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 Nalco, Bedford Park, IL
FROM:	Daniel Heins, Environmental Scientist AECAB (IL/IN)
THRU:	Nathan Frank, Section Chief AECAB (IL/IN)
TO:	File

BASIC INFORMATION

Facility Name: Nalco Company LLC (Nalco)

Facility Location: 6216 W 66th St, Bedford Park, IL 60638

Date of Inspection: July 14, 2021

EPA Inspector(s):
1. Daniel Heins, Environmental Scientist
2. Brianna Fenzl, Environmental Engineer

Other Attendees:
1. Rick Dombroski, SHE Manager – Nalco
2. Amari Jones, Regional SHE Manager – Nalco
3. Mary Lee, Production Manager – Nalco
4. Armando Lopez, Site Manager – Nalco
5. Scott Vann, Environmental Consultant – Edge Engineering & Science
6. Arijit Pakrasi, Environmental Consultant – Edge Engineering & Science

Contact Email Address: Richard.dombroski@ecolab.com

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

Facility Type: Colloidal silica, resins, and other liquids manufacturer

Arrival Time: 10:10
Departure Time: 13:00

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 Nalco representatives.

Company Ownership: Nalco is a subsidiary of Ecolab.

Process Description:
The Nalco Clearing Site ("The Facility") has been operating since 1928. It primarily has two production groups: colloidal silica and liquid processes (including both liquid blends and polymers). There are also separate packaging operations on site and natural gas boilers. The colloidal silica process uses sodium silicate as the primary input, adjusting temperature and pH to create products for filtration, cleaning microchips, and refractory. Biocides, ammonia, sulfuric acid, nitric acid, and caustic can also be used as inputs.

Liquid blends products are primarily for water treatment, with additional products for papermaking, mining, and drilling/refining. Other liquid products include solution polymers, water blends, oil blends, and gel hand sanitizer. All liquids are processed in one of five batch reactors. Two reactors are used for latex polymers and water oil emulsions. One reactor is used for malaic anhydride, another for water-based polymers. The last reactor is used for the high temperature product lines, three product lines of oil-based polymers heated up to 400 degrees Fahrenheit. Reactor raw materials are charged by pipes from the tank farm for bulk inputs, pumped in for small liquids, and dumped in the top for dry charges. The latex polymer process includes additional mix takes ahead of the reactor and a final post-reactor blend tank. Final products may be stored in storage tanks or unloaded straight to bulk trucks or train. Product is also shipped off 5- to 400-gallon containers.

Staff Interview:
Hazardous air pollutants (HAP) utilized in the liquid processes include dimethylamine (DMA), epichlorohydrin, acrylamide, and acrylic acid. The Facility is permitted as a true minor source for HAP. Nalco stated that its Title V permit primarily was for its boilers, as their processes require a large amount of steam.

Some reactors are routed to scrubbers, however these are not used for compliance and are not accounted for to reduce reported emissions. Most tanks vent directly to atmosphere. Nalco staff indicated that some might have scrubbers for odor control, but that they would need to check their records to determine which. The DMA tank is kept under pressure.

After a third-party audit and subsequent self-disclosure, Illinois EPA (IEPA) issued Nalco a Violation Notice on June 24, 2021. At the time of EPA's inspection, Nalco had brought in regional staff and outside consultants to resolve the concerns from the state-issued violation. As a part of this, Nalco is considering options for leak detection to determine the extent of fugitive emissions. Currently Nalco performs monthly audio/visual/olfactory checks.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:
EPA through the facility, including by storage tanks, reactors, and the water treatment system.

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

RECORDS REVIEW

No copies taken during inspection:

- IEPA Violation Notice
- Overview slides for facility, including basic process overview diagrams

CLOSING CONFERENCE

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

Requested documents:

- Tanks summary with contents, capacity, and controls (if applicable)
- Summary of any controls used and statement of if used for compliance
- IEPA Violation Notice
- Copy of emissions calculations for the past year, with explanation of emissions factors including supporting calculations.

DIGITAL SIGNATURES

Report Author: DANIEL HEINS Digitally signed by DANIEL HEINS Date: 2021.09.17 16:25:59 -05'00'

Section Chief: NATHAN FRANK Digitally signed by NATHAN FRANK Date: 2021.09.21 08:36:56 -05'00'