



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

DATE: See date of Section Chief signature

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Kinder Morgan Chicago Terminal, Chicago, IL

FROM: Daniel Heins, Environmental Scientist
AECAB (IL/IN)

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

TO: File

BASIC INFORMATION

Facility Name: Kinder Morgan Chicago Terminal

Facility Location: 12200 South Stony Island Ave, Chicago, IL 60633

Date of Inspection: August 4, 2021

EPA Inspector(s):

1. Daniel Heins, Environmental Scientist
2. Karina Kuc, Environmental Engineer
3. Emma Leeds, Environmental Engineer

Other Attendees:

1. Brent Myers, Air Compliance Manager Midwest – Kinder Morgan
2. Matt Clemens, Maintenance Manager – Kinder Morgan
3. Hal King, Regional EHS Manager – Kinder Morgan
4. Aqsa Zahid, Air Permitting Compliance Specialist – Kinder Morgan
5. Duane Toney, Operations Specialist – Kinder Morgan
6. Claudia Johnson, Terminal Manager – Kinder Morgan
7. Mohamed Ammra, Environmental Engineer – Illinois Environmental Protection Agency (IEPA)

Contact Email Address: brent_myers@kindermogan.com & aqsa_zahid@kindermogan.com

Purpose of Inspection: Compliance with Clean Air Act and permit requirements

Facility Type: Bulk liquids terminal

Arrival Time: 09:00

Departure Time: 14:15

Inspection Type:

- Unannounced Inspection
- Announced Inspection

OPENING CONFERENCE

- Presented Credentials
- Stated authority and purpose of inspection
- Provided Small Business Resource Information Sheet
- Small Business Resource Information Sheet not provided. Reason: Not a small business
- Provided CBI warning to facility

The following information was obtained verbally from Kinder Morgan representatives.

Process Description:

Kinder Morgan's Chicago Terminal ("the Terminal") is a bulk liquids terminal on Lake Calumet. It has approximately 55 employees and has operated since the 1960s. It ships and receives liquid good via barge, ship, bulk truck, rail, and totes/drums. The largest throughput goods are light cycle oil, glycols, and fuel grade ethanol.

Seventeen tanks under Section 4.2 of its Clean Air Act Permit Program (CAAPP) permit are less than 40,000 gallons in capacity. They have fixed roofs with submerged loading pipes and an annual preventative maintenance (PM) check. Approximately 50 tanks under Section 4.3 in the permit are above 40,000 gallons but store materials with a vapor pressure below 0.75 pounds per square inch absolute (psia). They have fixed roofs with submerged loading pipe. Under Section 4.4, nine tanks have internal floating roofs (IFR) and are pre-New Source Performance Standards (NSPS) but subject to requirements of the Illinois State Implementation Program (SIP). In contrast to what the CAAPP permit states, tank 3402 does not have a secondary seal. Section 4.5 covers eight IFR tanks subject to NSPS requirements in addition to the SIP. No tanks have controls beyond the floating roof, and none store liquids with vapor pressures above 11.1 psia. Tanks 1704, 2100, 2200, 3200, and 3409 are IFR tanks that do not have secondary seals.

Transfer racks 22 and 30 handle high volatility liquids: sodium methylate at rack 22 and fuel grade ethanol at rack 30. Rack 23 handled ethanol, but has been out of service for at least 20 years. These transfer racks are controlled by the vapor combustion unit (VCU). Loading is coded to only proceed when the VCU is operating at or above 500 degrees Fahrenheit.

Staff Interview:

While permitted for handling benzene, the Terminal has not stored benzene on site for over 20 years. The associated flare is currently inoperable, and the associated EPA Reference Method 21 leak detection and repair (LDAR) program has not been active since the facility handled benzene. The site does not handle any tri- or perchloroethene. No petroleum fluids are handled on site. Methylene chloride has not been handled on site in the past 12 months. Kinder Morgan stated that tanks are not frequently re-dedicated. Tanks are washed with water and detergent, with wastewater sent off site either as hazardous or non-hazardous waste pending profiling.

The site has a soil vapor extraction system. It previously was controlled by carbon canisters but has been directly venting to atmosphere after testing in 2018/2019. Arcadis checks this system on behalf of Kinder Morgan every two weeks.

In January 2021, IEPA issued Kinder Morgan a violation after Kinder Morgan found that the internal floating roofs for tanks 2100 and 2200 had sunk. This was discovered when taking the tanks out of service. Kinder Morgan suspects this could have happened due to an incorrect safe fill limit or an unsealed manway allowing liquid to go up and over the roof. Mr. Myers stated that Kinder Morgan had determined the issue had pre-dated the previous IFR inspection. When EPA asked how sunken roofs could have been missed during these inspections, Kinder Morgan stated that the tanks are dark and it can be hard to see inside them. When EPA asked if there is a standard operating procedure for the IFR inspections, Kinder Morgan stated that there is not.

IEPA issued a second violation relating to direct transfer emissions and the fugitive dust plan. Going forward Kinder Morgan stated that if a barge is not clean on arrival, that they will check to ensure the vapor pressure of the remnant material is below 2.5 psia.

Kinder Morgan stated that the most recent product with direct transfers has been clarified slurry oil. Having a volatility below 0.1 psia, the (currently inoperable) flare is not needed. Kinder Morgan stated that it had considered bringing a portable flare on site for a previous potential transfer that would have required control, but in the end did not conduct said transfer.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

EPA walked the site with a Forward Looking Infrared (FLIR) camera for imaging hydrocarbon gases. EPA climbed tanks 1704, 1603, 2100, and 3101 with the FLIR camera to make observations of these and neighboring tanks. EPA did not record any videos.

Photos and/or Videos: were not taken during the inspection.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

The 2020 log sheet for IFR tank inspections stated via checklist boxes that the seals on the internal floating roofs for tanks 2100 and 2200 were in good condition and that no liquid was observed on the surface of the roofs. Kinder Morgan stated that said roofs were sunken at this time.

Reviewed but copies not taken during inspection:

- Annual tank inspections (exterior)
- IFR tank inspections
- Emissions summaries by unit

Copies taken during inspection:

- Tanks list
- Response to IEPA pre-inspection questions
- 2020 VCU PM checklist

CLOSING CONFERENCE

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

Requested documents:

- Two years of emissions calculations
- Two years of annual IFR checks

Concerns:

EPA expressed concern that Kinder Morgan had not created standard operating procedures or otherwise changed their internal floating roof inspection procedure after it was determined that previous inspections had not only failed to detect any seal issues but failed to observe that the entire roof had sunken.

DIGITAL SIGNATURES

Report Author: DANIEL HEINS Digitally signed by DANIEL HEINS
Date: 2021.09.28 14:10:15 -05'00'

Section Chief: NATHAN FRANK Digitally signed by NATHAN FRANK
Date: 2021.09.28 16:34:53 -05'00'