



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO ATTENTION OF
ECW-15J

VIA ELECTRONIC MAIL

Daniel Langguth, Wastewater Superintendent
City of Crystal Lake
100 West Woodstock Street
Crystal Lake, Illinois 60014
dlangguth@crystallake.org

Subject: April 25 to 27, 2023, Pretreatment Compliance Inspection Report for the City of Crystal Lake, Illinois

Dear Mr. Langguth:

Please find enclosed a copy of the inspection report generated as a result of the pretreatment compliance inspection of the City of Crystal Lake, Illinois, conducted by the U.S. Environmental Protection Agency from April 25 to 27, 2023. The purpose of the inspection was to conduct a review of the City's pretreatment program implementation. During the inspection, EPA observed several areas of concern; these are listed in the enclosed report. Please provide a written response to the areas of concern identified in the report within 30 days. In your response, please include a description of actions taken to correct any issues documented in the inspection report. Your response should be submitted electronically to ellens.newton@epa.gov and r5pretreatment@epa.gov. Where it is infeasible to submit electronically, you may mail the information to:

Newton Ellens, Water Enforcement and Compliance Branch, EPA Region 5
77 W. Jackson Blvd. (ECW-15J)
Chicago, Illinois 60604-3590

If you have any questions or concerns regarding this letter, or the inspection report, please contact Mr. Ellens at (312) 353-5562 or at ellens.newton@epa.gov.

Sincerely,

**MOLLY
SMITH**

Digitally signed by
MOLLY SMITH
Date: 2023.06.22
17:37:30 -05'00'

Molly Smith
Section 1 Supervisor
Water Enforcement and Compliance Assurance Branch

Enclosure

Pretreatment Compliance Inspection: Crystal Lake, Illinois

Control Authority Name and Address

City of Crystal Lake
100 West Woodstock Street
Crystal Lake, Illinois 60014

Responsible Official

Daniel Langguth, Wastewater Superintendent

Inspection Participants

City of Crystal Lake

Daniel Langguth, Wastewater Superintendent
Michael Magnuson, Director of Public Works and Engineering¹
Michael Wisniski, Public Works Manager
Emily Sitkie, Public Works Analyst
Kelly Olbrich, Administrative Assistant²

Baxter and Woodman

Jennifer Sorensen, Assistant Environmental Department Manager

EPA

Newton Ellens, Pretreatment Program Manager
Sangsook Choi, Environmental Engineer

Inspector:

Ellens,
Newton

Inspector Signature: _____

Digitally signed by Ellens,
Newton
Date: 2023.06.23
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Approver Name & Title:

MOLLY
SMITH

Approver Signature _____

Digitally signed by
MOLLY SMITH
Date: 2023.06.22
17:37:57 -05'00'

¹ Mr. Magnuson was only present for a brief time during the opening interview.

² Ms. Olbrich was only present for the opening interview.

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SECTION 1.0: INTRODUCTION

The U.S. Environmental Protection Agency (EPA) conducted a Federal Pretreatment Compliance Inspection (PCI) of the City of Crystal Lake, Illinois (Crystal Lake or City) from April 25 to 27, 2023. The purpose of the inspection was to investigate the procedures and implementation of the City's pretreatment program. The City has two National Pollutant Discharge Elimination System (NPDES) Permits. Special Condition 12 of NPDES Permit No. IL0028282 and Special Condition 11 of NPDES Permit No. IL0053457 require Crystal Lake to operate its approved industrial pretreatment program. The industrial pretreatment program was approved on June 28, 1985. EPA's inspection consisted of:

1. Review of requested submittals prior to on-site inspection;
2. Interviews and discussion with Crystal Lake staff and City contractor staff;
3. Industrial User (IU) file reviews; and
4. A site visit at one IU: Big Beam Emergency Systems, Inc.

On April 25, 2023, inspectors Newton Ellens and Sangsook Choi arrived at the City of Crystal Lake, at 1100 Coventry Lane. We met Messrs. Langguth, Magnuson, and Wisniski, and Ms. Sitkie and Olbrich. EPA inspectors presented their credentials and began the inspection.

SECTION 2.0: SITE BACKGROUND AND PRELIMINARY REVIEW

Crystal Lake has two wastewater treatment plants (WWTPs): WWTP #2 and WWTP #3.

WWTP #2 has a design flow rate of 5.8 million gallons per day (MGD) and an actual flow rate of 4.6 MGD. It has the following treatment processes:

1. Primary—fine screens, grit tank, and primary clarifiers;
2. Secondary—aeration tanks and secondary clarifiers; and
3. Tertiary—sand filters.

WWTP #3 has a design flow rate of 1.7 MGD and an actual flow rate of 0.4 MGD. It has the following treatment processes:

1. Primary—mechanical bar screens, grit tank, and primary clarifiers;
2. Secondary—packed bed reactor towers, solids contact tanks, and secondary clarifiers; and
3. Tertiary—sand filters.

SECTION 3.0: SUPPLEMENTAL DATA REVIEW/INTERVIEW

A. Pretreatment Program Modification:

Previously, the Village of Lakewood, was a satellite to Crystal Lake's publicly-owned treatment works (POTW). Lakewood constructed its own wastewater treatment plant, then largely disconnected its sewer system from Crystal Lake's POTW in 2015. A few Lakewood homes are still connected to Crystal Lake's POTW.

B. Legal Authority:

According to the City, Crystal Lake has a working relationship with its Industrial Users (IUs) and has not had difficulty implementing its legal authority. However, according to the City, recent staff turnover at Werner Manufacturing has resulted in compliance issues. Crystal Lake issued Notices of Violation for ammonia exceedances and failure to notify the POTW about effluent limit exceedances. Through meeting with Werner Manufacturing representatives, Crystal Lake was able to resolve these issues, and bring the IU back into compliance.

C. IU Characterization:

Crystal Lake's definition of a significant industrial user (SIU) is similar to the definition written in 40 C.F.R. § 403.3(v).

Crystal Lake may determine that a categorical IU (CIU) is a non-significant CIU (NSCIU) under 40 C.F.R. § 403.3(v)(2). However, Crystal Lake has not determined that any of its CIUs are NSCIUs.

Crystal Lake conducted a comprehensive industrial user survey in 2021. Crystal Lake mailed surveys to businesses in its sewer shed as part of the survey. Crystal Lake also conducted drive-bys in industrial parks. Crystal Lake screened preliminary survey results. In cases where the results showed a need for further scrutiny, Crystal Lake conducted site inspections. Crystal Lake documented the results of its industrial user survey in a GIS database and inspection memos.

Crystal Lake reviews building applications, and occupancy certificates for incoming businesses. If Crystal Lake believes a business may be subject to pretreatment standards, the City will submit an IU survey to that business. Upon review, Crystal Lake determines if any of these businesses should have IU permits.

Crystal Lake requires IUs to notify the City of substantial (20% or more) changes in discharge through permit requirements. The City also checks for substantial discharge changes during annual site inspections.

Currently, Crystal Lake has three SIUs. These SIUs are also CIUs.

D. Hauled Waste:

Currently, Crystal Lake does not accept hauled waste. Under Crystal Lake's sewer use ordinance (SUO), septic waste is prohibited. But the City may accept industrial waste, per the Superintendent's discretion. Crystal Lake stated that it would need a dedicated anaerobic digester before it could accept hauled industrial waste.

E. Application of Pretreatment Standards and Requirements

Crystal Lake has local limits for the following pollutants:

- Ammonia-nitrogen
- Arsenic
- Barium
- Cadmium
- Chlorides

- Hexavalent chromium
- Total chromium
- Copper
- Cyanide
- Fluoride
- Iron
- Lead
- Manganese
- Molybdenum
- Mercury
- Nickel
- Phenols
- Selenium
- Silver
- Sulfate
- Zinc
- Fats, oils, and grease (FOG)
- Total suspended solids (TSS)
- Total phosphorous

EPA last approved Crystal Lake's local limits on September 28, 2022. The most stringent criteria for the local limits are chronic and acute water quality criteria.

Over the last two years, ammonia and biochemical oxygen demand (BOD) loadings have increased in WWTP #2's influent. Currently, ammonia and BOD loadings are about 60% of WWTP #2's capacity. Crystal Lake is concerned, because if these loadings rise to 70%, then the Illinois Environmental Protection Agency (IEPA) would require a critical review of Crystal Lake's NPDES permit. So Crystal Lake is searching for the source of the increased ammonia and BOD.

NPDES Permit IL0028282 (for WWTP #2) has barium effluent limits. Barium comes from Crystal Lake's deep drinking water wells (backwash). Crystal Lake uses alum to control barium.

NPDES Permit IL0053457 (for WWTP #3) has effluent limits for dichlorobromomethane and chlorine residual. Dichlorobromomethane is a byproduct of chlorination. Crystal Lake may use bleach to disinfect its sand filters and/or activated sludge. Crystal Lake is required to test its effluent for dichlorobromomethane and chlorine residual when it uses bleach.

NPDES Permit IL0053457 also has effluent limits for peracetic acid. Crystal Lake uses peracetic acid for disinfection (an alternative to bleach).

F. Compliance Monitoring:

Crystal Lake determines adequate IU monitoring frequencies (i.e., sampling, inspection, and reporting frequencies) by reviewing sample data results and annual site inspection reports.

During each IU inspection, Crystal Lake staff review the latest inspection report with IU staff and determine if there were any operational updates or proposed changes. Crystal Lake staff then walk through the IU facility and inspect manufacturing, chemical storage, and pretreatment facilities. If the IU facility has a lab, Crystal Lake staff will check the lab sampling protocol and check the IU's sample analysis reports.

Crystal Lake collects samples for metals, cyanide, and organics at each IU. Crystal Lake then sends those samples to a contract laboratory for analysis. The contract laboratory has quality assurance and quality controls (QA/QC) measures in place that are documented in its lab reports.

Crystal Lake requires all SIUs to have a slug discharge control plan, so there is no need to evaluate or reevaluate whether each SIU needs a plan.

G. Enforcement:

Crystal Lake's definition of a significant noncompliance (SNC) is similar to the definition written in 40 C.F.R. § 403.8(f)(2)(viii).

Crystal Lake's enforcement response plan (ERP) does not describe the time periods in which enforcement responses will take place. However, Crystal Lake stated that it typically issues Notices of Violation (NOVs) within three days of becoming aware of IU violations.

H. Data Management/Public Participation:

Crystal Lake has provisions for confidential information in its SUO. However, Crystal Lake does not have a standard operating procedure (SOP) for handling confidential information.

No one from the public has requested to review Crystal Lake's pretreatment files. However, Crystal Lake has a system to handle public information requests under the state's Freedom of Information Act (FOIA).

Crystal Lake's pretreatment records retention plan is for the least three years.

Crystal Lake issues public notices to accommodate public participation for SUO or local limit revisions.

I. Resources:

Crystal Lake devotes 0.4 FTE to implement its pretreatment program. The City has access to auto samplers and a sampling van.

Crystal Lake's annual budget for its pretreatment program is \$75,000. According to the City, funding is expected to stay the same for the next three years.

J. Environmental Effectiveness/Pollution Prevention

Crystal Lake is investigating phosphorous sources. Crystal Lake's 2021 IU survey showed that there are no major sources of phosphorous from IUs. Most phosphorous comes from residential sources.

Currently, Crystal Lake's NPDES permits have a 1 milligram per liter (mg/L) phosphorous limit. The phosphorous limit will change to 0.5 mg/L in 2031. Currently, Crystal Lake uses alum to control

phosphorous. Under a capital improvement project, Crystal Lake will install filters to increase phosphorous control.

SECTION 4.0: FILE REVIEWS

4.1 IU Identification

IU Permit Number	IU Name	IU Type	Maximum daily flow (gallons per day, or gpd)	Average daily flow (gpd)	Visited During Audit?	Reviewer	Categorical Pretreatment Standard
F001-04	Camfil USA, Inc.	CIU	28,000	12,500	No	Newton Ellens	420 IRON AND STEEL MANUFACTURING POINT SOURCE CATEGORY;#433 METAL FINISHING POINT SOURCE CATEGORY
BB002-20	Big Beam Emergency Systems, Inc.	CIU	2,250	1,000	Yes	Sangsook Choi	433 METAL FINISHING POINT SOURCE CATEGORY
KN003-17	Werner Co.	CIU	28,000	20,000	No	Newton Ellens	433 METAL FINISHING POINT SOURCE CATEGORY

4.2 Facility Information

Camfil USA, Inc.
500 S. Main St.
Crystal Lake, Illinois 60014

Camfil USA, Inc. (Camfil) manufactures high vacuum filters, plated wires for the filters, media filter substrate, steel products, and glide packs that hold the filters. Camfil operates one metal finishing operation; it is part of the wire-mill process that consists of the pickling operation. The acid pickling operation is classified under the Iron and Steel Manufacturing Point Source Category. According to a February 6, 2017, correspondence from Crystal Lake, EPA determined that Camfil should be regulated under both 40 CFR § 433 and 40 CFR § 420.

Big Beam Emergency Systems, Inc.
290 E. Prairie St.
Crystal Lake, Illinois 60014

Big Beam Emergency Systems, Inc. (Big Beam) manufactures emergency lighting units composed of metal fabrication. The facility has a metal finishing operation that is limited to iron phosphating, cleaning, and rinsing with a three-stage washer in the Paint Department. Two of three tanks in this process discharge to the POTW. The first stage consists of an iron phosphate/detergent solution with a 2.5 -3.0 percent concentration. This first stage is removed from the facility (hauled off-site) and is not discharged to the sanitary sewer system. The second and third stage of the wash system is a fresh water rinse with a 550-gallon capacity in each stage (tank). Both stages are composed of fresh water with some carry over from the first stage. Both stages continuously discharge to the sanitary drain with a combined average daily flow of < 2,000 gallons per day. Big Beam does not have a pretreatment system. There is one sampling point (001) located inside the facility at a discharge drain in a trough at the end of the combined process for Stage No. 2 and Stage No. 3.

Werner Co.
420 East Terra Cotta Avenue
Crystal Lake, Illinois 60014

Werner Co. (Werner) manufactures and distributes steel and aluminum storage chests and truck boxes for the construction industry. Currently, steel and aluminum chests and boxes go through a metal finishing washer prior to powder coating; this system consists of alkaline cleaners, iron phosphate, aluminum conversion coating, non-chrome sealer, deionized and city water rinses.

4.3 IU Evaluation

A. Issuance of IU Control Mechanism

Statement of duration (≤ 5 years)

There is a "continuation of expired permits" provision in the Camfil, Big Beam, and Werner IU permits. This provision could allow the permit to have a duration longer than five years.

Statement of Non-transferability

The Camfil, Big Beam, and Werner IU permits each include a provisions for transferring the permit to a new owner. The provisions, however, do not require the IU to provide a copy of the existing permit to the new owner.

Applicable effluent limits (local limits, categorical standards, Best Management Practices)

For Camfil: There is a discrepancy between the industrial user flow rates described in the IU permit, and the IU flow rate data used to calculate the alternative categorical limits in the IU permit. According to the Camfil IU permit, the IU has an average daily flow rate of 12,500 gpd, and a maximum daily flow rate of 28,000 gpd. However, according to the spreadsheet used to alternative categorical limits (using the combined wastestream formula (CWF)), the total industrial flow rate is 10,800 gpd (there are three process streams—each stream has a flow rate of 3,600 gpd).

The Camfil IU permit has two alternative categorical limits for lead and zinc. The permit states that the CWF was used to calculate these limits; then these limits were multiplied by a flow weighted average (FWA) factor of 0.86. However, the lead and zinc categorical limits in the permit do not equal the alternative categorical limits multiplied by a factor of 0.86:

Pollutant	Camfil IU permit daily limit (mg/L)	CWF daily limit from spreadsheet (mg/L)	FWA factor	CWA daily limit multiplied by FWA factor (mg/L)
Lead	0.42	0.57	0.86	0.49
Zinc	N/A ³			

Pollutant	Camfil IU permit monthly limit (mg/L)	CWF monthly limit from spreadsheet (mg/L)	FWA factor	CWA monthly limit multiplied by FWA factor (mg/L)
Lead	0.26	0.32	0.86	0.22
Zinc	0.86	1.04	0.86	0.89

Self-monitoring requirements

The Camfil, Big Beam, and Werner IU permits each do not include a description of the necessary process to apply for a waiver of categorical pollutant monitoring requirements.

The Camfil, Big Beam, and Werner IU permits each require grab sampling for hexavalent chromium. However, the IU files do not include documentation of the City's determination approving grab samples for hexavalent chrome.

The Camfil and Werner IU permits, have conflicting total toxic organics (TTO) monitoring requirements. Part 2.C. of each permit states that the permittee may submit a signed and dated certification in lieu of monitoring for TTO. However, the same part of the permit requires TTO monitoring.

Recordkeeping Requirements

- The recordkeeping requirements in the Camfil and Werner IU permits do not require each IU to make records available to the City and EPA for inspection and copying. Also, these recordkeeping requirements extends the period of record retention only for matters that are the subject of special orders, or any other enforcement brought by the City. The recordkeeping requirements do not extend the period of record retention (1) during the course of any unresolved litigation regarding each IU or the City, or (2) when requested by EPA.
- The Big Beam IU permit does not require the IU retain records (1) for a minimum of three years, or (2) when requested by EPA.

B. CA Compliance Monitoring

³ The zinc local limit (1.0 mg/L) is more stringent than the daily categorical limit for zinc.

The City sample documentation for Werner did not include the method for pH analysis.

The City collected a sample for Camfil on July 22, 2020. According to the chain of custody, the field pH of the sample was 27.7.

Camfil, Big Beam, and Werner each have an approved toxic organic management plan (TOMP). Because of the TOMPs, the City does not sample and analyze the IUs' discharge for TTO.

C. CA Enforcement Activities

Crystal Lake issued a January 28, 2020, Notice of Violation to Big Beam for exceeding an ammonia local limit. Crystal Lake collected the sample on July 25, 2019, six months prior.

D. IU Compliance Status

Daily flows in the October 2022 Camfil self-monitoring report vary from 17,670 gallons to 22,050 gallons. Camfil did not submit a notice for a significant change in flow.

SECTION 5.0: INDUSTRIAL USER SITE VISIT

Big Beam Emergency Systems, Inc.
290 E. Prairie St.
Crystal Lake, IL 60614

Date of site visit: April 27, 2023

Inspection participants:

Big Beam Emergency Systems, Inc.
Joshua Gast, Production Engineer Manager
Tushar Patel, Plant Manager

City of Crystal Lake, IL
Michael Wisniski, Public Works Manager
Emily Sitkie, Public Works Analyst

Baxter and Woodman
Jennifer Sorensen, Assistant Environmental Department Manager

EPA
Newton Ellens, Pretreatment Program Manager
Sangsook Choi, Environmental Engineer

EPA, Crystal Lake, and Baxter and Woodman staff entered the Big Beam Emergency Systems, Inc. (Big Beam) facility at 9:55 a.m.

Opening Interview: Big Beam Emergency Systems, Inc. (Big Beam) staff stated the following:

- Company operation:
 - Big Beam has 23 employees.
 - The company operates one daily shift, Monday to Friday.
 - The production staff work from 6:30 a.m. to 2:30 p.m.
 - The office staff work from 8:00 a.m. to 5:00 p.m.
- The company manufactures metal emergency lighting units. Below is a process summary:
 - The manufacturing process starts with sheet steel or coil steel.
 - Mechanical presses punch steel into desired shapes (as described below).
 - Parts are welded together, as needed.
 - Parts are hung on a conveyor, then undergo:
 - An iron phosphate process (described below),
 - Oven drying
 - Powder coating,
 - Oven curing, and
 - Assembly or storage.
- Big Beam generates wastewater through an iron phosphate process. Metal parts (on a conveyor) go through a three-stage spray booth process:
 - Stage 1: Iron phosphate detergent application
 - The tank used for this stage (Tank 1) has a 1,200-gallon capacity, but operates with 1,100 gallons of iron phosphate detergent.
 - The company adds a foam reducer (GX26) to the iron phosphate detergent.
 - The iron phosphate detergent in Tank 1 is hauled off for disposal every four to six months. Progressive Environmental is the waste hauler.
 - Stage 2: First water rinse
 - The tank used for this stage (Tank 2) has a 500-gallon capacity.
 - There is a continuous flow through Tank 2.
 - The discharge from the first water rinse goes to the sewer.
 - Stage 3: Final water rinse
 - The tank used for this stage (Tank 3) has a 500-gallon capacity.
 - There is a continuous flow through Tank 3.
 - The discharge from the final water rinse goes to the sewer.
- Sewer discharge
 - The maximum discharge rate is 2,000 gallons per day; the minimum discharge rate is 300 to 400 gallons per day.
 - Wastewater is not pretreated before discharge.
- There are facility processes that use water. These processes, however, do not discharge that water to the sewer:
 - Welding:
 - The welding system includes a 300-gallon water tank for cooling.
 - The water is part of a closed system.
 - The tank is replenished every four to six months.
 - Mechanical press:
 - The process of pressing desired shapes into steel is called “drawing.”

- Two types of lubricant are mixed with water for drawing (Towerdraw A317 and Towerdraw G943). Staff typically mix three parts of water with one part oil, but the ratio varies.
- Issue with tracking incoming water:
 - Occasionally, Big Beam reports two days of raw water usage as one day. Mr. Wisniski said that he will work with Big Beam staff on how to correctly track water usage.
- Compliance Sampling
 - Semi-annual sampling: Scientific Control Labs (SCL) conducts the following procedure to collect semi-annual compliance samples:
 - Monday: SCL staff sets up compliance sampling equipment.
 - Tuesday through Thursday: SCL collects daily composite samples.
 - Monthly Sampling: Big Beam staff collects samples for phosphorous, temperature, and pH.
- Big Beam retains seven years of pretreatment records.
- Slug plan/spill potential
 - Big Beam's slug plan is dated October 2020.
 - Under the slug plan, Big Beam trains staff (1) when the plan is updated, or (2) when new staff are hired. Mr. Wisniski asked Big Beam staff to also conduct annual training. However, Mr. Wisniski did not ask Big Beam to incorporate annual training requirements into its slug plan.
 - There are two types of floor drains at the facility: (1) a trench drain for the iron phosphate process, and (2) floor drains in the wash rooms. The company keeps a drain plug near the trench drain.
 - There is a storm sewer located at an outside loading dock at the front of the building. Big Beam does not store any products outside its facility.
 - Big Beam keeps two drums of iron phosphate onsite.
 - The company keeps a spill prevention kit.
- Chemical Storage: Big Beam has an oil storage space near its powder coating line.

Walkthrough

The following areas were toured:

- Iron phosphate spray booth (Attachment I, Photos 1 to 7):
 - Metal parts are hung on an overhead conveyor. The parts are conveyed through a three-stage spray booth (iron phosphate, fresh water rinse, and final water rinse)
- Compliance sample point (Attachment I, Photo 8):
 - There is a discharge flume beside the iron phosphate spray booth. Flow is measured, and compliance samples are taken at the discharge flume.
- Empty iron phosphate barrels (Attachment I, Photo 9):
 - Eighteen empty iron phosphate barrels were stacked near the iron phosphate spray booth. These barrels were disposed at a later date.
- Laboratory (Attachment I, Photos 10 and 11):
 - There was a thermometer, pH meter, bottles of pH buffers and a sample log book in the laboratory.

- There also was a sample refrigerator in the laboratory, filled with four-ounce composite sample bottles. The bottles contained a preservative.
- Big Beam staff stated that they collect a fill a composite sample bottle once per hour. Staff usually collect no more than three bottles per sampling day. A contract laboratory composites the individual samples afterwards.
- The refrigerator temperature was 3.7°C. Crystal Lake asked if Big Beam logs the refrigerator temperature when collecting samples. Big Beam staff said no. Crystal Lake advised Big Beam to start logging the refrigerator temperature when collecting samples.
- Paint Booth
- Welding Area (Attachment I, Photo 12)
- Mechanical Press (Attachment I, Photos 13 and 14)
- Oven:
 - The oven is used to cure paint applied to parts or to dry painted parts.
- Burn-off Oven:
 - The burn-off oven is used to remove paint from conveyor hooks. The paint booth uses an electrostatic charge to draw spray paint to each part.
- Truck Dock (Attachment, Photo 15):
 - There was a stormwater drain located in a truck dock area, outside the facility. The area around the drain appeared to be clean and dry.

SECTION 6.0: SUMMARY OF FINDINGS

A. Areas of Concern

40 C.F.R. §	Site Background & Inspection Observations	Report Section
403.8(f)(5)(ii)	Crystal Lake's enforcement response plan (ERP) does not describe the time periods in which enforcement responses will take place.	3.0 G.
403.8(f)(2)(vi)(D)	Under Big Beam's slug plan, Big Beam trains staff (1) when the plan is updated, or (2) when new staff are hired. Mr. Wisniski asked Big Beam staff to also conduct annual training. However, Mr. Wisniski did not ask Big Beam to incorporate annual training requirements into its slug plan.	5.0
40 C.F.R. §	File Reviews	Report Section

403.8(f)(1)(iii)(B) (1)	There is a "continuation of expired permits" provision in the Camfil, Big Beam, and Werner IU permits. This provision could allow the permit to have a duration longer than five years.	4.3 A.
403.8(f)(1)(iii)(B) (2)	The Camfil, Big Beam, and Werner IU permits each include a provision for transferring the permit to a new owner. The provisions, however, do not require the IU to provide a copy of the existing permit to the new owner.	4.3 A.
403.8(f)(1)(iii)(B) (3)	For Camfil: There is a discrepancy between the industrial user flow rates described in the IU permit, and the IU flow rate data used to calculate the alternative categorical limits in the IU permit. According to the Camfil IU permit, the IU has an average daily flow rate of 12,500 gpd, and a maximum daily flow rate of 28,000 gpd. However, according to the spreadsheet used to alternative categorical limits (using the combined wastestream formula (CWF)), the total industrial flow rate is 10,800 gpd (there are three process streams—each stream has a flow rate of 3,600 gpd). The Camfil IU permit has two alternative categorical limits for lead and zinc. The permit states that the CWF was used to calculate these limits; then these limits were multiplied by a flow weighted average (FWA) factor of 0.86. However, the lead and zinc categorial limits in the permit do not equal the alternative categorial limits multiplied by a factor of 0.86.	4.3 A.
403.8(f)(1)(iii)(B) (4)	The Camfil, Big Beam, and Werner IU permits each do not include a description of the necessary process to apply for a waiver of categorical pollutant monitoring requirements.	4.3 A.
403.8(f)(1)(iii)(B) (1) 403.12(g)(3)	The Camfil, Big Beam, and Werner IU permits each require grab sampling for hexavalent chromium. However, the IU files do not include documentation of the City's determination approving grab samples for hexavalent chrome.	4.3 A.
403.8(f)(1)(iii)(B) (4)	The Camfil and Werner IU permits, have conflicting TTO monitoring requirements. Part 2.C. of each permit states that the permittee may submit a signed and dated certification in lieu of monitoring for TTO. However, the same part of the permit requires TTO monitoring.	4.3 A.
403.8(f)(2)(vii)	The City sample documentation for Werner did not include the method for pH analysis.	4.3 B.
403.8(f)(2)(vii)	The City collected a sample for Camfil on 7-22-20. According to the chain of custody, the field pH of the sample was 27.7.	4.3 B.
403.12(j)	Daily flows in the October 2022 Camfil self-monitoring report vary from 17,670 gallons to 22,050 gallons. Crystal Lake stated that it requires IUs to notify the City of substantial (20% or more) changes in discharge through permit requirements. Camfil did not submit a notice for a significant change in flow.	4.3 D.

B. Program Recommendations

40 C.F.R. §	File Reviews	Report Section
403.12(g)(2)	Crystal Lake issued a January 28, 2020, Notice of Violation to Big Beam for exceeding an ammonia local limit. The sample was collected on July 25, 2019, about six months beforehand. Crystal Lake's enforcement response plan (ERP) does not describe the time periods in which enforcement responses will take place. However, Crystal Lake stated that it typically issues NOVs within three days of becoming aware of IU violations.	4.3 C.
403.14	Crystal Lake has provisions for confidential information in its SUO. However, Crystal Lake does not have a standard operating procedure (SOP) for handling confidential information.	3.0 H.
	Camfil, Big Beam, and Werner each have an approved TOMP. Because of the TOMPs, the City does not sample and analyze the IUs' discharge for TTO. EPA, however, recommends that the City collects and analyzes TTO samples from each metal finisher at least once per IU permit term.	4.3 B.