

NOTICE OF REQUEST FOR VARIANCE FROM SAFETY STANDARDS

As a U.S. Department of Energy site, this job site is subject to the Worker Safety and Health Program established by 10 C.F.R. 851. Fermi Research Alliance, LLC ("FRA") is a management and operations contractor for the Department of Energy in relation to the construction of the Long Baseline Neutrino Facility to support the Deep Underground Neutrino Experiment. FRA has requested a variance from certain requirements of 10 C.F.R. 851.

Variance requested:

10 CFR 851.23(a)(7) incorporates 29 CFR 1926, *Safety and Health Regulations for Construction*, 1926 Subpart S, *Underground Construction, Caissons, Cofferdams, and Compressed Air*. 29 CFR 1926.800(k)(3), states:

The linear velocity of air flow in the tunnel bore, in shafts, and in all other underground work areas shall be at least 30 feet (9.15 m) per minute where blasting or rock drilling is conducted, or where other conditions likely to produce dust, fumes, mists, vapors, or gases in harmful or explosive quantities are present.

FRA and its subcontractors, Thyssen Mining (TMI) is the excavation contractor and Kiewit-Alberici Joint Venture (KAJV) as the Construction Manager as Advisor (CMA), are requesting a variance to adopt a localized ventilation approach versus the dilution ventilation requirement of the 30-fpm minimum across the entire face of the opening as prescribed by 29 CFR 1926.800(k)(3). The localized ventilation approach provided will minimize wind velocities in the auxiliary tunnels that supply ventilation to the project to reduce the dust/silica exposures in the entire underground. Utilizing the local ventilation approach at the worker, balances the site wide hazard while ensuring personnel exposures are maintained below the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values. The local ventilation approach includes monitoring both airflow and airborne contaminants per the 2016 ACGIH at the workers' work zone per the FRA's subcontractor's industrial hygiene plan and sampling and monitoring plan. The requirements for localized ventilation will be addressed in the task specific FRA subcontractor work planning documentation, i.e., Build Plans, Job Hazard Analyzes, and Field Level Risk Assessments.

Reason for variance:

When the cavern face size (92-ft x 65-ft) is multiplied by the 30 fpm, the required air flow becomes approximately 180,000 cfm per cavern for an approximate total of 450,000 cfm when all three caverns are being excavated concurrently. If this requirement were to be applied, the resulting wind speeds in the surrounding drifts would uplift additional dust, creating unsafe air quality, introduce visibility issues, and increase worker fatigue while walking in the headings. In addition, directing air flow effectively to the cavern faces would be difficult and therefore, could not meet the velocity requirements as prescribed in 29 CFR 1926.800(k)(3) at the ends or the center of the caverns.

Where to obtain a copy:

A copy of FRA's variance application may be obtained by request addressed to tamber@fnal.gov and mandrews@fnal.gov.

Right to petition for a Conference:

Any affected contractor or worker may file with the Associate Under Secretary for Environment, Health, Safety and Security a request for a conference on the application for a variance. **A request for conference must be submitted on or before February 4, 2022. A request for a conference should be submitted to: Moury, Matthew (HQ) matthew.moury@hq.doe.gov. Please provide a copy to tamber@fnal.gov and mandrews@fnal.gov.**

A request for a conference must include:

- (1) A concise statement explaining how the contractor or worker would be affected by the variance applied for, including relevant facts;
- (2) A specification of any statement or representation in the application which is denied, and a concise summary of the evidence that would be adduced in support of each denial; and
- (3) Any other views or arguments on any issue of fact or law presented.

The Associate Under Secretary for Environment, Health, Safety and Security, or designee, must respond to a request within fifteen days and, if the request is granted, indicate the time and place of the conference and the DOE participants in the conference.

Date: 1/07/2022