ISPOSITION FORM

use of this form, see AR 340-15; the proponent agency is TAGO.

400075

RENCE OR OFFICE SYMBOL	SUBJECT
	Final Review of ARGUS Fact Sheet

GC
PAO
ISCM

FROM BA

DATE 16 Apr 82

CMT 1

Mr. Kaye/wg/57744

Enclosed is the final draft of the fact sheet for the NTPR history volume of the ARGUS ries. It incorporates recommended modification resulting from NTPR team review of ARGUS cond draft.

Comments are requested by COB, 23 April 1982.

Encl:

THOMAS J. HAYCRAFT
COL, USA
Chief, Biomedical Effects Office

DNA 18 Apr 82

DOE 21 May 82

5000944

A FORM AUG 80 2496

PREVIOUS EDITIONS WILL BE USED

516

ARGUS FACT SHEET

ARGUS was the designation given to the three high-altitude nuclear test shots conducted the United States in the South Atlantic Ocean in August and September 1958. The ARGUS :s were conducted to test the Christofilos theory, which argued that high-altitude nuclear ɔnations would create a radiation belt in the upper regions of the Earth's atmosphere. It theorized that the radiation belt would have military implications, including degradation radio and radar transmissions, damage or destruction of the arming and fuzing mechanisms ICBM warheads, and endangering the crews of orbiting space vehicles that might enter the :.

The tests were conducted in complete secrecy and were not announced until the following -. The organization conducting these tests was Task Force 88, a naval organization sisting of nine ships and approximately 4,500 men. A few specialists from the other vices and the Atomic Energy Commission and their contractors were with the fleet. rdinated measurement programs using satellite, rocket, aircraft, and surface stations were ried out by the services and other government agencies and contractors throughout the ld. The ships of Task Force 88 were the antisubmarine warfare support aircraft carrier, Tarawa (CVS-40); destroyers USS Bearss (DD-654) and USS Warrington (DD-843); destroyer orts USS Courtney (DE-1021) and USS Hammerberg (DE-1015); guided missile ship, USS Norton nd (AVM-1); seaplane tender, USS Albemarle (AV-5); and oilers USS Neosho (AO-143) and USS amonie (AO-26).

The low-yield (1- to 2-KT) devices were lifted to about a 300-mile altitude by rockets ed from the ship, Norton Sound. The detonations occurred at such distances above the th that there was no possibility of exposure of task force personnel to ionizing radiation.

Of the 264 radiation-detection film packets distributed to the task force, 21 had ications of radiation exposure, but the highest exposure recorded by an individual's ket was 0.010 roentgen (R), so low as to be negligible. The highest exposure recorded, 25 R, was by a control film packet. Control film packets were located in radiation-free as within the ships. Even this reading was so low that it could have been spurious or the ult of natural background radiation. In any event, both readings were below the accuracy it of the film, developing system, and densitometers used.

The results of the ARGUS operation proved the validity of the Christofilos theory. The ablishment of an electron shell derived from neutron and beta decay of fission products d ionization of device materials in the upper fringe of the atmosphere was demonstrated. e operation not only provided data on military considerations but also produced a great s of geophysical data, pure scientific material of great value.