



BOSTON EDISON

Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, Massachusetts 02360

September 17, 1988
BECO 88-135

Ralph G. Bird
Senior Vice President — Nuclear
U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

License DPR-35
Docket 50-293

ANNUAL MAIN BREAKWATER MONITORING REPORT

- References:
1. BECo letter from Mr. A. V. Morisi to Mr. T. A. Ippolito, dated May 30, 1981 (BECO 81-67)
 2. BECo letter from Mr. W. D. Harrington to Mr. D. B. Vassallo, dated July 7, 1983 (BECO 83-176)
 3. NRC letter from Mr. J. A. Zwolinski to Mr. W. D. Harrington, dated March 25, 1986

Dear Sir:

Attached is the report of our annual survey of the main breakwater at the Pilgrim Nuclear Power Station. This report fulfills the commitment made in Reference 1, as modified by References 2 and 3, to submit annually to the NRC the documented findings of all surveys of the main breakwater performed during the previous year. The survey was performed by a surveyor registered in the State of Massachusetts and included the seaward and leeward sides of the main breakwater as well as a topographical survey. The survey photographs are provided in Attachment 1 for your information. The results of the topographical survey are provided in Drawing C1181 (Attachment 2).

We have determined that no major stone movement or major damage has occurred to the main breakwater based on comparing the 1988 survey results with 1981 and 1987 survey results. Walkdowns and year-to-year photograph comparisons have revealed some rock dislodging along both sides of the main breakwater, but these rock movements are considered minor and insignificant to the structural integrity of the main breakwater. We therefore conclude that the main breakwater remains adequately constructed to perform its designed safety function.

R. G. Bird
R. G. Bird

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PHOTOS & DRAWINGS
TO REG. FILES

ATTACHMENT 2 TO BECO LETTER NO. 88-135


Main Breakwater Camera Locations and Survey Information

Drawing C1181 Sheet 2 of 2 Revision E0



0061-1-3-45
1900




A black and white photograph showing a rocky shoreline. The foreground is dominated by a large, light-colored rock formation. The middle ground shows a body of water with a rocky bank on the right side. The background is a bright, overexposed sky. A small white label is attached to the bottom left corner of the photograph.

STA F-3 1988

STA. F-5 1988



A black and white photograph showing a rocky shoreline. The foreground is dominated by a large, light-colored rock formation. The middle ground shows a rocky beach or shoreline with scattered stones and pebbles. The background is a bright, overexposed area, possibly a body of water or a very bright sky. A handwritten label is visible in the lower-left corner of the photograph.

STA. F-5 1988

SMA. F-7. 1988

CTA E-9 1988



STA. F-10 1988

STA. F-12 1988

STA. 1000-1

1988



STA. 1000-2 1988



STA. 1000-3 1989



STA. 1077-4 1988

STA. 1000-5 1988



STA. 1000-6 1988

STA. 1000-7 1988



STA. 1000-8 1988



STA. 1000-9 1988



8521 01-20-1988

STA. 1000-11 1000



STA. 1000-12 1998



STA. 10-1-1 1988



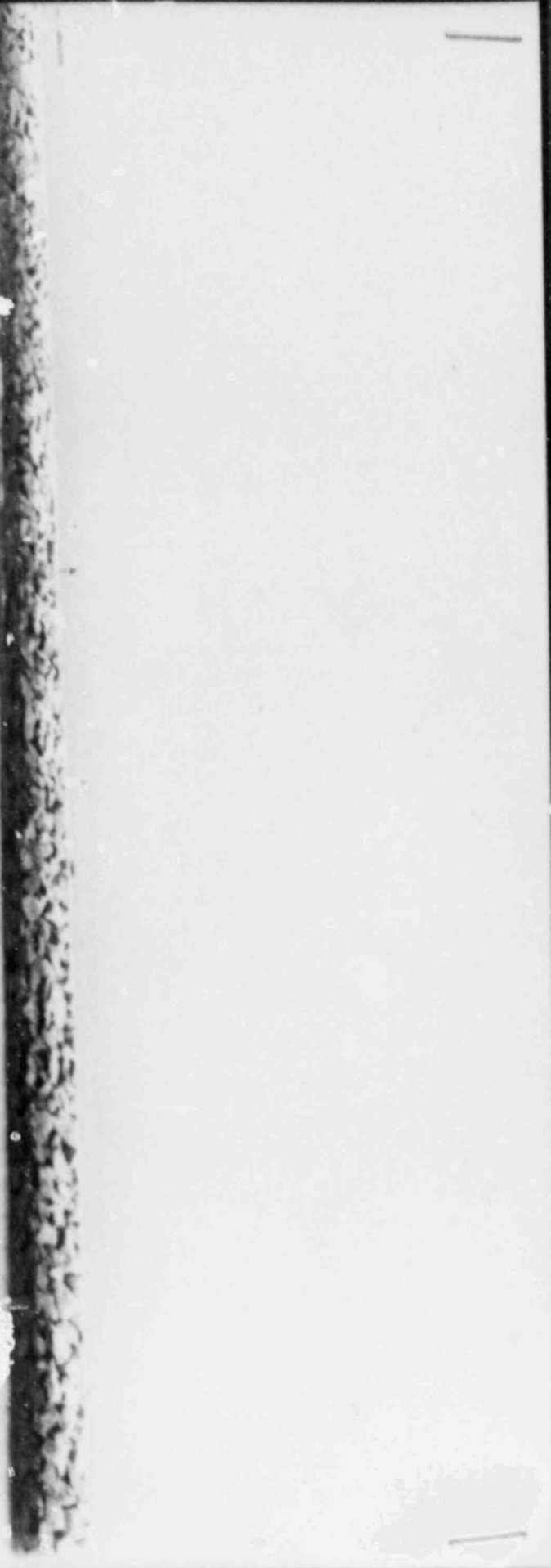
STA. 10.1-5 1988



STA. 10.1-3 1988



STA. 10.1-7 1988



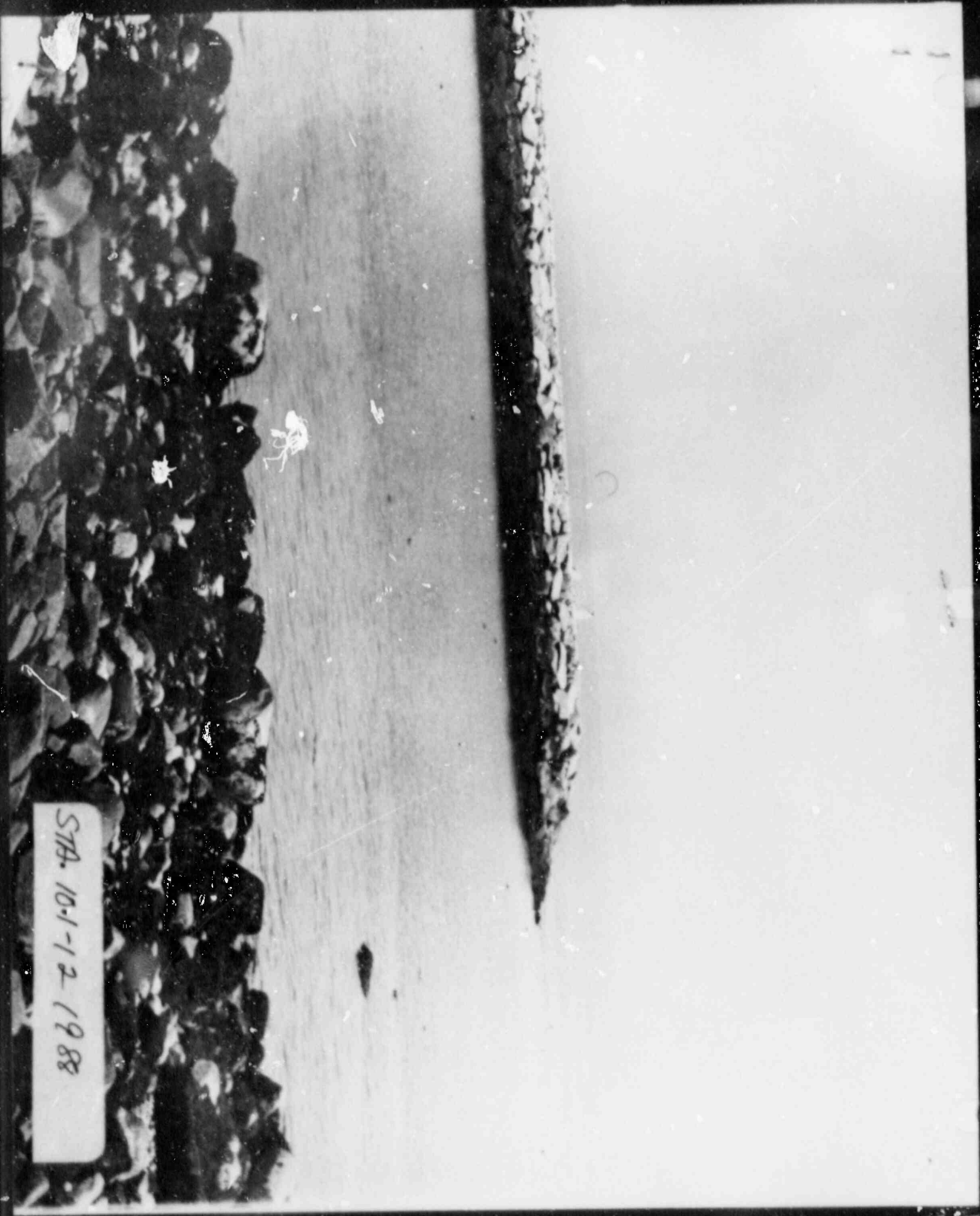


STN. 101-9 1988



STA. 10.1-10 1980

STA. 10-1-12 1988



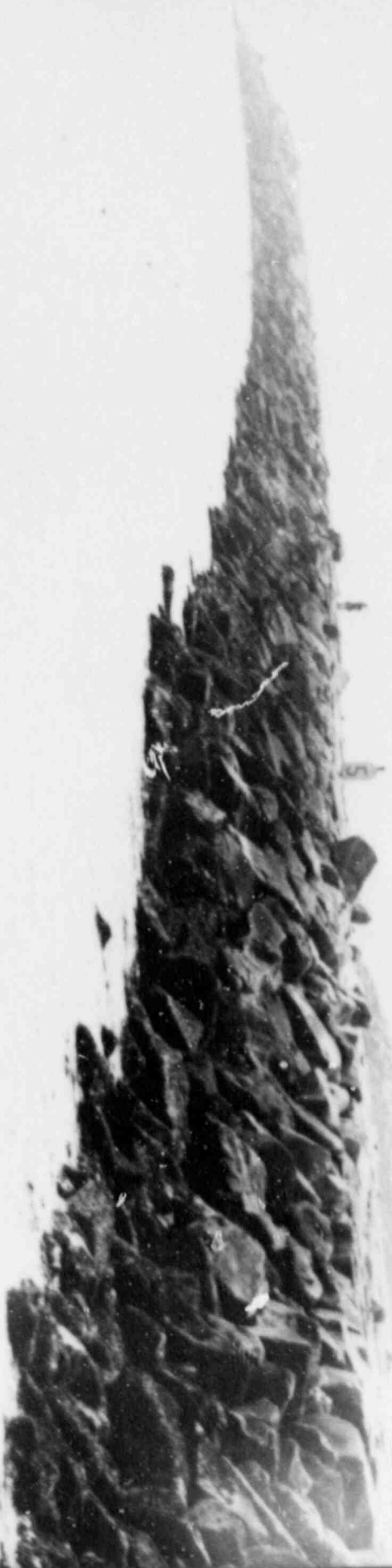
STA. H-1-1 1988

A black and white photograph showing a rocky shoreline. The foreground is dominated by a large, dark, textured rock formation that extends from the bottom left towards the center. The water is visible to the right of the rocks, with some ripples and a small white object floating near the shore. In the background, a person is standing on a flat, light-colored area, possibly a beach or a pier, looking out towards the water. The sky is bright and clear. The overall scene is a coastal or marine environment.


SMA H-1-3 1988



STA. H-1-5 1988



STA. H-1-7 1988



STA. H-110 1988



STA. H-1-12 1988



STA. B-1 1988

A black and white photograph showing a wide river in the foreground. The water has a textured, rippled surface. On the right bank, there is a prominent, dark, rocky embankment. Beyond the rocks, a steep, forested hillside rises towards the background. The sky is bright and clear. The photograph is mounted on a dark album page with white corner tabs. A small white label with handwritten text is attached to the bottom left of the photo.

STA. B-2 1988




STA. B-3 1988



A black and white photograph showing a stone wall in the foreground, with a multi-story building in the background. The wall is constructed from large, irregular stones. The building has several windows and a flat roof. The image is oriented vertically on the page.

STA. B-4 1988

A black and white photograph showing a coastal scene. The foreground is dominated by a large, textured area of water or a wet, rocky surface. A narrow strip of dark, jagged rocks runs horizontally across the middle of the frame. In the background, several multi-story buildings with windows are visible, situated on a slight rise. The sky is bright and clear. A small white label with handwritten text is positioned in the lower-left corner of the image.

STA. B-5 1988

STA. B-6 1988



A black and white photograph showing a rocky shoreline in the foreground. In the background, there is a long, low building and several power lines stretching across the scene. The sky is bright and hazy. The photograph is mounted on a dark album page with two circular punch holes on the left side.


STA. B-1 1988

STN. B-8 1988



STA. B-9 1988



A black and white photograph showing a coastal scene. On the left, there is a body of water with visible ripples. A dark, rocky shoreline runs vertically through the center of the image. To the right of the rocks is a wide, sandy beach that extends to the right edge of the frame. The sky is bright and mostly clear.

STA. B-10 1988

STA. B-11 1988





STA. B-12 1988

STA. A-1 1988

2





STA. A-2 1988

STA. A-3 1988





STA. A-4 1988

STA. 3-5 1988





STA. A-6 1988


STA. A-7 1988





STA. A-8 1988

STA. A-8 1988

A black and white photograph showing a coastal scene. In the foreground, there is a body of water with ripples. A long, narrow breakwater made of large, dark rocks extends from the shore into the water. To the right of the breakwater, a pier or dock structure is visible, featuring several vertical masts or poles. In the background, a large, light-colored building with a flat roof and several windows is situated on the shore. The sky is bright and clear. The photograph is mounted on a dark album page with four corner tabs.

A black and white photograph showing a rocky shoreline. The foreground is filled with water, exhibiting a dense, textured pattern of ripples. A narrow strip of dark, jagged rocks runs horizontally across the middle of the frame. In the background, a light-colored, rectangular building with a flat roof is visible, partially obscured by the distance and the angle of the shot. The sky is bright and clear. The photograph is mounted on a dark album page with four corner tabs.

STA. A-9 1988

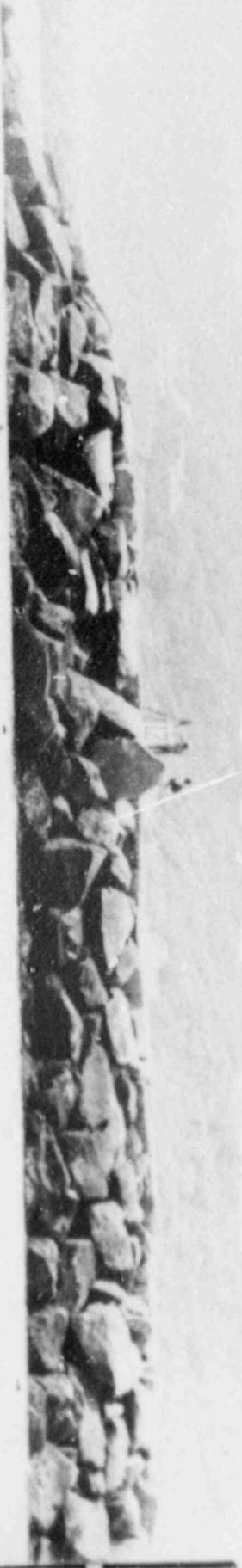
STA. A-10 1988



STA. A-11 1988

A black and white photograph showing a rocky shoreline. The foreground is filled with water, exhibiting a textured, rippled surface. A dark, jagged line of rocks runs horizontally across the middle of the frame. Behind the rocks, a light-colored, sloping hillside or beach is visible, extending towards the background. The sky is a uniform, light gray, suggesting an overcast day. The photograph is mounted on a dark album page, with small corner tabs visible.

STA. A-12 1988



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