

TITLE: Part 7 Battery Assembly Approvals, Subsequent Approvals and Extensions of Approval

1.0 PURPOSE

The purpose of this Standard Application Procedure (SAP) is to explain the basic investigative process and outline the minimum document requirements necessary to initiate an investigation leading to the issuance of Battery Assembly Approvals, Subsequent Approvals, or Extensions of Approval under 30 CFR Part 7.

2.0 SCOPE

This SAP applies to all applications for Battery Assembly Approvals, Subsequent Approvals, or Extensions of Approval under Part 7, Subpart C.

3.0 REFERENCES

This SAP refers to "Application Cancellation Policy", APOL1009.

4.0 DEFINITIONS

Subsequent Approval - A product that is similar to one for which the applicant already holds an approval.

5.0 PROCEDURE

5.1. All applications must include the following information:

5.1.1. Application Letter - Each application letter for approval shall include a brief description of the product, and, if appropriate, a statement indicating whether, in the applicant's opinion, testing is required. If testing is not proposed, the applicant shall explain the reasons for not testing. The application letter must be signed by the person responsible for answering any questions regarding the subject application. (Refer to Enclosures A, B, and C for completed samples.)

5.1.2. Certified Statement(s), as required by Part 7. (Refer to Enclosure D.)

5.1.3. A checklist is enclosed (Enclosure E). Submittal of this checklist to MSHA is optional.

5.1.4. One copy of all drawings, bills of materials, and/or specifications that include a composite drawing or drawings showing the details of the

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design and construction of the battery assembly per 30 CFR, Subpart C, Paragraph 7.43.

Note: Documents previously accepted by the Mine Safety and Health Administration need not be submitted, unless modified.

- 5.2. Applications may be submitted in electronic format. The procedure is available on the MSHA WEB Page (www.msha.gov).
- 5.3. Upon receipt of the application package by the Approval and Certification Center, a fee estimate letter is prepared and sent to the applicant, unless the applicant has pre-authorized the application, or, the applicant has a blanket authorization on file. The fee estimate letter includes an estimate of the maximum anticipated fee to complete the investigation and a tentative starting date.
 - 5.3.1. An authorization response form is included with the fee estimate. The authorization response form indicates agreement to pay expenses up to the maximum estimated fee for the investigation or requests cancellation of the application. This form must be completed and returned by the applicant before any further action is taken on the application. If the form is not returned within thirty days from the date of the letter, the application is canceled. (The applicant can pre-authorize a set amount by specifying in the application letter that he preauthorizes charging up to \$XXXX max.)
 - 5.3.2. When unforeseen circumstances encountered during the investigation result in exceeding the estimated fee, the applicant is contacted and given the option of canceling the action or accepting the new estimated fee. (the applicant is contacted by mailing/faxing etc. a revised fee estimate letter with an attached authorization response form.)
- 5.4. During the investigation, applicants are notified if MSHA elects to observe any product testing in accordance with Section 7.4(c), and of any discrepancies or additional information needed to process the application. A follow-up letter will then be sent. Applicants are notified by mail and telephone. If an email address is available, the discrepancy letter may be emailed.
- 5.5. After all the technical documents are evaluated and any changes required as a result of the viewing of any tests are finalized, notification of the official

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approval number is issued. The formal Approval, Subsequent Approval or Extension of Approval letter is issued when completed. An invoice for the total cost of the investigation is sent after final approval issuance.

6.0 CONTACT

All applicants are encouraged to contact the Team Leader, Electrical Safety Division at 304-547-2030 with questions relative to these procedures. Assistance through technical consultation is available by appointment.

(SAMPLE)

PART 7 BATTERY ASSEMBLY
APPROVAL 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: 02-21-07

Subject: New Approval of the Model 64-122A-21-1225, 128 volt, 1225 A.H. battery assembly

Company Application Code No.: 987654

Gentlemen:

We are requesting approval of the subject battery assembly built according to Composite Drawing 2B59010.

This Battery Assembly consists of one 64 cell unit with the tray and cover constructed of 3/8" thick AISI 1010 hot rolled steel. The overall dimensions are specified as 80" long X 51" wide X 30" high. The maximum total weight is 14,000 pounds. The interior of the tray and cover is coated with MSHA No. BI-11 insulating material. The cover is manufactured as a two piece assembly and a louver and cutouts on the tray are provided for ventilation with thirty 1" diameter holes for drainage.

The acid resistance test will be conducted in accordance with Section 7.48 on the insulating material on March 25, 2000 at R&D Battery, Incorporated.

Impact tests and deflection tests are not necessary due to the use of steel covers.

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)

(SAMPLE)

PART 7 BATTERY ASSEMBLY
EXTENSION OF APPROVAL 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: 02-21-07

Subject: Extension of a Model 64-122A-21-1225, 128 volt, 1225 A.H. battery assembly, Approval No. 7C-4321

Company Application Code No.: 987655

Gentlemen:

We are requesting approval of the subject battery assembly built according to Composite Drawing 2B2501C.

The subject battery is similar to the battery approved under 7C-4321, Investigation No. PS-15885, except the cover is manufactured as a three piece assembly.

The acid resistance tests are waived based on the battery box and cover insulating material being previously tested under MSHA BI-11.

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

Sincerely,

Harriet W. Long
President

(Enclosure B)

(SAMPLE)

PART 7 BATTERY ASSEMBLY
SUBSEQUENT APPROVAL 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: 02-21-07

Subject: Subsequent Approval of a Model 64-122A-21-1225, 128 volt, 1225 A.H. battery assembly.

Company Application Code No.: 987656

Gentlemen:

We are requesting a subsequent approval of the subject battery assembly built according to Composite Drawing 2B2532Y.

The subject battery assembly is similar to the model 64-122A-21-1225, 128 volt, 1225 AH battery assembly built according to Layout 40775-216, Approval No. 7C-4321-0, Investigation No. PS-10715, except the cover is a three piece design and the tray is made out of 3/8" thick A36 steel. This results in an increased weight of 14,500 pounds.

The acid resistance tests are waived based on the battery box and cover insulating material being previously tested under MSHA BI-11.

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

Sincerely,

Harriet W. Long
President

(Enclosure C)

PART 7 BATTERY ASSEMBLIES
CERTIFIED STATEMENTS

Company: _____

Date:

Address:

Subject:

Company Application Code No.:

I, _____, as the responsible company official, hereby certify that:
(signature)

- (1) The subject battery assembly will have Quality Assurance functions performed as specified in Title 30 Code of Federal Regulations 30 CFR Part 7, Subpart A (7.7).
- (2) The subject battery assembly has been designed to meet or exceed the design portion of the technical requirements set forth in 30 CFR Part 7, Subpart C (7.44).
- (3) The cover of the battery assembly has been tested and meets the performance criteria of the impact tests set forth in 30 CFR Part 7, Subpart C (7.46). (If applicable)
- (4) The subject battery box has been tested and meets the performance criteria of the deflection temperature tests set forth in 30 CFR Part 7, Subpart C (7.47). (If applicable)
- (5) The box and cover insulation of the battery assembly has been tested and meets the performance criteria of the acid resistance tests set forth in 30 CFR Part 7, Subpart C (7.48). (If applicable)

Sincerely,

(Enclosure D)

PART 7 BATTERY APPROVAL/SUBSEQUENT APPROVAL/EXTENSION
OF APPROVAL 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 battery assembly.

Administrative

- _____ 1. The appropriate Approval, Subsequent Approval, or Extension of Approval 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. There are no pencil or ink notations, or correction fluid (white-out) on the documents.
- _____ 6. All submitted documents, including sheet numbers, are traceable (referenced) back to the one or more documents to which the battery equipment is built.

Technical

- _____ 7. A certified statement is included that specifies that the battery assembly will have Quality Assurance functions performed as specified in Section 7.7.
- _____ 8. The overall dimensions of the battery assembly, including the minimum distance from the underside of the cover to the top of the terminal caps is specified on the assembly drawing (Section 7.43 (a) (1)).
- _____ 9. The battery box and cover(s) are constructed to the following minimum thickness of AISI 1010 hot rolled steel based on the total weight of a unit of the battery assembly charged and ready for services (Section 7.44 (a) (1)):

(Enclosure E)

Weight of Battery Unit.....Minimum Required Thickness

1000 lbs maximum.....	10 gauge or 1/8" nominal
1001 to 2000 lbs.....	7 gauge or 3/16" nominal
2001 to 4500 lbs.....	3 gauge or 1/4" nominal
over 4500 lbs.....	0 gauge or 5/16" nominal

Note: Battery boxes not constructed of AISI 1010 hot rolled steel shall have at least the tensile strength and impact resistance of battery boxes that are for the same weight class.

- _____ 10. Battery box covers constructed of materials with less than the tensile strength and impact resistance of AISI 1010 hot rolled steel or constructed of non-metallic materials meet the acceptable performance criteria for the impact test in Part 7.46 (Section 7.44 (3)).

Note: Non-metallic covers shall be used only in the battery assembly configuration in which they pass the impact test. A certified statement stating such must be included with the application.

- _____ 11. Non-metallic boxes and covers are made of MSHA flame-resistant materials (Section 7.44 (4) (i)).

- _____ 12. Non-metallic boxes and covers meet the acceptable performance criteria for the deflection temperature test in Part 7.47 (Section 7.44 (4) (ii)).

Note: A certified statement stating such must be included with the application.

- _____ 13. All insulating material has a minimum resistance of 100 megohms at 500 volt d.c. (Section 7.44 (4) (b)).

- _____ 14. The battery box and cover insulating material meet the acceptable performance criteria for the acid resistance test in Part 7.48 (Section 7.44 (4) (c)).

Note: A certified statement stating such must be included with the application.

- _____ 15. The covers are lined with an insulating material permanently attached to the underside of the cover, unless the cover is constructed of insulating material (Section 7.44 (4) (d)).
- _____ 16. The battery box covers, including those used over connector receptacle housings are provided with a means of securing them in a closed position (Section 7.44 (4) (e)).
- _____ 17. The battery boxes provide vent openings to prevent the accumulation of flammable or toxic gases or vapors within the battery assembly. The size and location of the openings prevent direct access to the cell terminations and other uninsulated current carrying parts (Section 7.44 (4) (f)).
- _____ 18. The total minimum unobstructed cross-sectional area of the ventilation openings is no less than the value determined by number of cells in the battery box, times the rated 6 hour battery capacity in ampere hours, divided by 950 (Section 7.44 (4) (f)).
- _____ 19. Drainage holes are provided to prevent accumulation of water or electrolyte (Section 7.44 (4) (g)).
- _____ 20. The battery cells are insulated from the battery box walls, partitions, and bottom by insulating material unless such part is constructed of insulating material. Insulating material extends to the top of the battery box wall (Section 7.44 (4) (h)).
- _____ 21. The cell terminals are burnt on, except when bolted connectors using two or more bolts are used on the end terminal (Section 7.44 (4) (i)).
- _____ 22. The battery connections are designed so that the total battery potential is not available between adjacent cells (Section 7.44 (4) (j)).
- _____ 23. The cables within the battery box are accepted by MSHA as flame-resistant under 30 CFR Part 18 and protected against abrasion by insulation, location, clamping, or other effective means (Section 7.44 (4) (k)).
- _____ 24. When the battery plug and receptacle are not located on or within the battery box, strain on the battery terminals is prevented by a strain relief device on the cable. Insulating material is placed between the strain relief device and cable (Section 7.44 (4) (l)).

(Enclosure E)

- _____ 25. There is at least a 1/2-inch air space provided between the underside of the battery cover and the top of the battery, including the terminals and connectors (Section 7.44 (4) (m)).

- _____ 26. Each approved battery assembly shall be identified by a legible and permanent approval plate inscribed with the assigned MSHA approval number and securely attached to the battery box (Section 7.49).