



# **Review of Trinidad Dam and Gatun Lake 3 ft. Deepening Feasibility Studies**

## **Revisión de los Estudios de Factibilidad Técnica del Embalse Bombeado de Trinidad y de la Profundización del Lago Gatún (3 pies)**

**U.S. Geotechnical Board**

**21 de abril de 2002**

**Contratos Nos. 85523 / 85501 / 85506 / 85509 / 85511**

**Resumen**

Mr. Agustín Arias, April 21, 2002

Subject: Geotechnical Advisory Board, Meeting No. 12

## 5. SUMMARY

The Geotechnical Advisory Board met in Panama from April 18-21. Prior to arrival, the Board reviewed materials relevant to the proposed Lower Trinidad Dam. In Panama, the Board received additional presentations on Lower Trinidad Dam, on the Channel Deepening Program (CDP) and on the Landslide Control Program (LCP). The Board met with senior ACP Staff prior to preparation of the report.

The Board was impressed with the extent of analysis applied to potential slope stability problems associated with the CDP. Appropriate caution is being directed to the slopes with the largest potential for problems, particularly East Culebra, West Culebra and Purple Rock.

The Board remains concerned about the need for an overall strategy for decision making in the LCP and urges completion of a review and synthesis of experience and development of a integrated strategy.

The Board recommends that geologic studies be expanded in the area of Zion and Hodges Hill above the head of the current West Culebra Slide, and that the remediation efforts on that slide emphasize reducing infiltration on the lower portion of the slide.

The Board believes that the proposed excavation of the Southeast Cucaracha Slide is not warranted. Instead, the Board recommends an increased effort to improve drainage of the slope, and only minor excavation.

The Board recommends that Purple Rock be kept under observation and that the need to implement stabilization measures be reviewed at a future time.

The Board does not believe that the analysis carried out to date is adequate to compare the proposed Lower Trinidad Dam project with the other competing projects in terms of feasibility and cost.

The Board recommends the assembly of a Study Team consisting of experienced consultants, contractors and ACP Staff, to conduct a feasibility study and cost estimate of the proposed Lower Trinidad Dam project. The Board recommends that this Study Team be assembled with great care to insure that its members have modern experience in similar marine earthwork on a soft foundation. The Board recommends that the deliverables of this study consist of a refined conceptual design taking into account proven construction techniques, a definitive conclusion about the feasibility of construction, a cost estimate with significantly reduced uncertainty, and the design of a test-fill. Based on these results, the Board believes that the ACP would be in position to compare the Lower Trinidad Dam project with the other competing projects.