

# NS SAVANNAH

Date: June 10, 1981

## RADIATION MONITORING REPORT

PROJECT: Nuclear Ship SAVANNAH  
LOCATION: Charleston, SC  
DOCKET NO: 50-238  
LICENSE NO: NRC No. NS-1  
LICENSEE: Maritime Administration

At the request of the U.S. Nuclear Regulatory Commission, a second radiation survey was performed aboard the N/S SAVANNAH utilizing a microR survey instrument. This survey was performed by Emory Williams, Radiation Safety Officer representing the Maritime Administration and was conducted on Wednesday June 10, 1981.

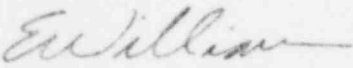
Instrumentation used for the survey consisted of an Eberline PRM-5N Count Rate Meter with an Eberline SPA-3 Sodium Iodide Scintillation Detector. Readings were obtained in counts per minute and were converted into microR/hr for reporting purposes.

The radiation survey conducted on June 10, 1981 was done to confirm a similar survey conducted on March 23, 1981. The June survey was more extensive since all of the staterooms and compartments were opened and could be entered for radiation monitoring. In all, over 130 staterooms, compartments, and areas were monitored during the June survey, whereas less than 50 microR readings could be made during March.

Defining the background level for the N/S SAVANNAH was determined by taking radiation readings topside of the vessel at the furthest points from the Reactor Compartment. This method had to be used since the background readings on the concrete dock and on the land area near the vessel were higher than the topside readings on the vessel. The results of the survey are shown on the following pages.

### Background Readings:

Bow of ship at ship's bell, weatherdeck.....	1.3 microR/hr
Stern of ship at flag staff, weatherdeck.....	1.3 "
Flying Bridge, weatherdeck.....	1.4 "
AVERAGE BACKGROUND.....	1.33 "

  
Emory F. Williams  
Radiation Safety Officer

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Area Surveyed	Direct Reading microR/hr	Reading, less 1.3 uR/hr Bkgd
<u>NAVIGATION BRIDGE DECK</u>		
In Pilot House at helm-----	3.0	1.7
Bridge Wing, Port Side-----	2.6	1.3
Bridge Wing, Starboard Side-----	2.6	1.3
Chart Room, Port Side-----	2.6	1.3
Radio Room, Starboard Side-----	2.8	1.5
Emergency Generator Room-----	1.8	0.5
Gyro/Radar Room-----	2.7	1.4
State Rooms, Starboard Side (highest reading)-----	2.8	1.5
<u>BOAT DECK</u>		
Chief Engineers Office-State Room, Port Side-----	4.5	3.2
Captain's Office-State Room, Starboard Side-----	4.8	3.5
Chief Mate's Office-State Room, Starboard Side-----	4.6	3.3
Two Forward State Rooms (highest reading)-----	3.9	2.6
State Rooms, Port Side (highest reading)-----	3.8	2.5
State Rooms, Starboard Side (highest reading)-----	3.8	2.5
Laundry Room, Port Side-----	3.7	2.4
Officer's Lounge, Aft-----	3.5	2.2
<u>PROMENADE DECK</u>		
Center of Main Lounge-----	4.2	2.9
Pantry, Port Side-----	4.0	2.7
Main Stair Case, Prom Level-----	3.9	2.6
Center of Veranda-----	3.9	2.6
Behind Bar, Veranda-----	3.9	2.6
<u>"A" DECK</u>		
State rooms, Forward, Port Side-----	3.4	2.1
Pantry, Port Side-----	3.3	2.0
Chief Purser's Office-State Room, Port Side-----	3.3	2.0
Fire Station #14, Port Passageway-----	3.4	2.1
Barber/Beauty Shop, Starboard Side-----	3.5	2.2
State Rooms, Starboard Side (highest reading)-----	3.3	2.0
Steward's Office-State Room, Starboard Side-----	3.3	2.0
Fire Station #16, Starboard Passageway-----	3.4	2.1
Doctor's Office-----	3.4	2.1
Operating Room-----	3.4	2.1
Health Physics Lab-----	3.4	2.1
Hospital Wards (highest reading)-----	3.3	2.0

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### "A" DECK (continued)

State Rooms, Aft, Port Side (highest reading)-----	3.0	-----	1.7
State Rooms, Aft, Starboard Side (highest reading)----	3.1	-----	1.8
Fire Station #17, Port Passageway-----	3.2	-----	1.9
Fire Station #15, Starboard Passageway-----	3.3	-----	2.0
Center of Main Lobby-----	3.3	-----	2.0
Purser's Office, Midship, Main Lobby-----	3.2	-----	1.9

### "B" DECK

Fire Station #20, Port Passageway-----	3.3	-----	2.0
Steward's Mess and Lounge, Port Side-----	3.8	-----	2.5
Deck Crew Mess, Port Side-----	3.4	-----	2.1
Engine Crew Mes: Port Side-----	3.1	-----	1.8
Crew Lounge, Port Side-----	3.0	-----	1.7
Officer's Pantry, Port Side-----	3.2	-----	1.9
Officer's Mess, Port Side-----	3.2	-----	1.9
Fire Station #22, Port Passageway-----	3.4	-----	2.1
Center of Main Dining Room-----	3.4	-----	2.1
Crew State Rooms, Starboard Side (highest reading)----	3.4	-----	2.1
Officer's State Rooms, Aft, Port Side (highest reading)	3.2	-----	1.9
Officer's State Rooms, Aft, Stb Side (highest reading)	3.3	-----	2.0
Conference Room, Aft-----	3.0	-----	1.7
Fire Station #21, Starboard Passageway-----	3.4	-----	2.1

### "C" DECK

Crew State Rooms, Port Side (highest reading)-----	2.9	-----	1.6
Main Ships Laundry, Port Side-----	3.3	-----	2.0
Crew State Rooms, Starboard Side (highest reading)----	3.1	-----	1.8
Visitor's Gallery, Port Side-----	3.1	-----	1.8
Visitor's Gallery, Forward-----	3.1	-----	1.8
Visitor's Gallery, Starboard Side-----	3.0	-----	1.7
CO <sup>2</sup> Room-----	2.9	-----	1.6

RADIATION SAFETY SERVICES

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