



PDC INC. ENGINEERS

Transforming Challenges into Solutions



Drift River Terminal Emergency Flood Protection

The Redoubt Volcano began a four-month eruptive cycle on December 14, 1989. These eruptions caused glacial melting and flooding that threatened Cook Inlet Pipeline Company's Drift River Terminal, which receives crude oil from the Cook Inlet platforms and transfers it to tankers via an offshore loading platform. Terminal operations would remain suspended until a flood protection dike could be constructed. The loss of jobs and revenue extended beyond the terminal to the oil platforms and the support industries. This costly disruption in operations meant a severe timeline was imposed for mobilization, construction, and completion of the project.

PDC was responsible for the civil design and construction management of this fast track project, which installed approximately two miles of concrete armored earthen dikes and related drainage improvements. Construction of the dikes required 250,000 cubic yards (cy) of excavation, 300,000 cy of borrow, and 12,000 cy of pumped concrete revetment. The contractor was mobilized during preliminary design, and the majority of field data was gathered and the design finalized in the field as construction proceeded. The project was complete and oil flowing on schedule in August 1990, just six months from project inception.

In January 1991, the National Society of Professional Engineers named this project as one of nine Outstanding Engineering Achievements in the United States during 1990.

Owner:

Cook Inlet Pipeline Company

Client:

Jim Aldrich, Arctic Hydrologic Consultants

Location:

Drift River (Cook Inlet), Alaska

Project Completion:

1990

PDC Involvement:

- Civil Engineering
- Construction Management

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