

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Northwest Regional Office • 330 W. US Highway 30, Suite F • Valparaiso, IN 46385 (888) 209-8892 • (219) 464-0233 • Fax (219) 464-0553 • www.idem.IN.gov

Eric J. Holcomb

Brian C. Rockensuess

Commissioner

July 5, 2024

VIA ELECTRONIC MAIL
Mike Penno
Linde Inc.
500 North Clark Road
Gary, Indiana 46406
mike.penno@linde.com

Re: Inspection Summary Letter

Linde Inc.

Source ID 089-00177 Gary, Lake County

Dear Mike Penno:

On July 2, 2024, representatives of the Indiana Department of Environmental Management (IDEM), Northwest Regional Office (NWRO), conducted an inspection of Linde Inc., located at 500 North Clark Road in Gary, Indiana. This inspection was conducted pursuant to IC 13-14-2-2. For your information, and in accordance with IC 13-14-5, a summary of the inspection is provided below:

Inspection Type: Commitment

Inspection Results: No violations were observed

Please direct any questions to me at 219-250-0350 or by email at cyukawa@idem.in.gov.

Sincerely,

Clift Mahawa

Cliff Yukawa, Compliance Inspector Indiana Department of Environmental Management Northwest Regional Office

ACES ID: 299188

ENCLOSURE

cc: Cliff Yukawa, Northwest Regional Office (NWRO)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY FIELD INSPECTION REPORT



SOURCE INFORMATION		
SOURCE NAME	Linde Inc.	
SOURCE LOCATION	500 North Clark Road, Gary, India	ana
SOURCE LOCATION	Lake County	
MAILING ADDRESS	500 North Clark Road, Gary, India	ana 46406
PLANT ID	089-00177	
PERMIT INFORMATION	Permit Type: Permit Number: Permit Expiration Date: VFC Document No.(hyperlink):	MSOP 089-46674-00177 10/24/2028 83548535
ATTAINMENT STATUS	☐ Attainment for all criteria pollut☒ Nonattainment for ☐SO₂ ☐C	ants CO ⊠O ₃ □NO ₂ □Pb □PM ₁₀ □PM _{2.5}
SOURCE STATUS	□ PSD Major (326 IAC 2-2)⋈ Emission Offset (326 IAC 2-3)□ Acid Rain (326 IAC 21)	J
SOURCE DESCRIPTION	The Permittee owns and operates	a stationary Industrial Gas Manufacturing facility.

INSPECTION INFORMATION							
INSPECTED BY	Cliff Yukawa	Cliff Yukawa					
INSPECTION DATE AND TIME	July 2, 2024	TIME IN: 9:00 a.m.	ı	TIME OUT: 1	1:30 a.m.		
REPORTED BY	Cliff Yukawa	REPORT DATE: 7	/2/2024				
COMPLIANCE PERIOD REVIEWED	October 2021 to July 2024						
INSPECTION NOTIFICATION	□ Announced □ Announced						
INSPECTION OBJECTIVE(S)	☐ Mega-Site: ☐ FCE ☐ PCE ☐ Comp			mmitment mplaint veillance			
ACES TRACKING NUMBER(S)	Inspection: 299188	Complaint: N/A	Violat	ion/Warning:	N/A		
RM TRACKING NUMBER(S)	Complaint: N/A		•				
INSPECTION BACKGROUND	The source was last inspected on 10/5/2021. No violations were determined at the time of the inspection.						

SOURCE PERSONNE	L INTERVIEWED		
Name	Title	Phone Number	Email Address
Mike Penno	Plant Manager	219-378-5760	Mike.penno@linde.com
Margaret Neander	S&ES Representative	219-378-4862	margaret.neander@linde.com
Timothy Shutski	Field Technician	219-252-3363	timothy.shutske@linde.com
Johnathan Kell	Environmental Specialist	219-384-3029	Johnathon.kell@linde.com

Linde Inc. (Plant ID 089-00177)

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INSPECTION AND COMPLAINT HISTORY (PREVIOUS 5 YEARS)						
Date	Inspection/Complaint Type	Result	Comments			
10/5/2021	CMS	No Violations Noted	None			
10/8/2019	10/8/2019 CMS No Violations Noted None					

COMPLIANCE HISTORY (PREVIOUS 5 YEARS)					
Informal Enforce	ement Actions				
Date Issued	Action Taken	Describe Viola	ation(s)		
N/A	N/A	N/A			
Formal Enforce	ment Actions				
Case Number	Enforcement Type	Civil Penalty	Describe Violation(s)		
N/A	N/A	\$ N/A	N/A		
Other Relevant Actions					
Action Taken	Comments				
N/A	N/A				

PERMIT SECTION D.1						
Emission Units and Control Devices:						
(a) One (1) natural gas fired Vaporizer Heater, identified as A12, constructed in 1999, with a maximum heat input rate of 41.8 million British thermal units per hour, equipped with low NOx burners for nitrogen oxide pollution control, exhausting through two (2) stacks ID # S012A and S012B;						
(b) One (1) natural gas fired Boiler, identified as A14, constructed in 2003, 12.56 million British thermal units per hour, using no control and exhaus						
Pollutants with Emission Limits or Applicable Standards:						
oxtimes SO ₂ $oxtimes$ NO _X $oxtimes$ CO $oxtimes$ VOC $oxtimes$ PM $oxtimes$ PM ₁₀ $oxtimes$ PM _{2.5} $oxtimes$ HAPS						
Applicable Rules:						
Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-	2-4]					
Requirement:	Applicable	Violation Noted				
Emission Limitations and Standards		□ Yes ⊠ No				
Preventive Maintenance Plan		□ Yes ⊠ No				
Compliance Determination Requirements	☐ Yes ⊠ No	☐ Yes ⊠ No				
Testing Requirements ☐ Yes ☒ No ☐ Yes ☒ No						
Compliance Monitoring Requirements ☐ Yes ☒ No ☐ Yes ☒ No						
Recordkeeping Requirements ☐ Yes ☒ No ☐ Yes ☒ N						
Types of Records Reviewed: N/A						
Reporting Requirements	☐ Yes ⊠ No	☐ Yes ⊠ No				
Observations and Comments:						

Linde Inc. (Plant ID 089-00177)

Permit Section Compliance Status:

N/A

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PERMIT SECTION D.1

Oxygen, Nitrogen, and Aragon gases and liquids. At the time of the inspection, the Vaporizer Heater identified as A12 was in operation. No visible emissions were observed coming from the stacks that were associated with this unit. The preventive maintenance plans for the natural gas fire vaporizer heater and low NOx burners were viewed and no deficiencies were identified. Reviewing the burners' technical documentation, I verified that the burners were designed as low NOx burners.

Emission Unit or Control Device	Parameter	Permitted Value/Range	Observation
Low NOx burners	N/A	N/A	N/A

The natural gas-fired Boiler (A14) was not operating during the inspection. It is used primarily as a building heater for the winter and cooler months. Mr. Penno indicated that the boiler would start its winter operation every new year in October. Likewise, he noted that the boiler is used for steam. Boiler A14 was also identified as the Sellers Boiler and was last inspected and maintained on December 1, 2023.

☑ No violations were observed or determined for this permit section at the time of the inspection.☐ The following violations were determined for this permit section at the time of the inspection:

PERMIT SECTION D.2					
Emission Units and Control Devices	:				
Specifically Regulated Insignifica	nt Activities				
	ng operations, that use Safety-Kleen, for de ty-five (145) gallons per twelve (12) months		, unless the usage		
Pollutants with Emission Limits or A	oplicable Standards:				
□ SO ₂ □ NO _X □ CO ⊠ VOC	C □ PM □ PM ₁₀ □ PM _{2.5} ⊠ HAPS				
Applicable Rules:					
	Equipment and Operating Requirements [3 Cleaner Degreasers [326 IAC 8-3-8]	326 IAC 8-3-2]			
Requirement:		Applicable	Violation Noted		
Emission Limitations and Standa	ards		☐ Yes ☒ No		
Preventive Maintenance Plan			☐ Yes ☒ No		
Compliance Determination Requ	irements	☐ Yes ☒ No	☐ Yes ⊠ No		
Testing Requirements		☐ Yes ☒ No	☐ Yes ☒ No		
Compliance Monitoring Requirer	ments	☐ Yes ⊠ No	□ Yes ⊠ No		
Recordkeeping Requirements			□ Yes ⊠ No		
Types of Records Reviewed: The name and address of the solvent supplier. The date of purchase (or invoice/bill dates of contract servicer indicating service date). The type of solvent purchased. The total volume of the solvent purchased. The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).					
Reporting Requirements		☐ Yes ⊠ No	□ Yes ⊠ No		
Observations and Comments:					

Linde Inc. (Plant ID 089-00177)

Permit Section Compliance Status:

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P	ER	MIT	SE	CTI	ON	D	2

During the opening conference, Ms. Neander indicated the company uses only one parts washer. At the time of the inspection, the parts washer was not in use. The parts washer lid was closed, and contained conspicuous labels containing operating instructions and other safety information. The company utilizes Safety-Kleen premium solvent with a vapor pressure of 0.2 millimeter of mercury measured at twenty (20) degrees Celsius. Clean Harbors (Safety Kleen) is the supplier who provides services for the parts washer. The parts washer is serviced quarterly.

 ☑ No violations were observed or determined for this permit section at the time of the inspection. ☐ The following violations were determined for this permit section at the time of the inspection: N/A 					
PERMIT SECTION D.3					
Emission Units and Control Devices:					
Insignificant Activities					
(c) Four (4) storage tanks, each with a maximum capacity of 1,050, 1,000, storing diesel oil or fuel oil, constructed in 2008, 2012, 1999, and 1997		lons, respectively,			
Pollutants with Emission Limits or Applicable Standards:					
\square SO ₂ \square NO _X \square CO \boxtimes VOC \square PM \square PM ₁₀ \square PM _{2.5} \boxtimes HAPS					
Applicable Rules:					
 Volatile Organic Compounds (VOC) [326 IAC 8-9] 					
Requirement:	Applicable	Violation Noted			
Emission Limitations and Standards		☐ Yes ☒ No			
Preventive Maintenance Plan	☐ Yes ☒ No	☐ Yes ⊠ No			
Compliance Determination Requirements	☐ Yes ☒ No	☐ Yes ⊠ No			
Testing Requirements	☐ Yes ⊠ No	☐ Yes ☒ No			
Compliance Monitoring Requirements	☐ Yes ☒ No	☐ Yes ⊠ No			
Recordkeeping Requirements		☐ Yes ⊠ No			
Types of Records Reviewed: The vessel identification number. The vessel dimensions. The vessel capacity.					
Reporting Requirements	☐ Yes ☒ No	☐ Yes ☐ No			
Observations and Comments:					
At the time of the inspection, we observed four (4) storage tanks in operation. T observed or odors detected. All information regarding tank records was available were in good condition and did not appear to be leaking or damaged. The storage emergency generators.	e during my inspecti	on. The tanks			
Permit Section Compliance Status:					
 ☒ No violations were observed or determined for this permit section at the tim ☐ The following violations were determined for this permit section at the time N/A 	·				

PERMIT SECTION E.1

Emission Units and Control Devices:

Linde Inc.	(Plant ID	089-00177)

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PERMIT SECTION E.1							
rate of 41.8 million British thermal un	(a) One (1) natural gas fired Vaporizer Heater, identified as A12, constructed in 1999, with a maximum heat input rate of 41.8 million British thermal units per hour, equipped with low NOx burners for nitrogen oxide pollution control, exhausting through two (2) stacks ID # S012A and S012B;						
(b) One (1) natural gas fired Boiler, identification 12.56 million British thermal units per							
Pollutants with Emission Limits or Applicable	Standards:						
\boxtimes SO ₂ \boxtimes NO _X \boxtimes CO \boxtimes VOC \boxtimes PN	$M \boxtimes PM_{10} \boxtimes PM_{2.5} \boxtimes HA$	\PS					
Applicable Rule:							
 General Provisions Relating to New Sour Standards of Performance for Industrial-Oct Dct [326 IAC 12] 							
Applicability Information:							
The above units are subject to 40 CFR 60, Subpart Dc because they are steam generating units for which construction, modification, or reconstruction is commenced after June 9, 1989, and that have a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).							
Requirement:			Applicable	Violation Noted			
Emission Limitations/Standards			□ Yes ⊠ No	□ Yes ⊠ No			
Work Practice/Operating Requirements			□ Yes ⊠ No	□ Yes ⊠ No			
Compliance Monitoring Requirements			□ Yes ⊠ No	□ Yes ⊠ No			
Testing Requirements			□ Yes ⊠ No	□ Yes ⊠ No			
Record Keeping Requirements				□ Yes ⊠ No			
Types of Records Reviewed: Record	s of the amount of each fuel	comb	usted.				
Reporting Requirements			☐ Yes ⊠ No	☐ Yes ⊠ No			
Preventive Maintenance Plan [326 IAC 1-	-6-3]		□ Yes ⊠ No	□ Yes ⊠ No			
Observations and Comments:							
During the inspection, the records of the amount of natural gas combusted were reviewed. It was found that the permittee keeps monthly records of the natural gas combusted in the A12 Vaporizer Heater and A14 Boiler. The records included a 12-month running average of natural gas utilization.							
Emission Unit or Control Device	or Control Device Parameter Permitted Value/Range Observation			Observation			
Low NOx burners	N/A	N/A		N/A			
Please see section D.2 of this report for the field observations regarding the A12 Vaporizer Heater and A14 Boiler.							
Permit Section Compliance Status:							
☑ No violations were observed or determined for this permit section at the time of the inspection.							

 \Box The following violations were determined for this permit section at the time of the inspection:

PERMIT SECTION E.2

N/A

Emission Units and Control Devices:

Linde Inc. (Plant ID 089-00177) Inspection Report

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PERMIT SECTION E.2				
Insignificant Activities				
(a) Five (5) diesel fired Emergency Generators, identified as A6, A7, A8, A10, and A11 each constructed in 1965, 1971, 1975, 1997, and 1999, respectively, each with a maximum heat input rate of 2.8, 3.3, 2.8, 3.2, and 5.2 million British thermal units per hour per hour, respectively, each exhausting through one (1) stack ID # S006, S007, S008, S010, and S011, respectively;				
Pollutants with Emission Limits or Applicable Standards:				
oxtimes SO ₂ $oxtimes$ NO _X $oxtimes$ CO $oxtimes$ VOC $oxtimes$ PM $oxtimes$ PM ₁₀ $oxtimes$ PM _{2.5} $oxtimes$ HAPS				
Applicable Rule:				
 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR 63, Subpart A] National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] 				
Applicability Information:				
The above emergency engines are subject to the requirements of 40 CFR 63, Subpart ZZZZ, because this rule applies to emergency engines that are located in a major or area source of HAP emissions.				
Requirement:	Applicable	Violation Noted		
Emission Limitations/Standards	☐ Yes ⊠ No	□ Yes ⊠ No		
Work Practice/Operating Requirements	☐ Yes ⊠ No	□ Yes ⊠ No		
Compliance Monitoring Requirements	☐ Yes ⊠ No	□ Yes ⊠ No		
Testing Requirements	☐ Yes ⊠ No	□ Yes ⊠ No		
Record Keeping Requirements		☐ Yes ☒ No		
Types of Records Reviewed: Records of the maintenance. Records of the hours of operation of the engines.				
Reporting Requirements	☐ Yes ⊠ No	☐ Yes ⊠ No		
Preventive Maintenance Plan [326 IAC 1-6-3]	⊠ Yes □ No	☐ Yes ⊠ No		
Observations and Comments:				
During the opening meeting, Mr. Katic indicated that all maintenance on the engines has been conducted annually by an external contractor, Cummins. The last full service of the engines was conducted on 12/11/2023. Ms. Neander and Mr. Shutske stated that the engines and generators are tested monthly, for fifteen (15) minutes, to ensure proper operation during an emergency, if needed.				
Maintenance records were reviewed, and no deficiencies were identified during the inspection. The generators were equipped with non-resettable hour meters.				
During the site tour, the generators were not in operation. We observed the generator A6 had 573.8 operating hours, generator A7 had 378.1 operating hours, generator A8 had 5330.3 operating hours, generator A10 had 508.2 operating hours, and generator A11 had 477.2 operating hours. The hours from the hour meters observed were all within a reasonable time duration for completing monthly inspections.				
Permit Section Compliance Status:				
 ☑ No violations were observed or determined for this permit section at the time of the inspection. ☐ The following violations were determined for this permit section at the time of the inspection: N/A 				

ADDITIONAL SOURCE COMPLIANCE REVIEW:

The following reports are required and were reviewed:

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None.

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ADDITIONAL SOURCE COM	IPLIANCE REVIEW:			
	ertification(s)			
☐ Annual Notification(s)	\boxtimes	Emission Statement(s)		
The reports are consistent with inspection observations. ⊠ Yes □ ١				
The permit accurately represents emission units observed on site.		served on site.	⊠ Yes □ No □ N/A	
Compliance assistance was provided during the inspection.		pection.	□ Yes ⊠ No □ N/A	
The source is required to have a Risk Management Plan [40 CFR 68].		□ Yes ⊠ No		
If yes, the source has a p	lan.		□ Yes □ No ⋈ N/A	
If yes, the employees have been trained.		□ Yes □ No ⋈ N/A		
Additional Information and Comments:				
None				
Additional Source Compliance Review Status: ☑ No violations were observed or determined for this permit section at the time of the inspection. ☐ The following violations were determined for this permit section at the time of the inspection: N/A				
INSPECTION FINDINGS	ad ar datarminad at the	time of the inspection		
 ☒ No violations were observed or determined at the time of the inspection. ☐ The following violations were determined at the time of the inspection: N/A 				
RECOMMENDED ACTION	Issue inspection sumr	mary letter.		
EXIT INTERVIEW	I explained my findings, recommendations, and conclusions with Mr. Penno, Ms. Neander, Mr. Shutske, and Mr. Kell prior to exiting the facility.			
ATT A GUMEN'TO				
ATTACHMENTS				