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CONTENTS

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INFORMATION RETRIEVAL

The key words, abstract, and reference "cards" for each article in this Journal represent part of the ASCE participation in the EJC information retrieval plan. The retrieval data are placed herein so that each can be cut out, placed on a 3 x 5 card and given an accession number for the user's file. The accession number is then entered on key word cards so that the user can subsequently match key words to choose the articles he wishes. Details of this program were given in an August, 1962 article in CIVIL ENGINEERING, reprints of which are available on request to ASCE headquarters.

9303 FOUNDATION TREATMENT FOR ROCKFILL DAMS

KEY WORDS: **Abutments; Dams (rockfill);** Design criteria; **Foundations; Geologic investigations; Grouting; Iraq; Philippines; Venezuela; Weathering**

ABSTRACT: The general practice of Harza Engineering Company for treating the abutments and foundations of high rockfill dams is considered in general and in detail through case histories of the Ambuklao, Derbendi Kahn, Angat and Guri Dam projects. It is shown how the site geology, type and extent of rock defects, and degree and extend to weathering influence greatly the embankment cross section and axis location, excavation required, surface treatment and grouting patterns. The treatments required for each project are considered and, through the use of field observations, it is shown that the treatments employed have been successful and that the dams are performing satisfactorily.

REFERENCE: Acker, Richard C., and Jones, Jack C., "Foundation and Abutment Treatment for Rockfill Dams," *Journal of the Soil Mechanics and Foundations Division*, ASCE, Vol. 98, No. SM10, **Proc. Paper 9303**, October, 1972, pp. 995-1015

9270 ABUTMENTS AND FOUNDATIONS FOR HIGH DAMS ON ROCKS

KEY WORDS: **Abutments; Dams; Dams (embankment);** Dam stability; **Foundations; Rock mechanics; Seepage; Soil mechanics**

ABSTRACT: The design of treatment of rock abutments and rock foundations has been in a continuous state of development in the U. S. Army, Corps of Engineers, and a few examples have been presented. While the treatment of these items are of prime importance on high dam projects, quite often the problems are more difficult on lower dams having solutioned limestone, open blocky joints in sandstone partially backfilled with cohesionless materials, and compaction clay-shales. Except for sudden slides, such as occurred at Vaiont, Italy, the control of seepage and thus the prevention of piping, especially along the core-rock interface will be of greatest importance. This applies especially to rock fill dams with a central core where corrective messures will be most difficult to execute.

REFERENCE: Barron, Reginald A., "Abutment and Foundation Treatment for High Embankment Dams on Rock," *Journal of the Soil Mechanics and Foundations Division*, ASCE, Vol. 98, No. SM10, **Proc. Paper 9270**, October, 1972, pp. 1017-1032

9268 PRACTICE IN FOUNDATION AND ABUTMENT TREATMENT

KEY WORDS: **Abutments; Construction;** Dams; Dams (earth); Design; Drainage; Drilling; **Foundations; Geology; Grouting;** Rock mechanics; **Seepage; Soil mechanics; Topography**

ABSTRACT: The current philosophy and practice of Bechtel Incorporated in the treatment of abutments and foundations of high embankment dams on rock are considered, with special reference made to the recently completed New Don Pedro Dam in California. The influences of site geology and topography on dam design, including grouting, stripping, rock reinforcement, and determination of acceptable rock foundation surface are considered. Foundation beneficiation such as the use of dental concrete and installation of French drains and relief wells and instrumentation such as piezometers at New Don Pedro and other dams are used to illustrate the steps taken to ensure satisfactory foundations for high embankments on rock foundations.

REFERENCE: Burke, Harris H., Content, Charles S., and Kulesza, Richard L., "Current Practice in Abutment and Foundation Treatment," *Journal of the Soil Mechanics and Foundations Division*, ASCE, Vol. 98, No. SM10, **Proc. Paper 9268**, October, 1972, pp. 1033-1052