



**US Army Corps
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ENGINEERING AND CONSTRUCTION BULLETIN

No. 2016-20

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SUBJECT: Core Retention

CATEGORY: For Information

1. References:

a. Standard Practices for Preserving and Transporting Rock Core Samples (ASTM D5079-08) July 1, 2008

b. Project Geotechnical and Concrete Materials Completion Report for Major USACE Projects (ER 1110-1-1901) February 22, 1999

c. Standard Practice for Concrete for Civil Works Structures (EM 1110-2-2000) February 1, 1994

2. Purpose: The purpose of this ECB is to provide guidance for the storage of rock core, and the recommended duration of rock core retention.

3. Background: Geotechnical investigations are essential to the successful execution of engineering projects. They provide accurate information about potential project sites. During geotechnical investigations, subsurface exploration is required to obtain information about soil and rock properties and conditions below the surface. One method is through rock core borings.

4. Storage Method: Rock core should be stored in boxes, in a protected storage facility, so that they are easily accessible, and in a way that does not change the rock integrity. Cores can be waxed, or wrapped in shrink film, while stored in boxes. The boxes should be made of wood, or other durable/sturdy material. If multiple cores are stored in the same box, it should have dividers separating the cores. If the rock core length is shorter than the core box length, then durable Styrofoam or other durable packing material should be placed within the core box to ensure all rock stays securely in place. Rock core should be stored above floor level to allow air circulation, and to prevent water damage.

5. Identification: The core boxes should be labeled with a permanent marker and include identifying information such as: project name, location, drill hole number, cataloging number (Box "x" of Box [total number of boxes], core runs and lengths, RQD, recovery, and core retrieval depths. The core boxes should be labeled in three locations: interior lid, exterior lid, and at least one side to ensure the core can be easily identified and/or retrieved if necessary. Start depth and end depth/bottom of hole should be labeled on the inside of the core box and on dividers if the core needs to be identified based on core run.

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6. **Retention Duration:** Rock core that is not used for testing should be stored in a protected storage facility until it is discarded in an environmentally responsible manner, as determined by the Chief of Engineering and Construction. Cores used for testing should be stored in a protected storage facility until all documents, photographs, and test data have been made a permanent record in the Project Geotechnical and Concrete Materials Completion Report, for no less than five years, however, the Project Delivery Team and individual District leadership will make the final determination on the length of core retention and funding sources for the storage requirements for megaprojects. Cores that may have relevance to additional and or future construction should be retained for a minimum of five years after the project has been turned over to the sponsor. If foundation or abutment issues arise, the cores should be retained until the issues have been resolved, or when known litigation has been resolved. If a proposed project is deauthorized or disapproved, the cores may be discarded in an environmentally responsible manner, as determined by the Chief of Engineering and Construction.

7. **Point of Contact:** The POC for this ECB is Marty Goff, P.G., CECW-CE, 202-761-1992.

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