

# Environmental Impacts - EPD



- ➔ Jeff Cown,
  - ➔ Surface Mining Unit
  
- ➔ Jim Current,
  - ➔ Quarries, Stationary Source Permitting Program
  
- ➔ John Yntema,
  - ➔ Asphalt Plants, Stationary Source Permitting Program

# Discussion Points

- ⇒ Permit Fees
- ⇒ Modeling
- ⇒ Permitting
- ⇒ Portable Crushers

# Permit Fees

- ⇒ NSPS = \$1500.00/yr
- ⇒ Synthetic Minor (SM) = \$1000.00/yr
- ⇒ If Major: \$31.00/ton + inflation adjustment
- ⇒ Asphalt Plants may avoid SM Fee
  - ▣ With Permit by Rule
  - ▣ Must live with lower limits

# Asphalt Plants Permit By Rule

## ⇒ 5. Hot mix asphalt plants.

- ⇒ (i) Notwithstanding any other provision of these Rules, this standard applies to facilities with external combustion fuel burning equipment rated at less than or equal to 100 million BTU per hour, with a potential to emit in excess of the Part 70 major source threshold without existing federally enforceable permit conditions limiting the source to below Part 70 major source thresholds. Hot mix asphalt plants shall be deemed to have a Permit by Rule if the conditions in paragraph (I) and (II) are met. Facilities that would otherwise have potential emissions of greater than major source thresholds or are not able to meet the conditions in paragraphs (I) and (II) shall obtain a Part 70 Permit.

# Asphalt plant PBR 2

- ⇒ I. New asphalt plants (which commenced construction or modification after June 11, 1973) permitted to burn natural gas/LPG and/or distillate oil only shall limit:
  - ⇒ A. Production to 400,000 tons during any twelve consecutive months; and
  - ⇒ B. Operations to 3000 hours during any twelve consecutive months.

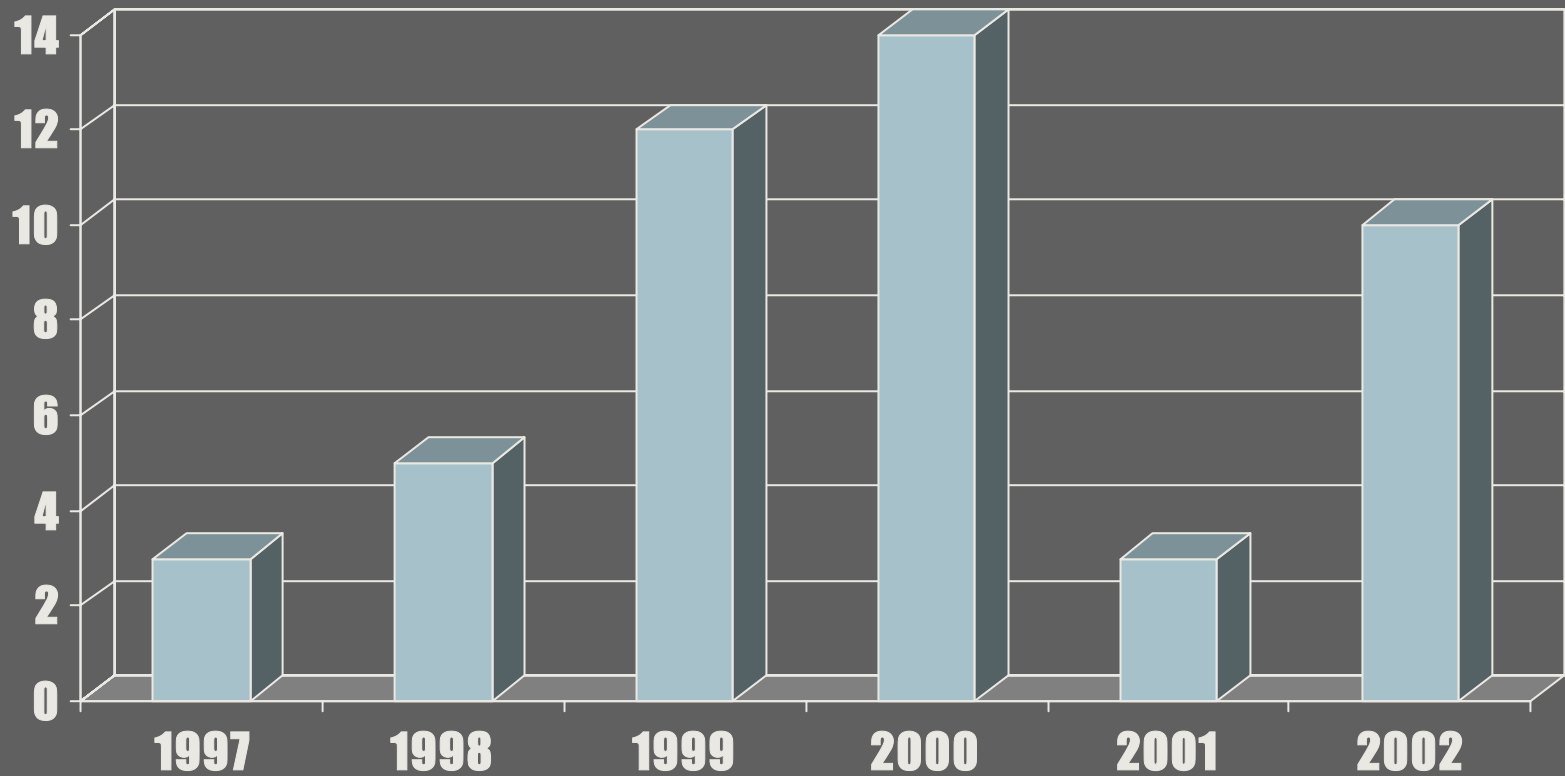
# Asphalt plant PBR 3

- ⇒ II. New and existing asphalt plants permitted to burn natural gas/LPG, distillate oil, and residual oil in any combination shall limit:
  - ⇒ A. Production to 200,000 tons during any twelve consecutive months;
  - ⇒ B. Fuel sulfur content to less than or equal to 1.5%;
  - ⇒ C. Operation to 3000 hours during any twelve consecutive months; and
  - ⇒ D. Fuel oil usage to 678,000 gallons during any twelve consecutive months.

# Modeling For Quarries

- ⇒ In response to requests from the quarry industry EPD drafted the Modeling Protocol in 1999.
- ⇒ This Protocol outlined procedures to show compliance with the NAAQS by modeling.
- ⇒ The quarry industry responded with a significant increase in model submittals.

# Model submittals in recent years



# Some results

- ⇒ Max. production ranges from 300 to 2200 Ton/Hr
- ⇒ Max. Sales ranges from 350 to 3000 Ton/Hr
- ⇒ Daily operations range from 10 to 24 Hr/Day
- ⇒ 61% to 100% of 24 Hr NAAQS consumed.
- ⇒ 63% to 100% of Annual NAAQS consumed.
- ⇒ 24Hr = 112/150  $\mu\text{m}^3$
- ⇒ Annual = 30/50  $\mu\text{m}^3$

# Permitting

- ⇒ In the last 5 years EPD has made several improvements in rock crushing permits which have added increased operational flexibility to the quarry industry.

# Flexibility:

- ⇒ Consistent modeling protocol
- ⇒ Removal of complex record keeping / calculations, such as water application rates.
- ⇒ Standard model permit for quarries
- ⇒ Op-flex condition added to most quarry permits when reissued.

# Modifications

- ⇒ The Permittee may make minor modifications &/or additions that are not addressed or prohibited by this Permit, which will automatically be covered by this permit, provided the following requirements are met:
  - ⇒ a. The process is similar in function and has control system similar to permitted equipment already on site (e.g. storage bin with bag house).
  - ⇒ b. The change is otherwise exempt from State permit review requirements under Rule 391-3-1-.03(6). Specifically: cumulative modifications, not covered in an existing permit, where the combined particulate matter potential to emit (PTE) increase is below 10 ton/year.

⇒c. When calculating particulate matter PTE, NSPS grain loading emission limits and/or emission factors from AP-42 [*The U. S. EPA AP-42 document "Compilation of Air Pollutants Emissions Factors," as revised,*] should be used whenever possible. In no event may a control efficiency greater in value than estimated by AP-42 for similar equipment be used in calculating potential emissions. Any process or control equipment assumed when calculating PTE must be installed and operated in a manner consistent with good operating practices, and any requirements of this permit relating to the type of equipment used.

# Portable Crushers (at quarries)

- ⇒ A temporary or portable crusher may be brought into any properly permitted quarry and operate under the quarry permit if the following are met.
- ⇒ 1. The crusher has dust control equal or better than the equipment permitted.
- ⇒ 2. The total permitted primary crushing capacity is not exceeded.
- ⇒ 3. NSPS testing requirements are met.

# Portable Crushers (not at quarries)

- ⇒ Are usually subject to NSPS requirements.
- ⇒ Are limited to the Non-attainment area threshold for a major source if they have a diesel engine.
  - Presently 50 ton/yr of NO<sub>x</sub>
  - Very Soon 25 ton/yr of NO<sub>x</sub>
- ⇒ Most existing portable crushers with diesel engines will need a new permit in future.