

Additional Questions from the Community and Staff Responses August 10, 2006

1) How would emissions from a state of the art facility (one built in California for example) compare with the existing and proposed SUP plant emissions?

While hot mix asphalt plants are located in many states across the U.S., those located in California are subject to some of the most stringent regulations. In California, installation of emission controls that qualify as BACT and/or LAER is routinely required for NOx and PM-10 emissions from asphalt plants. Furthermore, new asphalt plants in California are often permitted with natural gas or low-sulfur No. 2 oil as the primary fuel. In most other states, however, hot mix asphalt plants are routinely allowed to burn recycled fuel oil that meets certain EPA specifications, and the determination of whether any emissions controls are required is based on whether the plant's emissions qualify as a major source of air pollution. Since the VA Paving facility in Alexandria is a minor source of air pollution, no specific emissions controls are required under Virginia DEQ regulations. The proposed SUP addresses this "gap" between California's and Virginia's regulations by requiring VA Paving to install emissions controls typically required for facilities in California. The conditions developed for the proposed SUP were indeed based on City's review of California's regulations. The following is a summary of California's typical requirements for a hot mix asphalt plant.

Source	Pollutant / Parameter	Requirements in California	VA Paving	
			Current Permit	Proposed SUP
Aggregate storage and handling	PM-10	Enclosed conveyors, wet or chemical suppression	Wet suppression	Enclosed conveyors, wet or chemical suppression
RAP Crusher	PM-10	Unknown	Wet suppression	Enclosure, water spray, etc. to achieve minimum 80% control
Asphalt Cement Heater	Fuel	Low-sulfur No. 2 oil or Natural gas	Recycled oil or No. 2 oil	Low-sulfur No. 2 oil
Drum Dryer/Mixer	NOx	Low-NOx burner*	None	Low-NOx burner
	PM-10	Baghouse [#]	Baghouse	Baghouse
	Fuel	Low-sulfur No. 2 oil or Natural gas	Recycled oil	Recycled oil, Low-sulfur No. 2 oil when Air Quality Index is high
Asphalt Cement Storage/Handling	VOC, Odor	Condensers, steel-wool filters, enclosed conveyors vented to drum dryer burner	None	Condensers, steel-wool filters, enclosed conveyors vented to drum dryer burner
Hot Mix Asphalt Handling/Loadout	PM-10, VOC, Odor	Blue Smoke Filter Pack	None	Six-stage Blue Smoke Control System
On-site Haul Roads, Traffic Areas	PM-10	Paved roads, water flushing, vacuum sweeping	Application of asphalt, water or suitable chemicals	Paved roads and parking areas, water flushing, vacuum sweeping

* Low-NOx burner is the most-routinely required control method. Other methods include flue gas recirculation and water injection.

Baghouse is the most-routinely required control method. Other methods include cyclone, venturi scrubber and ESP.

2) What regulations have been adopted by other states to protect local communities from the health hazards (etc) associated with the operation of these plants?

Many counties and cities have recently adopted ordinances that prevent construction of new asphalt plants near residences, schools, hospitals, child-care centers, etc. For example, Ashe

County, North Carolina, prohibits a new asphalt plant from locating within 1,000 feet of a residence. Similarly, Ashe and Jackson Counties in North Carolina prohibit a new asphalt plant from locating within 1,320 feet (¼ mile) of a school or daycare facility, while Watauga County, North Carolina requires a minimum distance of 1,500 feet from a school or daycare facility. These ordinances apply to new asphalt plants. An existing asphalt plant is allowed to continue operation and is considered to be grandfathered from the ordinance. For example, the Watauga County ordinance states that a pre-existing asphalt plant “which does not conform to this ordinance may continue so long as the use is not discontinued for more than two years.”

3) *What exactly are the potential health risks and what special provisions should apply where plants are located near schools, and playgrounds where kids and adults exercise?*

The City performed a detailed dispersion modeling analysis to calculate potential worst-case impacts for criteria and hazardous air pollutants emitted by all of the facility’s processes, including the mobile sources. The maximum impacts, including those calculated at all modeled locations in Cameron Station, fall below the National Ambient Air Quality Standards (NAAQS) for criteria pollutants and the Significant Ambient Air Concentration (SAAC) guidelines for hazardous air pollutants. The NAAQS are established by U.S. EPA and the SAAC are established by Virginia DEQ to protect public health, including the health of the elderly, children and sensitive individuals. Based on the modeling analysis, the City does not believe any special provisions are necessary beyond those contained in the proposed SUP for the VA Paving facility.

4) *Therefore: isn’t the fact that the air quality in this region is some of the worst in the nation an argument for even tighter standards and restrictions?*

As air quality levels become worse in any region, the margin of compliance available to any industry located in that region reduces, thereby restricting the contribution a facility can have in order to show compliance with the ambient air quality standards. This tighter standard is reflected in the City’s modeling wherein the facility’s impacts were compared only to the available margin of compliance with the NAAQS. In the case of annual-average PM-2.5 impacts, where no margin of compliance is available because the air quality in metropolitan Washington area is worse than the standard, i.e., nonattainment, the facility’s impacts were found to be below significance levels as would be required for any new source locating in this area.

The proposed SUP for the facility does indeed contain tighter restrictions on the facility’s operations and the associated pollutant emissions. These restrictions are designed to reduce both the facility’s emissions and the corresponding impacts on air quality. Several restrictions also address noise and light pollution and limit nighttime operations. Many limits in the proposed SUP are above and beyond those required under Virginia DEQ regulations and are tighter than the facility’s current operating permit.