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U.S. EPA Encourages Iron and Steel 'Minimills' to Self Audits to Address Noncompliance with Environmental Requirements

Nucor Corp. Agrees to Control Practices; Provides Model for Industry

The Environmental Protection Agency (EPA) has identified a number of multimedia environmental compliance problems at 'minimill' steel production facilities.

Minimills are relatively new facilities that produce steel by melting scrap metal in an electric arc furnace (EAF). Minimills are required to comply with a number of environmental requirements. Violating these requirements can be costly.

For example, **Nucor Corporation** recently agreed to pay $9 million in civil penalties and spend an additional $4 million on related environmental projects for violating hazardous waste, clean air, clean water and right-to-know requirements. It will cost the company an estimated $85 million to implement the agreement (*see page 2 for more on this settlement*).

This issue of *Enforcement Alert* highlights:

- Recent and ongoing EPA activities to address noncompliance in this sector, including inspections and investigations at a number of mills, and
- An EPA self-disclosure initiative underway with certain minimills.

EPA encourages qualifying mills to take advantage of the Agency's Audit Policy (*see Audit Policy website http://www.epa.gov/oeca/ore/apolguid.html*). The policy establishes a framework for the voluntary disclosure and expeditious correction of violations in return for greatly reduced penalties.

EPA Concerned About Noncompliance in Iron and Steel Sectors

EPA's recent experience has raised serious concerns that iron and steel mills may not be in compliance with important federal environmental requirements such as the:

- **Clean Air Act (CAA)-New Source Review (NSR)/Prevention of Significant Deterioration (PSD) requirements** that are triggered due to plant construction, expansions and/or modifications. Some facilities constructed after 1978 (the effective date of the NSR/PSD regulations) have relied on inappropriate emission factors based on performance tests conducted under nonrepresentative conditions to estimate their potential emissions.

Some facilities that were constructed before 1978 and modified after that year may be failing to factor in equipment additions and/or process changes that increase production capacity and total emissions in the NSR permitting process.

Such companies have, therefore, underestimated their air emissions, including estimates for such criteria pollutants as carbon monoxide, nitrous

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About Enforcement Alert

Enforcement Alert **is published periodically by the Office of Regulatory Enforcement to inform and educate the public and regulated community of important environmental enforcement issues, recent trends and significant enforcement actions.**

This information should help the regulated community anticipate and prevent violations of federal environmental law that could otherwise lead to enforcement action. Reproduction and wide dissemination of this publication are encouraged.

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Eric V. Schaeffer
Director, Office of Regulatory Enforcement

Editor: Virginia Bueno
(202) 564-8684
bueno.virginia@epa.gov
(Please email address and name changes or subscription requests for this newsletter)

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oxides, volatile organic compounds, sulfur dioxide and particulate matter. In such a situation, the source may be greatly exceeding its permit limits and may be an unpermitted major source.

Some facilities constructed before 1978 but modified after that year may be failing to factor in equipment additions and/or process changes that increase production capacity and total emissions in the NSR permitting process. For example, the addition of a new EAF or rolling mill at a facility can increase production and emissions. Another way facilities can underestimate plant emissions is by failing to include emission increases from downstream processes in their emission calculations. For example, replacing older plant equipment with newer equipment, such as the installation of a ladle metallurgy furnace or larger transfer ladles, can increase plant productivity and emissions not only in the melt shop but downstream in the rolling mill as well. The Agency considers emissions at all debottlenecked units when determining whether the emissions from a modification are significant. For more information on the kinds of violations associated with the NSR permitting process, see *Enforcement Alert*, "Compliance with Permitting Critical to Clean Air Act Goals", Volume 2, Number 1 (January 1999) at *http://www.epa.gov/oeca/ore/enfalert/*.

EPA is concerned that some minimills have significantly expanded and modified their operations. These expansions may have resulted in increased production and pollutant emis-

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Recent EPA Enforcement Actions Involving Minimills

Nucor Steel Inc.: In December 2000, the Department of Justice filed suit against Nucor Steel Inc. and lodged a settlement agreement for multimedia violations at eight minimills and six steel fabrication facilities. The facilities are located in seven states in EPA Regions IV, V, VI, VII, and VIII. Nucor violated both PSD and NSPS provisions of the Clean Air Act and provisions of the Emergency Planning and Community Right-to-Know Act. Nucor mismanaged and illegally disposed of K061 dust, a RCRA listed hazardous waste generated by electric arc furnaces. The K061 releases also contributed to NPDES and stormwater violations of the Clean Water Act.

The settlement will require Nucor to install pilot technologies for control of NO_x (a smog precursor) emissions from its EAFs and reheat furnaces at two to four mills. The company will then install the best performing technology at all the remaining facilities. During the eight-year compliance schedule, Nucor's emissions from the EAFs and reheat furnaces will be capped at current limits until controls are in place. Under RCRA, Nucor will perform sampling of ground water and soils at all facilities, identify areas of contamination and perform cleanups according to a plan approved by EPA. States will be given the opportunity to oversee the cleanups. Nucor will also implement enhancements to its management of K061, process water and stormwater to ensure continued compliance with RCRA and CWA requirements.

AK Steel, Butler, Pa.: On June 7, 2000, EPA issued an emergency order under Section 1431 of the Safe Drinking Water Act (SDWA) to AK Steel Corporation in Butler, Pa., for excessive nitrate discharges. The federal order is intended to protect the health of people drinking the water in Zelienople, Pa. Zelienople has a water intake on the Connoquenessing Creek 21 miles downstream from the facility. AK Steel (formerly known as Armco Inc.) must provide an alternative water source to more than 4,000 people in Zelienople Borough and reduce dangerous nitrate discharges from its Butler steel mill.

Since 1995, AK Steel tripled its discharge of pickling liquors into the creek from its Butler plant (as much as 29,000 pounds per day) causing dangerously high concentrations of nitrates in the Connoquenessing Creek. Drinking water with high concentrations of nitrates can cause serious illness and death in infants under six months of age from a condition known as "blue baby syndrome." Too much nitrate reduces the capacity of blood to carry oxygen, turning skin blue, causing shortness of breath, and depriving the brain of oxygen, which impairs metabolism, thinking and other bodily functions. These symptoms can develop rapidly in infants.

EPA's standard under the SDWA sets a maximum contaminant level of 10 milligrams of nitrate per liter (mg/l) of drinking water (that is the same as 10 parts per million). Pollution above that level is unhealthy for all people, especially young children, and poses an acute health risk to infants under six months of age, pregnant women and nursing mothers. Water samples from the Connoquenessing Creek in the 30 miles downstream from AK Steel showed contained nitrates as high as 100 mg/l.

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sions that may not have been properly addressed under the existing permitting process.

■ **CAA requirements to conduct baseline testing required under New Source Performance Standards (NSPS) Subparts AA & AAa**. Some companies have failed to perform the required NSPS initial performance tests or subsequent monitoring. Such testing and monitoring ensure that particulate emissions are effectively controlled.

■ **RCRA storage and disposal requirements associated with electric arc furnace dust.** Some companies have failed to take steps to minimize the possibility of releases of K061, a listed hazardous waste. In addition, when spills do occur, they must be cleaned up as soon as practicable. An EPA administrative law judge recently found that a company that failed to clean up a hazardous waste spill from its baghouse as soon as its employees knew of the spill was in violation of 40 CFR Section 262.34(d)(5)(iv)(B) (see *In the matter of: Morrison Brothers Company*, Docket No. VII-98-H-0012, at *http://www.epa.gov/aljhomep/orders/morison.pdf*).

■ **National Pollution Elimination Discharge System (NPDES) stormwater permitting requirements.** In general, pollution control equipment waste is susceptible to being discharged with stormwater if not properly managed. Some companies have allowed K061 waste releases to contaminate stormwater discharges in violation of the Clean Water Act (CWA). In addition, the poor handling of slag piles, scrap, and other materials have caused violations of stormwater pollution prevention plans and NPDES stormwater general permits.

Compliance Audit Guides for Industry

EPA has developed audit guides for industry that provide summaries of many of its statutes and regulatory requirements, and checklists to guide environmental auditors through the auditing process. These protocols are optional guidelines and are helpful, but should not supplant any other efforts to identify potential violations. Printed copies are available from the National Center for Environmental Publications and Information at (800) 490-9198, or at *http://www.epa.gov/oeca/main/strategy/crossp.html.* For more information, contact Rich Satterfield, EPA's Office of Compliance, at (202) 564-2456.

Agency Increases Enforcement Activity at Iron and Steel Mills

Since 1999, EPA has taken a comprehensive approach to address the environmental and compliance problems at all steel mills. The goal of this approach is to reduce actual and potential emissions at steel mills, thereby minimizing the health risks and the harm to the environment. EPA aims to achieve this goal by:

■ Improving overall sector compliance rates;

■ Reducing the transfer of pollutants from one media to another by addressing environmental problems holistically; and

■ Preventing surface water, sediment, and groundwater contamination caused by discharges and disposal practices.

EPA's multitrack approach for addressing environmental and compliance problems at minimills includes targeted inspections of mills and appropriate enforcement responses, a voluntary national multimedia audit/self-disclosure initiative at certain minimills, promotion of environmental management systems, and the preparation of audit protocols and related compliance assistance materials.

National Minimill Audit Policy and Self-Disclosure Initiative

On Aug. 10, 2000, EPA's Office of Regulatory Enforcement sent letters to 41 minimills inviting them to participate in a voluntary audit and self-disclosure initiative based on EPA's Audit Policy. Companies that choose to disclose violations have until Feb. 28, 2001, to do so. Not all minimills were sent such letters—some were excluded from the initiative because of ongoing investigations and/or other enforcement activities. The initiative is intended to help minimills determine whether they are in compliance with environmental requirements.

Minimills that received a letter were invited to perform an environmental audit of their facility and discover potential areas of noncompliance, and encouraged to consider taking advantage of EPA's Audit Policy.

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Environmental Protection Agency
Office of Regulatory Enforcement
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1200 Pennsylvania Avenue, NW
Washington, DC 20460

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The Audit Policy greatly reduces and sometimes eliminates penalties for companies that discover, disclose, and correct civil violations through voluntary audits. The policy generally applies to violations that are voluntarily discovered and disclosed and does not apply to violations that are identified through a monitoring, sampling, or auditing procedure that is required by statute, regulation, permit, judicial or administrative order, or consent agreement. As of September 1999, 670 companies have disclosed environmental violations under the Audit Policy at more than 2,700 facilities nationally.

This year's activities are just the most recent in a multi-year effort to assist this sector in achieving lasting and consistent compliance. This focused effort began in 1996, when EPA Region V encouraged minimills to self-disclose violations to the Agency to improve compliance among the minimills within its six states. The self-disclosures submitted by the companies and the multimedia inspections performed by Region V and states revealed environmental concerns involving uncollected K061 baghouse dust, slag cooling water puddles, electric arc furnace shop floor dust and monitoring, reporting, and maintenance requirements.

As a result of the Agency's investigations during the past few years, EPA has become increasingly concerned that serious, substantive violations of federal environmental regulations are occurring at some minimills. The Agency strongly encourages owners and operators of these mills to look very closely at their operations, take steps to remedy any environmental violations, and ensure that such conditions do not exist in the future.

For more information, contact Michael Calhoun, Office of Regulatory Enforcement, Multimedia Enforcement Division, (202) 564-6031; Email: calhoun.michael.@epa.gov.

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Useful Compliance Assistance Resources

Office of Enforcement and Compliance Assurance:
http://www.epa.gov/oeca

Iron & Steel Sector Notebook:
http://www.epa.gov/oeca/sector/index.html#iron

Sector Facility Indexing Project (production, compliance and emissions information for integrated and minimills):
http://www.epa.gov/oeca/sfi/

Summary of Environmental Compliance and Enforcement Data for Steel Mills:
http://www.epa.gov/oeca/main/compasst/metal.html#is

Process-Based Investigation Guide; Compliance-Focused Environmental Management Systems-Enforcement Agreement Guidance; Multimedia Investigations Manual:
http://www.epa.gov/oeca/oceft/neic/pubs1.html

Audit Policy Information:
http://www.epa.gov/oeca/ore/apolguid.html

Compliance Assistance Centers:
http://www.epa.gov/oeca/mfcac.html

Small Business Gateway:
http://www.epa.gov/smallbusiness
major_environmental_laws.htm