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RESEARCH REPORT: RR 24735  
(CSI 07110)

Expires: February 1, 2023  
Issued Date: January 01, 2021  
Code: 2020 LABC

**GENERAL APPROVAL** – Renewal - Colloid Environmental Technologies Company Volclay Bentonite Below-grade Waterproofing Panel System, Volclay Ultraseal Below-grade Waterproofing system, Swelltite Composite Waterproofing Membrane and Envirosheet Membrane Waterproofing System for Wall and Slab Waterproofing.

**DETAILS**

1. The above product is approved for below-grade waterproofing as required by Chapter 18 of the Los Angeles City Building Code. The product may be used in conjunction with Los Angeles City approved caulking materials at penetrations of the waterproofing membrane.
2. -Volclay Panel Bentonite Waterproofing System consists of Volclay Type 1 panels (used on the exterior) or Volclay Voltex (used under slabs), Volclay Hydrobar tubes or Volclay Watershop RX and Volclay Bentoseal.  
  
- Swelltite Composite Waterproofing Membrane consists of a thick layer of Volclay® sodium bentonite compound integrally bonded between a tough geomembrane liner and a 1.5 mil thick water soluble film.  
  
- Envirosheet Membrane Waterproofing System is a self-adhering waterproofing sheet membrane consisting of a 60-mil thick sheet of waterproofing membrane comprised of a 4-mil cross laminated polyethylene sheet laminated to a thicker layer of rubberized asphalt compound.

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Colloid Environmental Technologies Company (CETCO)

RE: Volclay Bentonite Below-Grade Waterproofing Panel System, Volclay Ultraseal Below-Grade Waterproofing System, Swelltite Composite Waterproofing Membrane and Envirosheet Membrane Waterproofing System for Wall and Slab Waterproofing.

-Volclay Ultraseal waterproofing system utilizes a bentonite-polymer alloy (BPA). Two Ultraseal membrane composites - BT and SP each with specific product performance features, provide waterproofing for backfilled foundation walls and single form application, such as lagging walls.

Ultraseal Type SP has three components: an HDPE geomembrane; the BPA "core" layer; and a covering geotextile. Ultraseal BT has two components: an HDPE geomembrane and the BPA.

For a more detailed description of the system, see manufacturer's specification-data sheet.

3. The product shall not be used in construction methods where the Bentonite layer may be damaged as indicated in the manufacturer's instructions/limitations.
4. The application of the material shall be in accordance with the manufacturer's instructions. A copy of the instruction shall be available at each job site.
5. The product shall not be used along coastal areas or in areas where there is a presence of saline soils.
6. The product shall be in full contact with the wall and soil at all times.
7. Volclay Type 1 panel joints shall be lapped a minimum of 1 ½ inches; Voltex joints lapped a minimum 4 inches.
8. The Envirosheet Membrane is formulated for a temperature application of 55°F and above.

## **DISCUSSION**

The clerical modification is to update the report to the 2020 Los Angeles City Building Code.

The report is in compliance with the 2020 Los Angeles City Building Code.

Evidence of satisfactory performance of the product as used in the City of Los Angeles is on file in the Engineering Research Section.

The Volclay Bentonite panel system was tested to a maximum head of 10 feet of water.

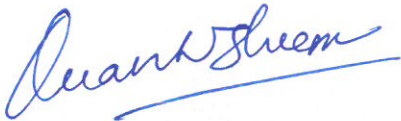
The Volclay Ultraseal below-grade Waterproofing membrane, Swelltite Composite Waterproofing and Envirosheet Membrane were tested to a maximum head of 231 feet of water.

Colloid Environmental Technologies Company (CETCO)

RE: Volclay Bentonite Below-Grade Waterproofing Panel System, Volclay Ultraseal Below-Grade Waterproofing System, Swelltite Composite Waterproofing Membrane and Envirosheet Membrane Waterproofing System for Wall and Slab Waterproofing.

This general approval of an equivalent alternate to the Code is only valid where an engineer and/or inspector of this Department has determined that all conditions of this Approval have been met in the project in which it is to be used.

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by Department of Building and Safety Engineers and Inspectors.



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