

IOWA DEPARTMENT OF NATURAL RESOURCES

ADMINISTRATIVE CONSENT ORDER

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| IN THE MATTER OF: KNIFE RIVER MIDWEST, LLC | ADMINISTRATIVE CONSENT ORDER NO. 2025-AQ- 09 |
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To:

Knife River Midwest, LLC
Colin Chatterton
Environmental Manager
2220 Hawkeye Drive
Sioux City, Iowa 51102

Knife River Midwest, LLC
Colin Chatterton
Environmental Manager
1500 N Sweetman Place
Sioux Falls, South Dakota 57107

Knife River Midwest, LLC
Registered Agent
CT Corporation System
400 E Court Avenue
Des Moines, Iowa 50309

I. SUMMARY

This administrative consent order is entered into between the Iowa Department of Natural Resources (DNR) and Knife River Midwest, LLC (Knife River) for the purpose of resolving air quality violations. In the interest of avoiding litigation, the parties have agreed to the provisions below.

Any questions regarding this administrative consent order should be directed to:

Relating to technical requirements:

Mark Fields
Iowa Department of Natural Resources
6200 Park Avenue
Suite 200
Des Moines, Iowa 50321
Phone: 515-343-6589

Relating to legal requirements:

Anne Preziosi, Attorney for the DNR
Iowa Department of Natural Resources
6200 Park Avenue
Suite 200
Des Moines, Iowa 50321
Phone: 515-238-3429

Payment of penalty to:

Director of the Iowa DNR
6200 Park Avenue
Suite 200

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Des Moines, Iowa 50321

II. JURISDICTION

This administrative consent order is issued pursuant to the provisions of Iowa Code sections 455B.134(9) and 455B.138(1), which authorize the director to issue any order necessary to secure compliance with or prevent a violation of Iowa Code chapter 455B, Division II (air quality), and the rules promulgated or permits issued pursuant to that part; and Iowa Code section 455B.109 and 567 Iowa Administrative Code (IAC) chapter 10, which authorize the director to assess administrative penalties.

III. STATEMENT OF FACTS

1. The Knife River facility located in Sioux City, Iowa, operates Portable Hot Mix Asphalt Plant #4 with a 300 tons/hr asphalt production capacity. The plant has the capability to produce asphalt using reclaimed asphalt pavement (RAP). Portable Hot Mix Asphalt #4 includes an asphalt hot mix dryer, hot mix asphalt silos, an asphalt loadout, material handling, storage piles, and plant roadways. The dryer may be fired by #2, #5, or #6 fuel oil, natural gas, or propane. Emissions from the hot mix dryer are controlled by a fabric filter baghouse.

Summary of Violations

2. Construction Permit No. 91-A-182-S1 for the Portable Hot Mix Asphalt Plant was issued to Knife River on March 19, 2012. Knife River has violated Condition 10, *Emission Limits*, of Construction Permit No. 91-A-182-S1.

- Condition 10 establishes emission limits of 6.9 lb/hr for PM10 and 39.0 lb/hr for Carbon Monoxide (CO). This emission limit was set to demonstrate no predicted exceedances of the National Ambient Air Quality Standards (NAAQS). Condition 10 also establishes a PM emission limit of 9.9 lb/hr for the facility to remain a minor facility below the Title V major threshold.
- According to the stack test conducted on May 16, 2024, the emission results demonstrated the following violations:
 - PM results were found to be 13.09 lb/hr.
 - PM10 Results were found to be 13.09 lb/hr.
 - CO results were found to be 160 lb/hr

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- According to the stack test conducted on September 11, 2024, the emission results demonstrated the following violations:
 - PM results were found to be 41.70 lb/hr.
 - PM10 Results were found to be 41.70 lb/hr.

Chronology

3. On October 6, 2021, DNR received a complaint about air quality issues occurring in the industrial area where Knife River facility is located. On October 29, 2021, EPA forwarded to DNR a complaint received by EPA about air quality issues occurring adjacent to the Sioux City industrial area in which Knife River is located.

4. On April 24, 2023, DNR again received a complaint concerning the industrial area in which the Knife River facility is located. On October 25, 2023, DNR conducted a site visit to the Knife River facility in Sioux City, Iowa. DNR noted opacity from the asphalt plant stack and haze drifting off the property. DNR made Knife River aware that fugitive emissions are not allowed to leave the property.

5. On November 13, 2023, DNR received a complaint related to the smell of chemicals or tar around the north side of Sioux City. The complaint stated that the odor was believed to be coming from the industrial area where the Knife River facility is located. On November 17, 2023, DNR conducted a site visit with Knife River personnel to review equipment, operations, and emission requirements at the Sioux City facility. On November 20, 2023, DNR issued Knife River a letter requiring that PM, PM10, Opacity, CO, NOx, and SO2 stack testing to be conducted within 30-days of restarting the facility in the spring 2024.

6. On May 16, 2024, Knife River conducted stack testing as required by the DNR. During the stack testing, DNR observed opacity being emitted from the stack and various portions of the asphalt plant. DNR observed that the stack, baghouse, and surrounding equipment had a heavy accumulation of an oily tar substance. DNR observers also noted strong odors being emitted from the filling of Asphalt Cement (AC) tanks at the facility. DNR documented large amounts of opacity being emitted while the plant was “idling” between stack testing runs 1 and 2.

7. On July 1, 2024, Knife River submitted the May 16, 2024, stack test results for DNR review. The stack test results demonstrated violations of the CO, PM, and PM10 permitted limits. The following table summarizes the stack test results.

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| Pollutant | Stack Test Result | Permit Limit |
|-----------|-------------------|--------------|
| NOx | 4.2 lb/hr | 16.5 lb/hr |
| CO | 160 lb/hr | 39.0 lb/hr |
| SO2 | 2.5 lb/hr | 35 lb/hr |
| SO2 | 0.038 lb/MMBtu | 2.5 lb/MMBtu |
| Opacity | 0% | 20% |
| PM | 13.09 lb/hr | 9.9 lb/hr |
| PM10 | 13.09 lb/hr | 6.9 lb/hr |

8. On August 9, 2024, Knife River scheduled a retest of EP 1 for August 27, 2024.
9. On August 26, 2024, DNR issued a Notice of Violation letter (NOV) for the CO, PM, and PM10 emission limit violations that occurred during the May 16, 2024, stack testing. The NOV required the submission of a compliance plan by September 23, 2024, with a detailed root cause analysis and corrective action summary.
10. On August 26, 2024, DNR issued a Letter of Inquiry (LOI) requesting that detailed information be submitted by October 8, 2024 regarding several aspects of the asphalt plant and its operations.
11. Also, on August 26, 2024, Knife River notified DNR that the August 27, 2024, test date needed to be rescheduled for September 11, 2024.
12. On September 11, 2024, Knife River conducted stack testing for CO, PM, and PM10.
13. On September 20, 2024, Knife River provided a response to the LOI and NOV letters issued by DNR on August 26, 2024. (Knife River was unaware of the PM and PM10 emission results from the September 11, 2024, test at the time of the response).
14. On September 20, 2024, Knife River provided a compliance plan as required by the NOV. The compliance plan provided that bags in the baghouse had become unseated prior to the May 16, 2024, stack test. A malfunctioning regulation valve had caused the CO exceedance. At this time Knife River stated its belief that the CO, PM, and PM10 issues had been resolved.
15. On September 20, 2024, Knife River also provided a response to the LOI to provide information on several items. A summary of the responses follows:

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- a. When asked to provide a plan to prevent future violations, Knife River stated that the facility is awaiting the September 11, 2024, stack test results but believes the plant is operating in compliance.
- b. Pressure drop was not being read across the baghouse and was only being taken at the front of the baghouse.
- c. Additional SO₂ may be coming into the process through recycled asphalt and AC.
- d. The facility is unsure if the AC tanks are exempt from permitting and provides that filling activities of the AC tanks likely produces small amounts of VOC, SO_x, and NO_x as fugitive emissions. Knife River had previously told DNR they believed that fugitive emissions do not need to be controlled.
- e. The ‘idling’ DNR observed between stack test runs 1 and 2 that produced large amounts of opacity is not a common operating scenario.
- f. Regardless of the September 11, 2024, stack test results, Knife River stated that a baghouse from a different facility would be used to replace the current control equipment. Knife River again noted a belief the September 11, 2024, stack testing demonstrated compliance with the CO, PM, and PM₁₀ emission limits.

16. On September 25, 2024, DNR received a complaint and pictures of emissions originating from the Knife River asphalt plant.

17. On October 4, 2024, Knife River submitted the September 11, 2024, stack test results for DNR review. The stack test results demonstrated the CO emission rate was in compliance with the permitted limit. PM and PM₁₀ emissions were shown to be significantly higher than the May 16, 2024, stack test results and remained in violation. The following table summarizes the stack test results.

| Pollutant | Result | Permit Limit |
|------------------|-------------|--------------|
| CO | 23.9 lb/hr | 39.0 lb/hr |
| PM | 41.70 lb/hr | 9.9 lb/hr |
| PM ₁₀ | 41.70 lb/hr | 6.9 lb/hr |

18. On October 10, 2024, DNR issued a NOV for the PM and PM₁₀ emission limit violations. The NOV required a compliance plan with a detailed root cause analysis, corrective action summary, and timeline to be submitted by November 10, 2024.

19. On October 17, 2024, Knife River and DNR met to discuss actions the facility is taking to address the PM and PM₁₀ violations. Knife River told DNR that changes had been made to the plant with engineering testing scheduled to

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determine if violations had been addressed. DNR informed Knife River that “fugitive” emissions from the facility that can be reasonably captured are required to be captured.

20. On November 17, 2024, Knife River submitted an updated compliance plan providing engineering test results that showed emissions are in excess of the PM and PM10 emission limits. The compliance plan included additional activities Knife River had planned to address violations.

21. On January 14, 2025, DNR and Knife River met to discuss the compliance plan and ongoing violations.

22. On January 16, 2025, Knife River provided DNR an updated compliance plan to approve changes to the facility to be completed by April 1, 2025, that are expected to address the PM and PM10 exceedances.

22. On January 17, 2025, DNR approved the January 16, 2025, compliance plan and required stack testing for CO, PM, and PM10 testing. The CO stack testing was required to ensure that equipment changes to address the PM and PM10 violations did not affect CO emissions.

23. On April 26, 2025, Knife River scheduled a stack test with DNR for May 22, 2025. The test protocol included justification for two stack testing operating scenarios as worst-case scenarios, one of which was to be tested.

24. On May 5, 2025, Knife River and DNR staff met to discuss the changes at the facility, the scheduled stack testing, and the proposed operating scenarios during the stack testing. Knife River reported that the proposed changes included in the January 16, 2025, compliance plan, which is attached as Exhibit A, have been completed.

IV. CONCLUSIONS OF LAW

1. Iowa Code section 455B.133 provides that the Environmental Protection Commission (Commission) shall establish rules governing the quality of air and emission standards. The Commission has adopted 567 IAC chapters 21 through 33 relating to air quality.

2. Iowa Code section 455B.134(3) provides that the director of DNR shall grant, modify, suspend, terminate, revoke, reissue or deny permits for the construction or operation of new, modified, or existing air contaminant sources and for related control equipment.

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3. 567 IAC 22.3(3) states that an air quality construction permit may be issued subject to conditions which shall be specified in writing, and may include, but are not limited to, emission limits, operating conditions, fuel specifications, compliance testing, continuous monitoring, and excess emission reporting. As stated above, Knife River has failed to comply with the emission limit provisions of Construction Permit No. 91-A-182-S1.

V. ORDER

Therefore, DNR orders and Knife River agrees to the following:

1. By no later than July 31, 2025, Knife River shall retest the Hot Mix Asphalt Plant for CO, PM, and PM10, while producing the worst-case for air emissions asphalt product at the maximum capacity of the plant, and;

2. Within 90 days of completing the stack test required by paragraph 1, if the stack test results demonstrate emission limit violations have not been addressed, then Knife River shall submit construction permit applications that include the following:

- A request to increase emission limits for any emission limit exceedance, and
 - If emission limit increases exceed 2.28 lb/hr then a PM2.5 ambient air dispersion model predicting NAAQS compliance shall be provided,
- A PM10 ambient air quality dispersion model predicting NAAQS compliance that is specific to the Knife River facility location shall be provided,
- Prior to ambient air quality dispersion modeling, Knife River shall provide the modeling protocol to DNR for DNR's approval,
- Any changes required to achieve predicted NAAQS compliance with the PM10 or PM2.5 ambient air quality dispersion model shall be completed prior to beginning operation for the 2026 operating season,
- Knife River shall outline conditions to minimize emissions from the asphalt hot mix dryer, hot mix asphalt silos, and asphalt loadout, material handling, storage piles, and plant roadways, as included in condition 14a of Construction Permit No. 91-A-182-S1, and
- Knife River shall include conditions related to the replacement of the existing baghouse, **or**;

3. Within 90 days of completing the stack testing required by paragraph 1 above, if the stack test results demonstrate compliance with the permitted emission limits, then Knife River shall submit construction permit applications that include the following:

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- The conditions under which the stack testing was conducted shall be the permitted operating limits (i.e. drum temperatures, AC injection line length allowances, changes to flight spacing and direction, removable oil/grease filter, etc.),
- Conditions shall be included to minimize emissions from the asphalt hot mix dryer, hot mix asphalt silos, an asphalt loadout, material handling, storage piles, and plant roadways, as is currently included in condition 14a of Construction Permit No. 91-A-182-S1,
- A PM10 ambient air quality dispersion model predicting NAAQS compliance that is specific to the Knife River facility location shall occur, and the permit application shall include that any changes required to achieve predicted NAAQS compliance with the PM10 ambient air quality dispersion model shall be completed prior to beginning operation for the 2026 operating season. Prior to ambient air quality modeling, Knife River shall provide the modeling protocol to DNR for DNR's approval,
- Conditions shall be included related to the replacement of the existing baghouse, and;

4. Within 30 days of DNR's Director signing the administrative consent order, Knife River shall submit for DNR approval a justification of a permit exemption or a construction permit application for the AC tanks, and;

5. Within 30 days of the date this Administrative Consent Order is signed by the Director, Knife River shall pay a penalty of \$10,000.00.

VI. PENALTY

Pursuant to the provisions of Iowa Code section 455B.109 and 567 IAC chapter 10, which authorize the director to assess administrative penalties, a penalty of \$10,000.00 is assessed by this administrative consent order. The penalty must be paid within 60 days of the date this Administrative Consent Order is signed by the Director. The administrative penalty is determined as follows:

Iowa Code section 455B.146 authorizes the assessment of civil penalties of up to \$10,000.00 per day of violation for the air quality violations involved in this matter. More serious criminal sanctions are also available pursuant to Iowa Code section 455B.146A.

Iowa Code section 455B.109 authorizes the Commission to establish by rule a schedule of civil penalties up to \$10,000.00 that may be assessed administratively. The Commission has adopted this schedule with procedures and criteria for assessment of penalties through 567 IAC chapter 10. Pursuant to this rule, DNR has determined that the most effective and efficient means of addressing the above-cited violations is the issuance of an administrative consent

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order with a penalty. The administrative penalty assessed by this order is determined as follows:

Economic Benefit – 567 IAC chapter 10 requires that DNR consider the costs saved or likely to be saved by noncompliance. 567 IAC 10.30(1) states that where the violator received an economic benefit through the violation or by not taking timely compliance or corrective measures, DNR shall take enforcement action which includes penalties to offset the economic benefit. 567 IAC 10.30(1) further states that reasonable estimates of economic benefit should be made where clear data are not available.

Delaying equipment and control equipment cleaning and maintenance until stack test results show the equipment is exceeding permitted emission limits has allowed Knife River to realize cost savings from not replacing parts on control equipment and not cleaning out control equipment. Knife River has provided information to DNR that several changes are needed to the facility to attempt to comply with permitted emission limits, and one of these changes is replacement of the current baghouse. The equipment costs have been delayed, and labor hours needed to perform the maintenance have been avoided.

The actual amount of cost savings is not known to the DNR, but it is likely Knife River profited from producing products for sale while operating in violation of the permitted emission limits.

For the reasons stated above \$4,000.00 is assessed for this factor.

Gravity of the Violation – Harm to the environment and public health may have occurred due to the amount of CO, PM, and PM10 that Knife River has emitted above the emission limits set forth in Construction Permit No. 91-A-182-S1.

Construction Permit No. 91-A-182-S1 for the Portable Hot Mix Asphalt Plant was issued to Knife River on March 29, 2012. Knife River has violated Condition 10, *Emission Limits*, of Construction Permit No. 91-A-182-S1. Condition 10 establishes emission limits of 6.9 lb/hr for PM10 and 39.0 lb/hr for Carbon Monoxide (CO). The facility has failed to comply with these emission limits, as stated above.

These emission limits were set to demonstrate no predicted exceedances of the National Ambient Air Quality Standards (NAAQS). Condition 10 of Construction Permit No. 91-A-182-S1 also establishes a PM emission limit of 9.9 lb/hr for the facility to remain a minor facility below the Title V major threshold. The PM limit has been violated as well, as stated above.

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For the reasons stated above, \$3,000.00 is assessed for this factor.

Culpability – The Knife River facility has been identified as a source of emissions by complaints from the surrounding community. Due to these complaints, DNR performed a site visit in fall of 2023 and identified potential emission issues at the facility. Knife River was made aware of potential emission issues with the asphalt plant but did not address the issues until stack test results demonstrated exceedances of emission limits. Knife River is responsible for maintaining the facility in compliance with the permitted emission limits at all times.

Knife River has been aware of emission issues with the facility since at least May 16, 2024, but has continued to operate the facility.

The noticeable accumulation of an oily tar substance on the stack, control equipment, and equipment at the plant indicates emissions issues have been ongoing for a considerable amount of time.

For the reasons stated above, \$3,000.00 is assessed for this factor.

VII. WAIVER OF APPEAL RIGHTS

This administrative consent order is entered into knowingly and with the consent of Knife River. For that reason, Knife River waives its right to appeal this order or any part thereof.

VIII. NONCOMPLIANCE

Failure to comply with this administrative consent order, including failure to timely pay any penalty, may result in the imposition of further administrative penalties or referral to the attorney general to obtain injunctive relief and civil penalties pursuant to Iowa Code section 455B.146. Compliance with Section “V. Order” of this administrative consent order constitutes full satisfaction of all requirements pertaining to the specific violations described in Section “IV. Conclusions of Law” of this administrative consent order.

Kayla Lyon, Director
Iowa Department of Natural Resources

Christopher Winkel Digitally signed by Christopher Winkel
Date: 2025.06.13 12:41:42 -05'00'
Knife River Midwest, LLC

Dated this _____ day of
_____, 2025.

DNR Air Quality Bureau; DNR Field Office 3