

City of South Bend  
Department of Public Works  
Industrial Pretreatment Program

Significant Industrial User – Permit No. 161591-88966

In accordance with all the terms of Chapter 17 of the City of South Bend’s Municipal Code, and with any applicable provisions of federal or state law and regulations, permission is hereby granted to:

Cleveland-Cliffs New Carlisle  
30755 Edison Road  
New Carlisle IN 46552

for the contribution of wastewater into the City of South Bend Publicly Owned Treatment Works.

This permit is granted in accordance with the application filed on 19 February, 2021.

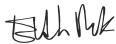
Effective on: 22 May, 2021  
Expires on the: 21 May, 2026  
Modified on 17 June, 2024

Any violation of the terms and conditions of this permit shall be deemed a violation of the City of South Bend Municipal Code and will subject the permittee to the sanctions set out in section 17-11 through 17-13 of the Municipal Code.

The permittee shall file an application for a renewal permit, a minimum of 90 days prior to the expiration date.

Approved By:

CITY OF SOUTH BEND, INDIANA  
BOARD OF PUBLIC WORKS



Elizabeth A. Maradik, President



Joseph R. Molnar, Vice President



Gary A. Gilot, Member



Briana Micou, Member



Murray L. Miller, Member



Attest: Theresa M. Heffner, Clerk

Date: June 25, 2024



CITY OF SOUTH BEND JAMES MUELLER, MAYOR

**DEPARTMENT OF PUBLIC WORKS**

ERIC HORVATH, DIRECTOR

June 12, 2024

Board of Public Works  
City of South Bend  
1316 County City Building  
227 West Jefferson Boulevard  
South Bend IN 46601

RE: Modification of Industrial Wastewater Discharge Permit

Dear Board Members:

The Division of Environmental Services recommends approving the modification of the Industrial Discharge Permit for Cleveland-Cliffs New Carlisle (formerly known as Cleveland-Cliffs Tek Inc and Cleveland-Cliffs Kote Inc) at the June 25, 2024, Board of Public Works Meeting.

Effective Date June 30, 2024, the facility formerly known as Cleveland-Cliffs Tek Inc and Cleveland-Cliffs Kote Inc will be known as Cleveland Cliffs New Carlisle. Any references to Cleveland-Cliffs Tek are now Cleveland Cliffs New Carlisle I L.P. References to the Cleveland-Cliffs Kote will now be changed to Cleveland Cliffs New Carlisle II L.P.

The Division of Environmental Services has changed this permit to reflect name change of the facility and individual buildings. No other changes have been made.

If you should have any questions, please do not hesitate to contact me (574) 235-5798 or at [sshane@southbendin.gov](mailto:sshane@southbendin.gov). Please let me know if I need to attend the Board Meeting to present this permit.

Sincerely,

*Serena Lozano-Shane*

Serena Lozano-Shane  
Pretreatment Manager  
City of South Bend  
Division of Environmental Services, Department of Utilities  
3113 Riverside Drive  
South Bend, IN 46628  
(574) 235-5798  
[sshane@southbendin.gov](mailto:sshane@southbendin.gov)  
Enclosure(s)

- Industrial Discharge Permit Board of Public Works Signature Page, Part I- Effluent Limitation, -Agenda Request Form

# PERMIT BRIEFING MEMO

## 1. Facility Description

The Cleveland-Cliffs New Carlisle I L.P. facility engages in the acid pickling and cold rolling of steel coils at the Continuous Descale Cold Mill. A Continuous Anneal Process Line also includes nickel electroplating and a skin pass mill. The Cleveland-Cliffs New Carlisle II L.P. facility also engages in electrogalvanizing and hot dip galvanizing of steel strip. The coils are not conversion coated or painted. The sampling site designated for this facility (126) is located on the southeast corner inside a shed where the combined outfall is located. The entire facility flow is discharged through this sampling location.

### Process Lines:

The Cleveland-Cliffs New Carlisle I L.P. facility has two main process lines and a maintenance procedure:

- a. Continuous Anneal Process Line (CAPL) which consists of electroplating and a single stand cold rolling skin pass mill operated as a direct application mill (i.e., once-through process water flow).
- b. Continuous Descale Cold Mill (CDCM) which consists of hydrochloric acid pickling and a cold rolling Tandem Mill equipped for recirculation of the rolling solution.

The CDCM has one fume scrubber that services the pickling portion of the line. All of the above wastewater is treated at the Cleveland-Cliffs New Carlisle I L.P. wastewater treatment plant (WWTP) with the exception of the wastewater from the CAPL skin passmill. The CAPL skin pass mill wastewater is treated at the Cleveland-Cliffs New Carlisle II L.P. facility. Stormwater from outdoor containment areas is treated at the Cleveland-Cliffs New Carlisle I L.P. WWTP.

The Cleveland-Cliffs New Carlisle II L.P. facility also has two process lines:

- a. Electrogalvanizing Line (EGL) which is an electroplating line.
- b. Continuous Galvanizing Line (CGL) which consists of hot dip galvanizing and a single stand cold rolling skin pass mill operated as direct application mill.

The CGL is equipped with three fume scrubbers, two for the galvanizing operation and one for the skin pass mill. Process wastewaters from the above processes are treated at the Cleveland-Cliffs New Carlisle II L.P. WWTP. Stormwater from outdoor containment areas is also treated at the Cleveland-Cliffs New Carlisle II L.P. WWTP.

## 2. Discharge description:

Cleveland-Cliffs New Carlisle's facility wastewater flow is combined prior to discharge. This includes process flows and whole facility sanitary flow as well as storm water that is pumped out of outdoor secondary containment structures.

Cleveland-Cliffs New Carlisle I L.P. has its own WWTP. The Cleveland-Cliffs New Carlisle I L.P. treatment plant treats all wastewater produced at the Cleveland-Cliffs New Carlisle I L.P. facility except wastewater from the Nickel Solutions Filter at the CAPL Post Treatment. Periodically, wastewater from the CAPL entry cleaning section and Pretreatment Tank may be sent to the Cleveland Cliffs New Carlisle II L.P. WWTP facility. The Cleveland-Cliffs New Carlisle I L.P. facility also treats storm water that is collected in outdoor secondary containments located on the Cleveland-Cliffs New Carlisle I L.P. facility grounds.

The Cleveland-Cliffs New Carlisle II L.P. facility also has its own WWTP. The Cleveland-Cliffs New Carlisle II L.P. treatment plant treats all wastewater produced at Cleveland-Cliffs New Carlisle II L.P. facility, storm water from secondary containments and the following additional sources:

1. New Carlisle I L.P. wastewaters from the Nickel Solution Filters at the CAPL Post Treatment is treated at the New Carlisle II L.P. WWT Nickel Reclamation System (NRS).
2. Periodic discharge of New Carlisle I L.P. wastewater from the CAPL entry cleaning section may be treated at the New Carlisle II L.P. WWT Oil Waste System (OWS).
3. Periodic discharge of New Carlisle I L.P. wastewater from the Pretreatment Tank may be treated at the New Carlisle II L.P. WWT Oil Waste System.

The total average wastewater flow of the Outfall #126 is **1.47 MGD**.

The Maximum daily total wastewater flow measured since 2016 is **2.22 MGD**.

### 3. Sample Site Description

Sample Site Outfall #126 is located in a sample shed on the south-east corner of the Cleveland-Cliffs New Carlisle facility site near the security gate. This is a combined outfall consisting of the entire facility's flow.

### 4. Wastewater Treatment

#### Cleveland-Cliffs New Carlisle I L.P. WWT Plant

The Cleveland-Cliffs New Carlisle I L.P. WWTP is designed to remove oils and precipitate out iron from solution prior to discharging to the City of South Bend.

Oil bearing wastewater flows into two oil/water separators designed to collect floating oils and remove them to the light oil tank. The source of the flow to the oil/water separators is predominantly rinse water from the caustic cleaning section of the Continuous Anneal Process Line (CAPL) at Cleveland-Cliffs New Carlisle I L.P.. The effluent from the oil/water separators then flows into the Neutralization Tank and combines with the metal bearing flows coming from the descale section of the Continuous Descale Cold Mill (CDCM) at Cleveland-Cliffs New Carlisle I L.P. The descale section of Cleveland-Cliffs New Carlisle I L.P. generates acidic iron bearing rinse water from the hydrochloric acid pickling process.

In the Neutralization Tank, the pH of the combined flow is adjusted to approximately 8.5 to precipitate the ferrous iron from the solution. The chemical used to adjust the pH is slaked lime. There are two mixers located on the top of the neutralization tanks to keep the precipitate suspended.

From the Neutralization Tank, the combined flows then go to a Lamella Clarifier. In the clarifier, the precipitated solids fall to the bottom of the unit and are periodically pumped to a sludge holding tank or flow by gravity. A high molecular weight anionic polymer is used to flocculate the precipitate solids in the clarifier.

The sludge tank is used to store sludge from the clarifier. Based on the sludge density in the storage tank, sludge is periodically drawn off to a Parkson Belt Press to dewater the sludge. A high molecular weight anionic polymer is used to condition the sludge prior to pressing. The metal hydroxide sludge is shipped off-site for disposal.

Emulsified oils generated from the Tandem Cold Mill and Caustic Cleaning Section are sent to the Cleveland-Cliffs New Carlisle I L.P. Pretreatment Tank. The Cleveland-Cliffs New Carlisle I L.P. Pretreatment Tank has a capacity of 90,000 gallons. This emulsified wastewater can be treated in two separate systems. First, an ultra-filtration unit rated at 25 gpm can be used to treat the

emulsified oily waste. Second, the emulsified oily wastewater can be pumped at a rate of 20 gpm to the Cleveland-Cliffs New Carlisle II L.P. Oily Waste System for treatment.

Cleveland-Cliffs New Carlisle II L.P. WWT Plant

The Cleveland-Cliffs New Carlisle II L.P. WWT Plant is segregated into three treatment streams: Oily Waste, Neutralized Waste, and Nickel Reclamation Waste.

The Oily Waste System (OWS) receives rinse water from the caustic cleaning sections of the Electro galvanizing Line (EGL) and Continuous Galvanizing Line (CGL) at Cleveland-Cliffs New Carlisle II L.P. The wastewater is treated with sulfuric acid and a de-emulsifier. The wastewater is further treated with a coagulant aid and then processed by dissolved air flotation. The separated oil is transferred to a storage tank and is shipped to an oil recycler.

The Neutralized Waste System (NWS) receives rinse water from zinc electroplating at the EGL. The Nickel Reclamation System (NRS) receives rinse water from the zinc electroplating at the EGL and the nickel solution filters at the CAPL Post Treatment. In both of these systems, the wastewater is treated with sodium hydroxide, a cationic coagulant aid, and an anionic polymer to aid settling. The pH of the wastewater is adjusted to approximately 10.5 to precipitate the zinc and nickel from the solution.

The precipitated metals are concentrated to approximately 5% in gravity belt thickeners. Sludge from the gravity belt thickeners is stored in sludge tanks prior to dewatering by filter presses. The metal hydroxide sludges are shipped off-site for disposal.

The filtrate from the gravity belt thickeners flows to Lamella Clarifiers. A Polymeric Metal Ion Precipitant Program is used on the Lamella Clarifiers. This program is necessary due to chelating or complexing agents which block their ability to precipitate the zinc simply by pH adjustment.

5. Classification

Cleveland-Cliffs New Carlisle is categorized as an A industry per the City’s Industrial Pretreatment Program based on minimum requirement all industries that discharge greater than 100,000 gallons a day are classified as A industries.

Discharges from Cleveland-Cliffs New Carlisle are regulated by 40 CFR 433 and 40 CFR 420. Specifically:

Cleveland-Cliffs New Carlisle I L.P. Wastewater Treatment Plant (Outfall 127)

<b>Operation</b>	<b>Applicable Regulation</b>
CDCM hydrochloric acid pickling	40 CFR Part 420.96(b)(2) - Pretreatment standards for new sources - hydrochloric acid pickling, strip sheet and plate
CDCM hydrochloric acid pickling fume scrubber	40 CFR Part 420.96(b)(4) - Pretreatment standards for new sources - hydrochloric acid pickling fume scrubber
CDCM Tandem Mill	40 CFR Part 420.106(a)(2) - Pretreatment standards for new sources - cold rolling multiple stand recirculation mill
Treated contaminated storm water	40 CFR 420.08 - Non-EGL wastewater flows
CAPL Electroplating	40 CFR 433.17 Pretreatment Standards for New Sources

Cleveland-Cliffs New Carlisle II L.P. Wastewater Treatment Plant (Outfall 128)

Operation	Applicable Regulation
CGL Galvanizing	40 CFR Part 420.126(a)(1) - Pretreatment standards for new sources - galvanizing terne coating and other coatings; strip, sheet, misc.
CGL Galvanizing Fume Scrubber	40 CFR Part 420.126(c) - Pretreatment standards for new sources - galvanizing terne coating and other coatings; fume scrubbers
CGL Skin Pass Mill	40 CFR Part 420.106(a)(4) - Pretreatment standards for new sources - cold rolling single stand direct application
CGL Skin Pass Mill Fume Scrubber	40 CFR 420.08 - Non-EGL wastewater flows
CAPL Skin Pass Mill	40 CFR Part 420.106(a)(4) - Pretreatment standards for new sources - cold rolling single stand direct application
Treated contaminated storm water	40 CFR 420.08 - Non-EGL wastewater flows
EGL Electroplating	40 CFR 433.17 Pretreatment Standards for New Sources

6. Calculation of Limits

Based on 40 CFR 433 and 420 PSNS

In accordance with 40 CFR 403.6(e), the concentration-based categorical pretreatment limits for Cleveland-Cliffs New Carlisle, Outfall 126, were developed by summing the total mass discharge allowance of each pollutant of concern for each of Cleveland-Cliffs New Carlisle's federal categorical operations, then dividing the sum by the average effluent flow to the City of South Bend's sewer system from January 2018 to December 2020. Cleveland-Cliffs New Carlisle's effluent to Outfall 126 consists of regulated flows and unregulated flows.

[Cleveland-Cliffs New Carlisle I L.P. Operations mass (lbs/day)] +  
 [Cleveland-Cliffs New Carlisle II L.P. Operations mass (lbs/day)]

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[Average discharge to City (mgd) X 8.345 (conversion factor)]

See Attachment 3 for more information regarding the calculation of limits for Cleveland-Cliffs New Carlisle. The City of South Bend Industrial Pretreatment Group applied the more stringent limits between local limits and categorical limits.

7. Monitoring Frequency

Monitoring frequencies are based on South Bend's US EPA approved industrial pretreatment program monitoring plan. Cleveland-Cliffs New Carlisle is categorized as an A industry per the City's Industrial Pretreatment Program based on minimum requirement that all industries that discharge flows greater than 100,000 gallons a day be categorized as an A industry. Cleveland-Cliffs New Carlisle is required to sample weekly because of Cleveland-Cliffs New Carlisle's potential, as the largest discharger to the sewer, to cause an upset at the POTW. Cleveland-Cliffs New Carlisle's average wastewater flow makes up approximately 7% – 8% of the POTW's influent flow.

Please note that Naphthalene and Tetrachloroethylene have been waived, as an individual testing requirement, upon request. These parameters will still remain in the semi-annual testing requirement for TTO's. In lieu of monitoring for these pollutants, Cleveland-Cliffs New Carlisle shall submit the following Statement:

***“Based on my inquiry of the person or persons directly responsible for managing compliance with the Pretreatment Standard for 40 CFR 420.106, I certify that, to the best of my knowledge and belief, there has been no increase in the level of naphthalene and tetrachloroethylene in the wastewaters due to the activities at the facility since filing of the last periodic report under 40 CFR 403.12(e)(1)”.***

8. Industrial Operator Certification Requirement

**Operator Certification Requirement: D**

Industrial operator certification requirements are based on the criteria listed in Indiana Administrative Code, Title 327, 5-22-5.

**BOARD OF PUBLIC WORKS  
AGENDA ITEM REVIEW REQUEST FORM**

Date	<u>6/12/2024</u>	Department	<u>UTILITIES</u>
Name	<u>Serena Lozano-Shane</u>	Phone Extension	<u>5798</u>
BPW Date	<u>6/25/2024</u>		

**Review and Approval Required Prior to Submittal to Board**

Diversity Compliance and Inclusion Officer	<input type="checkbox"/>	Officer Name	_____
BPW Attorney	<input type="checkbox"/>	Attorney Name	_____
Dept. Attorney	<input type="checkbox"/>	Attorney Name	_____
Purchasing	<input type="checkbox"/>	_____	_____

**Check the Appropriate Item Type – Required for All Submissions**

<input type="checkbox"/> Professional Services Agreement	<input type="checkbox"/> Contract	<input type="checkbox"/> Proposal	
<input type="checkbox"/> Open Market Contract	<input type="checkbox"/> Amendment/Addendum	<input type="checkbox"/> Special Purchase, QPA	
<input type="checkbox"/> Bid Opening	<input type="checkbox"/> Bid Award	<input type="checkbox"/> Req. to Advertise	<input type="checkbox"/> Title Sheet
<input type="checkbox"/> Quote Opening	<input type="checkbox"/> Quote Award	<input type="checkbox"/> Reject Bids/Quotes	
<input type="checkbox"/> Proposal Opening	<input type="checkbox"/> C/O & PCA No. _____	<input type="checkbox"/> PCA	
<input type="checkbox"/> Chg. Order, No. _____	<input type="checkbox"/> Traffic Control	<input type="checkbox"/> Resolution	
x <input type="checkbox"/> Other: <u><b>Cleveland Cliffs TEK Industrial Discharge Permit Modification – Name Change</b></u>			

**Required Information**

Company or Vendor Name	_____		
New Vendor	<input type="checkbox"/> Yes	<input type="checkbox"/> If Yes, Approved by Purchasing	
	<input type="checkbox"/> No		
MBE/WBE Contractor	<input type="checkbox"/> MBE	<b>Completed E-Verify Form Attached</b>	<input type="checkbox"/> Yes
	<input type="checkbox"/> WBE		<input type="checkbox"/> No
Project Name	_____		
Project Number	_____		
Funding Source	_____		
Account No.	_____		
Amount	_____		
Terms of Contract	_____		
Purpose/Description	_____		
	_____		

**For Change Orders Only**

Amount of	<input type="checkbox"/>	Increase	\$ _____
	<input type="checkbox"/>	Decrease	(\$ _____ )
Previous Amount			\$ _____
		Increase	_____ %
Current Percent of Change:		Decrease	( _____ %)
New Amount			\$ _____
		Increase	_____ %
Total Percent of Change:		Decrease	( _____ %)
Time Extension Amount:			_____
New Completion Date:			_____