



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, ILLINOIS 60604**

**SUBJECT:** CLEAN AIR ACT INSPECTION REPORT  
Koch Methanol, St. James, Louisiana

**FROM:** Karina Kuc, Environmental Engineer  
AECAB (IL/IN)

**THRU:** Nathan Frank, Section Supervisor  
AECAB (IL/IN)

**TO:** File

---

**BASIC INFORMATION**

**Facility Name:** Koch Methanol St. James

**Facility Location:** 6586 LA-3127, St James, LA 70086

**Date of Inspection:** April 21, 2022

**EPA Inspector(s):**

1. Karina Kuc, Environmental Engineer
2. Victoria Nelson, Environmental Engineer

**Other Attendees:**

1. Kevan Reardon, EHS Leader, Koch Methanol
2. Haleigh Engler, Environmental Engineer, Koch Methanol
3. Matthew Avery, Environmental Engineer, Koch Methanol
4. Marc Hoss, Plant Manager, Koch Methanol
5. Dana Jacobs, Production Manager, Koch Methanol (closing only)
6. Daniel Frank, Process Engineer, Koch Methanol (closing only)
7. Darien Carson, Operations Superintendent, Koch Methanol (closing only)

**Contact Email Address:** Kevan.Reardon@kochind.com

**Purpose of Inspection:** to assess compliance with the Clean Air Act

**Facility Type:** methanol production

**Facility Name:** Koch Methanol St. James  
**Facility Location:** 6586 LA-3127, St James, LA 70086  
**Date of Inspection:** April 21, 2022

**Regulations Central to Inspection:** National Emission Standards for Organic Hazardous Air Pollutants (NESHAP) from the Synthetic Organic Chemical Manufacturing Industry, 40 C.F.R. Part 63, Subparts F, G, and H (HON)

**Arrival Time:** 3:00 PM  
**Departure Time:** 6:45 PM

**Inspection Type:**

- ☒ Unannounced Inspection
- ☐ Announced Inspection

**OPENING CONFERENCE**

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Provided Small Business Resource Information Sheet
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Koch Methanol employees unless otherwise noted.

**Company Ownership:** When construction of the facility began in 2018, Koch Methanol was 40% owner and a Chinese investment firm, YCI, was 60% owner. In 2019, Koch Methanol became 60% owner of the facility and 100% owner of the terminal. In 2020, construction was finished and Koch Methanol became the sole owner. Production began in 2021.

**Process Description:**

Methanol production is achieved by first producing synthesis gas or “syngas,” followed by methanol synthesis and finally methanol distillation. Syngas production begins with desulfurization of natural gas. It is then routed to the steam methane reformer (SMR), where it is combined with a catalyst and steam to create syngas. Next, the syngas is combined with natural gas, then oxygen is introduced. An air separation system located at the facility but owned by Air Liquide, supplies oxygen and nitrogen to Koch Methanol. Methanol synthesis consists of two reactors in series. The syngas is reacted with a catalyst to produce crude methanol. The crude methanol is then distilled through several distillation columns to produce pure methanol. The product grade methanol is then distributed by pipeline or stored in tanks equipped with internal floating roofs before being shipped out by barge, railcar or tanker truck. Barge and ship loading is handled by a third party.

**Staff Interview:** Emissions from normal operations, sweeps, process sumps, slop tank, reactors and the emergency system are vented to an unassisted flare. The storage tanks are controlled by a condenser and scrubber. A design evaluation was done for assuming a range of control efficiencies at the scrubber under different operating scenarios. The SMR is controlled by a

**Facility Name:** Koch Methanol St. James  
**Facility Location:** 6586 LA-3127, St James, LA 70086  
**Date of Inspection:** April 21, 2022

selective catalytic reduction unit. Emissions from loading railcars and tank trucks are routed to a vapor combustor. A third party conducts Leak Detection and Repair (LDAR) requirements for the facility.

### **TOUR INFORMATION**

**EPA Tour of the Facility:** Yes

**Data Collected and Observations:** EPA conducted the inspection equipped with a FLIR GFx-320 (FLIR) and a flame ionization detector (FID) made by ThermoFisher Toxic Vapor Analyzer 2020 (TVA2020). EPA inspected the terminal storage tanks. Using the TVA2020, EPA observed readings from about 20 to 27 parts per million (ppm) from the hatch on Tank 2301. Using the FLIR, EPA observed the flare, SMR, and boiler. EPA observed the control room and parameters being monitored.

**Photos and/or Videos:** were taken during the inspection.  
EPA inspectors recorded videos using the FLIR.

**Field Measurements:** were taken during this inspection.  
EPA inspectors measured organic emissions data using a TVA2020.

### **RECORDS REVIEW**

1. Process Flow Diagram
2. Notice of Compliance Status for the HON

### **CLOSING CONFERENCE**

☒ Provided U.S. EPA point of contact to the facility

#### **Requested documents:**

- Unloading schedule at terminal tanks for April 20 and 21, 2022
- LDAR database in Microsoft Access for 1 year
- Parametric monitoring records for the flare for the past 3 months
- Parametric monitoring records for the scrubber and condenser for the past 3 months

**Compliance Assistance:** EPA recommended that the facility check the integrity of the internal floating roof at Tank 2301.

**Facility Name:** Koch Methanol St. James  
**Facility Location:** 6586 LA-3127, St James, LA 70086  
**Date of Inspection:** April 21, 2022

### **DIGITAL SIGNATURES**

Report Author: Kuc, Karina Digitally signed by Kuc, Karina  
Date: 2022.05.17 13:21:58 -05'00'

Section Supervisor: Frank, Nathan Digitally signed by Frank, Nathan  
Date: 2022.05.17 15:09:13 -05'00'

### **APPENDICES AND ATTACHMENTS**

Appendix A: Digital Video Log  
Appendix B: EPA Monitoring Results and Calibration Information

**Facility Name:** Koch Methanol St. James  
**Facility Location:** 6586 LA-3127, St James, LA 70086  
**Date of Inspection:** April 21, 2022

**APPENDIX A: DIGITAL IMAGE LOG**

<b>1. Inspector Name:</b> Victoria Nelson	<b>2. Archival Record Location:</b> Region 5 Electronic Records Center
---	--

<b>Image Number</b>	<b>File Name</b>	<b>Date and Time (central time)*</b>	<b>Description of Image</b>
1	MOV_0245.mp4	4/21/2022 18:41	Video of flare
2	MOV_0246.mp4	4/21/2022 18:42	Video of SMR and boiler stacks
3	MOV_0247.mp4	4/21/2022 18:51	Video of SMR and boiler stacks
4	MOV_0248.mp4	4/21/2022 18:52	Video of high pressure steam release

\*The time reflected on the timestamp is an hour later than the video was recorded

**Facility Name:** Koch Methanol St. James  
**Facility Location:** 6586 LA-3127, St James, LA 70086  
**Date of Inspection:** April 21, 2022

## **APPENDIX B: EPA MONITORING RESULTS AND CALIBRATION INFORMATION**

Monitoring Results from Inspection 4/21/2022 and Calibration and Instrument Information

**Table 1. Monitoring of Terminal Storage Tanks**

<b>Location</b>	<b>Notes</b>	<b>EPA Inspector</b>	<b>EPA Reading (ppm)</b>
Hatch on Tank 2301	Under lip of hatch	Karina Kuc	20-27

### **Calibration and Instrument Information**

EPA used one ThermoFisher Toxic Vapor Analyzer 2020 (TVA2020). The TVA2020 response times are in the 4 to 5 second range. No confirmation readings were taken.

Karina Kuc used TVA2020 ID: SL1555 for the duration of the survey.

**Table 2. Instrument Calibration**

<b>April 21, 2022</b>	<b>SL1555 Reading (ppm)</b>
4:20 PM Calibration Reading, 500 ppm	493
4:20 PM Calibration Reading, 10,000 ppm	10,100

**Table 3. Calibration Gases**

<b>Manufacturer</b>	<b>Composition</b>	<b>Lot #</b>	<b>Expiration</b>
	Zero air	TDBJ-1-22	3/27/2023
	Methane, 500 ppm	TDBJ-150A-500-11	3/27/2023
	Methane, 1%	TIBJ-135A-1-1	8/21/2023