

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:  
James P. Gleason, Chairman  
Frederick J. Shon  
Dr. Oscar H. Paris

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In the Matter of ) Docket Nos.  
CONSOLIDATED EDISON COMPANY OF NEW YORK, ) 50-247-SP  
INC. (Indian Point, Unit No. 2) ) 50-286-SP  
POWER AUTHORITY OF THE STATE OF NEW YORK ) January 12, 1983  
(Indian Point, Unit. No. 3) )  
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CON EDISON'S TESTIMONY  
OF SAMUEL ROTHSTEIN  
AND ARTHUR TUTHILL  
CONCERNING CONTENTION 2.2(a)

ATTORNEY FILING THIS DOCUMENT:

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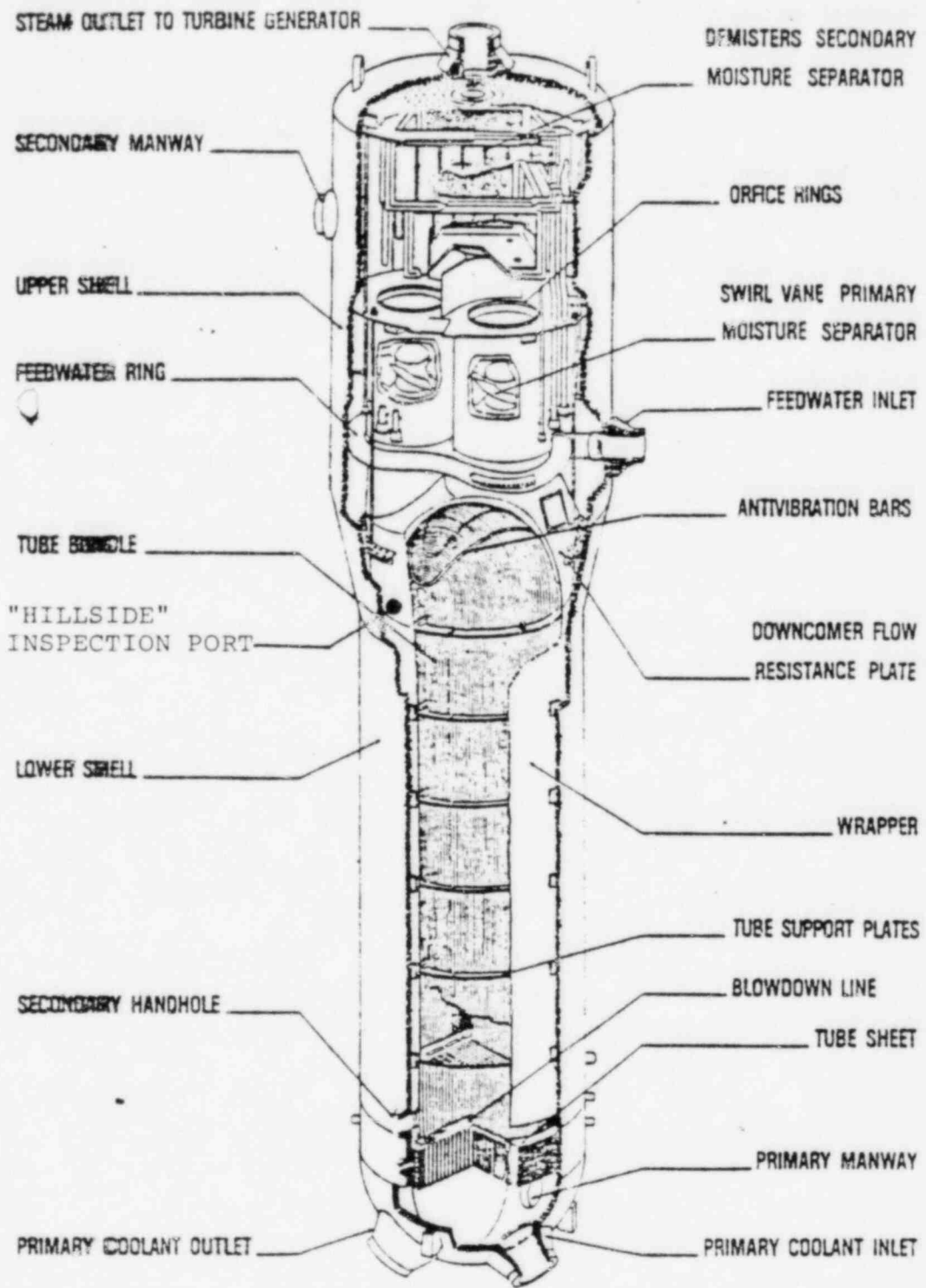
## II. STEAM GENERATOR DESCRIPTION

In the Pressurized Water Reactor (PWR) system, the steam generators isolate the radioactive reactor coolant from the non-radioactive steam cycle, and serve as the heat exchanger between the two systems.

The Westinghouse steam generators are vertical U-tube natural circulation evaporators and consist of two sections: 1) a heat exchange section with reactor coolant channel head, tube sheet and tubing, and 2) a steam separator section which includes the feedwater ring. The heat exchange section is a vertical shell and U-tube heat exchanger.

The Indian Point Unit 2 steam generators (See figure 1) are Westinghouse Series "44", with a total heat transfer surface of approximately 44,000 square feet. The heat transfer tubes are Inconel 600 (ASME SB 163, Alloy UNS N06600) and the support plates are carbon steel (ASME SA 285). There are four steam generators with 3,260 tubes and 6 support plates each. The tubes have a design outside diameter of 875 mils and wall thickness of 50 mils.

During operation, high temperature, high pressure reactor coolant flows from the Reactor Vessel to the inlet side of the channel head at the bottom of the steam generator by way of the hot leg, enters through the inlet nozzle, flows through the



WESTINGHOUSE STEAM GENERATOR

FIGURE 1