changes to an approved product under this part, the applicant must provide to MSHA as part of the approval application:

(i) Written evidence of the laboratory’s independence and current recognition by a laboratory accrediting organization;
(ii) Complete technical explanation of how the product complies with each requirement in the applicable MSHA product approval requirements;
(iii) Identification of components or features of the product that are critical to the safety of the product; and
(iv) All documentation, including drawings and specifications, as submitted to the independent laboratory by the applicant and as required by this part.

(b) The application will be examined by MSHA to determine whether inspection and testing of the modified system or component or of a part will be required. MSHA will inform the applicant whether testing is required and the component or components and related material to be submitted for that purpose.

(c) If the proposed modification meets the requirements of this part, a formal extension of certification will be issued, accompanied by a list of revised drawings and specifications which MSHA has added to those already on file.

§27.21 Methane-monitoring system.

(a) A methane-monitoring system shall be so designed that any machine or equipment, which is controlled by the system, cannot be operated unless the electrical components of the methane-monitoring system are functioning normally.

(b) A methane-monitoring system shall be rugged in construction so that its operation will not be affected by vibration or physical shock, such as normally encountered in mining operations.

(c) Insulating materials that give off flammable or explosive gases when decomposed shall not be used within enclosures where they might be subjected to destructive electrical action.

(d) An enclosure shall be equipped with a lock, seal, or acceptable equivalent when MSHA deems such protection necessary for safety.

(e) A component or subassembly of a methane-monitoring system shall be
§ 27.24 Power-shutoff component.

(a) A power-shutoff component shall be suitably constructed for incorporation in or with permissable and approved equipment that is operated in gassy mines and tunnels.

(b) The power-shutoff component shall include:

(1) A means which shall be made to function automatically to deenergize the machine or equipment when actuated by the methane detector at a methane concentration of 2.0 volume percent and at all higher concentrations in the mine atmosphere.

(i) For an electric-powered machine or equipment energized by means of a trailing cable, the power-shutoff component shall, when actuated by the methane detector, cause a control circuit to shut down the machine or equipment on which it is installed; or it shall cause a control circuit to deenergize both the machine or equipment and the trailing cable.

(ii) For a battery-powered machine or equipment, the methane-monitor power-shutoff component shall, when actuated by the methane detector, cause a control circuit to deenergize the machine or equipment as near as possible to the battery terminals.

(iii) For a diesel-powered machine or equipment, the power-shutoff component, when actuated by the methane detector, shall shut down the prime mover and deenergize all electrical components of the machine or equipment. Batteries are to be disconnected as near as possible to the battery terminals.

Note: It is not necessary that power be controlled both at the machine and at the outby end of the trailing cable.

(2) An arrangement for testing the power-shutoff characteristic to determine whether the power-shutoff component is functioning properly.