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July 12, 2002

Dave Sulc
Nucor Steel
Rural Route 2
P.O.Box 311
Crawfordsville, IN 47933

Re: Response to Review Request No.107-16103-00038
Routine Maintenance and Repair evaluation for Process
Logic Controllers

Dear Dave Sulc:

Nucor Steel submitted a review request on June 10, 2002. The letter was submitted to determine if the replacement or minor upgrades of the Process Logic Controllers (PLC) in the various emission units ranging from electric arc furnace (EAF), tunnel furnaces and other process equipment can be considered as "routine maintenance and repair". Nucor has stated that the PLCs are sophisticated equipment exposed to harsh mill environment, surges in power supply, normal wear and tear and development of more robust and reliable circuitry over time that can provide more consistent and trouble free operation.

The Nucor Steel has presented the following scenarios:

1. PLC is replaced or upgraded with the intent to increase production rate of the equipment which may increase potential to emit of the unit and if above the thresholds, may require prior permit approval.
2. PLC is replaced or there are minor upgrades that do not increase the production rate of the equipment, but may have the incidental effect on reducing downtime and maintenance generally would not require prior permit review unless the change materially effects the down time (for example: de-bottlenecking of existing process).

Nucor has requested guidance on how to determine what changes need IDEM approval where permitting action is necessary and being able to perform other changes where no such action is required.

The IDEM, Office of Air Quality (OAQ), evaluates this type of change using the following guidance:

1. The Title 326 IAC 2-2 (x) defines "Major Modification" as any physical change in, or change in the method of operation of, a major stationary source that would result in a significant net emissions increase of any pollutant that is being regulated under CAA. Further item (2) under the same rule identifies items that do not cause a physical change or change in the method of operation. Item (A) under this lists "Routine maintenance, repair, and replacement".
2. In a memo¹ U.S. EPA developed the circumstances for "routine maintenance" as, "...whether proposed work at an existing facility is 'routine', EPA makes a case-by-case

¹ See memo from Don R. Clay, Acting Assistant Administrator for Air and Radiation to David A. Kee, Director, Air and Radiation Division, Region V, on "Applicability of Prevention of Significant Deterioration (PSD) and New

determination by weighing the nature, extent, purpose, frequency, and cost of the work, as well as other relevant factors, to arrive at a common-sense finding.”

3. In the same matter of WEPCO vs. Riley² the Seventh Circuit Court agreed with U.S.EPA and established four factors that should be evaluated in determining whether a project should be considered routine maintenance. These factors are as follows:
 - (a) Nature and extent of the project
 - (b) Historical practices of the industry
 - (c) Repetitive Maintenance
 - (d) Cost of the project
4. The U.S. EPA Region 5 in a letter³ acknowledged that “.. the regulations provide no definition of ‘routine’ nor does the preamble to the notice promulgating the exclusion contain a discussion that would give the exemption a particular meaning for the NSR program... Webster’s defines ‘routine’ as ‘of a common place or repetitious character’; ‘of, relating to, or being in accordance with established procedure.’ These definitions suggest that determining routineness appropriately involves considering whether the activity is frequent (is it repetitious), whether it of significant scope (is it common place), and whether it is for a customary purpose or is being accomplished in a customary fashion (is it in accordance with established procedure)”.
5. In the same letter, U.S. EPA further elaborated that, “EPA has assessed routineness by considering the following factors:

Nature

- Whether major components of a facility are being modified or replaced; specifically, whether the units are of considerable size, function, or importance to the operation of the facility, considering the type of industry involved
- Whether the change requires pre-approval of a state commission, in the case of utilities
- Whether the source itself has characterized the change as non-routine in any of its own documents
- Whether the change could be performed during full functioning of the facility or while it was in full working order
- Whether the materials, equipment and resources necessary to carry out the planned activity are already on site

Extent

- Whether an entire emissions unit will be replaced
- Whether the change will take a significant time to perform
- Whether the collection of activities, taken as a whole, constitutes a non-routine effort, notwithstanding that individual elements could be routine
- Whether the change requires the addition of parts to existing equipment

Purpose

- Whether the purpose of the effort is to extend the useful life of the unit; similarly, whether the source proposes to replace a unit at the end of its useful life

Source Performance Standards (NSPS) Requirements to the Wisconsin Electric Power Company (WEPCO) Port Washington Life Extension Project”, on September 9, 1988.

² The Seventh Circuit Court Judgement in 1990, in case of Wisconsin Electric Power Company vs William K.Riley, 893 F.2d901.

³ Letter dated May 23, 2000 from Francis Lyons, Regional Administrator U.S.EPA, Region 5 to Henry Nickel, Counsel for the Detroit Edison Company, pages 8-11 of “Detailed Analysis of Detroit Edison Applicability Determination”.

- Whether the modification will keep the unit operating in its present condition, or whether it will allow enhanced operation (e.g., will it permit increased capacity, operating rate, utilization, or fuel adaptability)

Frequency

- Whether the change is performed frequently in a typical unit's life

Cost

- Whether the change will be costly, both in absolute terms and relative to the cost of replacing the unit
- Whether a significant amount of the cost of the change is included in the source's capital expenses, or whether the change can be paid for out of the operating budget (i.e., whether the costs are reasonably reflective of the costs originally projected during the source's or unit's design phase as necessary to maintain the day-to-day operation of the source)

These categories are interrelated. Many facts could be relevant to both nature and extent, while others could overlap with purpose. Moreover, none of these factors -- standing alone -- conclusively determines a project to be routine or not. Instead, a permitting authority should take account of how each of these factors might apply in a particular circumstance to arrive at a conclusion considering the project as a whole."

The IDEM, OAQ cannot make any determination based on the limited information available in the Nucor Steel request. Further these "routine maintenance and repair" determinations are case specific and cannot apply to all situations. The IDEM, OAQ encourages Nucor Steel to evaluate the various PLC replacements with respect to the above guidance to evaluate the need for permit action.

If you have any questions in this regard those should be directed to Gurinder Saini, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Gurinder Saini or extension 3-0203, or dial (317) 233-0203.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

GS

cc: File – Montgomery County
Air Compliance – Richard Sekula
Permit Tracking – Sara Cloe
Technical Support and Modeling - Michele Boner
Part 70 Operating Permit file – T 107-7172-00038
Part 70 Operating Permit Reviewer – Melissa Groch