

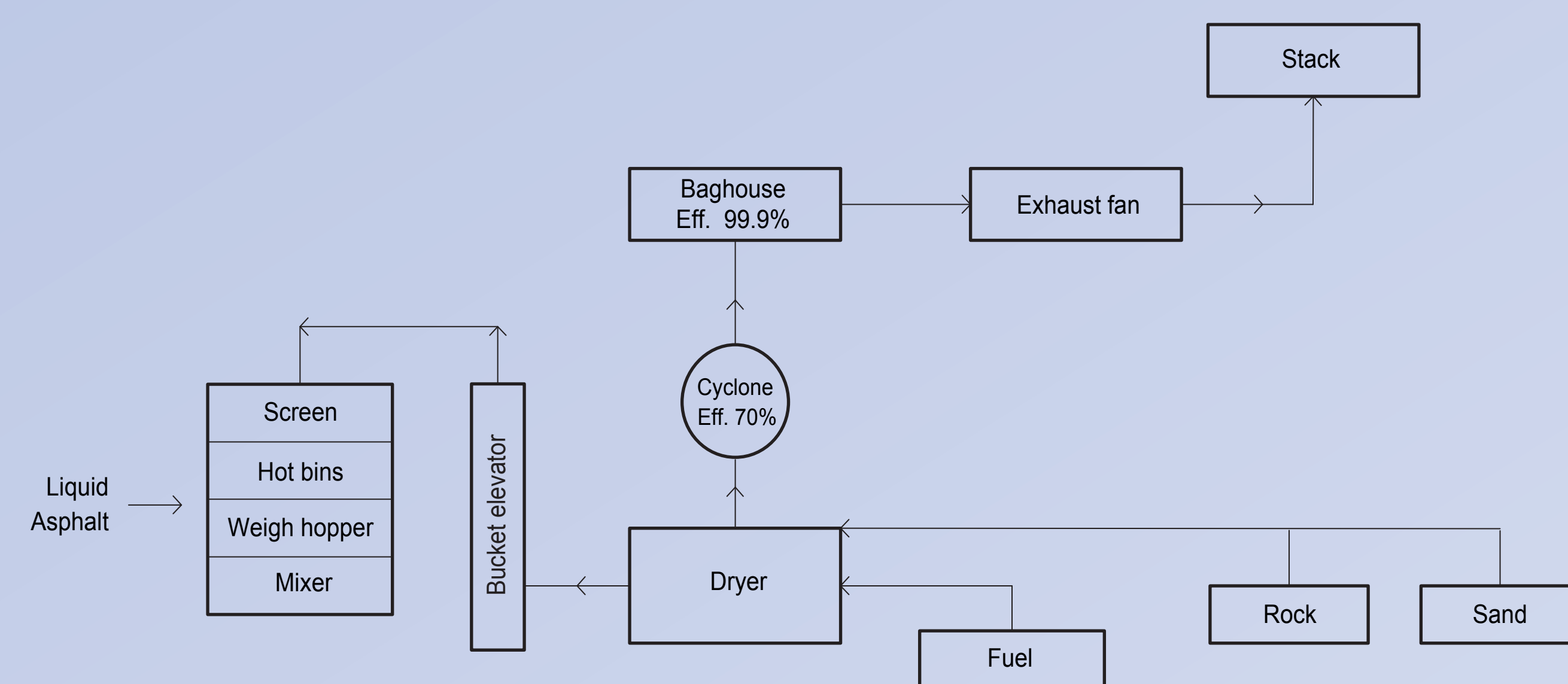
Asphalt Plant

General Description

- ❑ The existing asphalt plant installed in 1960 is being replaced with a new plant in 2003.
- ❑ The Laboratory procures asphalt paving material from outside contractors whenever possible and only produces asphalt when contractors are unavailable to provide support.
- ❑ The plant produces hot-mix asphalt by mixing aggregate (moist rock and sand) and liquid asphalt. Prior to mixing, aggregate is dried and heated in a gas-fired rotary dryer. Aggregate is screened into different sizes after being dried, and then mixed with the liquid asphalt. Liquid asphalt is stored in a tank and heated by a gas-fired heater. The hot-mix asphalt produced is dispensed into dump trucks for transport to the job site.
- ❑ Control equipment: Particulate matter is controlled in the exhaust from the rotary dryer by a cyclone followed by a baghouse. The cyclone and baghouse have control efficiencies of 70% and 99.9%, respectively.
- ❑ The maximum operating schedule for asphalt production is 10 hours per day, 7 days per week for approximately 25 weeks per year, with a maximum production rate of 80 tons per hour (160,000 pounds per hour). When patching is being performed, the actual schedule is less than 8 hours per day once or twice a week.



Process Flow Diagram for New Asphalt Plant - BDM Engineering



Applicable Requirements

- ❑ The new asphalt plant is regulated by the EPA New Source Performance Standard (NSPS) for asphalt plants at 40 CFR Part 60, Subpart I, the NMED regulation for asphalt processing at 20.2.11 of the New Mexico Administrative Code (NMAC) of the state Environmental Protection Regulations and Standards, and the conditions of the general construction permit No. GCP-3-2195G issued in October 2002. Particulate matter is the primary pollutant regulated.
- ❑ Emission limits: Particulate matter emissions from the baghouse, dryer, or mixer shall not exceed 0.04 grains/dry standard cubic foot, 35.4 pounds per hour, or an opacity greater than 20%.
- ❑ Operational requirements: Production shall not exceed 13,000 tons per year (Laboratory-proposed). The asphalt process equipment operates with a fugitive dust-control system to limit particulate emissions to the stack outlet. All screens, conveyor belts, and transfer points must be equipped and operated with dust collection and control systems sufficient to prevent opacity from exceeding 20%. Sulfur content for any natural gas used is limited to 0.75% by volume. Sulfur content for any propane used is limited to 0.5% by weight. Hours of operation are limited to 4380 hours per year. Haul roads must be watered.

Proposed Monitoring, Recordkeeping, and Reporting

- ❑ Monitoring: Perform monthly six-minute opacity readings for each emission point having an opacity greater than zero as determined by EPA Method 22. Monitor the differential pressure across the baghouse using a differential pressure gauge.
- ❑ Recordkeeping: Keep records of actual hours of operation, production rates, number of haul truck trips daily, fuel sulfur content, tickets of fuel purchased, quantity and frequency of water applied to haul roads, frequency of haul road sweeping, and copies of proposed and performed maintenance. Maintain results of the monthly six-minute opacity readings. Maintain records of the monitoring of the differential pressure across the baghouse.
- ❑ Reporting: Submit a semi-annual emissions report and monitoring report to the NMED.

Comparison of BDM Asphalt Plant and LANL Emissions

