

Update of 2018 Structural Component Approval for Refuge Alternatives

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Refuge Alternatives for Underground Coal Mines; Final Rule

- Effective Date March 2, 2009
- Establishes requirements for refuge alternatives
- Includes testing, performance, and documentation requirements for approval
- Implements Section 13 of the MINER Act of 2006

Approved Refuge Alternative Components

- **Breathable Air** – approved in 2013
- **Air Monitoring** – approved in 2013
- **Harmful Gas Removal** – approved in 2013
- **Structural** – allowance for state approval expires after 12/31/2018
 - Applies to Pre-Fabricated Refuge Alternatives
 - Includes Steel Structure and Inflatable, if applicable

Structural Tests and Design Requirements

- For MSHA part 7 approval consideration, applicants must
 - Conduct 8 tests and provide results
 - Apparent Temperature, Over-pressure, Rip & tear, Flash Fire, Gases & Odor, Deployment, Repair, and Stretcher
 - Submit design documents addressing 13 requirements
 - Space/Volume, Isolation, Preshift, Unauthorized entry, Pressurization, Human waste, Exterior gas measurement, Durability, Transport, Two way communication, Flame Resistance, Maintenance accessibility, Loss of pressure

Mine Operator Responsibilities

- Pre-fabricated refuge alternatives in service after December 31, 2018 must have MSHA part 7 approvals for structural components as well as breathable air, harmful gas removal and air monitoring components
- Pre-fabricated refuge alternative structures with only State approvals will no longer be accepted
- Emergency Response Plans (ERPs) may need to be updated to reflect the refuge alternative structural component approval
- Mine operators must provide training on the refuge alternative in the approved ERP

Scheduling and Coordination

- Mine operators are encouraged to contact the manufacturers who supply refuge alternatives to their mines if they have further questions or need additional information.

Approval Update

- MSHA has issued four Structural Component approvals that cover the following refuge alternative models:

<https://arlweb.msha.gov/TECHSUPP/ACC/lists/07Refuge.pdf>

MSHA Approval Number	Manufacturer	Model Number
07-LCA170001	Strata Safety Products	FAB Model S-M2624 and S-M2630
07-LCA170002	Strata Safety Products	FAB Model S-M3636, S-MC3635, S-M3630
07-LCA170003	Strata Safety Products	FAB Model S-M1618
07-LCA170004	Strata Safety Products	FAB Model S-M1020 and S-M1016



QUESTIONS?