

EPA Issues Proposed Site Remediation Category Hazardous Air Emissions Standards

The United States Environmental Protection Agency (EPA) recently issued proposed regulations under Section 112 of the federal Clean Air Act (CAA) establishing National Emission Standards for Hazardous Air Pollutants (NESHAP) for the “site remediation” source category. EPA has determined that site remediation activities may be major sources of organic hazardous air pollutants (HAPs) and other volatile organic compounds. The site remediation NESHAP implements Section 112(d) of the CAA by requiring affected site remediation activities to meet emission limits, operating limits, and work practice standards that reflect the application of maximum achievable control technology (MACT). EPA estimates that approximately 250 sites nationwide will be subject to the site remediation NESHAP. 67 Fed. Reg. 49398 (July 30, 2002).

CAA Section 112 requires EPA to list categories and subcategories of major sources of HAPs. A “major” source is defined as a source that emits or has the potential to emit at least 10 tons per year (tpy) of any single HAP or 25 tpy of any combination of HAPs. EPA included the site remediation category on the list of source categories in order to address HAP emissions from technologies and work practices used to remediate contaminated soils, groundwater, and other types of contaminated media at facilities classified as major HAP sources under the CAA. EPA stated that, during development of the proposed rule, it determined that HAP emissions resulting from the cleanup of contamination from leaking underground storage tanks (USTs) that are not otherwise associated with an industrial or manufacturing facility are significantly below the major source thresholds (i.e., 10 tpy single/25 tpy combined HAP emissions). Therefore, EPA announced that it will modify its description of the site remediation source category to exclude

remediation activities at remediation activities addressing leaking USTs at gasoline service stations and also at residential and farm sites.

EPA observed that establishing the site remediation NESHAP presented difficulties that were not present with the other source categories, which are usually tied to a specific industrial or manufacturing sector. Site remediation activities potentially may be conducted at any type of business or facility where contamination has occurred. EPA noted that, with the site remediation NESHAP, it had to balance the need for effective HAP emission controls with the goal of removing the threat to human health and the environment posed by the contamination undergoing remediation. Unlike many of the other source categories, the HAP emissions in the site remediation category are dependent on site-specific factors that determine the remedy selected for a cleanup and the sources and amounts of HAPs emitted as a result of the selected remedy.

Applicability

The proposed site remediation NESHAP would apply to facilities (with certain exceptions) that:

- are major sources of HAP emissions;
- where a “MACT activity” is also conducted; and
- at which a site remediation is being performed.

Under the proposed rule, a “site remediation” is “one or more activities or processes used to remove, destroy, degrade, transform, or immobilized organic HAP constituents in soil, sediments, groundwater, surface waters, or other types of solid or liquid environmental media as well as pure materials that are not mixed with environmental media.” A “MACT activity” is defined as “a non-remediation activity that is covered by a category of major sources listed pursuant to section 112(c) of the CAA.” EPA explains further that the “term ‘covered’ does not

mean that the non-remediation activity is necessarily subject to a MACT standard, just that the activity is included within the scope of a particular MACT source category.”

In addition to the exemption for residential, farm, and gas station cleanups previously mentioned, certain types of remediation sites are exempted from the proposed rule based upon the authority under which a cleanup is being performed. These sites include sites where cleanups are being performed under the federal Comprehensive Environmental Response, Compensation, and Liability Act and corrective actions performed under the Resource Conservation and Recovery Act. EPA is also proposing to exempt sources from the site remediation NESHAP if the contamination occurred within seven days prior to the remediation activity. This latter exemption is intended to encourage the prompt cleanup of spills and leaks and is intended to apply to cleanups started soon after the spill or leak and that are of very short duration.

Once In, Always In Policy Inapplicable

EPA has also determined that it would be inappropriate to apply its “once in, always in” policy to facilities that only become major HAP sources because they fall within the site remediation category. Under the once in, always in policy, once a facility is subject to a MACT standard, it remains subject to that standard as long as it fits within the affected source definition, even if its potential HAP emissions drop below the major source criteria. A HAP source that falls within a source category, but has potential HAP emissions less than the major source criteria is referred to as an “area source.” EPA recognized that such an area source may become a major source as a result of a site remediation and, therefore, be subject to both the site remediation NESHAP and the NESHAP established for its source category. For example, if an area source the aerospace source category conducts a site remediation that causes it to become a major source during the remediation, under the once in, always in policy, the source would

become subject to the aerospace NESHAP and would remain so even after the remediation was complete and potential emissions had declined below the major source criteria. EPA recognized that application of the once in, always in policy to the site remediation NESHAP would create a disincentive for area sources to engage in environmental cleanups. Therefore, EPA decided that it would not apply the once in, always in policy to the site remediation source category for those facilities that are area sources both before and after completion of a cleanup.

Emission Control Requirements

The site remediation NESHAP proposes emission control requirements for three groups of emission points: (i) process vents; (ii) remediation material management units; and (iii) equipment leaks. The process vents group includes both onsite and offsite remediation process vents. Examples of remediation material management units include tanks, containers, surface impoundments, oil/water separators, organic/water separators, and drain systems. The equipment leak group consists of remediation equipment components, such as pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, flanges and other connectors, and product accumulation vessels.

Process Vents

Process vents would be required to vent emissions to an air pollution control device, unless one of several exemptions applies: (i) the vent has a flow rate of less than 0.005 standard cubic meters per minute; (ii) the vent has a flow rate of less than 6.0 standard cubic meters per minute and a total HAP concentration in the vent stream of less than 20 parts per million by volume; or (iii) the HAP concentration of the material being treated is less than 10 parts per million by weight (ppmw).

Remediation Material Management Units

The proposed rule would establish emission controls depending on the type of remediation material management unit involved. For example, a surface impoundment could employ either a cover over the surface vented to an air pollution control device or a floating membrane cover. A number of exemptions also apply to this group. For example, remediation material with an organic HAP content of less than 500 ppmw would not be required to be managed in units with emission controls. Also, a person would be able to designate, on a site-specific basis, certain individual units as exempt from air emission control requirements regardless of the organic HAP concentration, provided the total annual organic HAP mass content of all of the remediation material placed in all of the exempted units does not exceed one megagram per year.

Equipment Leaks

The proposed rule would establish work practice and equipment standards to detect leaks and perform repairs to control emissions resulting from leaks in remediation equipment. The standards would apply to equipment that contains or comes into contact with remediation material that is a liquid or gas and has a total organic HAP concentration of ten percent or more by weight. Equipment that operates less than 300 hours per year would be exempt from the requirements.

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