



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

New England Regional Laboratory
Laboratory Services and Applied Sciences Division
11 Technology Drive
North Chelmsford, MA 01863-2431

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Subject: Sampling Summary Report - Arch Medical Solutions
Compliance Sampling Inspection

From: Shannon Shea, Inspector, Field Services Branch (FSB)
Laboratory Services and Applied Science Division (LSASD)

Reviewed By: Jerome Keefe, FSB Investigations Team Leader
LSASD

To: Todd Borci, Manager, Water Compliance Section 1
Enforcement and Compliance Assurance Division (ECAD)

CC: Jack Melcher, Inspector, Water Compliance Section 1
ECAD

I. Facility Information

- A. Facility Name: Arch Medical
- B. Facility Location: 35 Woodworkers Way, Seabrook, NH
- C. Facility Contact(s): Craig Michaud, Director of Engineering, (603)760 1532
Eola Saucier, Downstream Process Manufacturing Engineer
- D. NPDES ID Number: NHPIU0022

II. Background Information

- A. Date and time of inspection: 02/14/2023
Facility entrance: 0900
Facility exit: 1200
- B. Weather Conditions: Sunny, approximately 40° F
- C. US EPA Representative(s): Shannon Shea, William Sommer, Jack Melcher, Damian Bednarz
- D. State/Local Representative(s): Mario Leclerc, Town of Seabrook, Industrial Pretreatment
Manager
- E. Federally Enforceable Requirements
Covered During the Inspection: 40 CFR 403, 40 CFR Part 433.17
- F. Previous Enforcement Actions: N/A

III. Disclaimer

Unless otherwise noted, this report describes conditions at the facility/property as observed by EPA inspector(s), and/or through records provided to and/or information reported to EPA inspector(s) by facility representatives and as understood by the inspector(s). This report may not capture all operations or activities ongoing at the time of the inspection. This report does not make final determinations on potential areas of concern. Nothing in this report affects EPA's authorities under federal statutes and regulations to pursue further investigation or action.

IV. Type and Purpose of Inspection

US EPA Region 1 representatives Jack Melcher, Damien Bednarz, Shannon Shea, and William Sommer (the “EPA inspection team”) conducted an announced National Pollutant Discharge Elimination System (NPDES) industrial user (IU) pretreatment sampling inspection at Arch Medical, a privately-owned industrial facility located in Seabrook, New Hampshire (“the facility”).

The purpose of the inspection is to collect wastewater samples and assess the facility’s compliance with the EPA general pretreatment regulations in 40 CFR 403, the applicable EPA categorical pretreatment standards in 40 CFR Part 433.17 (See Section 10), and applicable provisions including but not limited to industrial local limits in the facility’s industrial discharge permit (IDP).

V. Facility Description

Arch Medical is a partner company to leading original equipment manufacturers for precision machining, contract manufacturing, and supply related integration. Arch Medical specializes in the production of orthopedic surgical instruments, surgical implants, diagnostics equipment components, and one-of-a-kind surgical devices. Arch Medical employs approximately 160 employees at the Arch Medical Solutions - Seabrook location. The facility has 3 operations shifts Monday through Friday and one operation shift on weekends.

Arch Medical Solutions – Seabrook consists of three buildings. The first facility building is located at 130 Ledge Road and consists of office space and a small volume (“made to order”) production line. No industrial wastewater is discharged to the Town from 130 Ledge Road. The second facility building is located at 15 Woodworkers Way and consists of office space and large volume instrument machining. Liquid waste from 15 Woodworkers is sent to an onsite evaporator then removed and disposed of by a third party. At the time of the inspection the evaporator was nonfunctional due to a fire and waiting on parts to be fixed. No wastewater is discharged to the town from 15 Woodworkers Way. The third facility building is located at 35 Woodworkers Way and consists of production of large volume instruments and implants. Wastewater flows to the facilities two-stage neutralization treatment system and discharges treated industrial wastewater to the Town of Seabrook, NH, POTW (NPDES ID No. NH0101303). The Town has an activated-sludge wastewater treatment facility with a design flow of 1.8 million gallons per day.

VI. Inspection

Jack Melcher announced the inspection to the Facility on February 7, 2023. USEPA inspection team Jack Melcher, Damian Bednarz, Shannon Shea, and William Sommer arrived at the facility at approximately 09:00 on February 14, 2023.

VI.A. Opening Conference

An opening conference was held with the USEPA representatives and facility representatives Dawn Frazer, General Manager; Steven Flynn, Director of Operations; Craig Michaud, Director of Engineering; and Eola Saucier, Downstream Process Manufacturing Engineer. I presented credentials and explained the purpose of the wastewater sampling inspection.

VI.B. Facility Wastewater Sampling Background

Wastewater sampling is performed at 35 Woodworker's Way where the two-stage neutralization system discharges into a sink. The Facility shares the building with their “landlord” Marco Rubber, a rubber O-ring manufacturer. Marco Rubber does not discharge to the sink, or any prior operations connected to the

two-stage neutralization system. Shared piping and combination of effluent between the Facility and Marco Rubber occurs after the sink drains into buried piping at an unknown point below the building.

The Facility performs grab samples (and not composite samples) for metals due to low flow and the inability to configure an automated sampler. The Facility does not collect composite samples at the manhole and pumping station outside of the building due to the presence of flows from Marco Rubber.

VI.C. Facility Inspection

Mr. Leclerc, Mr. Michaud, and Ms. Saucier led the EPA inspection team on a tour of 35 Woodworkers Way beginning at 09:45. The tour began in the wastewater treatment room and an adjacent utility room. Piping from the neutralization system runs through the wall of the wastewater treatment room and drains into a sink located in the utility room. The piping consists of one 2-inch diameter plastic pipe and one 0.5-inch diameter plastic pipe, both labeled “treated discharge to town sewer” (photo 1).

Mr. Melcher inquired about a white plastic cube located on the 0.5-inch diameter pipe, facility representatives said it is a flow meter that is recorded electronically, and the flow data must be downloaded to a computer to read since there is no in-situ flow data visible on the meter. I requested flow volume for 10:00 and 10:45. Split samples were denied by Ms. Saucier and Mr. Michaud.

The EPA sampling team (Shannon Shea, and William Sommer) set up a bucket collection system at 09:55 to catch flow from the pipes labeled “treated discharge to town sewer” before draining into the sink due to low flow. Mr. Melcher and Mr. Bednarz continued the facility inspection with facility representatives while the EPA sampling team monitored flow to the collection system. Sample collection began at 10:28 and completed at approximately 10:50. Bubbles were present on the surface of the flow collected inside the bucket. Sample containers had a slippery film on the outside of the bottle from sample collection (photo 2).

VI.C. Closing Conference

At approximately 11:50, the EPA inspection team and facility representatives Mr. Leclerc, Ms. Frazer, Mr. Michaud, and Ms. Saucier conducted a closing conference. EPA Inspector Shea requested the totalizer flow data for 10:00 and 10:45 from Ms. Saucier. Ms. Saucier stated that she would download the data and send it via email.

EPA inspectors departed at 12:00.

VII. Wastewater Sampling

The sampling activities were conducted in accordance with the Standard Operating Procedure for the Collection of Chemical and Biological NPDES Water and Wastewater Samples (*FSBSOP-NPDESWater#*). The EPA sampling team collected grab samples (“Arch01”) for the analysis of total metals, pesticides & polychlorinated biphenyls (PCBs), base/neutral acid extractables (BNAs), total cyanide, and volatile organic compounds (VOCs). Duplicate samples (“Dup01”) were collected for each analysis during the sampling inspection. An instantaneous grab sample was collected for the in-situ measurement of pH and Total Residual Chlorine (TRC). The sample was field tested for pH using an Oakton “pHtester” pH meter and TRC using a HACH “DR300” colorimeter. The pH was 6.99 S.U. and TRC was 0.05 mg/L. Between 10:00 and 10:45 2.38 gallons were discharged from the wastewater treatment system.

The total metals sample was collected in a 250-mL HDPE container and preserved with nitric acid to attain a pH of less than 2 Standard Units (S.U.). The pesticides/PCBs samples were collected in 1-liter amber jars with no preservative added. The BNAs samples were collected in 1-liter amber jars with no preservative added. The total cyanide sample was collected in a 250-mL HDPE container and preserved with sodium

hydroxide to attain a pH of above 12 S.U. Total cyanide was also preserved with ascorbic acid due to the presence of chlorine. The VOC samples were collected in 40-mL amber vials and preserved with hydrochloric acid to attain a pH of less than 2 S.U. After collection, all samples were placed in coolers with ice to maintain an internal temperature of less than 4 degrees Celsius and delivered to the to the EPA New England Regional Laboratory in North Chelmsford, MA to be analyzed.

VIII. EPA Sampling and Analytical Results

The table below provides a summary of the laboratory analytical results and field parameters collected during the inspection. For a full list of compounds analyzed for each parameter and their results, refer to the laboratory reports that are attached to this inspection report (Attachments A-E).

Table 1: Summary of Arch Medical, 02/14/23 Inspection

Sample #	Sample Date and Time	Sample Type	pH (S.U.)	TRC (mg/L)	Analytical Results (mg/L unless otherwise noted)		Pretreatment Standards for 40 CFR 433.17	
							Daily Maximum (mg/L)	Monthly Average (mg/L)
Arch 01	2/14/23	Grab	6.99	0.05	Total Cyanide	ND	1.20	0.65
		Composite			BNAs ^{1, 2}			
	N-nitrosodimethylamine		0.015	2.13	N/A			
	Benzyl Alcohol		0.0049					
	Bis(2-ethylhexyl)phthalate	0.042						
	Total Metals ³							
	Cadmium	ND	0.11	0.07				
	Chromium	0.077	2.77	1.71				
	Copper	0.12	3.38	2.07				
	Lead	ND	0.69	0.43				
Nickel	0.06	3.98	2.38					
Silver	ND	0.43	0.24					
Zinc	0.07	2.61	0.65					
Dup 01	2/14/23	Grab	N/A	N/A	Total Cyanide	0.083	1.20	0.65
					BNAs ^{1, 2}			
	N-nitrosodimethylamine	0.0048	2.13	N/A				
	Bis(2-ethylhexyl)phthalate	0.034						
	Total Metals ³							
	Cadmium	ND	0.11	0.07				
	Chromium	0.077	2.77	1.71				
	Copper	0.12	3.38	2.07				
	Lead	ND	0.69	0.43				
	Nickel	0.059	3.98	2.38				
Silver	ND	0.43	0.24					
Zinc	0.072	2.61	0.65					

Notes:

1: Compounds that were analyzed but not listed in this table are Not Detected above Reporting Limit (ND).

2: Compounds listed are detected Total Toxic Organics (TTO) subject to the Metal Finishing Point Source standards under 433.17.

3: Total metals within the pollutants of concern under the 40 CFR 433.17.

IX. Appendices

A: Photos

Photo 1: Utility room adjacent to facilities wastewater treatment room. Sample collected from bucket collection system located at the end of grey pipes labeled “treated discharge to town sewer”.



Photo 2: Bucket collection system located inside sink of utility room. Note: presence of bubbles on surface.



X. Attachments

A: Laboratory Report for BNAs

Author: LSASD Laboratory Services Branch

Pages: 19

B: Laboratory Report for Metals

Author: LSASD Laboratory Services Branch

Pages: 9

C: Laboratory Report for Pesticides and PCBs

Author: LSASD Laboratory Services Branch

Pages: 14

D: Laboratory Report for VOAs

Author: LSASD Laboratory Services Branch

Pages: 22

E: Laboratory Report for Total Cyanide

Author: LSASD Laboratory Services Branch

Pages: 8

End of Report