

DED Rec'd 4/10/97

40-7604



BP CHEMICALS

BP Chemicals Inc.
Ft. Amanda Road
P.O. Box 628
Lima, Ohio 45802-0628
(419) 226-1200

VIA OVERNIGHT MAIL

Mr. Sam Nalluswami
Low-Level Waste and Decommissioning Projects Branch
Division of Waste Management
Office of Nuclear Materials and Safeguards
United States Nuclear Regulatory Commission
Two White Flint North
11545 Rockville Road
North Bethesda, MD 20852

December 6, 1996

Re: License No. SUB-908
Docket No. 040-07604

Subject: Mixed Waste Pond Closure Project
Field Change No. 012

Dear Sir:

In accordance with the mixed waste pond closure project field change approval procedure (BPCI Administrative Procedure AP-02), BP Chemicals, Inc. (BPCI) herewith submits for NRC review proposed Field Change No. 012. This field change revises Project Specification 13200 to change the referenced ASTM test method in Section 3.5.1(d) and to add Section 3.5.1(g) providing pass/fail criteria for destructive testing. The reason for these revisions is to update the specification to meet EPA/600/R-93/182, *Quality Assurance and Quality Control for Waste Containment Facilities*, which was published after this specification was originally prepared.

Included for your review are revised pages 13200-10 and 13200-11 of the specification.

A copy of this field change request has also been submitted to Ohio EPA. If there are any questions, please give me a call at (419) 226-1299.

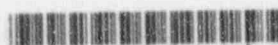
Sincerely,

William M. Rupert, PE
Project Manager

cc: Ed Kulzer, NRC Region 3
Ruth Vandegrift, Ohio Dept. of Health
James Ottarson, Ohio EPA

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BP CHEMICALS, INC.
MIXED WASTE POND CLOSURE PROJECT

FIELD CHANGE REQUEST FORM

Field Change Number: 012 Date: 11/1/96

Subject: Revise Specification 13200, Geosynthetic Membranes

Description: Section 3.5.1 (d) - Change ASTM designation to D4437; add Section 3.5.1 (g) to provide pass/fail criteria for destructive testing.

Justification: Update specification to meet EPA/600/R-93/182, "Quality Assurance and Quality Control for Waste Containment Facilities, which was published after specification was originally prepared.

Attachments: Pages 13200-10 and 11 (rev. 10/31/96)

Requested by: R. R. Blickwedehl Dames & Moore 11/1/96
Signature Company Date

BPCI Project Approvals

Dames & Moore Robert R. Blickwedehl not Yes No
Certifying Engineer Signature Approval Date

BPCI Radiation NOT APPLICABLE Yes No
Safety Officer Signature Approval Date

BPCI HSE not APPLICABLE Yes No
Manager Signature Approval Date

BPCI Project W. M. B. H. Yes No 11/1/96
Manager Signature Approval Date

Regulatory Agency Concurrence

Ohio EPA Yes No
Concurrence Signature Concur Date

NRC Yes No
Concurrence Signature Concur Date

BP CHEMICALS, INC.
MIXED WASTE POND CLOSURE PROJECT
FIELD CHANGE REQUEST FORM

Field Change No. 012 Date: 11/01/96

Subject: MODIFICATION TO SPECIFICATION SECTION 13200,
GEOSYNTHETIC MEMBRANES

Description: • IN SECTION 3.5.1.d CHANGE ASTM DESIGNATION TO D4437
• ADD SECTION 3.5.1.g TO INDICATE PASS/FAIL CRITERIA
- AVG. OF 5 TESTS GREATER THAN SPEC.
- AT LEAST 4 OF 5 TESTS " " "
- NO TESTS LESS THAN 80% OF "

Justification: ADDRESS INFORMATION IN EPA TECHNICAL GUIDANCE
DOCUMENT EPA/600/R-93/182; "QUALITY ASSURANCE AND
QUALITY CONTROL FOR WASTE CONTAINMENT FACILITIES".
THIS DOCUMENT WAS PUBLISHED AFTER SPECIFICATIONS
WERE PREPARED AND SUBMITTED FOR AGENCY
REVIEW.

Attachments: REVISED SPECIFICATION PAGES 13200-10
THROUGH 13 WITH CHANGES UNDERLINED

Initiator: 

Signature

DAMES & MOORE

Company

11/1/96

Date

Field Change Request Form

Field Change No. 012 Date: 11/01/96

Subject: MODIFICATION TO SPECIFICATION SECTION 13200,
GEOSYNTHETIC MEMBRANES,

BPCI Approvals

Dames & Moore
Certifying Engineer

Signature

Yes ☒ No ☐
Approval

Date 11/1/96

BPCI Radiation
Safety Office

Signature

Yes ☐ No ☐
Approval

Date

BPCI HSE
Manager

Signature

Yes ☐ No ☐
Approval

Date

BPCI Project
Manager

Signature

Yes ☐ No ☐
Approval

Date

Regulatory Reviews

Ohio EPA
Concurrence

Signature

Yes ☐ No ☐
Concurrence

Date

NRC
Concurrence

Signature

Yes ☐ No ☐
Concurrence

Date

GEOSYNTHETIC MEMBRANES

2. A rubber hose with fittings and connections;
3. A sharp hollow needle, or other approved pressure feed device.
- b. The following procedures shall be followed:
 1. Seal both ends of the seam to be tested;
 2. Insert needle or other approved pressure feed device into the tunnel created by the fusion weld;
 3. Energize the air pump to a pressure between 25 and 30 psi (160 and 200 kPa), close valve, and sustain pressure for approximately two minutes;
 4. If loss of pressure exceeds 2 psi (15 kPa), or does not stabilize, locate faulty area and repair in accordance with Paragraph 3.6 of this Section.
 5. Remove needle or other approved pressure feed device and seal.

3.4.4 Bolting: All bolting will be done as per details in the design drawings. All batten strips will be visually inspected to assure compression of the neoprene gasketing. All batten strips will be tapped in the center between two bolts, with a ballpeen hammer. A high pitched ringing sound indicates proper pressure between the strip and the gasket. A low pitched sound indicates a lack of pressure between the strip and the gasket. All anchor bolts are to be re-checked for tightness using a standard ratchet assembly.

3.5 Destructive Testing

3.5.1 At a minimum, every 500 linear feet of ~~seam~~ will be tested as follows:

- a. A test strip, 54 inches in length by 12 inches in width, will be removed.
- b. Three 6-inch by 1-inch samples will be tested in peel with a manual tensiometer immediately.
- c. The Contractor will keep 12 inches, give the QA/QC Engineer 12 inches for 3rd party testing and give the client 12 inches to store in their archives.
- d. As required, the Contractor's portion will be tested by their personnel in accordance with the following:
 1. Shear strength ASTM D 4437 100% of sheet yield strength
 2. Peel adhesion ASTM D 4437 Film tearing bond
- e. A set of 5 coupons, 6 inches by 1-inch per sample are to be tested in shear and 5 in peel.
- f. All areas that have been destructively tested will be repaired with patches and welded by the extrusion method and vacuum tested.

GEOSYNTHETIC MEMBRANES

g. A seam test is considered to pass if each of the following criteria are met:

- i. The average of the 5 coupon results meets or exceeds the specifications.
- ii. At least four of the five coupon results meet or exceed the specifications.
- iii. No coupon result is below 80 percent of the specification.

3.5.2 Start-Up Testing

- a. A test strip per welding machine will be made at the start of each welding period. A welding period is defined as, at a minimum, a four hour period of welding operations. This typically corresponds to the morning and afternoon. The test strip will be 4 feet in length by 2 feet in width with the seam centered lengthwise. The test strip will be cut in half with regards to length. One half will be given to the client and the other half will be tested in peel. The sample will have three 6-inch by 1-inch coupons cut from it. Test description is as follows:

1. Peel Test

The overlapped portion of the coupon will be pulled 180 degrees from the top portion of the coupon. The coupon will be pulled using a tensiometer. A pass is defined as film tearing bond (i.e. sheet material tears with no damage to the weld). A failure is defined as the seam peeling.

3.6 Defects and Repairs

3.6.1 Identification

- a. All seams and non-seam areas of the geomembrane shall be examined by the Contractor for identification of defects, holes, blisters, undispersed raw materials and any sign of contamination by foreign matter.

3.6.2 Evaluation

- a. Each suspect location, both in seam and non-seam areas, shall be non-destructively tested using the methods described in Section 3.4 as appropriate. Each location which fails the non-destructive testing shall be marked by the Contractor and repaired. Work shall not proceed with any materials which will cover locations which have been repaired until laboratory test results with passing values are available.

3.6.3 Repair Procedures

- a. Any portion of the geomembrane exhibiting a flaw or failing an destructive or nondestructive test shall be repaired. Several procedures exist for the repair of these areas. The final decision as to the appropriate repair procedure shall be agreed upon between the Owner or his designated representative and the Contractor. The procedures available include: