CLEAN WATER ACT COMPLIANCE EVALUATION INSPECTION REPORT
U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 5

Purpose: Pretreatment Industrial User (IU) Inspection

Facility: Pentair Filtration Solutions
1040 Muirfield Dr.
Hanover Park, Illinois 60133

Date of Inspection: June 21, 2023

U.S. EPA Representatives: Newton Ellens, Pretreatment Program Manager, 312-353-0724
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Facility Representatives: Gurinderjit (Gary) Singh, Operations Leader, 630-307-3081
Sammy Legarija, Maintenance Manager

Environmental Inc. Representative: John Karrow, Associate

Report Prepared by: Jennifer Bush, Environmental Scientist, 312-886-0879
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Inspector Signature: Bush, Jennifer Digitally signed by Bush, Jennifer Date: 2023.08.02 12:11:23 -05'00'

Report Date: 8/2/2023

Approver Name and Title: Molly Smith, Section 1 Supervisor, Water Enforcement and Compliance Assurance Branch

Approver Signature: MOLLY SMITH Digitally signed by MOLLY SMITH Date: 2023.08.09 17:02:08 -05'00'

Approval Date: 8/9/2023

Purpose of Inspection:

The purpose of the inspection performed by the U.S. Environmental Protection Agency (USEPA) was to describe and document compliance with the Clean Water Act (CWA) and associated pretreatment regulations with respect to Pentair Filtration Solutions (Pentair or Facility), located at 1040 Muirfield Dr. Hanover Park, Illinois 60133.

Background:

Pentair is a water filter cartridge production facility located in Hanover Park, Illinois. The Village of Hanover Park does not run a Federally approved pretreatment program. In addition, the Illinois Environmental Protection Agency (IEPA) does not run an approved State pretreatment program. Therefore, the USEPA is both the Approval Authority and the Control Authority for the Pentair facility, as defined in 40 C.F.R. § 403.3(c) and (f).

Pentair submits periodic monitoring reports to the U.S. Environmental Protection Agency, Region 5 office.

Pentair provided the USEPA with the most recent Water Pollution Control Permit issued from the State of Illinois (IEPA Permit Number 2017-EP-62037, which has an effective date of May 8, 2017, and an expiration date of April 30, 2022), and the Village of Hanover Park Significant Industrial Discharge Permit (Permit No. 00008-14, which has an effective date of November 1, 2019, and an expiration date of November 1, 2024).

Inspection:

Opening Conference

Jennifer Bush and Newton Ellens of the USEPA arrived at the facility on June 21, 2023, at 9:45 AM CDT and were met at the front desk by Gurinderjit (Gary) Singh (Operations Leader). Jennifer Bush and Newton Ellens showed their credentials and began the Opening Conference. At various parts of the Opening Conference, Gary Singh was joined by Sammy Legarija (Maintenance Manager) and John Karrow (Environmental Inc., Associate – via telephone). The following information was provided to USEPA by Pentair and Environmental Inc. staff:

- General Plant Information:
    - The Hanover Park, Illinois Pentair facility opened in 2006.
    - In 2006, Pentair moved into an existing building. The aluminum forming process was added to the building in 2006 when Pentair's lease began.
    - There are approximately 240 employees.
    - The Facility operates five days a week, twenty-four hours a day, but will add overtime on the weekends as needed by product demand.
    - Holidays are the only scheduled shut-down days.
    - There are no seasonal production changes; the Facility has steady business throughout the calendar year.
- Manufacturing Process:

- Pentair forms water filter cartridges and systems with aluminum. The staff estimate approximately 16,000 cartridges are produced in a 24-hour day.
- The facility receives plastics and aluminum material, which then is combined with additives and minerals, such as carbon and phosphate, to be stretched and formed into various shapes/pieces for cartridges.
- There are 2 different machines/process lines on site for the aluminum forming process. The first line has aluminum coils, which start as discs, and the coil is cut into pieces using a coolant and water mix. The second line has aluminum coil which begins as pre-cut pieces. Both lines include an aluminum wash area.
    - The aluminum in line one is cut with a coolant and water mixture as it moves through the process line. The mixture of coolant and water is kept within tanks below the process line and is reused until it is replaced, approximately once a month.
    - The wash water from both lines is discharged into floor drains and go through a series of four (4) underground pits. The first three pits trap oil and catch sediment, and the fourth pit, referred to by the Facility as the ejection pit, is connected to a lift station that sends the process water to the Village of Hanover Park sewer line.
- Pentair said the Facility typically gets shipments of material in 3 times per week. This was estimated the aluminum coil line (line 1) is 85% of each shipment, and the aluminum pieces line (line 2) is 15% of each shipment.
- Pentair estimates about 1 coil is completed per shift on each line, or a total of 3 coils per 24 hours. This would be approximately 9,000 pounds of aluminum coil per 24 hours.

- Waste Generation:
    - Any aluminum scraps from either of the lines are hauled off site by United Scrap.
    - The aluminum coil line (85% of production) has a continuous discharge through the floor drains that lead to the series of four (4) pits.
    - There is no flow meter at any of the discharge locations. There are two (2) meters in the Sprinkling Room which measure water intake. The Environmental Inc. (John Karrow) uses these meters to estimate flow when collecting samples. The Facility believes there is little to no loss of water throughout the process line.
- Pretreatment:
    - Process wash water is generated by the Facility's aluminum forming line (Line 1 and Line 2) and is discharged to floor drains that lead to a series of four (4) pits. Pentair uses the first 3 pits in the series to trap oil and catch sediment prior to the 4th pit, which has a lift station pump to discharge to the Village of Hanover Park sewer. There is no pretreatment process besides the physical separation.
    - John Karrow will notify Pentair approximately once a year to alert the Facility that the three pits need to be cleaned out for oil and sediment. Beaver Oil is used for the cleaning and hauling of the pit material.
- Wastewater Sampling:
    - Pentair coordinates timing with Environmental Inc., who collects all samples.
    - Pentair staff will open pit and manhole for Environmental Inc., but will not observe the sample collection process.

- The Facility's samples are collected by John Karrow, an Associate at the Environmental Inc. John Karrow collects two samples, the first being at the manhole located outside (for the Village) and the second location is at the ejector basin (pit 4) for the process wash water.
- Pentair has Environmental Inc. complete quarterly sampling.

Plant Walk Through

Pentair staff showed USEPA inspectors the following during the plant walkthrough:

- Sprinkling Room:
  - Houses the flow meters (2) for water intake.
  - John Karrow combines the reading of the two flow meters prior to sampling and after sampling to calculate the flow.
- Sampling Locations:
  - Pit Series
    - Only the covers of the 4 pits are visible above ground.
    - The drains going into the pits carrying the process water are underground and not seen. The are pipes connected to and leaving the first three pits are for ventilation only.
    - The ejector pit, pit 4, is where John Karrow collects the sample for the aluminum forming line.
  - Village of Hanover Park Manhole
    - Manhole is located outside on the east side of the building.
- Aluminum Forming Line 1:
  - Process shows aluminum coil being punched into can shapes with coolant and water mixture.
  - The mixture is recycled and hauled off site approximately once a month.
  - Once coils are punched into cans, they go through a wash cycle. The wash water is discharged through the floor drains which lead to the pit series.
- Generation of Wastewater:
  - As aluminum coil is moving through the two process lines, it is cooled with a mixture of coolant and water. As noted above, this mixture is reused for approximately one month before being replaced. This is hauled offsite by Beaver Oil. USEPA did not observe wastewater being hauled during the inspection.
  - The wash water used to wash the cut aluminum coils discharges into the floor drains which lead to the pit series.

Records Review

USEPA staff reviewed a sample analysis laboratory report from the most recent quarterly monitoring, with a reporting period of January – March 2023. The samples were collected on March 7, 2023.

Closing Conference

USEPA and Pentair Staff discussed the following:

- USEPA briefly reviewed recent quarterly samples from Pentair. Based on the quarterly sampling, Pentair is not including Total Toxic Organics (TTOs) in the sample analysis, and there is not a submission of the full lab analytical report (i.e. parameters are listed, but results are not shown).
- USEPA requested information regarding how the permit limits were calculated for the applicable categorical regulations. At the time of issuing this report, USEPA has not received information regarding permit limit calculations.
- USEPA requested these documents to be provided by Pentair following the inspection:
    - All previous state of Illinois permits since facility opening (2006);
    - All previous state of Illinois permit applications since facility opening (2006);
    - Most recent Beaver Oil hauling manifest;
    - Full laboratory reports from most recent quarterly sampling; and
    - Information on missing results for TTOs.

USEPA staff completed the Closing Conference and left the facility at 12:15 PM CDT.

Post-Inspection Activities

Gary Singh contacted Jeremy Cantrell, EHS Manager, who provided the following documents to USEPA via email:

1. Aluminum Forming Wastewater Discharge Permit No. 201-EP-62037
2. HP SPCC Plan
3. Village of Hanover Park – SIU Discharge 00008-14 10312019
4. Manifests for Circon Environmental, Beaver Oil Co. from the last two calendar months
    a. 000003044150-IN
    b. 000003052539-IN
    c. 000003053028-IN
    d. 000003053327-IN
    e. 000003054355-IN
    f. 000003055056-IN
    g. 000003055616-IN

Gary Singh contacted John Karrow, Environmental, Inc. Associate, who provided the following document to USEPA via email:

1. Suburban Laboratories, Inc. Report: Rpt_2303707_Final_v4

Attachments

A. Photo Log: Photos taken during U.S. Environmental Protection Agency Inspection of Pentair Filtration Solutions (June 21, 2023)

Pentair Filtration Solutions
USEPA Inspection June 21, 2023
All photos taken by Newton Ellens, Pretreatment Coordinator, USEPA
Camera: Ricoh WG-4 SR Adventure Proof

1: RIMG0078
Description: Flow Meter 1
Location: Sprinkler Room at Pentair Facility
Date/Time: June 21, 2023

2: RIMG0079
Description: Overview of Flow Meter 1 Area
Location: Sprinkler Room at Pentair Facility
Date/Time: June 21, 2023

3: RIMG0080
Description: Flow Meter 2 (with camera flash)
Location: Sprinkler Room at Pentair Facility
Date/Time: June 21, 2023

4: RIMG0081
Description: Overview of Flow Meter 2
Location: Sprinkler Room at Pentair Facility
Date/Time: June 21, 2023

5: RIMG0082
Description: Second photo of Flow Meter 2 (no camera flash)
Location: Sprinkler Room at Pentair Facility
Date/Time: June 21, 2023

6: RIMG0083
Description: Pits 1 – 3 of pit series (oil separation and sediment collection pits)
Location: Pentair Facility
Date/Time: June 21, 2023

7: RIMG0084
Description: Pit 4, Ejector Pit (last in the series). Pit 3 shown in background.
Location: Pentair Facility
Date/Time: June 21, 2023

8: RIMG0085
Description: Manhole using for sample collection for Village
Location: Outside of Pentair Facility
Camera Direction: Northwest
Date/Time: June 21, 2023

9: RIMG0086
Description: Overview of aluminum can wash area
Location: Pentair Warehouse
Date/Time: June 21, 2023

10: RIMG0087
Description: Aluminum can washing area, connected to floor drain leading to the pit series
Location: Pentair Warehouse
Date/Time: June 21, 2023