



Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

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Eric J. Holcomb
Governor

Brian Rockensuess
Commissioner

June 21, 2024

Via Email to: fernando.cervantes@arconic.com
Mr. Fernando Cervantes, Plant Manager
Arconic US, LLC
3131 E Main Street
Lafayette, Indiana 47905

Dear Mr. Cervantes:

Re: Inspection Summary Letter
Arconic US, LLC.
NPDES Permit No. IN0001210
Lafayette, Tippecanoe County

An inspection of the above-referenced facility or location was conducted by a representative of the Indiana Department of Environmental Management, Office of Water Quality, pursuant to IC 13-18-3-9. A summary of the inspection is provided below:

Date(s) of Inspection: June 18, 2024
Type of Inspection: Compliance Evaluation Inspection
Inspection Results: Potential problems were discovered or observed.

A copy of the NPDES Industrial Facility Inspection Report is enclosed for your records. Please direct any response to this letter and any questions to Maggie Kroeger at 317-619-3639 or by email to mkroeger@idem.IN.gov.

Sincerely,

Kim Rohr, Chief
Wastewater Inspection Section
Office of Water Quality

Enclosure



NPDES Industrial Facility Inspection Report

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

NPDES Permit Number: IN0001210		Facility Type: Industrial Major		Facility Classification: C		TEMPO AI ID 11814	
Date(s) of Inspection: June 18, 2024							
Type of Inspection: Compliance Evaluation Inspection							
Name and Location of Facility Inspected: Arconic US, LLC. 3131 E Main Street Lafayette IN 47905				County: Tippecanoe		Receiving Waters/POTW: Elliott Ditch	
						Permit Expiration Date: 10/31/2023	
						Design Flow: NA	
On Site Representative(s):							
First Name	Last Name	Title	Email	Phone			
James	Tyler	Environmental Manager	james.tyler@arconic.com	765-250-1972			
Dean	Glenn	EHS Manager	dean.glenn@arconic.com				
Will	Ellinger	MacLellan iNEWT Operator					
Kelly	Hensley	Operator					
Was a verbal summary of the inspection given to the on-site rep? Yes							
Certified Operator: Joyce Casillas		Number: 19324	Class: D	Effective Date: 7-1-22	Expiration Date: 6-30-25	Email: joyce.casillas@eptconsultants.com	
Cyber Security Contact							
Name:		Email:					
Responsible Official: Mr. Fernando Cervantes, Plant Manager 3131 E Main Street Lafayette, Indiana 47905				Permittee: Arconic US, LLC Email: fernando.cervantes@arconic.com Phone: Fax:			
						Contacted? No	
INSPECTION FINDINGS							
<input type="radio"/> Conditions evaluated were found to be satisfactory at the time of the inspection. (5) <input type="radio"/> Violations were discovered but corrected during the inspection. (4) <input checked="" type="radio"/> Potential problems were discovered or observed. (3) <input type="radio"/> Violations were discovered and require a submittal from you and/or a follow-up inspection by IDEM. (2) <input type="radio"/> Violations were discovered and may subject you to an appropriate enforcement response. (1)							
AREAS EVALUATED DURING INSPECTION							
<i>(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)</i>							
S	Receiving Waters	S	Facility/Site	M	Self-Monitoring	N	Enforcement
S	Effluent/Discharge	S	Operation	S	Flow Measurement		
S	Permit	M	Maintenance	S	Laboratory	M	Effluent Limits Compliance
		S	Sludge	S	Records/Reports	M	Other: Stormwater
DETAILED AREA EVALUATIONS							
Receiving Waters:							
<u>S</u> 1. The receiving stream was visibly free of excessive deposits of settled solids, floating debris, oil, scum, or billowy foam. Comments: The receiving stream was observed at the concrete outfall structure and was free of notable foam, algae or solids.							
Effluent/Discharge:							
<u>S</u> 1. Final effluent was essentially free of excessive solids, floating debris, oil, scum, or billowy foam. <u>N</u> 2. Pretreatment discharge into sanitary sewers appeared free of excessive oils, grease, solids, or foam and did not appear to be in violation of the local Sewer Use Ordinance.							

N 3. Pretreatment discharge into sanitary sewers did not contain materials that pass through or interfere with the operation of the POTW.

Comments:

The effluent from the old treatment plant was observed at internal Outfall 101 and it was clear and free of color at the time of the inspection. The final effluent was observed at the sample shack for Outfall 001 and at Elliott Ditch. The final effluent from Outfall 001 was clear and free of color at the time of the inspection. Internal Outfall 102 was not discharging at the time of the inspection.

Permit:

S 1. Did the facility have a copy of the current permit available for reference.

S 2. If the permit expires within 180 days, has a renewal application been submitted?

S 3. Receiving waters are accurately described in the permit.

N 4. The permit has been properly transferred if there is a new owner.

N 5. The NPDES Permit Schedule of Compliance monitoring and reporting milestones have been met.

Comments:

The facility's current permit expired on 10/31/23 and has been administratively continued. The renewal application was submitted on 5/4/24 and a draft permit was distributed on 4/18/24.

The permittee is currently testing an Industrial Naturally Engineered Wetlands Treatment (iNEWT) system which will replace the existing on-site wastewater treatment plant. Once the iNEWT system's initial testing phase is complete, the new permit will be modified to include a new internal outfall, internal Outfall 102, for regulating discharges from the iNEWT system.

Facility/Site:

S 1. The facility was found to have standby power or equivalent provision, If required.

S 2. An adequate alarm or notification system for power or equipment failure was available for the treatment facility.

S 3. Safe and adequate access was provided for inspection of all treatment units and outfalls.

S 4. Facilities and equipment did not appear beyond their useful life.

5. List any safety concerns noted during the inspection in the box below:

Comments:

The facility grounds are well maintained. Adequate access was provided to the entire facility and the outfalls. The old treatment system has an on-site generator that is manually tested monthly. The old treatment system components are monitored using a SCADA system and by facility personnel 24 hours a day seven days a week. The new iNEWT system is operated and monitored by MacLellan Integrated Services, Inc. The standby generator transfer switch for the iNEWT system has not yet been installed. The iNEWT system is monitored using a SCADA system and by MacLellan personnel 24 hours a day seven days a week. The certified operator is an environmental consultant that makes monthly visits to the facility.

Operation:

S 1. All facilities and systems necessary for achieving compliance with the terms and conditions of the permit were operated efficiently, including an anticipated bypass report for steps of treatment taken out of service.

S 2. An adequate, qualified operating staff was found to be provided to carry out the operation of the facility, including:

a. Certified Operator's on-site attendance and/or qualified operations personnel attendance was adequate.

b. Adequate documentation of operational activities, including system monitoring and cleaning.

c. Adequate funding to ensure proper operation.

S 3. Solids handling procedures were adequate.

S 4. Documentation of solids removal, handling, and disposal was adequate.

Comments:

The permittee is currently in the initial testing phase of the Industrial Naturally Engineered Wetlands Treatment (iNEWT) system which will replace the existing on-site wastewater treatment plant. Wastewater is currently being directed through the iNEWT system and discharged through internal Outfall 102 to the old treatment system for additional treatment before discharging vial internal Outfall 101.

All units of the iNEWT system appear to be operated efficiently. The iNEWT system is comprised of a one million gallon EQ tank, two clarifiers, one combined clarification tank, 2 wetlands treatment units, UV disinfection, mushroom mixed media and carbon filters, and a final tank. Ferric Chloride, Magnesium Hydroxide, and a polymer are added during the clarification step. Total organic carbon (TOC) and pH are monitored continuously after clarification and the wetlands treatment and determine if the wastestream must be returned to the EQ for further treatment. Operational targets are documented every two hours and a detailed operational log is kept to document all activities performed each shift.

All units of the old treatment system appear to be operated efficiently. The old treatment plant is comprised of a comminutor, an influent wet well, a holding tank, two secondary clarifiers in succession, a trickling filter, final tertiary clarifier, chlorine contact tank, EQ tank, multimedia filter, two carbon filters in succession, and a recycle storage tank that discharges to internal outfall 101 when a certain height in the storage tank is reached. Several chemicals are added in different units of treatment to promote the precipitation of metals and oils. Ferric Chloride and Magnesium Hydroxide are added to the holding tank. An anionic polymer is added inline before the first secondary clarifier. Liquid bleach is added to chlorinate in the chlorine contact tank. Sodium bisulfate is added to dechlorinate after the carbon filters and before the final recycle tank.

Maintenance:

- S 1. A maintenance record system has been established and includes maintenance/repair history and preventative maintenance plan.
- M 2. Facility maintenance activities appeared adequate.

Comments:

Maintenance was rated as marginal due to woody vegetation noted on some of the stormwater detention pond banks, leafy vegetation noted in the trickling filter, and leafy vegetation noted in the first aerobic portion of the wetlands treatment units.

iNEWT maintenance will be documented and tracked using a new and separate system from the old treatment system and other facility maintenance. A maintenance PM was reviewed for the iNEWT system. The old treatment system's work orders and preventative maintenance is printed monthly and distributed to personnel to complete. Work orders and PMs are tracked and entered into an electronic system once complete.

Sludge:

- S 1. Sludges, screenings, and slurries were found to be handled and disposed of properly.

Comments:

The facility dewatered sludge with a newly installed rotary vacuum drum. A records review during the inspection showed adequate handling, and disposal of sludge. A sludge manifest showed S & C Transport hauled 10,233 kg of sludge to Wayne Disposal, Inc. in Belleville, MI on 6/11/24.

Self-Monitoring:

- S 1. Samples were found to be taken at pre-designated locations and were found to be representative.
- S 2. Flow-proportioned samples were found to be obtained where needed.
- M 3. The facility was found to conduct sampling of all waste streams, including type and frequency, as required in the permit.
- S 4. Sample collection procedures, including automatic sampling, include:
 - a. Samples refrigerated during compositing.
 - b. Proper preservation techniques used.
 - c. Containers and holding times conform to 40 CFR 136.3.
- S 5. Sample documentation was adequate and includes:
 - a. Dates, times, and locations of sampling.
 - b. Name of individual performing sampling.
 - c. Instantaneous flow for flow-weighted aliquots.
 - d. Chain of Custody records.
- N 6. NPDES Permit Total Toxic Organic (TTO) requirements were being met.
- S 7. NPDES Permit Whole Effluent Toxicity (WET) testing requirements were being met.

Comments:

The Self Monitoring Program generated a marginal rating. The January 2024 internal Outfall 101 DMR and MRO reports noted no composite samples were collected from 1/15/24 to 1/20/24 due to insufficient flow caused by frozen influent pipe and equipment. Internal Outfall 101 flow records indicated no effluent flow on 1/15/24 and around 500 gallons on 1/17/24 and 1/18/24. Based on the flow records, it appeared a manually flow proportioned composite sample could have been taken on 1/16/24, 1/19/24, and 1/20/24 if the automatic sampler was also frozen. Aluminum, CBOD, TSS, Total Chromium, and Chloride were not monitored at the frequency required during this time.

A NIST certified thermometer should be placed in the composite sampler at internal Outfall 102. It was noted a thermometer had been ordered.

The facility is required to perform WET testing every six months. WET testing was performed in September 2023 and March 2024 and submitted to IDEM on October 17, 2023 and April 11, 2024, respectively. Both tests achieved passing results.

Flow Measurement:

- S 1. Flow was found to be properly monitored as required by the permit.

S 2. Flow data and calibration records were available for review, and document that monitoring equipment has been calibrated at the frequency required in the permit.

Comments:

The facility's flow measurement program, including all documentation, is adequate and representative. Outfall 001 has two effluent flow meters, both were calibrated on February 22, 2024 by Gripp Incorporated. The Internal Outfall 101 effluent meter was calibrated on February 22, 2024 by Gripp Incorporated.

Laboratory:

The following laboratory records were reviewed:

Chlorine Bench Sheets pH Bench Sheets Sample Log
Contract Lab Reports Chain-of-Custody

S 1. The laboratory practices and protocol reviewed were adequate, including:

- a. A written laboratory QA/QC manual was available.
- b. Samples were found to be properly stored.
- c. Approved analytical methods were used.
- d. Calibration and maintenance of instruments was adequate.
- e. QA/QC procedures were adequate.
- f. Dates of analyses (and times, where required) were recorded.
- g. Name of person performing analyses was recorded.

S 2. Review of lab records and/or on-site field testing equipment and protocols was found to be adequate.

Contract Lab Information

Element Materials Technology

Fort Wayne, IN

Comments:

Analyses for pH and TRC are performed on-site with all other parameters of the permit being performed at the contract lab. Laboratory records were reviewed from March 2024, April 2024, and June 2024. Contract lab reports for Mercury were reviewed from October 2023. The bench sheets, contract lab reports, and chain-of-custody forms appeared to be accurate and complete. The facility has begun the process to complete the DMRQA 44 Lab Proficiency Study.

Records/Reports:

The following records/reports were reviewed:

DMRs for the period of May 2023 to April 2024 were reviewed as part of the inspection.

S 1. All facility records for the period including the previous three years were available for review.

S 2. DMRs and MMRs were completed properly and accurately including:

- a. "No Ex" column was accurate.
- b. Signatory requirements were met.
- c. Reports were prepared by or under the direction of a certified operator.

N 3. Bypass and Noncompliance reporting are adequate.

Comments:

The monthly records were available on-site, but the reports were reviewed on Virtual File Cabinet or NetDMR by the inspector before the on-site inspection. The monthly records reviewed on NetDMR appeared to be accurate and complete. The facility is using an MMR from 2014. The current 2024 version of the MMR, State Form 30530, was emailed to facility personnel following the on-site inspection.

Enforcement:

N 1. Agreed Order compliance milestones have been met.

Comments:

The facility is not entered into an Agreed Order with IDEM. The Department of Justice and U.S. EPA have entered into a Consent Decree with the facility, United States of America v. Alcoa Inc. No. 4:99cv61 AS (N.D. Ind.) DJ #90-5-1-1-06358, dating back to 2002 and relating to Arconic's Lafayette Indiana Operations.

Effluent Limits Compliance:

Yes 1. Were DMRs reviewed as part of the inspection?

DMRs for the period of May 2023 to April 2024 were reviewed as part of the inspection.

Yes 2. Were violations noted during the review of DMRs?

The Effluent Limits Compliance area was rated marginal due to the following self-reported violations of the limits detailed in Part I. A. of the NPDES Permit:

Month	Year	Outfall	Parameter	Number
June	2023	101	E. coli	1
July	2023	101	CBOD	1
August	2023	101	E. coli	1
September	2023	101	Aluminum	1

Comments:

A review of DMRs revealed 2 *E. coli* daily maximum violations, one CBOD daily maximum violation, and one aluminum daily maximum violation from internal Outfall 101.

Other:

Stormwater

Comments:

The Other: Stormwater portion of this report was rated as marginal due to the Stormwater Pollution Prevention Plan (SWPPP) needing to be updated to reflect current personnel on the Pollution Prevention Team. In addition, Part I. D. 6. b of the permit indicates the control measures must be reviewed and revised if necessary following construction or a change in design, operator, or maintenance at the facility. The SWPPP must be reviewed and revised due to the addition of the iNEWT system.

The facility completed the annual review and comprehensive site evaluation for 2023 and is current with quarterly inspections. A small portion of on-site stormwater is currently directed to the iNEWT system and discharged through internal Outfall 102 to the old treatment system. The majority of the on-site stormwater is collected on-site via drains. Weirs and pumps are used to pump the storm sewers during storm events to detention ponds or tanks. The stormwater is pumped to Natural Media Filtration (NMF) cells containing spent mushroom compost for treatment prior to re-entering the stormsewer, comingling with discharge from internal Outfall 101, and discharging via Outfall 001. During precipitation events that exceed the hydraulic capacity of the storage units and NMF cells, defined by when the MH-12 Level 4 switch is activated, the excessive stormwater is pumped and treated with cartridge filters before discharging to Outfall 001.

IDEM REPRESENTATIVE

Inspector Name:	Email:	Phone Number:
Maggie Kroeger	mkroeger@idem.IN.gov	317-619-3639
Other staff participating in the inspection:		
Name(s)	Phone Number(s)	
Aaron Deeter	317-691-1915	

IDEM MANAGER REVIEW

IDEM Manager:	Date:
Kim Rohr	6/21/2024