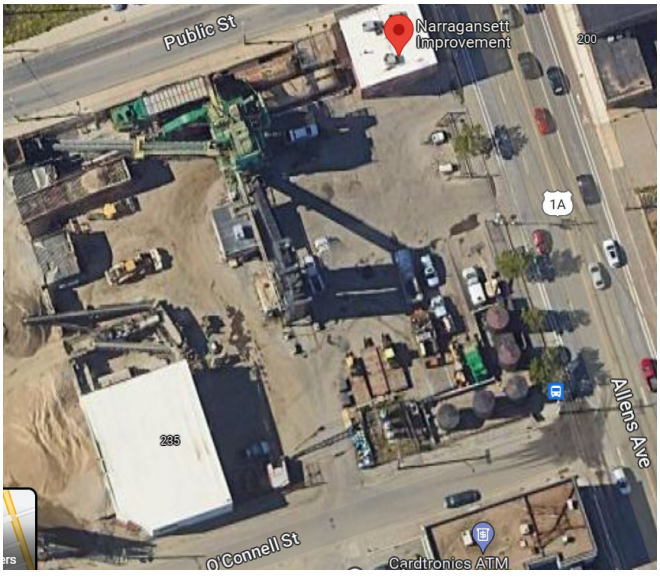
REGION 1
BOSTON, MA 02109

Clean Air Act Partial Compliance Evaluation Inspection Report

Drafted:	November 14, 2023
Finalized:	November 27, 2023
EPA Inspector:	Steven Rapp, U.S. EPA, Office of Enforcement and Compliance Assurance, Air Enforcement Division, Stationary Source Enforcement Branch/SR/
EPA Reviewer:	Darren Fortescue, Manager, U.S. EPA Region 1, Enforcement and Compliance Assurance Division, Air Compliance Section /DEF/
Facility Name:	**Narragansett Improvement Company**
Facility address:	223 Allens Avenue Providence, RI 02903
Mailing address:	Same as above
ICIS-Air Number:	RI0000004400700038
Inspection date:	November 6, 2023



Inspection Attendees:	Title	Organization
Steven Rapp	Clean Air Act Inspector	US EPA HQ
Jack Melcher	Clean Air Act Inspector-in-training	US EPA Region 1
Courtney Fix-Newman	Air Quality Specialist	RI DEM
Owen Jackson	Air Inspector	RI DEM
Breanna DeAngelis	Air Inspector	RI DEM
Jon Toegemann	Vice President	Narragansett Improvement Co.

Disclaimer:

Unless otherwise noted, this report describes conditions at the facility/property as observed by EPA inspector(s), and/or through records provided to and/or information reported to EPA inspector(s) by facility representatives and as understood by the inspector(s). This report may not capture all operations or activities ongoing at the time of the inspection. This report does not make final determinations on potential areas of concern. Nothing in this report affects EPA's authorities under federal statutes and regulations to pursue further investigation or action.

Purpose:

The purpose was to conduct a routine Clean Air Act ("CAA") compliance inspection by the United States Environmental Protection Agency ("EPA") of the Narragansett Improvement Company facility located at 223 Allens Avenue in Providence, Rhode Island ("NIC" or "the facility"). Steven Rapp from EPA's headquarters office led the inspection and Jack Melcher of the EPA's Region 1 office assisted. Courtney Fix-Newman, Breanna DeAngelis, and Owen Jackson from the Rhode Island Department of Environmental Management ("RI DEM") participated in the inspection (although Mr. Jackson participated in the morning activities only). The purpose was to gather information to determine if the facility is complying with CAA requirements, such as federal requirements found at 40 C.F.R. Part 63, Subpart AAAAAAA, "National Emission Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing, ("Subpart 7A") and Rhode Island Air Pollution Control Regulations, Regulation No. 9 – Air Pollutions Control Permits ("Regulation 9"), as well as federally enforceable CAA permits issued to the facility.

Number of Employees and Working Hours:

There are approximately 25 employees at the facility and 80 company-wide. The facility operates from 6:00 am – 3:00 pm on Monday through Friday and Saturdays 7:00 am to 12:00 pm, generally from March to December. The facility infrequently operates at night to prepare batches of material for morning pick up.

Potentially Applicable CAA Requirements:

Potentially Applicable CAA Requirements include, but are not limited to:

- 40 C.F.R. Part 63, Subpart AAAAAAA, "National Emission Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing, ("Subpart 7A");
- Rhode Island Air Pollution Control Regulations, Regulation No. 9 – Air Pollutions Control Permits ("Regulation 9"); and
- Rhode Island Emissions Cap Permit Number 07-2009.

Previous Enforcement Actions:

On October 24, 2019, July 14, 2021, and June 8, 2022, RI DEM conducted CAA inspections of the facility. On July 28, 2021, and September 18, 2023, RI DEM issued Letters of Noncompliance to NIC for violations of Rhode Island's air pollution regulation Part 17, "Odors" and for failure to submit the facility's 2022 Air Pollution Inventory by the deadline of June 30, 2023.

Preliminary Observations:

At approximately 8:30 am, the EPA and RI DEM representatives ("the inspectors") arrived at the facility and parked on Public Street. From the public sidewalk across the street from the facility, the inspectors observed visible white emissions exiting from the rectangular metal stack connected to the baghouse. Mr. Rapp used an optical gas imaging, forward-looking infrared camera ("FLIR"), model GF320, to observe the equipment at the facility for emissions of volatile organic compounds ("VOCs"). Mr. Rapp viewed the two liquid asphalt tanks near the street, as well as the rectangular exhaust stack from the baghouse, using the FLIR. The FLIR images appeared to show a mix of water vapor and VOCs emitted from the baghouse stack (See Attachment A, Video 1).

Mr. Rapp proceeded to the public sidewalk on Allens Avenue where he observed the two hot mix asphalt silos, truck loading, conveyor to the silos, and the green metal building which houses the bucket elevator, aggregate dryer, pugmill, as well as the baghouse ductwork and exhaust. Mr. Rapp observed puffs of blue-grey emissions from below the silos when trucks were being loaded. The inspectors noted an odor of asphalt. Mr. Rapp used the FLIR camera to observe the equipment. The FLIR images appeared to indicate a mix of water vapor and VOC emissions exhausting from the rectangular stack connected to the baghouse (See Attachment A, Video 2).

While standing on the public sidewalk on Allens Avenue, a person inside the fencing of the facility asked Mr. Rapp what he was doing. Mr. Rapp explained that he was from the EPA and that the EPA was performing a CAA inspection looking for sources of VOCs. Mr. Rapp presented his EPA identification credentials and asked if there was a facility representative that they could meet with to ask a few questions. The person replied that there was no one available at that time. Mr. Rapp said that they would come back later in the day and inquire again.

At approximately 8:50 am, Mr. Rapp went back to the public sidewalk opposite the facility on Public Street to observe from a different angle the liquid asphalt storage tank, hot mix asphalt silos, conveyor to the silos, the green metal building, and the baghouse ductwork and exhaust. The FLIR images appeared to indicate a mix of water vapor and VOC emissions exhausting from the rectangular stack connected to the baghouse (See Attachment A, Video 3 and Photo 1).

The inspectors departed at approximately 8:55 am.

Opening Conference:

At approximately 1:00 pm, the inspectors returned to the facility. From the sidewalk on Public Street across from the facility, they observed visible white emissions from the rectangular stack of the baghouse. The inspectors proceeded to the public sidewalk on Allens Avenue where they observed visible blue-grey emissions from below the silos when trucks were being loaded. The inspectors noted an odor of asphalt.

The inspectors entered the Allens Avenue door of the brick NIC building at the corner of Allens Avenue and Public Street. Mr. Rapp presented his EPA identification credentials to a facility representative and requested to speak with someone who could answer questions related to environmental requirements at the facility. Jon Toegemann, vice-president of NIC, greeted the inspectors in the waiting area and the other inspectors showed Mr. Toegemann their credentials. Mr. Rapp asked if the inspectors could meet with him in a conference room to ask him a few questions. Mr. Toegemann said he had been ill recently and did not want to meet in a closed room. Mr. Rapp asked if they could meet on the public sidewalk outside the building and Mr. Toegemann agreed.

On the public sidewalk, Mr. Rapp asked for general information regarding the operations of the facility. Mr. Toegemann said NIC had approximately 25 employees at the facility and 80 company-wide. Mr. Toegemann said that his area of responsibility was mainly paving operations performed by NIC. Mr. Toegemann said the facility operates from 6:00 am – 3:00 pm on Monday through Friday and Saturdays 7:00 am to 12:00 pm, generally from March to December. Mr. Toegemann added that the facility infrequently operates at night to prepare batches of material for morning pick up.

Mr. Rapp asked for the number and volume of liquid asphalt tanks at the facility. Mr. Toegemann said there are two liquid asphalt storage tanks with combined capacity of approximately 60 tons; however, he said he did not know the tank volumes because the company uses weight of the material rather than volume. Mr. Toegemann said NIC uses approximately 7,000 tons per year of the material. Mr. Rapp asked if the liquid asphalt tanks had pressure relief valves or if they were vented directly to the atmosphere and Mr. Toegemann said he did not know.

Mr. Rapp asked from whom NIC purchases the liquid asphalt. Mr. Toegemann said NIC purchases the material from Bitumar, Inc., who leases space at the Hudson Liquid Asphalt facility on Shipyard Street in Providence. Mr. Rapp asked if NIC cuts the liquid asphalt with any other material, such as hazardous waste, waste oil, diesel fuel, or residual oil, before mixing it with the aggregate. Mr. Rapp noted that several of the vertical storage tanks at the facility had markings on them indicating they held hazardous waste. Mr. Toegemann said NIC does not cut the asphalt with any of those materials but mixes the liquid asphalt directly with the sand and stone. Mr. Toegemann said the storage tanks hold waste oil which is used to heat the sand and stone aggregate materials.

Mr. Rapp asked how many trucks are loaded each day with hot mix asphalt at the facility. Mr. Toegemann said approximately 40 to 50 trucks are loaded per day but explained that the trucks are of different sizes, from small dump trucks to larger trailer trucks.

Mr. Rapp asked how the liquid asphalt tanks are heated. Mr. Toegemann said they are heated by diesel fuel and the asphalt is kept at approximately 300 degrees Fahrenheit.

Mr. Rapp noted that EPA's national emissions inventory shows that NIC has previously reported 3.6 tons per year of VOCs from operations at its facility. Mr. Rapp asked how NIC calculates the VOC "working loss" emissions (e.g., from the loading of the liquid asphalt tanks, the breathing of the liquid asphalt tanks when not being filled, and the other operations at the facility, such as truck loading). Mr. Toegemann said he did not know how the emissions are calculated. Mr. Rapp asked if NIC had ever tested the air pollutant emissions, such as VOCs, nitrogen oxides, and carbon monoxide, from any of the equipment, including the baghouse exhaust stack. Mr. Toegemann said he did not know of any emissions tests being conducted at the facility.

Mr. Rapp asked if NIC uses any techniques to mitigate odors from the asphalt, such as chemical additives, mist eliminators, or adsorbers. Mr. Toegemann said NIC does not use any such techniques or chemicals.

Mr. Rapp asked if the inspectors could walk through the facility to take photographs of equipment used in the process. Mr. Toegemann said that he did not want the inspectors on the site at that time, saying it was not convenient. Mr. Rapp asked if Mr. Toegemann would join them and answer questions while they walked the perimeter on the public sidewalk. Mr. Toegemann agreed.

Walk Around the Facility Perimeter:

At approximately 1:30 pm, the inspectors asked what is stored in the two horizontal tanks along Public Street in the northeaster section of the facility, behind the brick building and Mr. Toegemann said that they are the liquid asphalt storage tanks (See Attachment A, Photo 2).

While facing the facility from Allens Avenue, the inspectors asked for a description of the asphalt processing equipment at the facility. Mr. Toegemann said that NIC is an asphalt batch

plant. Mr. Toegemann said the process starts at bins storing sand and gravel ("aggregate") (See Attachment A, Photo 5). Mr. Toegemann said that the aggregate is conveyed into a dryer by conveyor belt. Mr. Toegemann said, from the dryer the material goes into a bucket elevator that carries it to the screen deck where the aggregate is separated into four sizes by vibrating screens. Mr. Toegemann said, next, the aggregate drops to the pug mill where it is mixed with hot liquid asphalt pumped from two horizontal asphalt tanks to form "hot mix asphalt," which is either dumped directly from the bottom of the pug mill into trucks or conveyed to one of two hot mix asphalt silos, each with a 200-ton capacity.

Mr. Toegemann said the green metal covered structure includes the hot elevator for moving the sand and gravel up the right side, the screen deck for sorting the material, the pug mill where the aggregate material is mixed with the liquid asphalt, as well as a truck bay where the hot mix asphalt mixture is dropped into trucks (See Attachment A, Photo 3).

The inspectors observed the central portion of the site where the hot mix asphalt storage silos are located. Mr. Rapp asked how the silos are heated. Mr. Toegemann said the silos are heated with electricity and retained heat from the hot mixture process (See Attachment A, Photo 4).

The inspectors moved south along Allens Avenue to view the storage tanks located in the southwestern corner of the facility. Mr. Rapp asked Mr. Toegemann for the volume and contents stored in the tanks. Mr. Toegemann said that the tanks store waste oil but did not know the volumes of the tanks (See Attachment A, Photo 6).

The inspectors moved west up O'Connell Street to view the western portion of the facility where they observed the sand and stone handling area. Mr. Rapp asked how the sand and stone are delivered. Mr. Toegemann said NIC receives the material by truck (See Attachment A, Photo 5).

Closing conference:

At approximately 1:45 pm, the inspectors concluded the walk around the three sides of the perimeter accessible on the public sidewalks.

<u>Areas of Potential Concern</u>

Mr. Rapp said that in the morning the inspectors had observed a steady stream of air emissions from the stack connected to the baghouse next to the green metal structure. He noted that, using the FLIR camera, they had observed what appeared to be VOCs in the mix of emissions and asked if the stack served as the exhaust from the mixing of the asphalt and aggregate or from any of the combustion devices, such as the dryer or the heater of the liquid asphalt. Mr. Toegemann said he did not believe the stack was the exhaust of anything combusted or any sources of VOCs. Mr. Rapp asked if the baghouse is serviced by an outside vendor. Mr. Toegemann said that NIC performs the maintenance on the baghouse and they did not hire an outside vendor.

The inspectors told Mr. Toegemann that they would write an inspection report within the next 60 days and provide a copy to NIC. The inspectors said that they may follow up in writing if they had further questions. The inspectors thanked Mr. Toegemann for his time and departed from the site at approximately 2:00 pm.

Attachments:
A. Digital images