



# Electric Arc Furnace Area Source Rule Mercury Requirements Factsheet for State and Local Agencies

## Background

The United States Environmental Protection Agency (USEPA) published *National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities; Final Rule* (EAF Rule) on December 28, 2007 in the Federal Register. The final rule establishes requirements for the control of mercury emissions that are based on the maximum achievable control technology and requirements for the control of other hazardous air pollutants that are based on generally available control technology or management practices. This factsheet describes the key requirements of the final rule as it applies to mercury emissions.

Under this final rule, an affected electric arc furnace (EAF) steelmaking facility must have or obtain a Title V Permit and its owners or operators are required to :

- ❖ Purchase scrap only from scrap providers that are participating in a USEPA-approved program for mercury switch removal; or
- ❖ Operate pursuant to a USEPA or state-approved site-specific plan (of equal effectiveness to a USEPA-approved program) to ensure that scrap providers have removed mercury switches; or
- ❖ Not melt scrap from end-of-life vehicles.

Affected EAF Facilities must be in compliance with the mercury provisions of the final rule no later than June 30, 2008.

## USEPA-Approved Programs for Mercury Switch Removal

The National Vehicle Mercury Switch Recovery Program (NVMSRP) and the Vehicle Switch Recovery Program mandated by Maine State law (ME-VSRP) are USEPA-approved programs. Specifically these approved programs:

- ❖ Include outreach that informs the dismantlers of the need for removal of mercury switches and provides training and guidance for removing mercury switches.
- ❖ Have a goal to remove at least 80 percent of mercury switches from the motor vehicle scrap the scrap provider processes.
- ❖ Agreed to submit progress reports to the USEPA Administrator (Administrator) no less frequently than once every year. These reports provide:
  - ◆ The number of mercury switches removed or the weight of mercury recovered from the switches,
  - ◆ The estimated number of vehicles processed,
  - ◆ An estimate of the percent of mercury switches recovered, and
  - ◆ Certification that the recovered mercury switches were recycled at facilities with permits as required under the rules implementing subtitle C of the Resource Conservation and Recovery Act (RCRA) (40 CFR parts 261 through 265 and 268).

- ❖ Must submit progress reports to the Administrator based on a database that includes data for each program participant; however, data may be aggregated at the state level for progress reports that will be publicly available.
- ❖ Following 90-day notice, allow the Administrator to change the approval status of a program or portion of a program (e.g., at the state level) based on the progress reports or on other information.

USEPA expects switch removals under the NVMSRP to steadily increase over the next year as this program begins to fully operate. The NVMSRP provides a strong incentive to all of the parties involved in switch removal to make every effort to ensure the NVMSRP is effective on a continuing basis. However, if the national program or Maine's program were to prove unsatisfactory and be subsequently disapproved by USEPA as a compliance option, the burden would be on the EAF owner or operator to implement a site-specific approach. In either case (whether a national program or site-specific program), the rule has codified an approach that provides accountability and measures of effectiveness.

## Site-specific Plan

The rule allows, specifies the content of, and describes how an EAF facility may develop and obtain approval of a site-specific plan if the EAF is purchasing motor vehicle scrap from other than USEPA approved programs. An approved site-specific plan describes how the facility is to operate and includes its reporting and recordkeeping requirements. (This information is summarized under the guidance for permit writers on page 5)

## Permitting and Enforcement Agency

The EAF Rule may be implemented and enforced by the USEPA or a delegated authority such as a state, local, or tribal environmental agency.

## Key Requirements for an EAF

### *Operating under USEPA-Approved Programs*

- ❖ **Title V Permit** – All EAF steelmaking facilities affected by this rule must have a Title V Permit reflecting the requirements of the federal EAF Rule. An EAF steelmaking facility with an existing Title V Permit must incorporate the federal rule requirements into the permit when it is renewed or modified. Any EAF steelmaking facility that currently does not have a Title V Permit must apply for one.
- ❖ **EAF Compliance Plan** – An EAF must develop and maintain onsite a plan demonstrating how the facility is participating in the USEPA-approved program. Specifically, the EAF's plan must:
  - ◆ Include facility-specific implementation elements, corporate-wide policies, and/or efforts coordinated by a trade association as appropriate for each facility.
  - ◆ Document direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-

life vehicles. Upon the request of the permitting authority, it must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols.

- ◆ Require periodic inspections or provide other means of corroboration to ensure that scrap providers are aware of the need to and are implementing appropriate steps to minimize the presence of mercury in scrap from end-of-life vehicles.
- ❖ **Notice of Compliance Status** – An EAF must certify in its notification of compliance status that:
  - ◆ It is participating in and purchasing motor vehicle scrap only from scrap providers who participate in a USEPA-approved program for removal of mercury switches.
  - ◆ If it is purchasing motor vehicle scrap from a broker, all scrap received from the broker was obtained from other scrap providers who participate in a USEPA-approved program for the removal of mercury switches.
- ❖ **EAF Records and Recordkeeping** – An EAF must:
  - ◆ Maintain records identifying each scrap provider and documenting the scrap provider’s participation in an approved mercury switch removal program.
  - ◆ If it purchases motor vehicle scrap from a broker, maintain records identifying each broker and documentation that all scrap provided by the broker was obtained from other scrap providers who participate in an approved mercury switch removal program.
  - ◆ Submit semiannual compliance reports to the Administrator for the control of contaminants from scrap according to the requirements in § 63.10(e) of the general provisions. The report must identify any deviation from the rule requirements and the corrective action taken.

### ***Operating Under Site-Specific Plans***

- ❖ **Title V Permit** – All EAF steelmaking facilities affected by this rule must have a Title V Permit reflecting the requirements of the federal EAF Rule. An EAF steelmaking facility with an existing Title V Permit must incorporate the federal rule requirements into the permit when it is renewed or modified. Any EAF steelmaking facility that currently does not have a Title V Permit must apply for one.
- ❖ **Scrap Specifications** – An EAF facility must include a requirement in its scrap specifications for the removal of mercury switches from vehicle bodies used to make the scrap.
- ❖ **Plan Development and Approval Process** – An EAF facility develops the site-specific plan and submits it to the Title V permitting authority for approval. An EAF facility must operate according to its submitted plan during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the permitting authority within 60 days following disapproval of a plan.<sup>1</sup>
- ❖ **Site-Specific Plan** – At a minimum, an EAF facility site-specific plan must include:<sup>2</sup>
  - ◆ A means of communicating to scrap purchasers and scrap providers the need to obtain or provide motor vehicle scrap from which mercury switches have been removed and

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<sup>1</sup> An EAF facility may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the permitting authority. The permitting authority may change the approval status of the plan upon 90-days written notice based upon the semiannual compliance report or other information.

<sup>2</sup> The permitting authority may request documentation or additional information at any time.

the need to ensure the proper management of the mercury switches removed from that scrap as required under the rules implementing subtitle C of RCRA (40 CFR parts 261 through 265 and 268).

- ◆ Documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles.
- ◆ Provisions for obtaining assurance from scrap providers that motor vehicle scrap provided to the facility meets the scrap specification.
- ◆ Provisions for periodic inspections or other means of corroboration to ensure that scrap providers and dismantlers are implementing appropriate steps to minimize the presence of mercury switches in motor vehicle scrap and that the mercury switches removed are being properly managed, including the minimum frequency such means of corroboration will be implemented.
- ◆ Provisions for taking corrective actions if needed. (i.e., actions resulting in scrap providers removing a higher percentage of mercury switches or other mercury-containing components)
- ◆ A requirement for each motor vehicle scrap provider to provide an estimate of the number of mercury switches removed from motor vehicle scrap sent to the EAF facility during the previous year and the basis for the estimate.
- ◆ A goal for each scrap provider to remove at least 80 percent of the mercury switches.
- ◆ Submission of semiannual progress reports for each scrap provider to the permitting authority that includes the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches removed, and certification that the removed mercury switches were recycled at RCRA-permitted facilities or otherwise properly managed pursuant to RCRA subtitle C regulations.

## Key Requirements for Permit Writers

### *Permits for an EAF Plan Using USEPA-Approved Mercury Programs*

- ❖ Section 63.10685(b)(2) of the EAF rule (“Option for approved mercury programs” at 72 FR 74113) is where the rule defines requirements for facilities which choose to comply with the mercury requirements by participation in the NVMSRP or ME-VSRP.
- ❖ Sections 63.10685(b)(2)(i), (ii), and (iii) list requirements that are already part of the NVMSRP or ME-VSRP.<sup>3</sup> Therefore, any facility which is in the NVMSRP or ME-VSRP is already meeting the requirements of Sections 63.10685(b)(2)(i), (ii), and (iii) by certifying their participation in the NVMSRP or ME-VSRP.
- ❖ Section 63.10685(b)(2)(iv) lists the requirements which the permit writer should incorporate into their existing permits. Section 63.10685 (b)(2)(iv) requires the facility to develop and maintain an onsite plan demonstrating the manner through which the facility is participating

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<sup>3</sup> The three requirements are criteria that will be used by USEPA in the future if requests are made to approve other State or local mercury switch recovery programs under this option.

in the NVMSRP or ME-VSRP. Specifically, the plan must:

- ◆ Include facility specific implementation or corporate policies.
- ◆ Provide documentation of communication to suppliers throughout the scrap supply chain that stress the need to promote the removal of mercury switches. Examples of materials used for outreach must be provided to the permitting authority at their request.
- ◆ Provide for periodic inspections or other means of corroboration to ensure that scrap providers are aware of the need to and are implementing appropriate steps to minimize the presence of mercury in scrap.
- ❖ Section 63.10685(b)(2) has an important compliance provision for all facilities using this approach: they must certify in their notification of compliance status that they participate in an approved program and purchase motor vehicle scrap only from scrap providers who participate in an approved program.

### ***Permits for an EAF Site-Specific Plan***

Any facilities that choose the option of a site-specific plan have more stringent requirements than those participating in a USEPA-approved program. Consequently, USEPA expects very few facilities will choose the site-specific option and they will instead participate in a USEPA-approved program. The primary considerations for permit writers are the details in Sections 63.10685(b)(1)(i) through (v) under “Site-specific plan for mercury switches” at 72 FR 74112.

- ❖ Section 63.10685(b)(1)(i) requires the facility to establish a scrap specification that mercury switches be removed from motor vehicle bodies used to make the scrap.
- ❖ Section 63.10685(b)(1)(ii) requires that a site-specific plan be submitted to the permitting authority for approval, that the plan demonstrate how the facility will implement the specification for removal of mercury switches, and that the plan address the following elements:
  - ◆ A means of communication (and documentation) to suppliers throughout the scrap supply chain that stress the need to promote the removal of mercury switches and proper management of switches under RCRA. Examples of materials used for outreach must be provided to the permitting authority at their request.
  - ◆ Provisions for obtaining assurance from scrap providers that the scrap meets the scrap specification.
  - ◆ Provisions for periodic inspections or other means of corroboration to ensure that scrap providers are aware of the need to and are implementing appropriate steps to minimize the presence of mercury in scrap and to manage the switches properly, including a minimum frequency of corroboration activities.
  - ◆ Provisions for taking corrective actions, if they are needed, based on the results of periodic inspections or other means of corroboration outlined above.
- ❖ Section 63.10685(b)(1)(iii) requires an estimate of the number of mercury switches removed by each scrap provider during the previous year and the basis for the estimate.
- ❖ Section 63.10685(b)(1)(iv) requires establishing a goal to remove 80 percent of switches. Section 63.10685(b)(1)(v) requires semiannual progress reports to the Title V permitting authority on the number of switches removed or weight of mercury recovered, number of vehicles processed, an estimate of percent of switches removed, and certification the switches were properly managed under RCRA.

- ❖ Section 63.10685(b)(1)(v) also contains a key compliance provision in that the permitting authority may change the approval status of the site-specific plan based on the progress reports or other information.

### ***Permits for an EAF Using Specialty Scrap***

Section 63.10685(b)(3) is an option developed primarily for producers of stainless and specialty steel who do not use motor vehicle scrap that contains mercury switches. Under this option, the EAF owner or operator must certify that the only scrap from motor vehicles is material recovered for its specialty alloy content and that it is not reasonably expected to contain mercury switches.

### ***Permits for an EAF Not Using Motor Vehicle Scrap***

Some providers do not create scrap from motor vehicles, and such scrap is not subject to the requirements (three options) discussed above. However, under Section 63.10685(b)(4) the EAF owner or operator must certify and maintain records documenting that this scrap does not contain materials from motor vehicles.

The Quicksilver Caucus (QSC) is a coalition of State associations formed to address and resolve health and environmental problems resulting from the release of mercury to the environment. The membership of the QSC includes the Environmental Council of the States, The Association of State and Territorial Solid Waste Management Officials, The National Association of Clean Air Agencies, The Association of State and Interstate Water Pollution Control Administrators, The Association of State Drinking Water Administrators, and the National Pollution Prevention Roundtable.

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