National Stone Sand & Gravel Meeting
EPA's Proposed AERR Rule

Aggregates are Essential for Infrastructure

Aggregates are the basic raw materials needed for road and bridge construction, commercial building and home construction, flood control, water treatment, asphalt paving, and air pollution control.

- There are over 9,000 operations in the US; some companies own multiple operations, some own only one or two.
- According to MSHA data, there are a total of 4,266 aggregate companies in the U.S. Of these, 3,685 or 86% of aggregates companies have 20 employees or fewer; 73% or 3,133 have less than 10 employees. Most companies are small businesses.
- The large majority of aggregate producing facilities are in rural areas having much lower hazardous air pollutant concentrations and much less likely impact of multiple closely-spaced sources.
- The vast majority of aggregate products are sold to government entities for infrastructure-related projects.

Aggregate-Producing Plants. What do they do? What do they include?

- Aggregate plants produce rocks and sand in various size ranges
- Products are used in road construction, building construction, and numerous other types of infrastructure-related projects
- Aggregate-producing plants include (1) a quarry, (2) off-road vehicles, (3) one or more crushers, (4) screens, (5) conveyors, and (6) stockpiles
- The majority of aggregate operations have 10 or less employees

Aggregate-producing plants have extremely low and difficult to quantify HAP emissions.

The Proposed AERR requires reporting of Hazardous Air Pollutants (HAPs)

- HAPs include 416 man-made and naturally occurring compounds and elements that can adversely impact human health. These can be used and produced by industrial activities, natural forest decay, agricultural operations, forest fires, and a variety of community sources.
- Industrial facilities with high levels of HAP air emissions already track and report these emissions to State, local, and tribal agencies who report this information to EPA.
- The AERR Rule, as proposed, would expand a reporting system that only states & tribes use to many thousands of businesses, many small, with very low HAPS emissions.
- Costs to comply will be huge and the results are unlikely to be useful.

NSSGA's Main Points

- The aggregate-producing facilities do not purchase HAPs as raw materials and do not produce HAPs as a product.
- Aggregate industries crush & sort naturally occurring minerals.
- Emissions of HAPs from off-road vehicles at each facility are extremely low due the small set of off-road vehicles and the very short travel distances inherently in compact plant areas. Vehicle speeds are inherently low.
- 9,000 facilities will have to go through an expensive exercise each year only to demonstrate that most facilities have no HAPs at levels that must be reported.
- State agency, local agency & tribal authority already expertly calculate and report emissions to EPA.
  - The change from dedicated experts to ordinary people reporting is unprecedented
  - Typically, EPA has spent many years developing reporting systems for and working with stakeholders on its use (like TRI) this one will be requiring ordinary people to have the same expertise as state and tribal dedicated staff

Aggregate industries should be exempted from this extremely expanded rule.

Aggregate Facility Off-Road Vehicles, Examples of Some Inventory Preparation Costs

Some mix of onsite staff and consultant support will be needed in nearly all cases just to demonstrate that the emission thresholds are not exceeded. For example.

- Preparing an emission inventory spreadsheet with sufficient documentation concerning the source characteristics, the specific emission factors, and the assumptions used for analytes for which no emission factor or other supporting information exists ($20,000/facility to $50,000/facility)
- Registering for CARES and CEDRI databases and learning how to enter emission inventory data into these programs. ($5,000-$15,000/facility)
- $5,000 to $10,000/facility Management review of emission inventory scope, calculations, and assumptions.

Costs and Benefits

- Preliminary calculations prepared by individuals experienced with emission factor calculations and the Aggregate Industry indicate that even the largest aggregate producing facilities will at most exceed the reporting thresholds of one or two of the 416 HAPs at levels barely exceeding the overly restrictive reporting thresholds.
- **Considerable costs will be incurred annually simply to determine that reporting is not needed for most, if not all HAPS for most, if not all aggregate-producing facility.**
  - **Total costs: $30,000-$75,000 per facility x 9000 operations in the US**
- State and Tribal Authorities in all parts of the U.S. will be besieged with questions from thousands of businesses and their consultants struggling to compile reasonable estimates of emissions.

Very high cost, minimal benefit!

Too Many Source Categories, Too Many HAPs

Not all sources and HAPs are equally important with respect to community HAPs exposure.

- Small businesses with small HAPs emissions should be exempted.
- Small sources that don’t (1) purchase HAPs as raw materials or (2) produce HAPs as part of their processes should be exempted.
- Some of the 416 HAPs should be removed until solid data justify their inclusion.
- EPA can always use the Clean Air Act Section 114 authority to gather site-specific data for exempted sources or non-included HAPs in the AERR.

Much of the Information required to comply is not available

- A complete set of HAP emission factors is **not presently available**
- Guidance documents with example calculations and other information are **not presently available**

EPA has not established the necessary technical information for calculating the emissions of most of the 416 HAPs listed. This lack of proper preparation affects sources of all sizes—but is most severe for small businesses.

Aggregate-Producing Plants, The Issues Involving Off-Road Vehicles

- Aggregate-producing facilities each have between 10 and 30 off-road vehicles including large quarry haul trucks, front-end loaders, bulldozers, and scrapers. Off-road vehicles use either diesel or gas.
- There are many engine types that are categorized as Tier 1 through Tier 4 having significantly different emissions.
- There are many different emission controls including diesel particulate filters, selective catalytic reduction systems, and engine recirculation. There are different emissions for each Tier, fuel, and emission control.
- Due to the diversity of Tier-levels, fuels, and controls, a facility with 10 to 30 off-road vehicles could need many different separate sets of HAP emission factors for the 416 HAPs.

Aggregate-Producing Plants
The Issues Involving Off-Road Vehicles

- EPA has published only 57 of the 416 HAP emission factors that could apply to off-road vehicles
- Many of the 57 emission factors are based on very limited data and based on on-road vehicles with potentially quite different emissions.
- Many of the 416 HAPs are highly improbable. For example, crushed stone plants do not produce rocket fuel, coke oven gas, and the raw materials for manufacturing polyurethane foam.

The off-road vehicle HAP emission inventories will be based primarily on limited, potentially inapplicable emission factors and assumptions. How does this help anyone?

Off-Road Vehicles
NSSGA Recommendation

The applicable emission factor data that are available suggest that the total HAPS emissions from a small to moderately sized fleet that travels very limited distances per year does not exceed even the overly stringent HAPs reporting thresholds in Table 1B.

Due to the severe lack of reliable emission factors and the low estimated HAPs emissions, offroad mobile vehicle emissions from small facilities should be exempted from AERR regulation applicability

NSSGA RECOMMENDATIONS

- The expanded AERR should focus on large sources that purchase HAPs as a major raw material or that generate HAPs as a product or byproduct.
- Industries that have only incidental HAPs emissions in trace concentrations should be exempted.

Aggregate-producing facilities should be exempted from the AERR requirements.

- Compiling the data annually to determine if reporting is necessary will be very costly
- HAP emissions from aggregate activities are quite small.
- Aggregate-producing facilities are primarily small businesses located in rural areas where the cumulative impact of multiple sources is quite small.
- There are more than 9,000 aggregate-producing facilities.