

August 7, 1992

Mr. Robert Arvedlund  
Environmental Compliance & Project  
Analysis Branch  
Federal Energy Regulatory Commission  
Office of Pipeline & Producer Regulation  
Washington, DC 20426

Dear Mr. Arvedlund:

Your letter of July 24, 1992, seeks our opinion whether the concept of using the outer wall of a double-wall LNG storage tank for dual use as both the outer wall and the tank's only dike is allowed under 49 CFR Part 193. We understand from your July 15, 1992, report titled "Preliminary LNG Export Facility Preconstruction Cryogenic Design and Technical Review" that this impoundment system design is proposed for each of the two storage tanks for Yukon Pacific Company's proposed LNG export terminal to be located at Anderson Bay, Valdez, Alaska.

The concept of the outer wall of an LNG tank being used also as the tank's only dike is allowed under 49 CFR Part 193 and is addressed in 193.2153(a) which defines a "Class 1" impoundment system as one which surrounds the component served with the inner surface of the dike constructed against or within 24 inches of the component served.

Section 193.2161(b) allows an outer wall of a component served by an impoundment system to be used as a dike if the outer wall is a concrete wall designed to comply with the requirements of 193.2155(c) or equivalent design impact loading. Section 193.2155(c) specifies the impact design loading for a Class 1 impoundment system if the tank is within a certain distance from an airport. Because the proposed Anderson Bay terminal is outside that distance, the equivalent design load requirement of 193.2161(b) applies.

Our position is that the equivalent design impact loading for the outer wall of a double-wall tank used a Class 1 impoundment system when the tank location is not within the distance limits set forth in 193.2155(c) is a loading experienced by the collision or explosion of a Cessna 150 aircraft or equivalent size aircraft. We understand this conforms with similar design requirements used in certain countries in Europe.

Your letter states that FERC will require Yukon to perform an equivalent impact load analysis and submit it to the Department for approval. The Natural Gas Pipeline Safety Act of 1968 and

the Part 193 regulations do not authorize pre-construction approvals of LNG facilities. Thus, we normally do not review

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operator's design and construction plans except during, or in preparation for, routine compliance inspections, which are handled by our regional offices. In this case, however, we and our Western Regional office will consider Yukon's design and construction plans for its proposed Anderson Bay LNG terminal. Upon receipt of the impact load analysis, we will advise you of any shortcomings we see in the analysis.

Sincerely,

Lloyd W. Ulrich  
Chief, Technical Division  
Office of Pipeline Safety