Asphalt and the production process.
Hot Mix Asphalt is usually mixed at temperatures between 300 and 325 degrees, and it needs to be laid hot, no less than about 250 degrees. It must therefore be produced close to where it is needed.

Facts about Asphalt

More than 94 percent of the nation’s two million miles of streets and highways are paved with asphalt.
Step 1: Aggregate
Recycled Asphalt Pavement (RAP), crushed stone, gravel, and sand – stored in stockpiles.

Step 2: Cold Feed Bins
Accurately measures out the aggregate onto a conveyor belt.

Step 3: Drying Drum
Dries and heats aggregate before mixing with asphalt cement.

Step 4: Emission Control System
Bag House Collectors filter fine sand and dust particles from the exhaust air.

Step 5: Storage Silo
Holds hot mix asphalt (HMA) until its time to load onto trucks for paving jobs.

There are some 3,600 hot mix asphalt plants in the U.S.
Asphalt pavement is the leader in Recycling

- The most widely recycled product in terms of both percentage and tonnage is asphalt pavement.
- Using RAP benefits the tax payers and the environment.
  - Using RAP results in lower cost. Less new material is used.
  - Less landfill space is consumed. Fewer trucks on the road.

![Bar chart showing percentage of material recycled](source: National Asphalt Pavement Association)
How does having the plant here help?
Savings to the Community

- The optimal location inside the beltway saves the taxpayers money.

- Virginia Paving Company has historically been the low bidder for the City of Alexandria and Arlington County street maintenance programs.

- Over the past three years, Virginia Paving Co. saved Virginia taxpayers approximately $4.6 million on government contracts.
How did we get here?
Why night paving?
How did we get here?

In 1960, Newton Asphalt began operating at this location.

In 2001, Virginia Paving Company purchased the Alexandria Plant from Newton Asphalt.

We were not aware of any restrictions to the way the plant had been operated for decades.

When code enforcement brought the issue of the night time operations permit wording to our attention, we began this process.

We did not purposely violate our permit.
The Value of Night-time Paving

- Reduced traffic and congestion.
- Paving work done quicker – more efficiently.
- A better price to customers.

If night work is NOT allowed:

- Increased production during the day
- More trucks on local streets during busy hours
- More congestion and traffic problems
- More environmental impact: ozone
What work will be done at night?

All night work will be public work.

Even in the daytime, approximately 60% of the Alexandria plant work is public work.

Virginia Paving is proposing to modify plant operations at night as part of the SUP.
What are the emissions from the plant site?
Emissions from our plant have been extensively evaluated by experts.

EPA has extensively tested, or overseen the testing of hot mix asphalt production operations nationally.
Virginia DEQ has evaluated our airborne emissions and found them to be within acceptable limits.

Experts involved with the facility’s Air Dispersion Model include:

Cambridge Environmental
Laura Green Ph.D., D.A.B.T.,
Mike Ames M.S., Sc. D.,
Stephen Zemba, Ph.D., P.E.

AERO Engineering Services
Maureen Barrett, P.E.

Sullivan Environmental Consulting, Inc.
David A. Sullivan, Certified Meteorologist
Dennis Hlinka, Certified Meteorologist
We are in full compliance with all applicable emissions standards.

Our emissions were tested in 2004 & 2005 and found to be well within VDEQ and EPA standards.

The panel of experts is here to answer your questions.
Putting the emissions in perspective.
We are not a power plant…

### Industrial Emission Comparison

<table>
<thead>
<tr>
<th>Facility</th>
<th>Nitrogen Oxides (NO2)</th>
<th>Carbon Monoxide</th>
<th>Volatile Organic Compounds (VOCs)</th>
<th>PM10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexandria Asphalt Plant</td>
<td>10.18</td>
<td>45.61</td>
<td>1.69</td>
<td>2.2</td>
</tr>
<tr>
<td>Waste-to-Energy Plant</td>
<td>574.8</td>
<td>56.7</td>
<td>9</td>
<td>2.2</td>
</tr>
<tr>
<td>Coal Power Plant</td>
<td>2100</td>
<td>241.8</td>
<td>33.9</td>
<td>588.3</td>
</tr>
</tbody>
</table>

**Facility**

Waste to Energy data For Covanta – Alexandria see [http://www.deq.state.va.us/air/pdf/titlevpermits/71895sb.pdf](http://www.deq.state.va.us/air/pdf/titlevpermits/71895sb.pdf)

Emission Inventory 2000; Page 6

124 Virginia Paving Company = 1 Coal Fired Power Plant
Our emissions are a small fraction of those from other common combustion sources in Alexandria,…

Other Source Categories Emission Comparison

<table>
<thead>
<tr>
<th>Facility</th>
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<th>Volatile Organic Compounds (VOCs)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Alexandria Asphalt Plant</td>
<td>10.18</td>
<td>2,737</td>
<td>664</td>
<td>2.2</td>
</tr>
<tr>
<td>Highway Vehicles</td>
<td>2,737</td>
<td>6,173</td>
<td>273</td>
<td>119</td>
</tr>
<tr>
<td>Off-highway Vehicles</td>
<td>664</td>
<td>407</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>Other Fuel Combustion and Industrial Uses</td>
<td>1,055</td>
<td>23,167</td>
<td>273</td>
<td></td>
</tr>
</tbody>
</table>

Virginia Paving Company – Alexandria Asphalt Plant – see 2005 Particulate Stack Test & 2004 Gaseous Stack Test
… and are also small relative to some less frequently thought of Alexandria sources.

Other Source Categories Emission Comparison

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<td>1.69</td>
<td>2.2</td>
</tr>
<tr>
<td>Residential Fuel Combustion</td>
<td>173</td>
<td>73.5</td>
<td>9.63</td>
<td>15.1</td>
</tr>
<tr>
<td>Residential Wood Combustion</td>
<td>2.4</td>
<td>174</td>
<td>77</td>
<td>23.8</td>
</tr>
<tr>
<td>Solvent Usage (domestic, paints)</td>
<td>1,364</td>
<td>559</td>
<td></td>
<td>1,026</td>
</tr>
<tr>
<td>Storage and Transport (gas stations)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fugitive Dust</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
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Virginia Paving Company – Alexandria Asphalt Plant – see 2005 Particulate Stack Test & 2004 Gaseous Stack Test
Virginia Paving Company
5601 Courtney Avenue
Alexandria, Virginia 22304

What are we proposing to change?
Proposed Plant Improvements

- Fugitive Emissions Package – silo tops, loadout.
  - Enclosing Transfer Points on aggregate conveyors
- Increase in stack height - will help dispersion.
- Anti Odor Equipment – liquid asphalt, final product.
- Enhanced Storm Water Management System
- Landscape
  - Resource Protection Area (RPA) Enhancement
  - Vegetative Screenings
- Best Management Practices (BMPs)
  - Inspections, housekeeping, yard watering and sweeping, logs & records.
- Voluntary reduction in production limit
  - VDEQ permits 1.5 million tons; reduced to 1.2 million tons.
Proposed Site Improvements

View from Summers Grove

VIEW 3: PROPOSED IMAGE
Proposed Site Improvements

View from Boothe Park
Virginia Paving Company
5601 Courtney Avenue
Alexandria, Virginia 22304

Get the facts.
Don’t rely on Assumptions and Apprehension

Get the facts.

Site-specific expert studies and other information is available online.

www.laneconstruct.com/AboutUs/Environmental.aspx

Virginia Paving       Alexandria SUP Application
We are a good neighbor.
It is important for us as a business within the City to give back to the City.

Virginia Paving has made financial and physical donations to the following organizations and programs during 2005:

- Campagna Center’s - Head Start Program
- Salvation Army
- Carpenter Shelter
- TC. Williams High School
- Give to the Troops
- Operation 1st Response
- Fairfax County Deputy Sheriffs’ Coalition
- VA. Department of Conservation & Recreation – Adopt a Stream
Virginia Paving Wins NAPA Award

Virginia Paving Company's programs have contributed to the community and were an award from the National Asphalt Pavement Association.

BY CHRISTINA FISHER
PICS COURTESY OF VIRGINIA PAVING COMPANY

If you ask Phil Piscopo, assistant plant manager, why Virginia Paving Company has become involved in its community of Alexandria, the answer is simple. "We feel that we needed, from a business standpoint, to show an enhanced community relationship with the community and working with them. They are good neighbors, and I think the construction industry has a positive image in the community."

The commitment has earned the company a 2005 NAPA Community Involvement Award, which is sponsored by Associate Construction Publications, in recognition of its outstanding programs.

In the past year, Virginia Paving has been a major sponsor of "Adopt-A-School" programs. The program, managed by the Virginia Department of Conservation and Recreation, "adopts" schools that require ongoing support. The programs are sponsored by Radian Industries.

"We've contributed to a school in a different area of the community," added Phil Piscopo. "It's a good program, and we've been able to contribute to the community in a meaningful way."

Adopt-A-School is actually a part of Virginia Paving's growing environmental program. "We've been involved in the community," added Piscopo, "and we feel that we need to be involved in the community and working with them." The company is also committed to improving the local environment, and there are plans to install solar panels on the company's garage in the future.

"We're doing a lot with environmental issues around the country," added Phil Piscopo. "We've been a leader in environmental issues, and we're looking at ways to reduce our impact on the environment." Virginia Paving is committed to reducing its environmental footprint and promoting sustainable practices.

"We're committed to protecting the environment," added Piscopo. "We're doing our part to help the community and show our commitment to environmental sustainability." Virginia Paving's commitment to environmental issues is part of its ongoing efforts to improve the local community and contribute to a better future for all.

"We're proud to be part of this program," added Piscopo. "We're committed to making a difference in the community and showing our support for environmental sustainability."

"We're looking forward to continuing our involvement in Adopt-A-School programs," added Piscopo. "We're committed to making a difference in the community and showing our support for our local neighbors." Virginia Paving's commitment to Adopt-A-School programs is part of its ongoing efforts to contribute to the development of a strong, healthy community.

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Cooperative effort with various groups has led to constructive planning

- **Community Associations**
  - Cameron Station Civic Association
  - Cameron Station Community Association
  - Summers Grove Home Owners Association

- **City of Alexandria**
  - Planning and Zoning
  - Transportation and Environmental Services
  - Department of Recreation, Parks, and Cultural Activities

- **Site Planners**
  - Landscape Architecture Design
  - Storm Water Management Survey & Design
Thank you!!
Cambridge Environmental’s
Air Quality and Public Health Evaluation
of the
Virginia Paving Facility in Alexandria, Virginia

Laura Green, Ph.D., D.A.B.T.
Green@CambridgeEnvironmental.com

May 15, 2006