



## WASTE ISOLATION PILOT PLANT

September 2018

# The Biggest Fans

If you're a fan of fans, WIPP's new Safety Significant Confinement Ventilation System (SSCVS) is going to blow you away.

The motors and fans are a critical part of the SSCVS, which will be located on the southeastern side of the WIPP site. The SSCVS will provide a modern air supply system designed to run continuously in HEPA filtration. The system will provide approximately 540,000 cubic feet per minute (cfm) of air to the underground, significantly more than the current ventilation system.

At an estimated cost of \$288 million, construction of the new ventilation system is expected to be completed by early 2021.

The multiple parts of the system started to take form following groundbreaking on June 14.

The Encorus Group of New York is building six enormous fans for the project at subcontractor Clarage's fan facility in Pulaski, Tenn. Each unit is 1,000 horsepower, compared to the current WIPP fans, which are about 230. The intakes are 6 feet in diameter, large enough for a person to walk into them, and the outlet is a 4X10-foot rectangle. The units are 20 feet tall and each one weighs 44,000 pounds, or 22 tons.

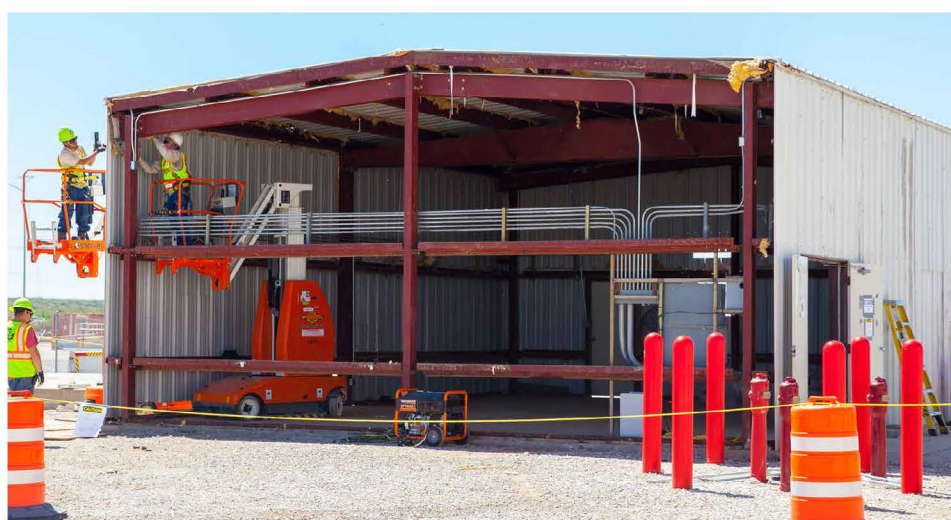
Tom Gilmartin, lead engineer on the fan for Encorus, said the SSCVS will be the largest containment fan system in the entire DOE complex.

The general contractor bid award for the project is under review by DOE headquarters, and the award is expected no later than October.

Granite Construction has completed Phase 1 grading, which included an area for five contractor trailers, parking areas and excavation of a storm-water runoff pond. Granite also has the contract for Phase 2 grading of the SSCVS building site, which will begin in September.

The five trailers designed to support the project were inspected at the manufacturer, Apex Modular, on Aug. 16, with installation targeted for early September.

A separate capital project, a \$171 million utility shaft, also is progressing. Located across the access road from the site, it is moving toward DOE approval after meetings between Rodney Whisenhunt, Nuclear Waste Partnership senior project manager, and DOE on project schedule, costs and resources. The 30-foot diameter shaft will eventually connect to the existing repository.

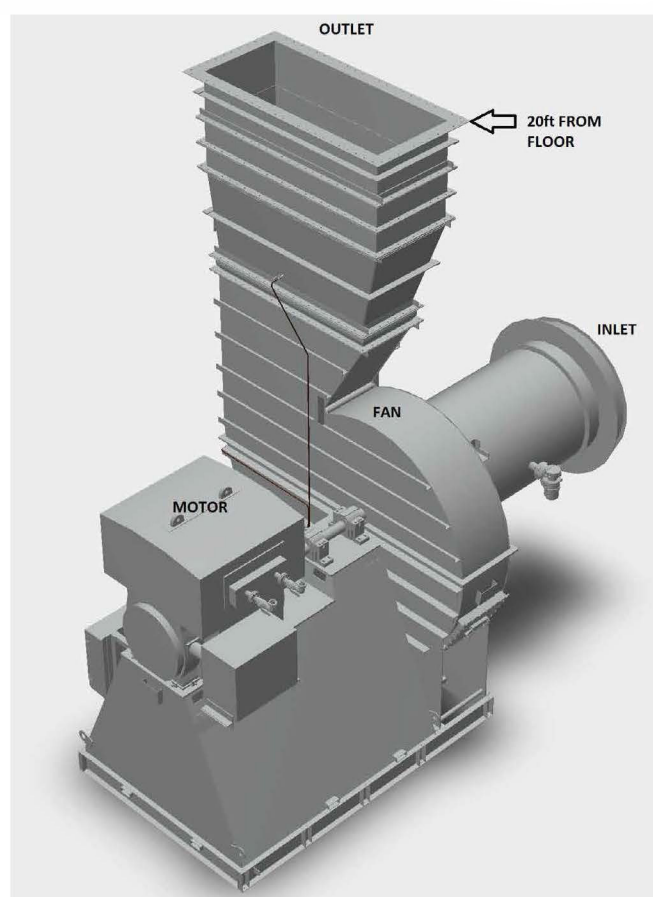


Building 482 was recently demolished to allow utilities to be installed for the Safety Significant Confinement Ventilation System's construction trailer complex. Below: Phase 1 grading is complete, which included an area for five contractor trailers, parking areas and excavation of a storm-water runoff pond.



Encorus has experience working with WIPP. The company designed the Interim Ventilation System, which is currently in use, and the fire protection system.

The SSCVS fans will pull air through a salt-reduction facility and a HEPA filter building. IONEX Research Corp. is manufacturing the 22 HEPA filter housings at its facility in Lafayette, Colo.



This schematic shows one of the six fans being built for the new SSCVS. The 1,000 horsepower fan is 20 feet tall. The intake is 6 feet in diameter, and the outlet is 4x10 feet. The fan weighs more than 20 tons.