetics, perfumes and other personal care products
- Paints, paint strippers, stains and lacquer.
- insecticides and pesticides
- building materials and furnishings
- office equipment such as copiers and printers
- graphics and craft materials including glues and adhesives; and
- industrial equipment and chemicals

The ability of organic chemicals to cause health effects varies greatly from those that are highly toxic, to those with no known health effects. As with other pollutants, the extent and nature of the health effect depends on many factors, including but not limited to the exposure duration and concentration ("time/dose"). Eye and respiratory tract irritation, headaches, dizziness, visual disorders, and memory impairment are among the most common symptoms that some people have experienced.

To date, no standards have been established for VOC exposure in non-industrial settings. However, exposures to specific VOCs, such as formaldehyde, have been regulated by governmental agencies. For example, OSHA regulates formaldehyde as a carcinogen.

For the purposes of this limited assessment, Fuss & O'Neill performed direct reading measurements using an RAE Systems, model MultiRAE Lite five gas meter. The MultiRAE measures Total Volatile Organic Compounds (TVOCs) and was used as a screening tool to identify areas of concern and potential sources of VOCs in the indoor environment.

24

3.5 Particulate Matter

Coarse particulate matter (PM₁₀) refers to tiny particles or droplets in the atmosphere that are smaller than 10 µm in width, which can be hazardous to human health. Particulate matter in the PM₁₀ size range is able to travel deeply into the respiratory tract, reaching the lungs. Exposure to elevated concentrations of particulate matter in the PM₁₀ size range can cause short-term health effects such as eye, nose, throat and lung irritation, coughing, sneezing, runny nose, and/or shortness of breath. Prolonged exposure can also affect lung function and worsen medical conditions, such as asthma.

The EPA established NAAQS for PM₁₀ in 1997 and revised them in 2012. The short-term (24-hour or daily average) standard to protect public health is 150 micrograms per cubic meter (µg/m³).

3.6 Oxygen

Normal atmospheric air contains 20.9% oxygen. OSHA defines an oxygen deficient atmosphere as a space that contains less than 19.5% oxygen, and oxygen enriched atmosphere as a space that contains more than 22 % oxygen. An oxygen deficient or enriched atmosphere may be an indicator of a leak from a storage tank, process valve, or potentially natural reactions, etc. in poorly ventilated areas or confined spaces.

3.7 Hydrogen Sulfide

Hydrogen sulfide is a colorless, flammable gas under normal conditions which often has the odor of rotten eggs. The OSHA ceiling concentration limit for hydrogen sulfide is 20 parts per million (PPM). Ceiling concentration refers to the value or concentration which must not be exceeded at any time. The odor threshold for hydrogen sulfide is 2.0 PPM.

3.8 Combustible Gas

Combustible gases are monitored by evaluating the percentage of the lower explosive limit (%LEL). LEL is the range below which the percentage of gas or vapor is combustible if an ignition source is introduced. A value of 10% of the LEL is used as an indicator of the presence of combustible atmosphere.

4 Observations

On the day of the assessment, October 8, 2025, the weather was seasonably mild, wet and rainy. Fuss & O'Neill conducted a visual and olfactory assessment of typically occupied locations of the wastewater treatment plant facilities. Observations from the assessment are summarized below:

- Primary Building Office Area
 - Obvious sewer odor present when entering office building (adjacent press room exhaust was off for about two hours based on information from Site contacts)
 - At end of assessment after the blower had been on for 3 to 4 hours, the odor in the office area was not noticed
 - Obvious visible suspect mold growth not observed
 - Water staining or damaged surfaces were not observed
 - Outdoor air intake not observed on gas hot air furnace - return air intake was from corridor with supply to rooms

(25)

- Aspen High Performance Air Purifier operational in corridor
- Locker/shower room was comprised of ceramic tile floor & walls and appeared clean and organized
- Building appeared clean and well kept

- Primary Building Press Room/Garage
 - Obvious sewer odor present when entering press room (press room exhaust was off)
 - According to the Client, the exhaust is specified to operate at all times in the press room, but was shut off for assessment purposes prior to F&O's arrival
 - Make-up air for the exhaust fan requires opening one of the doors
 - Rotary Press is an enclosed unit with the solids being dropped onto a conveyor and moved outside to a roll off waste container
 - Two liquid chemicals are injected into the press machine process; Endimall (odor neutralizing agent containing sodium hydroxide and sodium chlorite) and Zetag (a flocculant polymer used for solid/liquid separation)
 - Water leak around conveyer wall penetration observed causing puddling on floor around press
 - Obvious visible suspect mold growth not observed
 - No fresh air intake on gas furnace used for heat in the area
 - Furnace return air intake was open at the base of the furnace
 - Filter was not observed to be in place
 - Stairwell opened to basement storage below
 - Building appeared clean and well kept

- Primary Building Basement (pump room and plumbing supply storage)
 - Obvious sewer odor present in the basement storage room under the press room with an open stairwell to the garage portion of the press room (press room exhaust was off prior to assessment)
 - Obvious visible suspect mold growth not observed
 - Water leak from the building's cast iron sanitary waste pipe (dripping at a pipe joint in storage room)
 - Stairwell opened to garage portion of press room above
 - Area appeared clean and uncluttered

- Secondary Building
 - Main level has former decommissioned drum thickener/filter machinery
 - one of the open top process tanks has a musty smelling liquid remaining in it after decommissioning
 - Main level contains plant electrical switch gear and is otherwise currently used for grounds maintenance equipment, used oil drums and other storage
 - Main Level Heated by a hot gas air unit heater and had an air intake louver supplying make-up air for the basement air blowers.
 - Abandoned decommissioned HVAC air handling equipment remains in place
 - Upper level has generator loft and testing laboratory
 - Laboratory has heat & A/C supplied by wall mounted mini-split units
 - Laboratory has operating fume hood and sample oven- vented outside
 - No fresh air intake observed other than awning windows
 - Lab hood was off upon arrival with a slight odor of organics present in the lab
 - Basement houses pump equipment and air blowers
 - Blowers get make-up air through a ceiling grate from wall louver on the main level
 - Basement was dry, but had signs of sediment from prior water ponding on floor by pumps

26

- Obvious visible suspect mold growth not observed
- Mold or mildew odor observed/not observed

Waste Storage Building

- Consists of two large concrete aerobic digester pits, with a steel walkway over the center of pits
- The Pits are covered by a corrugated fiberglass shed roof, attached to the Secondary Building.
- Sewage odor on the building due to open pit of process water below
- Obvious visible suspect mold growth not observed
- Ventilated only through access opening
- Occasional access to this space for maintenance operations

Disulfate Room

- Consists of a subgrade concrete pump room
- The room appeared dry with no strong odors observed.
- Obvious visible suspect mold growth not observed
- Ventilated only through access opening
- Occasional access to this space for maintenance operations

Raw Sewage Building

- Consists of a main level masonry equipment building with exterior subgrade concrete raw sewage inlet/strainer room
- Equipment room heated by a gas hot air unit heater
- Equipment room appeared dry with no odors observed.
- Obvious visible suspect mold growth not observed
- Raw sewer strainer pit is a concrete open top ventilated access pit/stairwell
- Occasional access to raw sewer pit space for grate strainer cleaning operations with overhead hoist to haul out strainer waste

Digester Building

- Decommissioned equipment room with a cylindrical open top well on each side of masonry construction
- Equipment room upper level currently used for storage
- Equipment room lower-level is a former pump room
- Building appeared dry but with a musty odor, and peeling paint from inside the masonry structure at the time of the assessment
- Building was closed and dark, with no apparent ventilation, natural lighting or operating lights.
- Obvious visible suspect mold growth not observed
- Occasional access to access/store infrequently used items.

5 Results

5.1 Temperature and Relative Humidity

At the time of the assessment, interior temperature measurements ranged from 65.9°F to 74.4°F. Some of these measurements are below the ASHRAE recommended range of between 68°F and 79°F.

27

At the time of the assessment, interior relative humidity measurements ranged from 60.1% to 76.8%. These measurements are above the ASHRAE recommended range of 30 to 60%.

Outdoor ambient temperatures ranged from 63.8°F to 64.8°F and outdoor relative humidity measurements ranged from 67.9% to 77.6%. The weather was seasonably mild and wet with rain during the assessment.

5.2 Carbon Dioxide

At the time of the assessment, the interior concentrations of carbon dioxide ranged from 446 ppm to 879 ppm. These measurements are acceptable in accordance with ASHRAE recommendations of up to 1,000 to 1,200 ppm.

5.3 Carbon Monoxide

Within the limitation of instrumental accuracy, there was no carbon monoxide detected in the building during this assessment.

5.4 Total Volatile Organic Compound (TVOC) Screening

Measurements of VOCs were collected using a portable multi-gas meter. This device indicates if TVOCs are present. At the time of this assessment interior concentrations of TVOCs were not observed throughout the Site, with the exception of the press room while operating with the exhaust fan off (condition of space upon arrival to conduct the assessment, but not normal operating procedure according to the Client).

Within the Primary building, TVOCs were detected within the belt filter press room. Initial measurements showed a concentration of 1.0 ppm during the time when the fan was not operating. When the fan was operating, concentrations reduced to 0.0 ppm.

5.5 Particulate Matter

The concentration of particulate matter less than 10 μm (PM_{10}) ranged from 1.0 $\mu\text{g}/\text{m}^3$ to 25 $\mu\text{g}/\text{m}^3$ during the assessment. These measurements below the 150 $\mu\text{g}/\text{m}^3$ EPA NAAQS 24-hour average.

5.6 Oxygen

Oxygen measurements were obtained using a RAE Systems multi-gas meter. Readings were obtained in representative occupied and intermittently occupied areas throughout the buildings as well as of outdoor air.

Within the limitation of instrumental accuracy, oxygen concentrations were found to be at 20.9% within all the buildings and in the ambient air during this assessment.

5.7 Hydrogen Sulfide

Within the limitation of instrumental accuracy, hydrogen sulfide was not detected above the OSHA ceiling limit of 20 ppm in the areas tested. The press room was found to have an initial concentration of 3.2 ppm in the area

28

adjacent to the rotary press machine with the exhaust fan off prior to and during the initial assessment. This concentration was quickly reduced to 0.0 ppm with the fan operating and the overhead door partially opened (standard operating procedure according to the Client).

5.8 Percent Lower Explosive Limit

Fuss & O'Neill performed direct reading measurements using a RAE Systems multi-gas meter. The meter measures the %LEL and is used as a screening tool to identify areas of concern and potential locations of combustible atmosphere in the built environment.

Within the limitation of instrumental accuracy, %LEL was not detected in the areas tested, with the exception of the press room, adjacent the rotary press. The press room was found to have an initial %LEL concentration of 1% with the exhaust fan off prior to and during the initial assessment. This concentration was reduced to 0.0% with the fan operating.

Please refer to *Appendix D* for the temperature, relative humidity, carbon monoxide, carbon dioxide, total VOCs, hydrogen sulfide, combustible gas, oxygen, and particulates data sheet.

6 Conclusions and Recommendations

Based on the measurements, physical walk-through, and information available at the time of this assessment, Fuss & O'Neill concludes and recommends the following:

6.1 Conclusions

- Interior temperature measurements in some locations were slightly below the ASHRAE recommended comfort range for typical occupied office settings. Areas that were below this range are spaces not occupied for prolonged periods of time and some are open to the outside air.
- Interior relative humidity measurements were above the ASHRAE recommended comfort range.
 - High humidity and moist surfaces will also contribute to mold/spore growth
 - If possible, relative humidity levels should be maintained between 30% and 60%.
 - The elevated levels at the time of the assessment were likely due to the wet rainy weather and high ambient humidity during the assessment, combined with some of the spaces being opened to the outside air.
- Interior concentrations of carbon dioxide were acceptable in accordance with ASHRAE recommendations.
- Interior concentrations of carbon monoxide were below limits specified by the NAAQS.
- Interior concentrations of particulate matter (PM₁₀) ranged from 1 µg/m³ to 25 µg/m³ during the assessment. These measurements were well below the 150 µg/m³ EPA NAAQS 24-hour average.
- Interior concentrations of oxygen were found at the normal atmospheric concentration of 20.9%
- Concentrations of %LEL were not detected within the areas assessed during the assessment.

- Interior concentrations of total volatile organic compounds were not identified in the areas sampled, with the exception of the following location:
 - A low TVOC concentration of 1 ppm was detected within the press room adjacent to the rotary press during the initial assessment without the exhaust fan in operation prior to and during the initial assessment.
 - A decrease in TVOC concentration to 0 ppm was observed within the press room when the fan unit was in operation and the overhead door was partially opened. Concentrations detected within the press room initial assessment appear to be attributed to limited ventilation.
- Concentrations of hydrogen sulfide were detected within the press room adjacent to the rotary press during the initial assessment without the exhaust fan in operation prior to and during the initial assessment.
 - A decrease in TVOC concentration to 0 ppm was observed within the press room when the fan unit was in operation and the overhead door was partially opened. Concentrations detected within the press room initial assessment appear to be attributed to limited ventilation.
- Endimall (odor neutralizing agent containing sodium hydroxide and sodium chlorite) and Zetag (a flocculant polymer used for solid/liquid separation) are injected into the rotary press as part of the solids separation process within the press room. These chemicals Safety Data Sheets both are recommend local ventilation during use of the products.
- The hot air furnace used in the press room/garage space does not take in outside air and was not observed to have a filter in place at the return air filter housing on the bottom of the unit.
- Rainwater was entering the press room at the conveyor belt wall penetration and puddling on the floor at the press machine.
- The Primary Building Basement Plumbing Storage Room had a small leak in the overhead cast iron waste pipe.
- No other water intrusion within the assessed areas of the enclosed buildings were identified.
- Neither the Press Room nor the Laboratory appeared to have any outside make-up air intake to exhaust systems to properly function, other than manually opening windows or doors.
- The decommissioned Digester Building is currently used for storage on the upper level only, with occasional access by staff to store or retrieve items in the building. The space is an above and below level concrete building with no windows, no apparent ventilation and no lights at the time of the assessment. No water intrusion was evident, but the space was musty smelling. Painted masonry surfaces were peeling, which is an indicator of high moisture/humidity within the space.
- No areas other than the Digester Building were identified with musty odors.

- The Primary building office area and basement storage room had a sewer odor present upon entry in the morning when the press room exhaust fan had been off. At the end of the assessment when entering the office building with the exhaust fan running, the odor was not noticed.
- No visible suspect mold growth was identified on any interior building surfaces within the assessed areas.
- Secondary Building Decommissioned Drum Thickener tank remains half full of a musty smelling liquid

6.2 Recommendations

- The exhaust fan should be kept operating within the press room during press operation.
 - This seems to eliminate odor accumulation within the office area, press room and basement.
 - The exhaust fan also removed the concentrations of LEL/combustible gas and Hydrogen Sulfide that were present without the fan running at the start of the assessment.
 - Endimall and Zetag are injected into the rotary press as part of the solids separation process within the press room. These chemicals Safety Data Sheets both are recommended to local ventilation during use of the products
- The hot air furnace used in the press room/garage space needs to have a return air filter installed and replaced as part of PM activities.
- Rainwater entering the press room at the conveyor belt wall penetration and puddling on the floor at the press machine should be addressed.
 - This could be easily achieved by adding a small rain diverter or roof over the conveyor at the outside of the exterior wall penetration, attached /flushed to the press building to prevent rain from running into the building.
- The Primary Building Basement Plumbing Storage Room leak in the overhead cast iron waste pipe needs repair to stop leak puddling on the floor.
- Secondary Building Decommissioned Drum Thickener tank remains half full of a musty smelling liquid that should be identified/characterized, removed, and properly disposed of.
- The Press Room and Laboratory appear to rely on manually opening windows or doors to provide outside make-up air for exhaust systems to operate efficiently. If this will be the method, a standard operating procedure (SOP) should document the procedures of required exhaust fan/hood operations and the employees in those spaces should be trained on the procedures and made aware of the SOP.

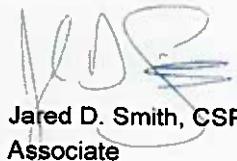
Refer to *Appendix E* for photographs taken during the assessment.

Report prepared by:



Eric W. Cooley
Senior Environmental Analyst

Reviewed by:



Jared D. Smith, CSP
Associate

31

Appendix A

Limitations

LIMITATIONS

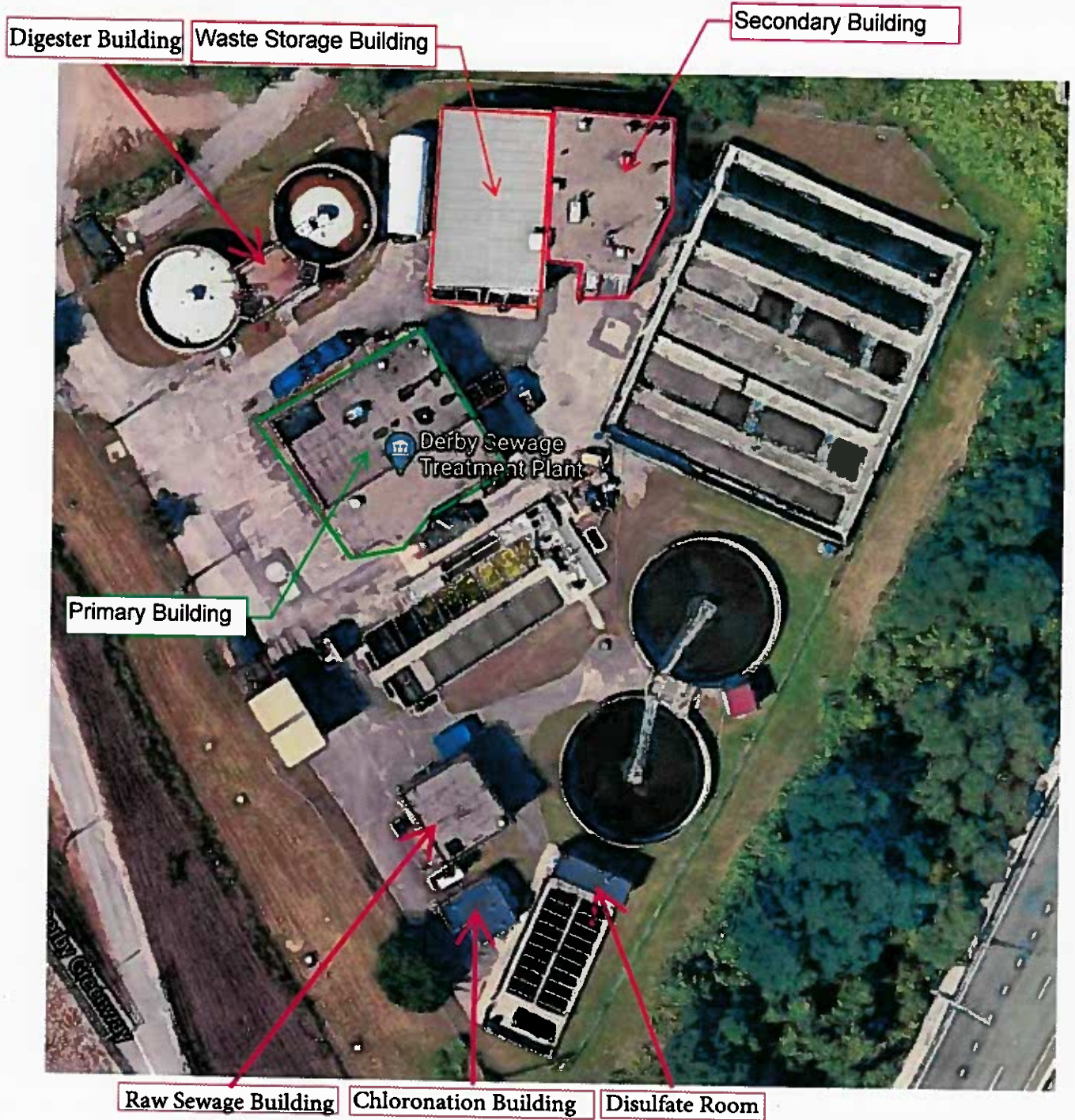
**Site: Derby Wastewater Treatment Facility
1 Caroline Street, Derby, CT**

1. This environmental report has been prepared for the exclusive use of the City of Derby Wastewater Pollution Authority (the "Client"), and is subject to, and is issued in connection with our written agreement on October 2, 2025. Any use or reliance upon information provided in this report, without the specific written authorization of the Client and Fuss & O'Neill, Inc. (Fuss & O'Neill) shall be at the User's individual risk.
2. Fuss & O'Neill has obtained and relied upon information from multiple sources to form certain conclusions regarding the Site when conducting this assessment. Except as otherwise noted, no attempt has been made to verify the accuracy or completeness of such information or verify compliance by any party with federal, state or local laws or regulations.
3. Fuss & O'Neill has obtained and relied upon laboratory analytical results in conducting the sampling. This information was used to form conclusions regarding the types and quantities of bio-aerosols and mold at the Site. Fuss & O'Neill has not performed an independent review of the reliability of this laboratory data.
4. The findings, observations, and conclusions presented in this report are limited by the scope of services outlined in our Agreement dated October 2, 2025, which reflects schedule and budgetary constraints imposed by Client. Furthermore, the assessment has been conducted in accordance with generally accepted environmental practices. No other warranty, expressed or implied, is made.
5. The conclusions presented in this report are based solely upon information gathered by Fuss & O'Neill to date. Should further environmental or other relevant information be discovered at a later date, the Client should immediately bring the information to Fuss & O'Neill's attention. Based upon an evaluation and assessment of relevant information, Fuss & O'Neill may modify this report and its conclusions.

Appendix B

Site Plan

Derby Waste Water Treatment Facility
1 Caroline St, Derby, CT



Appendix C

Instrumentation List

Instrumentation

Measurement Parameter	Description	Calibration
Temperature, Relative Humidity & Carbon Dioxide	TSI IAQ-Calc IAQ Meter (7545X)	Annually – 2025
Total Volatile Organic Compounds, Combustible Gas (%LEL), Carbon Monoxide, Oxygen & Hydrogen Sulfide	MultiRAE LITE 5-Gas Detector	October 7, 2025
Particulates	TSI Dust Trak II Model 8530	Field Calibrated

Appendix D

Data Sheet for Temperature, Relative Humidity, Carbon Dioxide, Total Volatile Organic Compounds, Combustible Gas (%LEL), Carbon Monoxide, Oxygen, Hydrogen Sulfide & Particulates

Air Quality Parameters

CLIENT: City of Derby Wastewater Pollution Authority

SITE ADDRESS: 1 Caroline Street,

CITY & STATE: Derby, CT

FUSS & O'NEILL PROJECT NO. 20210206.A20

Date: October 8, 2025

Location: Derby Wastewater Treatment Plant

Page 1 of 2

Location	Time (0000)	# of Occupants	CO ₂ (PPM)	CO (PPM)	Temp. (°F)	RH (%)	Particulates (µg/m ³)	VOCs (PPM)	H ₂ S (PPM)	O ₂ (%)	LEL (%)
Recommended Guidelines			< 1,200	< 9.0	68-79	30-60	<150	N/A	10	20.9	N/A
Primary Building											
Admin/Reception	950	2	817	0	69.3	63.2	0.002	0	0	20.9	0
Office Corridor-Center	1000	2	846	0	70.0	62.4	0.004	0	0	20.9	0
Office Break Room	1010	0	834	0	69.9	60.1	0.004	0	0	20.9	0
Press Room (fan off)	1020	0	879	0	70.4	76.8	0.003	1	3.2	20.9	0
Press Room (fan on)	1020	0	478	0	66.9	71.3	0.001	0	0	20.9	0
Ambient Air - pre	1030	N/A	416	0	63.8	77.6	0.001	0	0	20.9	0
Basement Storage	1100	0	522	0	68.0	73.6	0.008	0	0	20.9	0
Basement Pump Room	1055	0	627	0	67.2	74.3	0.008	0	0	20.9	0
Admin Reception	1250	0	802	0	69.9	56.8	0.025	0	0.0	20.9	0
Secondary Building											
Main Level - Storage	1125	0	495	0	71.8	68.5	0.006	0	0	20.9	0
Upper-Level Lab (fume hood off)	1135	1	714	0	70.3	55.2	0.015	0	0	20.9	0
Upper-Level Lab (fume hood on)	1145	1	702	0	69.7	58.6	0.016	0	0	20.9	0
Basement Pump/Blower Room	1200	0	458	0	73.8	61.2	0.010	0	0	20.9	0
Waste Building											
Waste Building	1210	0	561		67.7	74.4	0.006	0	0	20.9	0

39

Location	Time (0000)	# of Occupants	CO ₂ (PPM)	CO (PPM)	Temp. (°F)	RH (%)	Particulates (µg/m ³)	VOCs (PPM)	H ₂ S (PPM)	O ₂ (%)	LEL (%)
Recommended Guidelines			< 1,200	< 9.0	68-79	30-60	<150	N/A	10	20.9	N/A
Disulfate Pump Room											
Disulfate Pump Room	1230	0	446	0	68.4	72.3	0.004	0	0	20.9	0
Raw Sewage Inlet Pit											
Raw Sewage Inlet Pit	1230	0	608	0	65.9	70.0	0.006	0	0	20.9	0
Raw Sewage Upper Main Level	1225	0	469	0	68.0	67.5	0.003	0	0	20.9	0
Digester Room											
Digester Room	1240	0	475	0	67.6	73.0	0.003	0	0	20.9	0
Ambient Air											
Ambient Air - Post	1245	N/A	414	0	64.8	67.9	0.003	0	0	20.9	0

Appendix E

Site Photographs



Primary Building Office Reception Area

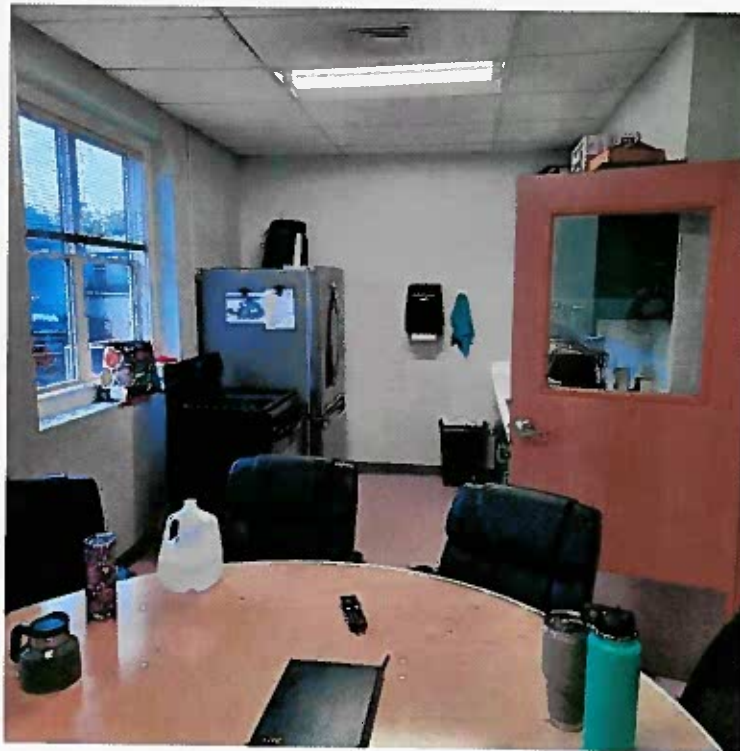


Primary Building Office Corridor

42



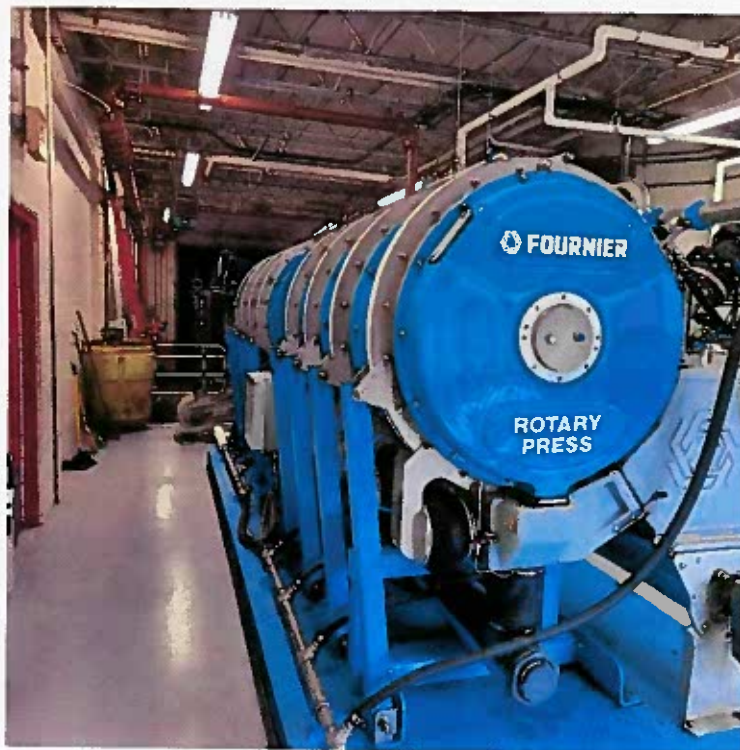
Air Purifier in use in Office Area Corridor



Primary Office Building Break Room



Primary Office Building Furnace/Utility Room



Primary Building Press Room - Solid Waste Press Machine

144



Pump Room Workspace with rainwater puddling on the floor from conveyor wall penetration.



Solid Waste Conveyor to outside waste container

45

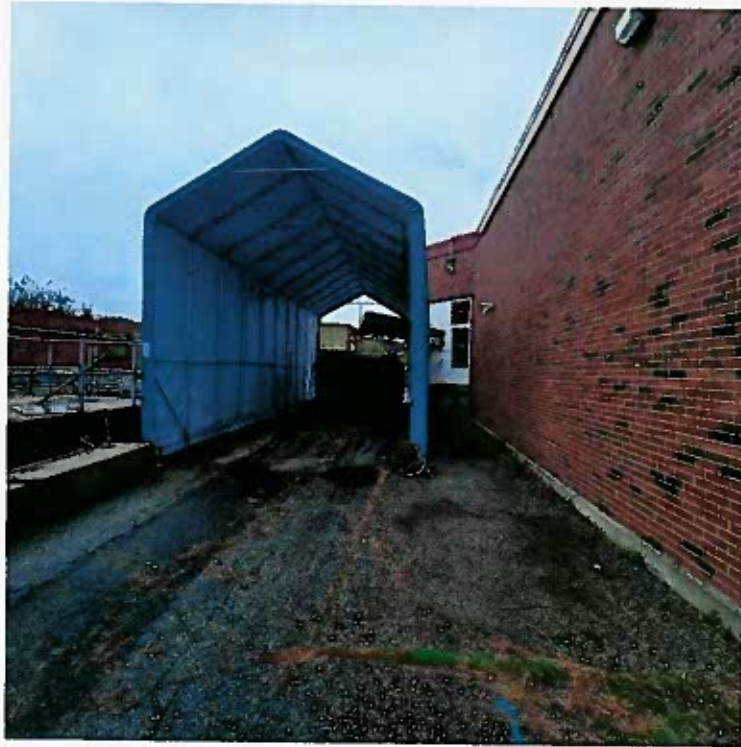


Primary Building Garage located off of Press Room

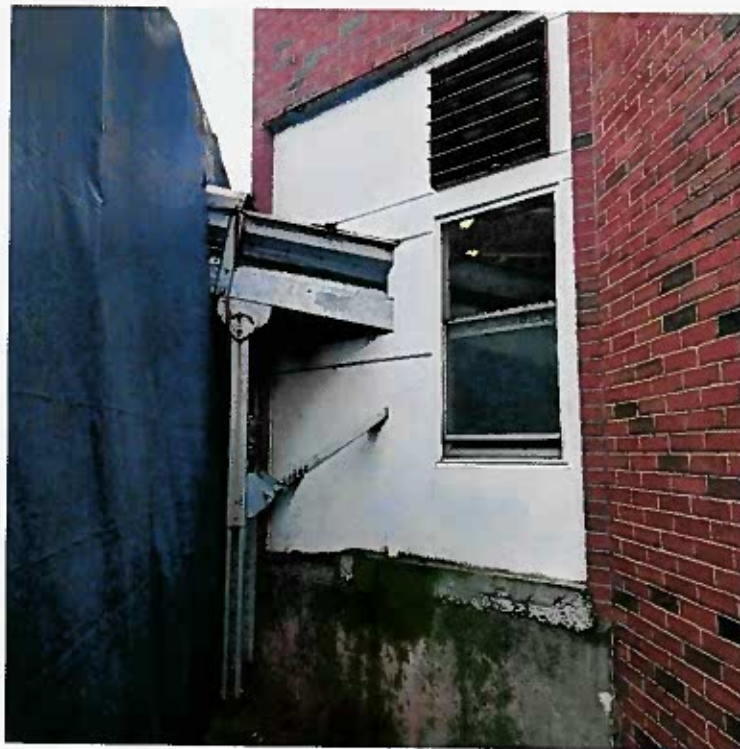


Primary Building Garage Furnace with no air filter in return air filter housing

46



Solid waste container being filled by conveyor



Solid Waste Conveyor Penetration where water is entering pump room and puddling in the floor

47



Primary building basement plumbing storage room - waste pipe leak and puddle below.



Secondary Building Main Level Decommissioned drum thickener/filter machinery

48

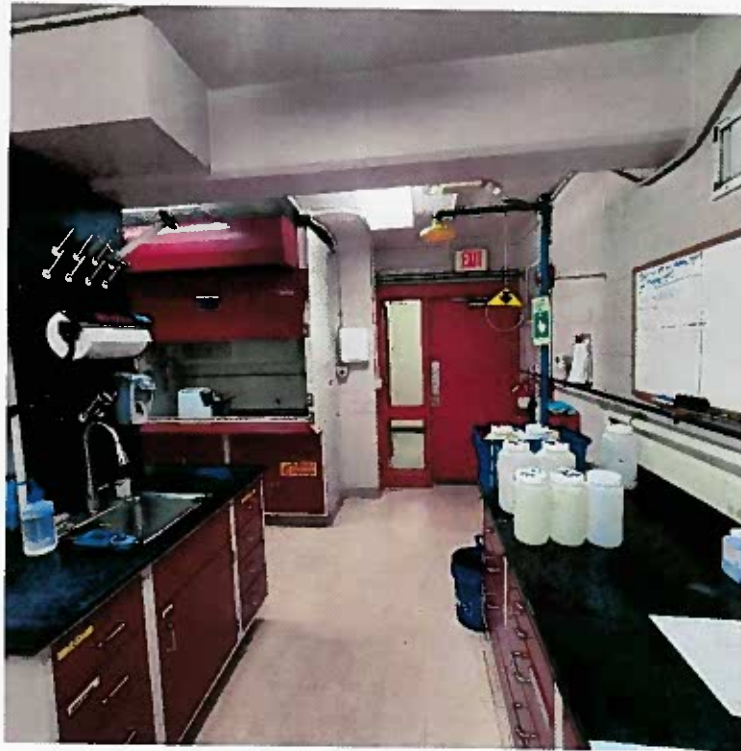


Secondary Building Main Level Air Intake Louvers and Floor Grate (Blower Make-up Air) & Generator Fuel Tank

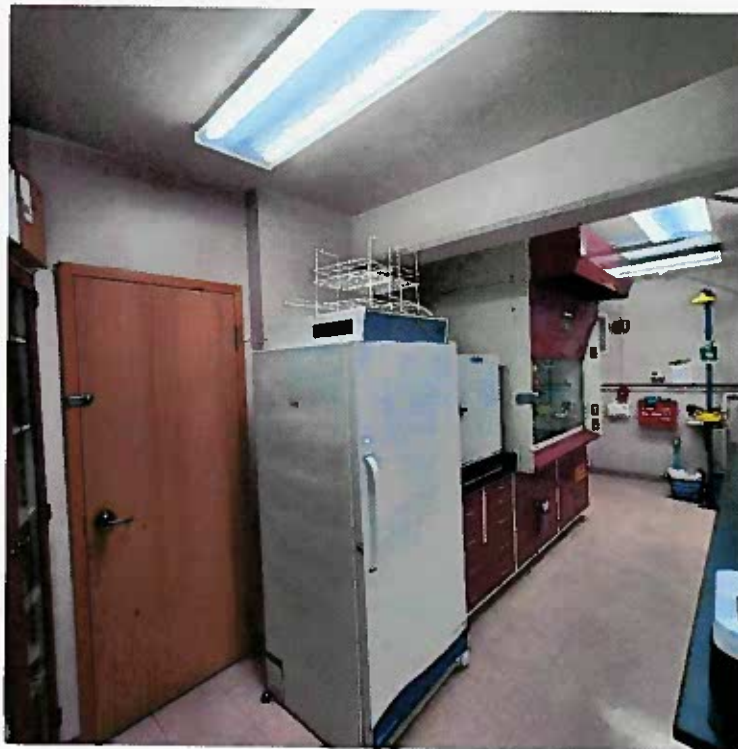


Secondary Building Main Level - Electrical Switchgear

49



Secondary Building - Upper-Level Lab



Secondary Building Upper-Level Lab - Fume Hood/Oven

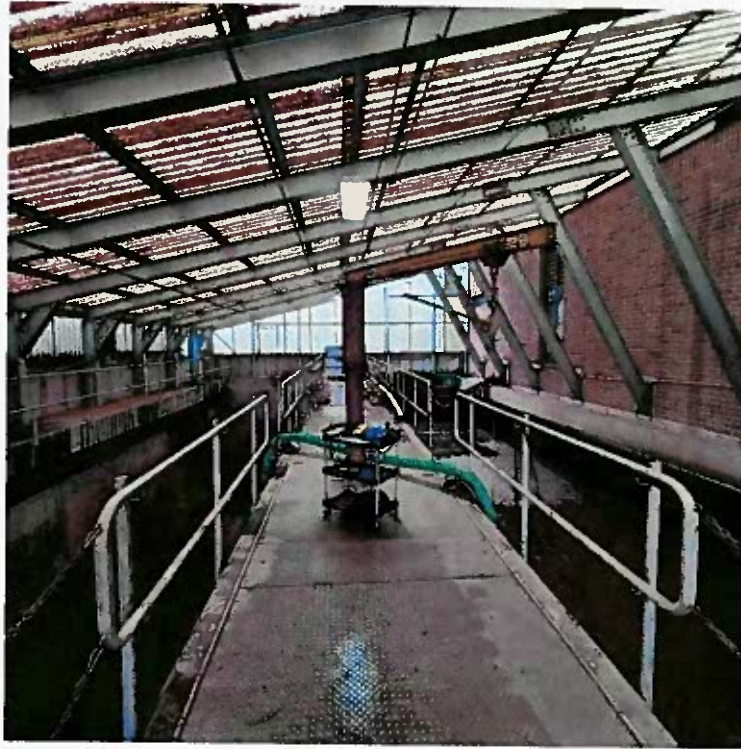


Secondary Building Basement Pumps



Secondary Building Basement Air Blowers

51

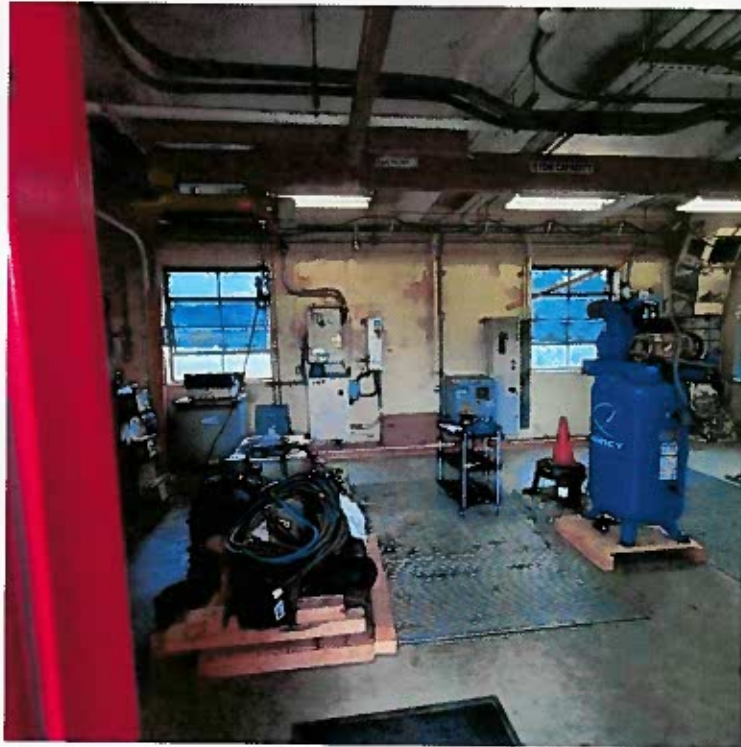


Waste Building

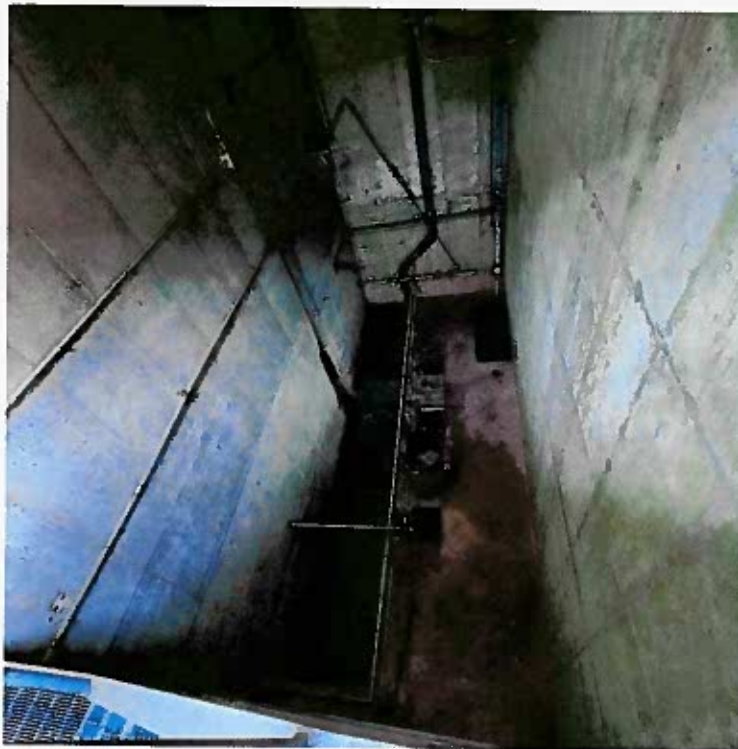


Disulfate Room

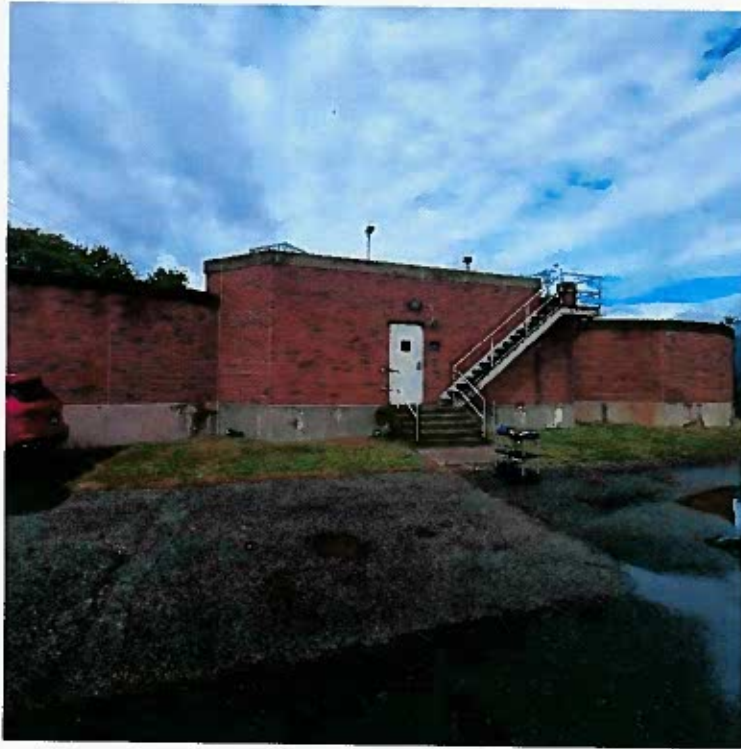
52



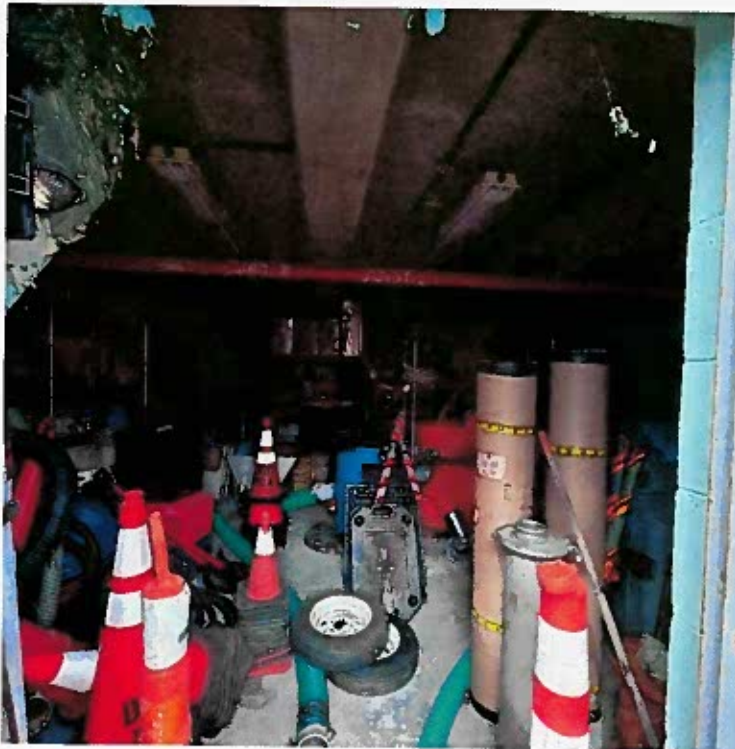
Raw Sewage Building



Raw Sewage Inlet/Screens



Digester Building/Side Tanks



Digester Building Main Level - Storage

54

RECEIVED

By Marc J. Garofalo, MPA, MCC, MCTC at 1:40 pm, Nov 17, 2025