

## 1.0 PURPOSE

The purpose of this document is to explain the basic investigative process and outline the minimum documents and requirements necessary to initiate an investigation leading to the issuance of an acceptance or extension of acceptance for a ground wire monitor system.

## 2.0 SCOPE

This Standard Application Procedure (SAP) encompasses all manufacturers' applications submitted for acceptance or extension of acceptance of a ground wire monitor system. A ground wire monitor system acceptance is issued under Title 30, Code of Federal Regulations for:

- 2.1. Surface applications which include all surface circuits required to be monitored under Sections 77.803 and 77.902.
- 2.2. Underground applications, which are required to be monitored under Sections 18.47(d)(2), 75.803, and 75.902.

## 3.0 REFERENCES

N/A

## 4.0 DEFINITIONS

N/A

## 5.0 APPLICATION PROCEDURE

5.1. Each application for acceptance or extension of acceptance must include:

- 5.1.1. One completed ground wire monitor system application letter (see Enclosure A). A company official responsible for answering any questions regarding the subject application must sign the application letter.
- 5.1.2. A company application code number, any six-digit or less number assigned by the applicant, which was not previously used, to identify an application.

- 5.1.3. One copy of each drawing or specification. Documents previously accepted by MSHA need not be submitted, unless modified. All documents must be titled, numbered, dated, and include the latest revision. All documents shall include the statement "Changes in design must be authorized by MSHA before being applied to accepted equipment."
- 5.1.4. All installation instructions and wiring diagrams.
- 5.1.5. Calibration instructions and diagrams.
- 5.1.6. Maintenance and/or testing instructions and diagrams.
- 5.1.7. Lists or bills of material of the component parts necessary to construct one complete system including auxiliary or remotely located parts. This list must specify the manufacturer, component, type of component (carbon composition, wire-wound, electrolytic, etc.), component designation (R1, L3, T2, etc.) tolerance, value, rating, and the manufacturer's part number.
- 5.1.8. Electrical schematic with component designations.
- 5.1.9. Component layout (location diagram with component designations).
- 5.1.10. A sample label design for the acceptance plate. The acceptance plate must include the following minimum information:
  - 5.1.10.1. MSHA logo.
  - 5.1.10.2. Company name.
  - 5.1.10.3. Type of configuration (pilot or pilot-wireless).
  - 5.1.10.4. Monitoring method (continuity or impedance).
  - 5.1.10.5. Type of device, i.e. "ground wire monitor".
  - 5.1.10.6. Input voltage.
  - 5.1.10.7. Space for MSHA acceptance number (eleven spaces minimum).
  - 5.1.10.8. Tripping relay specification (manufacturer, type, number, etc).

- 5.1.10.9. Spare component parts for all integrated circuits, transistors, and other components which could be destroyed during MSHA's testing.
- 5.1.10.10. Seven sample units complete for installation. Six production units and one laboratory "breadboard" unit with any IC's, transistors, etc. mounted on sockets. (All parts will be returned after tests are completed).
- 5.2. Upon receipt of the application package by the Approval and Certification Center a letter which includes an estimate of the maximum anticipated fee to complete the investigation and a tentative starting date will be sent to the applicant.
- 5.2.1. An authorization response form will also be included which indicates agreement to pay expenses up to the maximum estimated fee for the investigation or request cancellation of the application. The applicant must return this form before any further action is taken on the application. If the form letter is not returned within thirty days from the date of the letter, the application fee will not be refunded.
- 5.2.2. When unforeseen circumstances are encountered during the investigation, which may result in exceeding the estimated fee, the applicant will be contacted and given the option of canceling the action or accepting the new estimated fee.
- 5.3. During the investigation, applicants will be notified via telephone of any discrepancies or additional information needed to process the application and a follow-up letter will then be sent by mail. Overseas applicants will be notified by airmail, but will not receive a telephone call.
- 5.4. The official acceptance number will be issued via an advance notification letter. The acceptance or extension of acceptance letter will be sent at a later date.
- 5.5. An invoice for the total cost of the investigation, in accordance with Part 5 fees, will follow.
- 5.6. All applicants are encouraged to contact the Chief, Electrical Safety Division at 304-547-2026 if there are any questions relative to these procedures. Assistance through technical consultations is available by appointment.

(SAMPLE)  
GROUND WIRE MONITOR  
ACCEPTANCE/ EXTENSION  
OF APPLICATION LETTER

Chief, Approval and  
Certification Center  
RR #1, Box 251  
Industrial Park Road  
Triadelphia, WV 26059

Company and Address:

BB Electric, Inc.  
2 Starlake Avenue  
Wheeling, WV 26003

Date: 04-29-04

Subject: New Acceptance/Extension of Acceptance the Model BR549 Ground Wire  
Monitor

Company Application Code No.: 987654

Gentlemen:

We are requesting acceptance/extension of acceptance of the subject ground wire  
monitor built according to Composite Drawing 2B59010.

This Ground wire monitor consists of a central monitor assembly, two phase coupler  
filters, and one device which is connected in series with the grounding conductor.

The complete installation has been tested according to MSHA's standard test procedure  
for accepting ground wire monitors. A performance log is enclosed for informational  
purposes.

Enclosed are all of the new or revised drawings and specifications pertinent to this  
application. If there are any questions, please contact me at 304-232-9421.

Sincerely,

Harriet W. Long  
President

(Enclosure A)  
GROUND WIRE MONITOR ACCEPTANCE/ EXTENSION  
OF ACCEPTANCE CHECKLIST

Complete all of the following by adding a check mark on the lines provided. The check mark signifies the item has been positively addressed. N/A signifies the item is not applicable to the design of the ground wire monitor.

- \_\_\_\_\_ 1. The appropriate Acceptance or Extension of Acceptance application letter is enclosed.
- \_\_\_\_\_ 2. A drawing list and checklist is enclosed.
- \_\_\_\_\_ 3. All correspondence, specifications, and lettering on documents are in English or translated into English and legible.
- \_\_\_\_\_ 4. All documents are titled, numbered, dated, and show the latest revision or date. If multiple pages are submitted, this information is on each sheet.
- \_\_\_\_\_ 5. All submitted documents, including sheet numbers, are traceable (referenced) back to the one or more documents to which the ground wire monitor is built.
- \_\_\_\_\_ 6. The assembly drawing(s) includes the following:
- \_\_\_\_\_ a. Location and designation of all electrical components, i.e. resistors ( $R_1$ ), capacitors ( $C_1$ ), integrated circuits ( $IC_1$ ), etc.
- \_\_\_\_\_ b. Location of the approval plate and method of attachment.
- \_\_\_\_\_ 7. There are no pencil or ink notations, or correction fluid (white-out) on the documents.
- \_\_\_\_\_ 8. All documents include a note "Do not change without approval of MSHA" on each page or sheet.
- \_\_\_\_\_ 9. A complete unit prepared for laboratory evaluation has been shipped separately. The unit has all discrete components mounted so as to be removable and are mounted in sockets as necessary.
- \_\_\_\_\_ 10. The additional required units will be supplied when requested following laboratory evaluation.

\_\_\_\_\_ 11. The ground wire device testing will be arranged at an independent testing high voltage laboratory based on your investigator's schedule as requested.

\_\_\_\_\_ 12. A letter will be mailed to the investigator from the manufacturer of the phase coupler filter capacitors when requested.

\_\_\_\_\_ 13. Each approved ground wire monitor shall be identified by a legible and permanent acceptance plate inscribed with the assigned MSHA acceptance number and securely attached to the front of the ground wire monitor.