



STATE OF DELAWARE

**DEPARTMENT OF NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL**

DIVISION OF WATER

RICHARDSON & ROBBINS BUILDING

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**COMMERCIAL &
GOVERNMENT SERVICES:
WASTEWATER,
STORMWATER, &
BIOSOLIDS
MANAGEMENT**

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Public Notice Fact Sheet

July 15, 2026

Baltimore Aircoil Company, Inc.
1162 Holly Hill Road
Milford, Delaware 19963

State Permit No. WPCC 3022E/94
NPDES Permit No. DE0051047

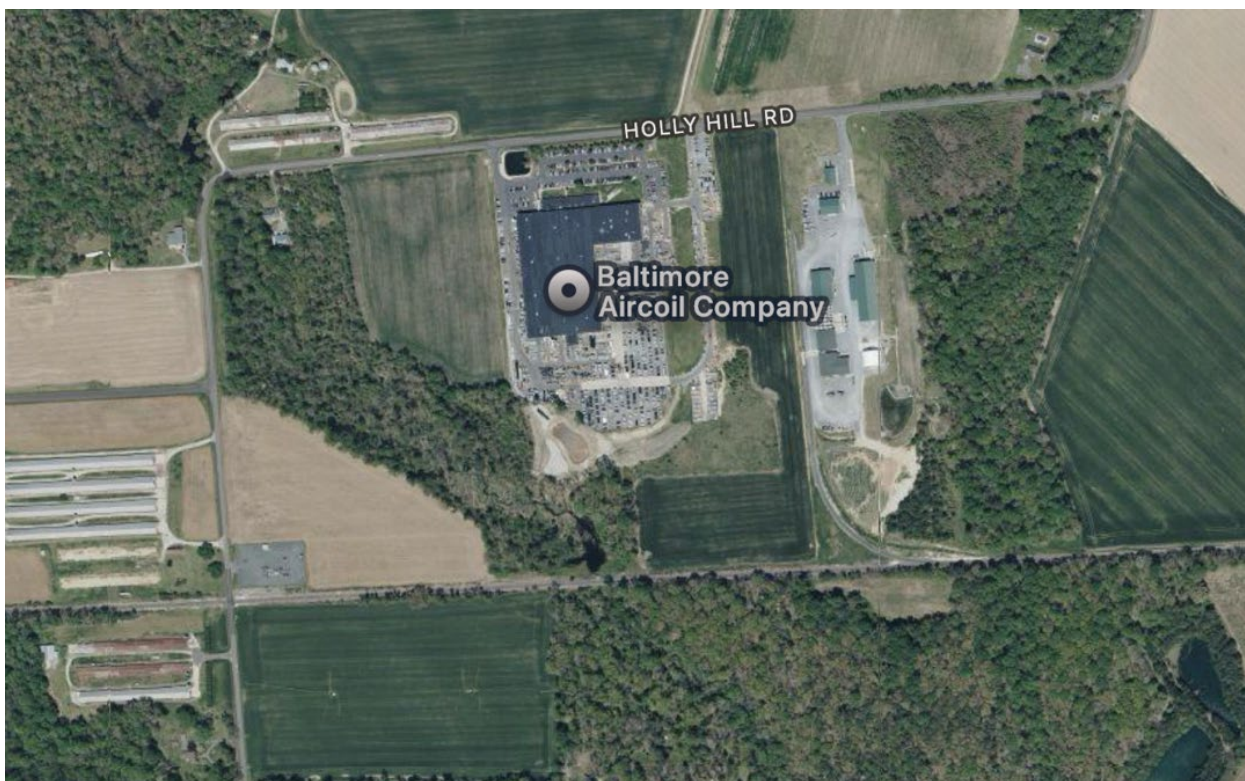
Baltimore Aircoil Company (BAC or permittee) has applied for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit to discharge storm water to Lednum Branch, a tributary of Haven Lake, which discharges to Silver Lake and ultimately to the Mispillion River.

Summary of Proposed Changes

1. Removed Outfalls 002, 003 and 004. Added new Outfall 005.
2. Added benchmark monitoring for iron.
3. Removed monitoring requirements for lead and TPH.
4. Removed the special condition requiring investigation of zinc sources and corrective action.
5. Added a new Special Condition 6 requiring the permittee to investigate the source of elevated levels of enterococcus in storm water.
6. Revised Special Condition 4 to require monitoring for nutrients and bacteria at new Outfall 005.
7. Added Special Condition 8 for sampling rainfall.

Facility Location

Baltimore Aircoil Company is located at 1162 Holly Hill Road in Kent County, Delaware.



Activity Description

The facility manufactures factory-assembled cooling towers and heat exchangers. Processes include sheet metal fabrication, coating, machining and assembly. The predominant materials used for manufacturing consist of galvanized steel, black steel, stainless steel and PVC. All manufacturing operations occur in one building and the final products are stored outside.

Description of Discharges

Following the installation of an iron sand biofilter basin (filter basin) to address zinc issues, stormwater from the existing outfalls 002, 003 and 004 is now directed into the filter basin from which it discharges via a single outfall, new Outfall 005. The proposed permit replaces Outfalls 002, 003 and 004 with new Outfall 005 as requested by permittee. New Outfall 005 discharges to the Lednum Branch. Storm water is from the building roofs, paved storage areas, parking lot and grassy areas.



Receiving Stream Classification

Outfall 005 discharges stormwater to Lednum Branch, a tributary of Haven Lake, which discharges to Silver Lake and ultimately to the Mispillion River. The designated uses of the Mispillion River Watershed are industrial water supply; primary contact recreation; secondary contact recreation; maintenance of fish, aquatic life, and wildlife; and agricultural water supply. To address impairment due to excessive nutrients and bacteria, the Total Maximum Daily Loads (TMDL) regulation for the Mispillion River Watershed¹, was established in 2006 for nitrogen, phosphorus and enterococcus bacteria. The TMDL does not include a point source load allocation for the facility. The TMDL requires reductions in nonpoint source loads of total nitrogen (TN), total phosphorus (TP) and enterococcus bacteria through a Water Pollution Control Strategy (WPCS). The WPCS for the Mispillion and Cedar Creek River Watershed² was published in 2012 and focuses on nonpoint source pollution. The WPCS also describes best management practices for stormwater. The 2024 Integrated 305(b)-303(d) Report³ shows the Mispillion River meeting the assessment threshold for total phosphorus however the threshold for total nitrogen and criteria for bacteria are not met.

¹ <https://regulations.delaware.gov/AdminCode/title7/7423>

²

<https://documents.dnrec.delaware.gov/swc/wa/Documents/WatershedPlans/Mispillion%20Pollution%20Control%20Strategy%202012%20final.pdf>

³ documents.dnrec.delaware.gov/Watershed/Aessment/Reports/2024-Integrated-Report/Combined-Watershed-Assessment-Report.pdf

Statutory and Regulatory Basis

The Delaware Department of Natural Resources and Environmental Control (DNREC or the Department) proposes to issue this NPDES permit to discharge stormwater subject to certain effluent limitation monitoring identified in the attached permit. Section 402 of the Federal Clean Water Act of 1977, as amended, and 7 Del. C., Chapter 60 and regulations promulgated thereunder provide the authority for NPDES permit issuance.

Proposed Effluent Limitations

The Department has examined the application, recent discharge monitoring data, and related information and proposes to reissue the facility's NPDES and State discharge permits for a period not to exceed five (5) years, subject to the discharge benchmark limitations, monitoring requirements and other provisions that are outlined in the Permit.

Basis for Effluent Limitations

The current permit contains Benchmark Monitoring Concentrations (BMCs) of 0.117 mg/L Zinc, 15 mg/L Total Petroleum Hydrocarbons (TPH) and 0.0816 mg/L Lead, and pH limits between 6 and 9 S.U. for Outfalls 002, 003, and 004. The BMCs and monitoring requirements are based on Section 9.1 of the State of Delaware *Regulations Governing the Control of Water Pollution* (RGCWP). Based on the processes, materials used and material storage at the facility, applicable BMCs in Sections 9.1.4.3.2.17 and 9.1.4.3.2.9 of the RGCWP are applied. BMC values represent target pollutant concentrations for a facility to achieve through implementation of its Storm Water Plan (SWP). Analytical results that exceed BMC values are not a violation as these values are not numeric effluent limitations. However, results that exceed a BMC value are indications that the storm water discharge could potentially cause, or contribute to causing, water quality impairment in the receiving waterbody. The BMC values are also viewed as a level, that if below, the discharge presents little potential for water quality concern. Since Outfalls 002, 003 and 004 are proposed to be removed, the proposed permit applies monitoring requirements at the new Outfall 005.

As discussed above, processes at the facility include sheet metal fabrication, coating, machining, and assembly. Manufacturing processes occur indoors and only finished products, certain intermediate products and scrap metal are stored outside. The predominant materials used for manufacturing consist of galvanized steel, black steel, stainless steel and PVC. Based on the processes and materials used, the permit application included sample results for zinc, iron, nickel, chromium, and manganese. Additionally, sample results for cobalt, copper and lead were included. As shown in the table below, sample results for all parameters except for zinc and iron are at least an order of magnitude below applicable BMCs or at non-detect levels. While iron at the new Outfall 005 is below the BMC, it is significant enough to warrant monitoring. The proposed permit therefore adds benchmark monitoring for iron. Zinc is the primary contaminant of concern. Zinc levels at Outfalls 002, 003 and 004 are representative of stormwater prior to filtration at the newly installed basin discussed below. The concentration at Outfall 005 is representative of stormwater from the filtration basin and is below the BMC

Parameter	BMC (mg/l)	Outfall 002	Outfall 003	Outfall 004	Outfall 005
Zinc	0.117	0.362	0.208	0.205	0.095
Iron	1	0.0536	0.0437	0.0818	0.713
Nickel	No BMC	<0.001	<0.001	<0.001	<0.001
Chromium	No BMC	0.00111	0.00101	0.0019	0.00123
Manganese	No BMC	0.00966	0.00923	0.00621	0.142
Cobalt	No BMC	<0.001	<0.001	<0.001	<0.001
Copper	0.0636	0.00245	0.00564	0.00621	0.00135
Lead	0.0816	0.0014	0.00182	0.001	0.00133

Lead and TPH

The current requirements for lead and TPH are said to be based on Section 9.1 of the RGCWP, but the actual basis is unclear as current activities at the facility are not associated with those parameters. Prior to issuance of the 2011 permit, changes at the facility resulted in elimination of process water discharge, and only stormwater discharges remained. Additionally, monitoring results show lead levels consistently well below the benchmark monitoring concentration and TPH consistently at non-detect levels. Monitoring requirements for lead and TPH are therefore proposed to be removed from the permit. Federal (40 CFR 122.44(l)) and Delaware (RGWP §6.15.11) regulations have anti-backsliding requirements that restrict issuance of permits with less stringent requirements than the previous permits, but with some exceptions. The proposed change is based on the exception provided under RGWP §6.15.11.1 “The circumstances on which the previous⁴ permit was based have materially and substantially changed since the permit was issued and would constitute cause for permit modification or revocation and reissuance under Part V.”

Zinc

In compliance with Special Condition 6 of the current permit, BAC submitted a Plan of Action⁵ to investigate and reduce zinc in storm water discharges. The Plan of Action outlined potential sources of zinc and proposed investigations to verify those sources, as well as preliminary Best Management Practices (BMPs) to reduce zinc levels. Potential sources outlined in the Plan of Action included deposition from process air emissions (including particulate matter and dust), coating spray waste, runoff from parts and storage racks, leaks from metal recycling containers, rainwater, roof materials and wall coatings, vehicle tires, and ambient air contamination. The Plan of Action included a test program to test samples from select emission sources, samples associated with metal parts, samples associated with yard sweeping activities, rainwater samples, samples associated with coatings, ambient air monitoring and samples from other locations. A summary of previously implemented BMPs was also included in the Plan of Action.

As outlined in the Plan of Action, BAC completed an evaluation of the potential sources of zinc that included process air emissions from building exhausts and roof vents, parts storage areas, metal recycling containers, storage yard sweepers, building downspouts and

⁴ Permit issued prior to discharge changes

⁵ Plan of Action for Investigation of Zinc in Storm Water Discharge, December 30, 2019

roof membrane. The purpose of the evaluation was to confirm the presence and magnitude of zinc in potential sources and determine the likelihood of zinc coming in contact with and transported by storm water runoff. Results of the evaluation were presented in a July 29, 2020, report⁶ submitted to the Department. Ambient air and rainwater were also evaluated to identify possible off-site sources of zinc. Zinc was detected in some of the exhausts, metal parts, metal recycling containers and water used by the outdoor sweeper. Rainwater was also found to contain zinc at levels averaging a significant amount of the benchmark concentration. Zinc was not detected in the ambient air. According to the report, zinc contained in metal parts, scrap metal stored in recycling containers, recycling container residual debris, and roof membranes was leachable in rainwater and available to be transported the rainwater that contacts the material's surface. The evaluation therefore confirmed several sources of zinc existed at the facility that were potential contributors to zinc in storm water runoff. The report outlined potential Best Management Practices (BMPs) to reduce zinc in the facility's storm water runoff including installation of air emission controls, enclosure of recycling containers, use of treatment media on downspouts, drainage ditches, and outfalls as well as installation of a storm water retention pond. BAC initially proposed several actions including conducting trial treatment media in drainage ditches, outfall modification to control residual material, increasing monitoring frequency, and conducting an options analysis of potential BMPs. Results from the trial treatment media in drainage ditches did not yield noticeable reduction in zinc concentrations and was therefore discontinued. Monitoring frequency was increased with rainwater samples collected concurrently. Other immediate actions taken included improved disposal practices for zinc spray cans, improved handling of floor sweepings, increased outdoor sweeping of storage yard pavement, and covering of scrap metal recycling dumpsters. These actions also resulted in negligible reductions in zinc concentrations. BAC contracted the services of an engineering company to perform an alternatives analysis to address elevated zinc in the facility's stormwater discharge. Ten alternatives were evaluated. Use of an iron sand biofilter basin was recommended.

BAC met with the Department to present and discuss its recommendation to proceed with an iron sand biofilter basin (filter basin). A Basis of Design report⁷ was submitted to the Department detailing the design and expected performance of the filter basin. Construction of the filter basin was completed in November 2023. Stormwater from the three existing outfalls is now directed to the filter basin where suspended solids and dissolved zinc are removed. The filter basin is equipped with a network of PVC underdrain pipes which collect water infiltrating through the iron sand media and discharge to Lednum Branch through a new single outfall (Outfall 005). The basin is designed to collect and treat initial runoff from a typical 1-inch storm event. Initial runoff (first flush) is expected to contain the highest concentrations of zinc. A typical storm pattern begins with low-intensity rainfall, followed by a period of more intensity rainfall (SCS Type II storm). A storm with 1-inch of rainfall that occurs within the first 30 minutes has a much lower frequency. The basin is also expected to treat runoff from SCS Type II storms larger than 1 inch. The basin includes overflow structures for high-flow events when the stormwater runoff exceeds the design storm runoff volume to prevent system failure due to erosion and bank breaches.

With the installation of the filter basin, zinc levels at new Outfall 005 are expected to be below the benchmark concentration. Result from a grab sample collected at a proposed location for Outfall 005 following the completion of the filter basin was below the benchmark concentration.

⁶ Revised Plan of Action, Zinc in Storm Water Discharges

⁷ Basis of Design Stormwater Zinc Treatment System, April 2023

Rainwater

As outlined in the Plan of Action report, BAC collected rainwater samples from four events (October 2011 to June 2013) which were analyzed for zinc. For each event, five temporary rain stations were used to collect rainwater for a total of 20 samples. Five of the samples had concentrations of zinc greater than the BMC, and an additional seven greater than 50% of the BMC. All five rain stations were located within the facility property.

To better understand the potential contribution of zinc from rainfall, BAC proposes to submit a sampling plan to the Department to characterize background concentrations of zinc in rainfall at an off-site location that is not impacted by industrial activities. BAC requests the Department's consideration of background zinc in evaluating compliance with BMC requirements.

Special Condition 8 has been added to the draft permit requiring BAC to submit a rainfall sampling plan for the Department's review and authorization to implement the plan. The data collected will be considered in evaluating zinc detected in stormwater discharges consistent with the provisions found in the EPA NPDES Multi-Sector General Permit (MSGP) regarding BMC exceptions attributable to natural background.

Nutrients and Bacteria

The TMDL for the Mispillion River Watershed does not include a point source load allocation for the facility. The current permit, however, includes a special condition requiring the facility to monitor Total Nitrogen (TN), Total Phosphorous (TP) and enterococcus on a semi-annual basis. Except for TP at Outfall 003, a review of the monitoring results does not indicate concerns with TN and TP when compared to the long-term TMDL target concentrations. Following consolidation of all storm water discharges from the site, semi-annual monitoring for TN and TP has been retained for Outfall 005. At least four rounds of sampling shall be conducted after which the permittee may request approval from the Department to discontinue monitoring if the results do not indicate levels of concern.

Monitoring results however show elevated levels of enterococcus in the stormwater.

A special condition has been added requiring the permittee to investigate the source of elevated levels of enterococcus and take corrective action if found to be associated with the site's activities.

Special Conditions

Special Condition No. 1 indicates that this permit supersedes the NPDES Permit DE 0051047 and State Permit WPCC 3022D/94, issued on September 30, 2019, with an effective date of November 1, 2019.

Special Condition No. 2 is a standard permit reopener clause. This special condition allows the Department to reopen and modify the permit if the discharge is causing water quality problems.

Special Condition No. 3 pertains to the discharges of storm water runoff from the site. It requires the facility to continue to implement a storm water plan that is

designed to limit exposure of industrial materials and activities to precipitation and to minimize the discharge of contaminated storm water from the Permittee's facility.

Special Condition No. 4 requires the permittee to monitor nutrients and bacteria to determine whether the discharge contributes to the impairment of the Mispillion watershed.

Special Condition No. 5 requires the facility to compare storm water monitoring results to Benchmark Monitoring Concentrations and take actions as warranted.

Special Condition No. 6 requires the permittee to investigate the source of enterococcus in the storm water and take corrective action as necessary.

Special Condition No. 7 requires the permittee to use EPA-approved analytical methods that are capable of detecting and measuring the pollutants at, or below, the applicable water quality criteria or permit limits pursuant to 40 CFR Part 136.

Special Condition No. 8 requires the permittee to submit a rainfall sampling plan for the Department's review and authorization to implement the plan.

Antidegradation Statement

The proposed effluent limitations in the NPDES permit comply with the applicable portions of the State of Delaware's *Surface Water Quality Standards*, Section 5.0, "Antidegradation and ERES Waters Policies".

Public Notice and Process for Reaching a Final Decision

The public notice of the Department's receipt of the application and of reaching the tentative determinations outlined herein will be published in the Wilmington News Journal and the Delaware State News on **July 8, 2026**. Interested persons are invited to submit their written views on the draft permit and the tentative determinations made with respect to this NPDES permit application. The Department will not hold a public hearing on this application unless the Department receives a meritorious request to do so or unless the notice of this proposal generates substantial public interest. A public hearing request shall be deemed meritorious if it exhibits a familiarity with the application and a reasoned statement of the permit's probable impact. The request for a public hearing shall be in writing and shall state the nature of the issues to be raised at the hearing. All comments received by the close of business at **4:30 pm on August 7, 2026**, will be considered by the Department in preparing the final permit.

Department Contact for Additional Information

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