

BP CHEMICALS, INC.
MIXED WASTE POND CLOSURE PROJECT

FIELD CHANGE REQUEST FORM

Field Change Number: 021 Date: 11/7/96

Subject: Compaction of protective sand layer, Specification 02220

Description: Revise Section 3.2.8 (f) to specify that compaction shall consist of two passes with a hand operated plate vibrator.

Justification: Geonet does not provide a firm base for compaction. Too much compaction could lower sand permeability and force sand into Geonet.

Attachments: Revise specification pages 02220-8 and 02220-9

Requested by: R.R. Blickwedehl Dames & Moore 11/7/96
Signature Company Date

BPCI Project Approvals

Dames & Moore Certifying Engineer	<u>Robert R. Blickwedehl</u> Signature	<u>2st</u> <u>Yes</u> No Approval	<u>11/7/96</u> Date
BPCI Radiation Safety Officer	<u>NOT APPLICABLE</u> Signature	Yes No Approval	<u>-</u> Date
BPCI HSE Manager	<u>NOT APPLICABLE</u> Signature	Yes No Approval	<u>-</u> Date
BPCI Project Manager	<u>Will M. Ryt</u> Signature	<u>Yes</u> No Approval	<u>11/7/96</u> Date

Regulatory Agency Concurrence

Ohio EPA Concurrence	Signature	Yes No Concur	Date
NRC Concurrence	Signature	Yes No Concur	Date

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

Field Change No. 021 Date: 11/7/96

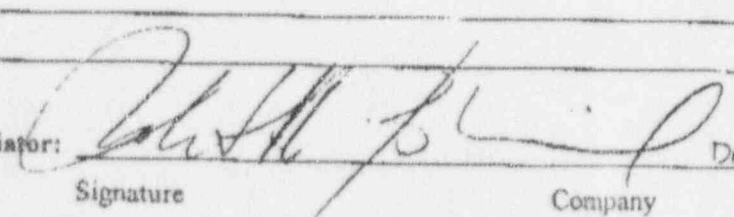
Subject: COMPACTION OF TYPE D PROTECTIVE SAND LAYER.

Description: ADD THE FOLLOWING TO SPECIFICATION SECTION 0220.3.2.B.f:

"THE 90% MAXIMUM DRY DENSITY REQUIREMENT IN C. DOES NOT APPLY TO THE TYPE D PROTECTIVE SAND LAYER. COMPACTION OF THE TYPE D PROTECTIVE SAND LAYER SHALL CONSIST OF TWO PASSES WITH A HAND OPERATED PLATE VIBRATOR"

Justification: THE GEONET DOES NOT PROVIDE A FIRM BASE FOR COMPACTION. APPLICATION OF EXCESS ENERGY TO COMPACT THE SAND TO A HIGH DENSITY COULD (1) SIGNIFICANTLY LOWER THE PERMEABILITY OF THE SAND (2) FORCE GEOTEXTILE AND SAND INTO GEONET BOTH OF WHICH ARE UNDESIRABLE. TWO PASSES WITH THE PLATE VIBRATOR IS SUFFICIENT TO PREVENT SETTLEMENT

Attachments: NONE

Initiator: 

Signature

Company

DAMES & MOORE

11/7/96

Date

Field Change Request Form

Field Change No. 021 Date: 11/7/96Subject: COMPACTION OF TYPE D PROTECTIVE SAND
LAYER

BPCI Approvals

Dames & Moore Certifying Engineer	Signature _____	Yes _____ Approval	No _____ Date
BPCI Radiation Safety Office	Signature _____	Yes _____ Approval	No _____ Date
BPCI HSE Manager	Signature _____	Yes _____ Approval	No _____ Date
BPCI Project Manager	Signature _____	Yes _____ Approval	No _____ Date

Regulatory Reviews

Ohio EPA Concurrence	Signature _____	Yes _____ Concurrence	No _____ Date
NRC Concurrence	Signature _____	Yes _____ Concurrence	No _____ Date

EXCAVATION AND BACKFILL

- b. Acidity range (pH) of 5.5 to 7.5.
 - c. Containing a minimum of 4 percent, and a maximum of 25 percent inorganic matter.
- 3.2.8 Backfill shall be placed symmetrically to prevent eccentric loading upon or against structures.
- a. Backfill, including trench backfill, shall be placed in horizontal layers not to exceed eight inches in loose thickness and shall have the proper moisture content for the required degree of compaction and the top one inch of subgrade shall be scarified prior to backfill placement.
 - b. Large fills compacted with tractor drawn compactors may be placed in layers not to exceed 8 inches in loose thickness, subject to the provision of 3.2.7 a, and a uniform surface shall be maintained during compaction operations in order to insure compaction of the entire layer.
 - c. Each layer shall be compacted by hand or machine tampers or other suitable equipment to at least 95 percent of maximum dry density at optimum moisture content to +4 percent of optimum as determined by ASTM D-1557 unless noted otherwise on drawings. Each layer shall achieve the required density before proceeding with the next layer. If the material fails to meet the required density, the material shall be reworked, replaced or construction methods altered as necessary to obtain the required density.
 - d. Any areas improperly backfilled, or where settlement occurs, shall be reopened to the depth required for proper compaction, refilled and compacted with the surface restored to the required grade and compaction.
 - e. Low-permeable soil being placed for liner and cap systems shall be done in a consistent manner with the results of the respective test fill pad.
 - f. Protective sand layer must be compacted with hand operated plate vibrator. The 90% maximum dry density requirement in section c. does not apply to the Type D protective sand layer. Compaction of the Type D protective sand layer shall consist of two passes with a hand operated plate vibrator.
- 3.2.9 Backfill placed against or around pavement, piles, sewers, utility structures and similar facilities shall, within six inches of such structures, contain no particles exceeding two inches in largest dimension.
- 3.2.10 Pipe joints shall be left exposed until required tests have been performed and in the case of concrete pipe for at least 24 hours after the joint is made.
- 3.2.11 Construction equipment or other vehicles shall not cross over culverts until the fill has reached a depth of 1/5 the diameter or nine inches, whichever is greater, over the top of the culvert.
- 3.2.12 Heavy equipment shall not be used closer to a foundation than a distance equal to the height of the backfill unless approved in writing by the Owner.
- 3.2.13 No backfill shall be placed against foundations for at least 3 days after pouring concrete.

EXCAVATION AND BACKFILL

- 3.2.14 The minimum earth cover above pipe in trenches shall be as follows or as indicated on the contract drawings:

<u>Pipe Size</u>	<u>Cover</u>
6 inches and smaller	6 inches
8 inches to 12 inches, incl.	12 inches
14 inches to 22 inches, incl.	18 inches
24 inches and larger	24 inches

- 3.2.15 Fill shall not be frozen nor should fill be placed on frozen subgrade.

- a. Protect fill surfaces from freezing including final lifts of compacted clay liners and cap materials.

- 3.2.16 Provide final survey of locations and elevations of final surfaces of clay liner, leak detection and leachate collection trenches and each cap layer. Survey must include coordinates and elevations of all grade change points and a grid no greater than 25 feet square. Survey must be plotted on an appropriately scaled map.

--END OF SECTION--