

RCRA Inspection Report

1) Inspector and Author of Report

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2) Facility Information

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SCD044940369

3) Responsible Official

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4) Inspection Participants

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Elizabeth DeLanghe, South Carolina Department of Health and Environmental Control
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William Kappler, U. S. Environmental Protection Agency, Region 4

5) Date of Inspection

February 1, 2023

6) Applicable Regulations¹

Resource Conservation and Recovery Act (RCRA) Sections 3002 (42 U.S. Code – Annotated

¹ As the State's authorized hazardous waste program operates in lieu of the federal RCRA program, the citations of those authorized provisions will be to the authorized State program. However, for ease of reference, the federal citations will follow in brackets.

U.S.C.A. §§ 6925 and 6927), South Carolina Hazardous Waste Management Act (SCHWMA), S.C. Code Ann. § 44-56-10 *et seq.*, and South Carolina Hazardous Waste Management Regulations (SCHWMR), S.C. Code Ann. Regs. 61-79.260-270, 61-79.273 and 61-79.279, and [40 Code of Federal Regulation (C.F.R.) Parts 260 - 270, 273, 278, & 279].

Pursuant to S.C. Code Ann. Regs. 61-79.262.15(a) [40 C.F.R. § 262.15(a)], a generator may accumulate as much as 55 gallons of hazardous waste in containers at or near the point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit or without having interim status, as required by Section 44-56-60(a)(2) and (b) of the S.C. Code Ann. § 44-56-60(a)(2) and (b) [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with S.C. Code Ann. Regs. 61-79.124, 264-267, and 270, and S.C. Code Ann. Regs. 61-79.262.16(b) or R.61-79.262.17(a) [40 C.F.R. § 262.16(b) or §262.17(a)], except as required in S.C. Code Ann. Regs. 61-79.262.15(a)(7) and (8) [40 C.F.R. § 262.15 (a)(7) and (8)], provided that the generator complies with the satellite accumulation area (SAA) conditions listed in S.C. Code Ann. Regs. 61-79.262.15(a) [40 C.F.R. § 262.15(a)] (hereinafter referred to as the “SAA Permit Exemption”).

Pursuant to S.C. Code Ann. Regs. 61-79.262.17 [40 C.F.R. § 262.17] a generator of 1,000 kilograms or greater of hazardous waste in a calendar month is a large quantity generator (LQG) and may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, as required by Sections 44-56-60(a)(2) and (b) of the S.C. Code Ann. § 44-56-60(a)(2) and (b) [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with S.C. Code Ann. Regs. 61-79.124, 264-267, and 270, provided that the generator complies with the conditions listed in S.C. Code Ann. Regs. 61-79.262.17 [40 C.F.R. § 262.17], (hereinafter referred to as the “LQG Permit Exemption”).

Pursuant to S.C. Code Ann. Regs. 61-79.273.9 [40 C.F.R. § 273.9], a small quantity handler of universal waste (SQHUW) means a universal waste handler who does not accumulate 5,000 kilograms or more of universal waste (batteries, pesticides, mercury-containing equipment, lamps, or aerosol cans, calculated collectively) at any time.

7) Purpose of Inspection

The purpose of this inspection was for the U.S. Environmental Protection Agency, Region 4, and the South Carolina Department of Health and Environmental Control to conduct a joint unannounced compliance evaluation inspection (CEI) at Nucor Steel Darlington (hereinafter, “Nucor” or the “facility”) to determine compliance with the applicable requirements of the Resource Conservation and Recovery Act (RCRA) and the corresponding South Carolina Department of Health and Environmental Control (SCDHEC) regulations. This was an EPA lead inspection.

8) Facility Description

Nucor is located at 300 Steel Mill Road, Darlington, Darlington, County, South Carolina, Latitude 34.373289, and Longitude -79.886032. The facility has been at its present location since 1967 and consists of approximately 700 acres. The facility employs approximately 490 people and operates 24 hours a day, seven days a week, from 7:00 a.m. to 7:00 p.m. on four rotating

shifts. The facility consists of one large, interconnected building, with approximately one million square feet under roof. Darlington County provides potable water, and the City of Darlington provides sanitary sewer services. The primary NAICS code for the facility is 331110, Iron and Steel Mills and Ferroalloy Manufacturing.

Nucor Steel Darlington is a mini-steel mill located in Darlington, South Carolina that produces merchant and reinforcing steel products such as bar, coil, angle iron, channels, flats, hexagons, and rounds from recycled scrap steel and iron. The Nucor Darlington facility brings in ferrous scrap metal from industries and non-ferrous scrap metal from the general public.

The process areas consist of the Electric Arc Furnace (EAF), the Ladle Metallurgical Furnace (LMF), the four-strand caster, the powder cast and shroud, the billet cutting area, billet storage, the Z roll mills, and the package and ship area. Nucor also operates a cold finishing process in the Cold Finishing Building located at 2600 Governor Williams Highway (Highway 52), Darlington, Darlington County, South Carolina.

The facility manages approximately one hazardous waste central accumulation area (roll-offs) and several hazardous waste satellite accumulation areas (SAAs).

The process begins with placing steel from the scrap yard into a charge bucket. Each “heat” is custom-made so that the composition of scrap metal in each charge bucket is precise. Scrap metal is also fed into the Electric Arc Furnace (EAF) via a feed conveyor. Loaders follow a specific recipe for each grade to ensure the exact order.

The charge bucket is filled with scrap steel and scrap substitutes and then transported to the EAF. Hot briquetted iron and pig iron, which make up 5-10% of the metallic charge, are conveyed through the roof of the EAF shell to diluting the residuals to acceptable levels for the required end use product.

At the bottom of each charge bucket is a clamshell door. The crane operator hoists each charge bucket over the electric arc furnace and drop their load of scrap steel. Once the charge is unloaded the furnace is covered, and electrodes are lowered through the top of the furnace. The electrodes are lowered near the scrap, inched back up and electricity “arcs” to the steel. It takes one or two charges to make a “heat” of up to 150 tons of steel. The molten steel is then tapped through the bottom of the furnace into a ladle and transferred to the LMF.

Before each heat goes to the Continuous Caster, it is processed at the LMF. Unlike the EAF, which is a direct current (DC) furnace with a single 28" carbon electrode, the LMF is an alternate current (AC) furnace with three 16" carbon electrodes. At the LMF, the exact chemistry and temperature are achieved by adding and trimming alloying elements to precise levels. Additionally, the facility can deoxidize, desulfurize, and modify inclusions, while monitoring the chemistry, cleanliness, and temperature needed for casting. Alloys are added in either bulk or wire form. The temperature adjustment is achieved by power through the electrodes.

Nucor installed a new degreaser on or about December 2021. A percentage of heats are processed through a vacuum tank degreaser, where gases are removed to improve the quality of the steel. The impurities are generated as gases and are vented to a flare.

Steel chemistry and temperature sampling are performed throughout the heat to insure proper chemistry and superheat for casting. The ladle is sent to the caster and rotated in to start or continue a cast sequence.

Shrouded steel drains from the ladle into the tundish, which serves as a reservoir allowing multiple heats to be sequentially cast. The steel flows from the tundish into the mold through the submerged entry nozzle. The facility has a variable width mold capable of "in bar" width changes. As the slab leaves the mold, it enters a water spray chamber. Slabs are cut to meet specific order requirements. Upon cut completion, the slab is transferred to the appropriate charge position for the walking beam reheating furnace. The reheat furnace will equalize the slab temperature to approximately 2250°F.

The Roll Mill converts the billets, blooms and slabs into rebar, angles, rounds, channels, flats, and squares. The electric arc furnace and the billet continuous caster have baghouses that collect the EAF dust generated. The EAF dust is conveyed to a single silo which loads the outgoing railcars. TCLP analyses of the dust revealed hazardous constituents of lead and cadmium. The baghouse dust has been listed as a K061 waste.

The non-ferrous scrap metal is received, sorted, shredded and shipped out by Darlington Shredding Company, Inc. which is located within a mile of Nucor.

Nucor submitted a RCRA Subtitle C Site Identification Form, 8700-12, of its regulated waste activity to SCDHEC, on March 29, 2021, notifying as a LQG of hazardous waste, a small quantity handler of universal waste (SQHUW) and indicating generating EPA waste numbers D001, D002, D006, D007, D008, D009, F001, F002, F003, F005, and K061.

The facility generates hazardous waste consisting but not limited to sodium contaminated insulation (D003), tank washout (U080), MMT flange sump cleanout (D001), T1564 tank cleanout – knock out pot (P001), tank cleanout (D001), hazardous waste oil mixture (D006, D007, F001), wastewater cleaning liquid (D008) waste lamps (D009), lead based paint (D008), waste flammable liquid (F005), lead based paint (D008), lead and cadmium contaminated material (D006, D008), corrosive liquid (D002), refractory brick and chrome (D007) hazardous waste liquid (D040, F002), waste acid mixture (D001, D002), Nital wipes (D001), leaking lead acid batteries (D002, D008), mercury containing equipment (D009) dust contaminated debris (K061), waste varsol solvent (D001, waste baghouse dust (K061), universal waste lamps, batteries, aerosol cans and used oil. Non-hazardous waste scale is sold to a concrete company as a product.

Non-hazardous waste slag is shipped to TMS International, located on contiguous property. TMS International processes the slag to make various diameter aggregate for use in roadbed.

Nucor operates an on-site industrial wastewater treatment plant (IWWTP) clarifying wastewater containing mill scale. The mill scale is generated from the cooling and casting operation. The wastewater is discharged to a concrete settling basin. The scale is allowed to gravity separate in the basin. The wastewater is next filtered through several sand filters and the clean water is stored in the clean water basin for discharge to Black Creek. Sand filter back wash water is discharged to the concrete settling basin.

The mill scale is removed from the concrete settling basin two to three times per day and stored in the outdoor central accumulation area. The mill scale is shipped to Argos Cement Company as a product.

9) **Previous Inspection History**

Nucor was inspected by the SCDHEC on March 12, 2020. The inspector observed the facility failed to mark or label containers with the words hazardous waste or with a hazard indicator, failed to mark or label containers with words used oil and failed to maintain a written description of the type and amount of both introductory and continuing training given to employees.

Nucor was inspected by the EPA on May 20, 2015. The inspector observed the facility failed to clean up a release of used oil to the ground, failed to mark or label a container with the words hazardous waste and failed to clean up broken fluorescent lamp shards on the ground.

10) **Opening Conference**

On February 1, 2023, the EPA inspector William Kappler, accompanied by SCDHEC inspectors Earle Watson and Elizabeth DeLanghe, arrived at Nucor at approximately 9:15 a.m. The inspectors were received by Carey Bullard, Environmental Manager with Nucor at the security office and inspector signed a visitor's log. The inspectors were escorted by Carey Bullard to a conference room for an opening conference. Carey Bullard and the inspectors were joined by Nucor representatives Tom Batterbee, Heather Huggins and several Nucor facility operation personnel, for an opening conference. The inspectors introduced themselves, showed their credentials and explained the purpose of the visit.

The inspectors described the anticipated use of a digital camera during the inspection and provided a written list of the records needed for review. The EPA inspector explained that the Small Business Regulatory Enforcement Fairness Act's classification of a "small business" is generally set by the Small Business Administration using the business' SIC/NAICS code and annual receipts or number of employees. A copy of the EPA's information sheet for small businesses can be found at <https://www.epa.gov/sites/production/files/2017-06/documents/smallbusinessinfo.pdf>. The EPA inspector also discussed the company's ability, pursuant to 40 C.F.R. §2.203, to assert a business confidentiality claim for information provided to the EPA. Nucor did not assert a business confidentiality claim.

Nucor provided an overview of the facility's history and current operations during the opening conference. The inspection participants also discussed health and safety protocols and required personal protective equipment before Nucor representatives Carey Bullard and Jason Pugh (Nucor representatives) escorted the inspectors on a tour of the facility operations.

11) **Inspection Observations**

Central Accumulation Area (90-Day or Less Accumulation)

The central accumulation area (CAA) is an outdoor area near the baghouses. Hazardous waste EAF dust (K061 dust) is accumulated in 30 to 40 cubic yard containers. The inspectors observed six empty containers in the CAA at the time of this inspection.

Baghouse #1 SAA

The inspectors observed one 55-gallon container accumulating Tyvek, gloves and debris contaminated with K061 dust in the SAA. The inspectors observed the container was closed, in good condition, labeled with the words “hazardous waste” and marked with a toxic hazard indicator (Photograph 1).

Baghouses #1 and #2 Silo Loading Building/Railcar Area

The baghouses feed to the screw conveyor which flows into a common silo for baghouse 1 and 2. The baghouse silo is fully enclosed and conveys the K061 dust through piping to the Silo Loading Building.

The inspectors observed one railcar in the loading building accumulating K061 dust. Railcar loading operations were not occurring at the time of the inspection. The inspectors accessed the stairs to the top of the railcar platform to observe all hatches/manways/fill ports were closed and in good condition. The inspectors observed the railcar was closed, in good condition with aisle space, a magnetic label with the words “hazardous waste,” marked with the date February 2, 2023, and marked with a toxic hazard indicator.

Decon Box

The Decon Box is near baghouse 2. The inspectors observed one 30-cubic yard container accumulating K061 dust. The inspectors observed the container was closed, in good condition, labeled with the words “hazardous waste”, marked with the date November 25, 2022, and marked with a toxic hazard indicator (Photograph 2).

Baghouse #2 Basement SAA

The inspectors observed one 30-gallon vacuum accumulating K061 dust in the SAA. When the vacuum becomes full of dust, it is transferred to the Decon Box. The inspectors observed the container was in good condition, labeled with the words “hazardous waste” and marked with a toxic hazard indicator. The inspectors observed the vacuum cover was not closed and the inlet port was not closed (Photograph 3). Nucor representatives closed the vacuum cover and inlet port (Photograph 4).

Pursuant to S.C. Code Ann. Regs. 61-79.262.15(a)(4) [40 C.F.R. § 262.15(a)(4)], which is a condition of the SAA Permit Exemption, a generator is required to keep containers of hazardous waste closed at all times during accumulation, except when adding, removing, or consolidating waste; or when temporary venting of a container is necessary for the proper operation of equipment, or to prevent dangerous situations, such as build-up of extreme pressure.

Used Oil Storage Area

The used oil storage area is constructed with a concrete pad, stairs leading to a platform and a metal roof. The area is identified with the sign “used oil recycling area”. The inspectors observed eight 55-gallon containers of used oil that were closed and labeled with words “used oil”. The inspectors observed two 55-gallon containers of refrigerant and oil and one 55-gallon container of grease and scale, closed and with labels (Photograph 5).

The inspectors observed one 35-gallon SAA container accumulating waste solvent (xylene) that was closed, labeled with the words “hazardous waste” and labeled with a hazard indicator (Photograph 6).

The inspectors observed five one-gallon containers of “ACE All Purpose” and “DEV Guard 4160” oil-based paint and oil-based primer on a wood pallet. The paint did not appear to be useable. The containers were closed and in good condition (Photograph 7).

Pursuant to S.C. Code Ann. Regs. 61-79.262.15(a)(5)(i) [40 C.F.R. § 262.15(a)(5)(i)], which is a condition of the SAA Permit Exemption, a generator must mark or label its container with the following: (i) The words “Hazardous Waste”

Pursuant to S.C. Code Ann. Regs. 61-79.262.15(a)(5)(ii) [40 C.F.R. § 262.15(a)(5)(ii)], which is a condition of the SAA Permit Exemption, must mark or label its containers with an indication of the hazards of the contents (examples include, but are not limited to, the applicable hazardous waste characteristic(s) (i.e., ignitable, corrosive, reactive, toxic); hazard communication consistent with the Department of Transportation requirements at 49 CFR part 172 subpart E (labeling) or subpart F (placarding); a hazard statement or pictogram consistent with the Occupational Safety and Health Administration Hazard Communication Standard at 29 CFR 1910.1200; or a chemical hazard label consistent with the National Fire Protection Association code 704).

The inspectors observed several empty containers on the bottom and top level of the Used Oil Storage Area.

Research and Development Building SAA

The inspectors observed one 35-gallon container attached with an aerosol puncture device accumulating waste solvent in the SAA. The container was closed, in good condition, labeled with the words “hazardous waste” and labeled with a hazard indicator.

The inspectors also observed one 55-gallon container accumulating punctured aerosol cans that was closed and labeled.

Caster Dirty Water Settling Basin

Dirty water containing casting scale is discharged to an on-site concrete settling basin. The non-hazardous waste scale is generated from the casting operation. The scale is settled in the basin and then removed with a front-end loader to a sloped concrete pad and dewatered by gravity and evaporation (Photograph 8). Dewatered scale is stored in the outdoor central accumulation area. The scale is sold to a concrete company as a product. Hazardous waste was not observed in this area at the time of the inspection.

Mill Scale #1 Clean Water Basin

The clean water basin stores the clean water from the IWWTP. Hazardous waste was not observed in this area at the time of the inspection.

Casting

Scale that is generated from quenching of the steel is deposited around the casting conveyance.

The scale is removed on a schedule and accumulated in the Caster Dirty Water Settling Basin.

Casting Deck SAA

The inspectors observed one 35-gallon container attached with an aerosol puncture device accumulating waste solvent in the SAA. The container was closed, in good condition, labeled with the words “hazardous waste” and labeled with a hazard indicator.

The inspectors also observed one 55-gallon container accumulating punctured aerosol cans that was closed and labeled.

Refractory Area SAA

The inspectors observed one 35-gallon container attached with an aerosol puncture device accumulating waste solvent in the SAA. The container was closed, in good condition, labeled with the words “hazardous waste” and labeled with a hazard indicator.

The inspectors observed non-hazardous waste refractory brick and slag on the floor from the refurbishment of a Ladle (Photograph 9).

Universal Waste Storage Shed

This is a two-door metal shed with a bay for universal waste batteries and a bay for universal waste lamps. The doors are kept locked.

In the universal waste battery bay, the inspectors observed one lead acid battery on a shelf in good condition (Photograph 10). The inspectors observed a 5-gallon container of batteries, closed, labeled with the words “universal waste” and marked with the date January 3, 2023.

In the universal waste lamp bay, the inspectors observed one container of HID lamps dated November 5, 2022, one container of lamps dated October 6, 2022, one eight-foot lamp container dated September 2, 2022, one eight-foot lamp container dated December 13, 2022, and one four-foot lamp container dated January 10, 2023. The containers were in good condition and labeled with words “universal waste”. The inspectors observed the lid for the one four-foot lamp container was not closed (Photograph 11). Nucor representatives closed the container (Photograph 12).

A small quantity handler of universal waste (SQHUW) must manage lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

Pursuant to S.C. Code Ann. Regs. 61-79.273.13(d)(1) [40 C.F.R. § 273.13(d)(1)], a SQHUW must contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

The inspectors also observed one 55-gallon container accumulating broken lamps generated in various areas of the facility. The container was closed, in good condition, labeled with the words “hazardous waste” and labeled with hazard indicator. The container was accumulating hazardous

waste from various generation points and was not marked with a date.

Pursuant to S.C. Code Ann. Regs. 61-79.262.17(a)(5)(i)(C) [40 C.F.R. § 262.17(a)(5)(i)(C)], which is a condition of the LQG Permit Exemption, a generator is required to mark or label containers with the date upon which each period of accumulation begins clearly visible for inspection on each container.

Rolling Mill/Cooling Bed/Billet Pusher SAA

The inspectors observed one 35-gallon container accumulating waste aerosol can residue (xylene) in the SAA. The container was closed, in good condition, labeled with the words “hazardous waste” and labeled with a hazard indicator.

Etch Laboratory

Steel samples are tested in this area. The inspectors observed a line of dip baths in the rear of the laboratory where the samples are tested in a bath of muriatic acid, rinsed in a bath of water and rinsed a second time under a facet of running water. Waste muriatic acid and waste rinse water is discharged through the dip bath’s drain to the Caster Dirty Water Settling Basin. Nucor representatives indicated there were no RCRA metals in the waste streams based on knowledge.

Documentation that would support the determination that the waste discharged to the Caster Dirty Water Settling Basin is not a hazardous waste, was not available at the time of the inspection.

Pursuant to S.C. Code Ann. Regs. 61-79.262.11(f) [40 C.F.R. § 262.11(f)], an LQG must maintain records supporting its hazardous waste determinations. These records must comprise the generator’s knowledge of the waste and support the generator’s determination, as described at paragraphs (c) and (d) of this section.

Daylight Maintenance SAA

The inspectors observed one 55-gallon container accumulating waste aerosol can residue (xylene) in the SAA. The container was closed, in good condition, labeled with the words “hazardous waste” and labeled with a hazard indicator.

The inspectors observed two 55-gallon containers accumulating used oil. The inspectors observed the containers were labeled with the words “used oil”. The inspectors observed the bung cap for one 55-gallon container of used oil was not closed. Nucor representatives closed the container (Photograph 13).

Pursuant to S.C. Code Ann. Regs. 61-79.279.22(a) [40 C.F.R. § 279.22(a)], *storage units*. Used oil generators shall not store used oil in units other than tanks, containers, or units subject to regulation under parts 264 or 265 of this chapter.

Cold Finishing Building

Nucor operates a cold finishing process in a building located at 2600 Governor Williams Highway (Highway 52), Darlington, Darlington County, South Carolina. Nucor indicated the Cold Finishing Building is on contiguous property owned by Nucor. Nucor leases the adjoining

properties for agricultural use. The Cold Finishing Building is located on 265 acres and operates Monday through Saturday. The Cold Finishing Building operates four cold finishing lines. The cold finishing is a dry operation, consisting of three steel extruding lines using dies to make various diameter steel straight bars and one peeling line to cut the steel straight bar. Waste aerosols, universal waste lamps, universal waste batteries, waste contaminated rags and used oil is generated from the process operation.

Universal Waste Storage Shed

This is a one-door room attached to the main building. The door is kept locked.

The inspectors observed one 55-gallon container accumulating broken lamps generated in various areas of the Cold Finishing Building. The container was closed, in good condition and labeled with the words “hazardous waste”. The container was not marked or labeled with a hazard indicator. The container was accumulating hazardous waste from various generation points and was not marked with a date (Photograph 14). Nucor representatives marked the container with a hazard indicator.

Pursuant to S.C. Code Ann. Regs. 61-79.262.17(a)(5)(i)(B) [40 C.F.R. § 262.17(a)(5)(i)(B)], which is a condition of the LQG Permit Exemption, a generator is required to mark or label containers with an indication of the hazards of the contents.

Pursuant to S.C. Code Ann. Regs. 61-79.262.17(a)(5)(i)(C) [40 C.F.R. § 262.17(a)(5)(i)(C)], which is a condition of the LQG Permit Exemption, a generator is required to mark or label containers with the date upon which each period of accumulation begins clearly visible for inspection on each container.

The inspectors observed one large container of lamps. The container was closed, in good condition, labeled with the words “universal waste” and marked with the date January 10, 2023.

The inspectors observed three 5-gallon container of batteries. The containers were closed, labeled with the words “universal waste” and each marked with a date indicating storage less than one year.

Die Room

Various mechanical dies are used to extrude the steel bar. The inspectors observed a part washer that was in use and a one-cubic yard container accumulating waste blast dust from blasting steel billets. The blast dust is shipped as scrap metal for recycling.

Used Oil Storage Area

Used oil is accumulated in containers on a metal grate platform over a concrete containment sump. The inspectors observed one 300-gallon container on the metal platform and one 100-gallon container on a metal stand accumulating used oil. The inspectors observed the 300-gallon container of used oil was not clearly marked or labeled with the words “used oil”. The used oil label on the container was hidden from being clearly read due to other labels. Nucor representatives arranged the label so that it could be clearly read (Photographs 15 and 16).

Pursuant to S.C. Code Ann. Regs. 61-79.279.22(c)(1) [40 C.F.R. § 279.22(c)(1)], containers

and aboveground tanks used to store used oil at generator facilities must be labeled or marked clearly with the words “Used Oil.”

The inspectors observed used oil released to the concrete containment sump. The inspectors observed used oil staining on the 100-gallon container and bottom valve and on the grated platform beneath the 100-gallon container’s bottom valve (Photographs 17, 18 and 19).

Response to releases. Upon detection of a release of used oil to the environment that is not subject to the requirements of Part 280, Subpart F of this chapter and which has occurred after the effective date of the recycled used oil management program in effect in the State in which the release is located, a generator must perform the following cleanup steps:

- (1) Stop the release;
- (2) Contain the released used oil;
- (3) Clean up and manage properly the released used oil and other materials; and
- (4) If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

Pursuant to S.C. Code Ann. Regs. 61-79.279.22(d)(3) [40 C.F.R. § 279.22(d)(3)], a generator must perform the following cleanup steps: clean up and manage properly the released used oil and other materials.

Maintenance Shop SAA

The inspectors observed one 35-gallon container accumulating waste aerosol can residue in the SAA. The container was closed, in good condition, labeled with the words “hazardous waste” and labeled with a hazard indicator.

The inspectors observed one 55-gallon container accumulating solvent rags generated in the maintenance shop. The container was closed, in good condition and labeled with the words “excluded solvent contaminated wipes”.

Coil Line Between 1B and 2B SAA

The inspectors observed one 35-gallon container accumulating waste aerosol can residue in the SAA. The container was closed, in good condition, labeled with the words “hazardous waste” and labeled with a hazard indicator.

Waste Management

Employees in process operations that generate hazardous waste accumulate it in containers at the point of generation. Full containers are transferred to the central accumulation area for 90-day or less storage.

Nucor used the following transporters in 2020 through 2023

SC Central Railroad, SCR000767798

CSX Transport, SCR000771618

CSX Transport, FLD006921340

Robbie D Wood, ALD067138891

Safety Kleen Systems, Inc., TXR000081205

Clean Harbors, Inc., MAD039322250

Nucor used the following TSDFs in 2020 through 2023
American Zinc Recycling Group, FLD006291340
Chemical Waste Management, Inc., ALD000622464
Safety Kleen Systems, Inc., KYD053348108
Clean Harbors Reidville, LLC, NCD000648451
Befesa Zinc USA, Inc., SCR000771618

Records Review

The hazardous waste manifests, land disposal restriction notifications, nonhazardous waste manifests, universal waste manifests, and part washer receipts for the calendar year 2020 through 2023 were reviewed. The EPA inspector reviewed 76 hazardous waste manifests from the EPA's E-Manifest Record System from July 2022 to January 2023.

Waste Determination/Profiles/Safety Data Sheets (SDS)

The inspector reviewed waste determination records for the waste refractory brick, mill scale, secondary mill scale (caster dirty water settling basin) and waste slag.

The inspector reviewed the SDSs for Devguard 4160 Multi-Purpose Tank, Structural Primer and ACE Rust Stop Interior/Exterior Oil-Based Primer paints observed at the Used Oil Storage Area. The Devguard SDS indicates it is composed of several solvents and resins (ethylbenzene, xylene and ethanol) and has a flash point of 108 degrees Fahrenheit. The ACE SDS indicates it is composed of several solvents (ethylbenzene and xylene) and has a flash point of 80 degrees Fahrenheit. The inspectors reviewed the SDS for AST Contact Cleaner used in the Cold Finishing Building maintenance shop.

Quick Reference Guide

The inspectors observed the quick reference guide did not include the identification of any hazardous wastes where exposure would require unique or special treatment by medical or hospital staff and the flow rate from the water supply system.

**Pursuant to S.C. Code Ann. Regs. 61-79.262.17(a)(6) [40 C.F.R. § 262.17(a)(6)], which incorporates S.C. Code Ann. Regs. 61-79.262.262(b)(3) and (b)(6) [40 C.F.R. § 262.262(b)(3) and (b)(6)], and is a condition of the LQG Permit Exemption, a generator's quick reference guide to the contingency plan must include the following elements:
The identification of any hazardous wastes where exposure would require unique or special treatment by medical or hospital staff; and
The flow rate from the water supply.**

Contingency Plan

The contingency plan was revised on March 17, 2021. The Contingency Plan did not have evacuation routes and alternate evacuation routes for the Cold Finishing Building.

Pursuant to S.C. Code Ann. Regs. 61-79.262.261(f) [40 C.F.R. § 262.261(f)], which is a condition of the LQG Permit Exemption, the plan must include an evacuation plan for generator personnel where there is a possibility that evacuation could be necessary. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and

alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires).

The inspectors reviewed weekly container inspection records for 2020, 2021, 2022 and 2023, the arrangements with the local authorities, personnel training, job titles, position descriptions, and quarterly reports from 2021 to 2022.

12) Closing Conference

The inspectors conducted a closing conference with Tom Batterbee, Carey Bullard, Heather Huggins and Jason Pugh from Nucor Steel Darlington. During this meeting, the inspectors stated their preliminary conclusions of the inspection.

13) Sampling Overview

Sampling was not conducted.

14) List of Appendices

Appendix 1 – Photograph Log:
Photos taken on: February 1, 2023
Photos taken by: William Kappler
Samsung Camera (Model WB250F)
EPA Property Tag# S75917

15) Signed

WILLIAM KAPPLER Digitally signed by WILLIAM KAPPLER
Date: 2023.02.28 12:32:46 -05'00'

William Kappler
Physical Scientist

Date

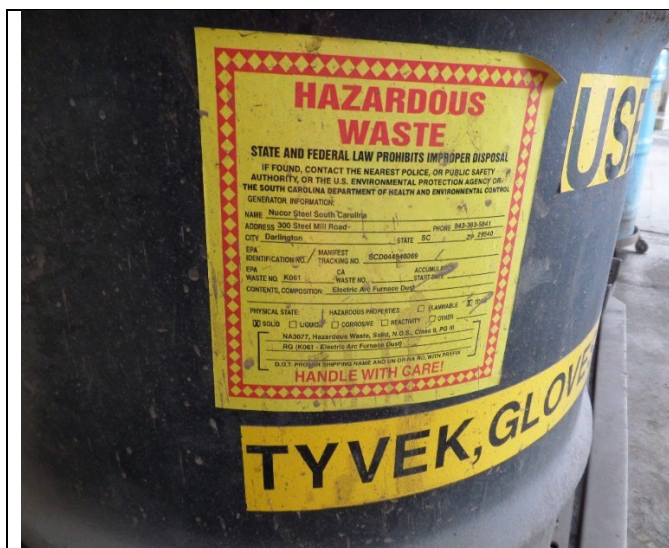
Concurrence

ARACELI CHAVEZ Digitally signed by ARACELI CHAVEZ
Date: 2023.03.01 17:31:54 -05'00'

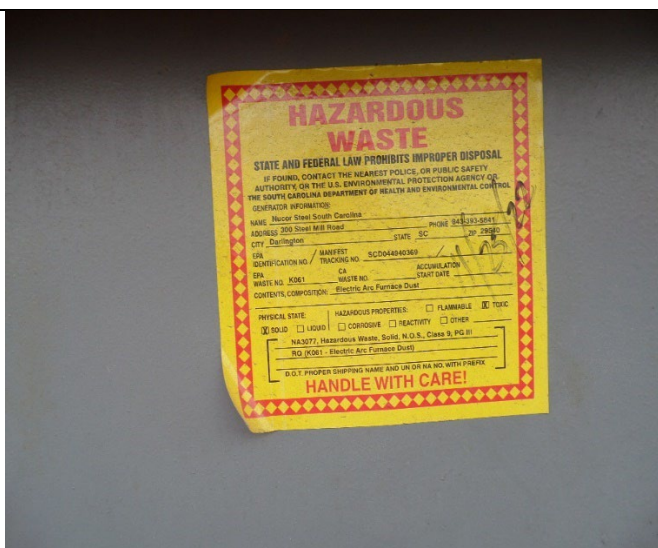
Araceli B. Chavez
Chief
RCRA Enforcement Section

Date

Nucor Steel Darlington RCRA CEI Photographs



Baghouse 1 SAA. Observed one 55-gallon container of K061 dust. Photograph 1 taken at 10:37 a.m.



Decon Box. Observed one 30-cubic yard container of K061 dust labeled and dated. Photograph 2 taken at 10:48 a.m.



Baghouse #2 Basement SAA. Observed the vacuum was not kept closed. Photograph 3 taken at 10:57 a.m.



Baghouse #2 Basement SAA. Observed Nucor representatives closed the vacuum. Photograph 4 taken at 10:59 a.m.



Used Oil Storage Area. Observed a 55-gallon container of grease and scale. Photograph 5 taken at 11:16 a.m.



Used Oil Storage Area. Observed a 35-gallon SAA container. Photograph 6 taken at 11:18 a.m.



Used Oil Storage Area. Observed five one-gallon containers of paint. Photograph 7 taken at 11:24 a.m.



Caster Dirty Water Settling Basin. Observed a pile of cast scale. Photograph 8 taken at 11:40 a.m.



Refractory Area. Observed refractory brick and slag. Photograph 9 taken at 12:07 p.m.



Universal Waste Storage Shed, Battery Bay. Observed a lead acid battery. Photograph 10 taken at 12:12 p.m.



Universal Waste Storage Shed, Lamp Bay. Observed the container of UW lamps was not kept closed. Photograph 11 taken at 12:19 p.m.



Universal Waste Storage Shed, Lamp Bay. Observed Nucor representatives closed the container. Photograph 12 taken at 12:19 p.m.



Daylight Maintenance. Observed open container of used oil. Nucor representatives closed the container. Photograph 13 taken at 12:41 p.m.



Cold Finishing Building - Universal Waste Storage Room. Observed the container was not marked or labeled with a hazard indicator. Nucor representatives marked the container with a hazard indicator. Photograph 14 taken at 1:20 p.m.



Cold Finishing Building - Used Oil Storage. Observed 300-gallon used oil container not marked or labeled clearly with the words used oil. Photograph 15 taken at 1:42 p.m.



Cold Finishing Building - Used Oil Storage. Observed Nucor representatives clearly label the container with the words used oil. Photograph 16 taken at 1:44 p.m.



Cold Finishing Building - Used Oil Storage. Observed used oil on the bottom of 100-gallon container, the stand and around the valve. Photograph 17 taken at 1:45 p.m.



Cold Finishing Building - Used Oil Storage. Observed used oil in containment sump and on the grated platform under 100-gallon container. Photograph 18 taken at 1:45 p.m.



Cold Finishing Building - Used Oil Storage. Observed used oil on the bottom of 100-gallon container, the stand and around the valve. Photograph 19 taken at 1:46 p.m.