

PROJECT SUMMARY

I. INTRODUCTION

Arrow Road Construction Company has applied for a federally enforceable state operating permit (FESOP) for the existing drum mix asphalt plant. The limits established in the proposed FESOP would prevent the source from being major source of emissions. The proposed permit would not require Arrow Road Construction Company to obtain an operating permit under the Clean Air Act Permit Program. The proposed limits would be accompanied by recordkeeping and reporting requirements to assure that the plant is operated as a non-major source. These conditions would be enforceable by both the State of Illinois and the USEPA.

II. SOURCE DESCRIPTION

Arrow Road Construction Company employs a drum mix asphalt plant, which manufactures hot mix asphalt for road pavement. The process consists of blending prescribed portions of cold feed materials (sand, gravel, screenings, chips, etc.) uniformly and adding sufficient hot asphalt oil to bind the mixture together. After the hot asphalt mix is manufactured at the plant, it is transported to the location where it is to be applied. The hot asphalt mix is spread evenly over the surface with a paver then compacted with a heavy roller to produce the final product.

The following is a general description of the plant's manufacturing process:

The cold feed materials (aggregate) are dumped into separate bins, which in turn feed a common continuous conveyor. The aggregate is dispensed from the bins in accordance with the desired formulation onto the cold feed system conveyor to an inclined weigh conveyor, then to a rotating drum for continuous mixing and drying at approximately 300-350° F. When recycled asphalt mix is used, it is added halfway down the drum through a separate conveyor. The required amount of hot asphalt oil is then injected onto and mixed with the dried aggregate in the mixing section of the drum dryer. The now newly formed hot asphalt mix is pulled to the top of a storage silo through a slide gate into waiting dump trucks which transports the material to a final destination for spreading.

The drum mixer uses a burner fired with natural gas to heat air to dry the aggregate, and the motion of the rotating drum to blend the aggregate. The air is drawn into the system via an exhaust fan. After passing through the gas burner and the mixing drum, the air passes through a baghouse. The exhaust gasses are drawn through the baghouse and discharged to the atmosphere through the stack. The particulate matter, which is removed by the baghouse, is reinjected into the drum mixer.

III. EMISSIONS

The principal air contaminants emitted from the asphalt plant is particulate matter (PM), carbon monoxide (CO), nitrogen oxide (NO_x), sulfur dioxide (SO₂), and volatile organic compound (VOC) generated by the asphalt plant (dryer and heater).

The proposed permit limits the emissions of the asphalt plant to less than the threshold value for each pollutant, thereby exempting this asphalt plant from the requirements of Clean Air Act Permit Program.

IV. APPLICABLE EMISSION STANDARDS

All emission sources in Illinois must comply with the Illinois Pollution Control Board emission standards. The board's emission standards represent the basic requirements for sources in Illinois. The board has standards for sources of regulated pollutants for the asphalt plant. This site readily complies with all applicable Board standards.

V. PROPOSED PERMIT

The conditions of the proposed permit contain limitations and requirements to assure that the plant will be operated as a non-major source. The permit sets limitations on the amount of asphalt concrete produced. These limitations are consistent with the historical operation and capacity of the plant.

The permit conditions also establish appropriate procedures, including inspection practices, recordkeeping and reporting requirements. The Permittee must carry out these procedures on an ongoing basis to demonstrate that the asphalt plant is operating within the limitations set by the permit and is properly controlling emissions.

VI. REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that the asphalt plant will meet all applicable state and federal air pollution control requirements, subject to the conditions proposed in the draft permit. The Illinois EPA is therefore proposing to issue a permit with federally enforceable limits for this operation.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 Ill. Adm. Code Part 166.

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