

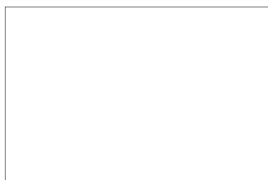
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NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER

**PHOTOGRAPHIC
INTERPRETATION
REPORT**

**SPECIAL-PURPOSE BARGES
ASSOCIATED WITH
SOVIET NUCLEAR SUBMARINES**



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NOVEMBER 1970

COPY NO 110

6 PAGES

PIR-072/70

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SPECIAL-PURPOSE BARGES ASSOCIATED WITH SOVIET
NUCLEAR SUBMARINES

1. The Soviet naval task group which recently visited Cienfuegos, Cuba, delivered two special-purpose (SP) barges. These barges, [redacted] have been identified at Soviet naval bases serving nuclear submarines and nuclear submarine support vessels. The barges are believed to be used primarily for transporting and disposing of low-level radioactive liquid waste from operational nuclear submarines. Thirty-nine of these SP barges are known to exist.

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2. The two SP barges were transported to Cuba as deck cargo aboard an Alligator-class landing ship tank (LST) from the Severomorsk Naval Base of the Soviet Northern Fleet (Figures 1 and 2). They were off-loaded, probably at Havana where heavy-lift cranes are available, and towed to Cienfuegos (Figure 3). As of the latest available photographic coverage [redacted], the barges were still in Cienfuegos Bay, but the Soviet ships had departed.

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3. The assessment of the primary function of the SP barges comes from their direct association with operational nuclear submarines and nuclear submarine support vessels and their lack of association with any other type of ship. Examples of such associations are illustrated on Figure 4. Additional factors indicating a role in the transporting and disposing (dumping at sea) of low-level radioactive liquid waste are the following: the heavy-weather bow and narrow lines of the barges; the apparent extensive ventilation and hose-coupling systems on the deck; the presence of the barges in the USSR at Paldiski Probable

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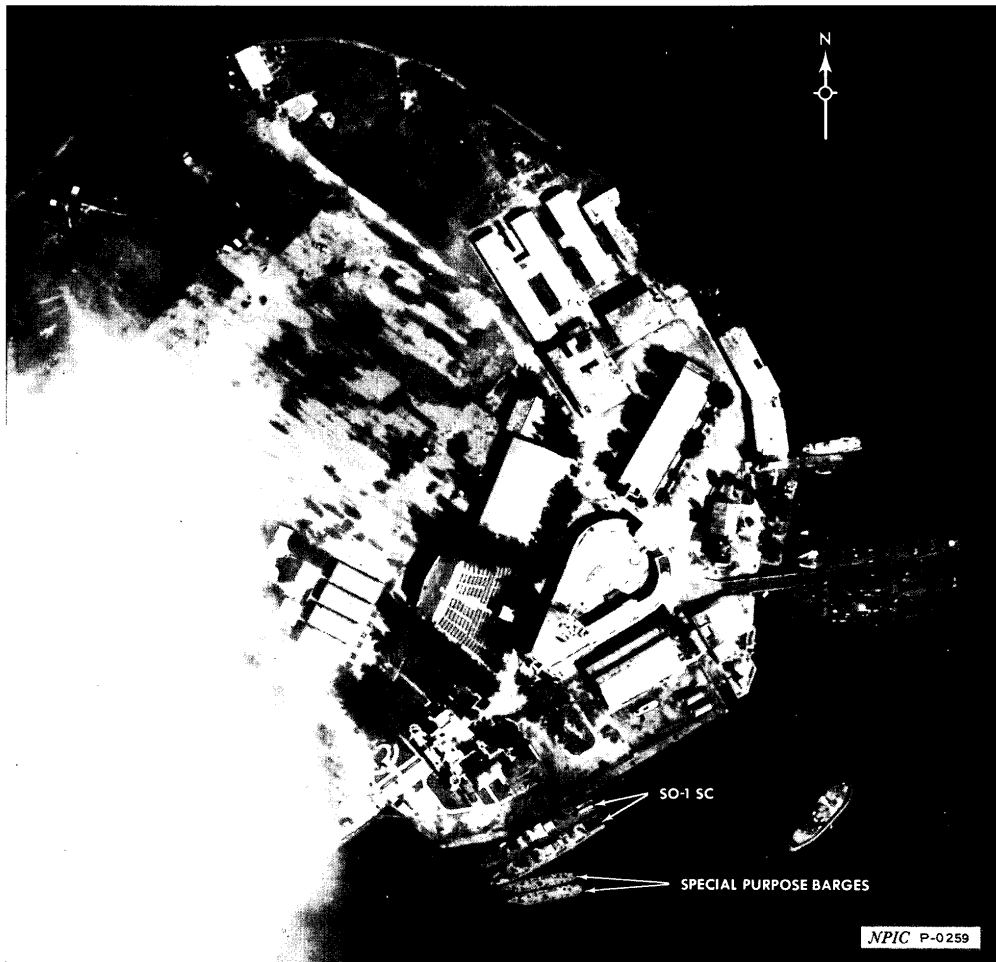
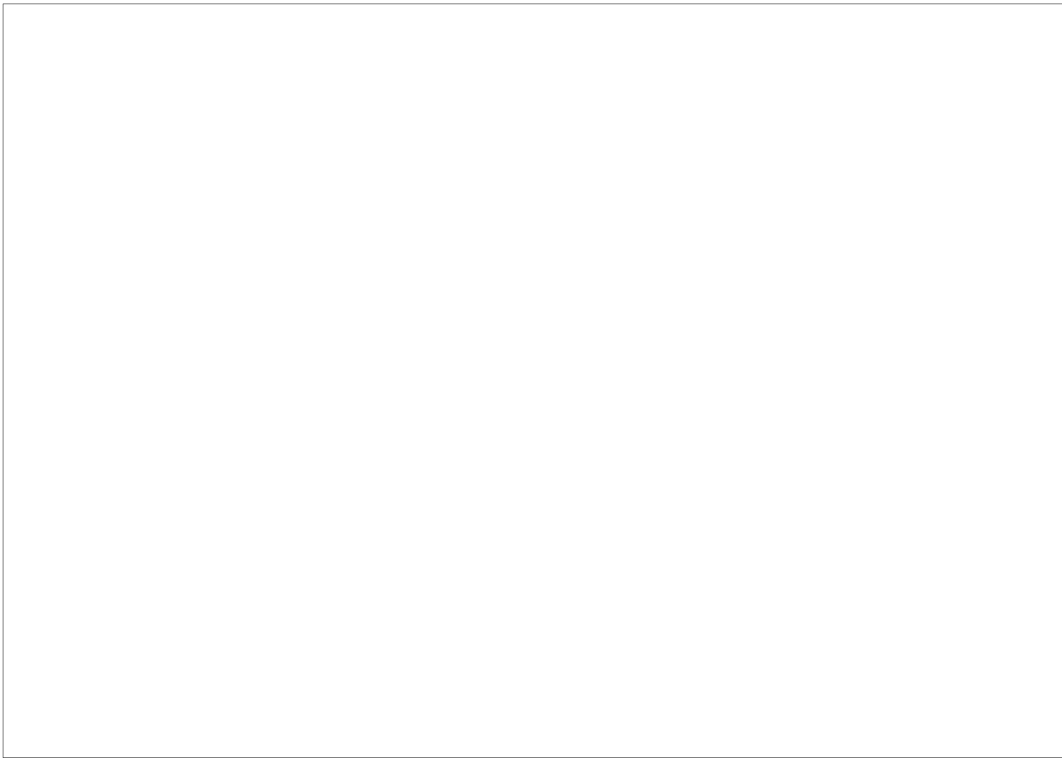


FIGURE 3. SP BARGES AT CIENFUEGOS NAVAL BASE, CUBA

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Table 1. Installations of Which Nuclear-Associated Vessels Have Been Seen

Installation (BE No)	Primary Function	SP Barges		Remarks
		No	First Seen	
PACIFIC FLEET				
Petropavlovsk Sub Base & Ship Repair Yard Tarya Bay [redacted]	Operating	--	--	Nuclear submarines here
Petropavlovsk Ship- yard & Naval Base Seldevaya [redacted]	Repair	3	1967	Probably supports Petropavlovsk Submarine Base, Tarya Bay
Komsomolsk Shipyard Amur 199 [redacted]	New Construction	--	--	Nuclear submarine construction
Sovetskaya Gavan Submarine Base [redacted]		1	1968	SP barge seen at the unidentified underground facility east of base
Dunay Sub Base & Ship Repair Yard Razboynik Bay [redacted]	Operating	2	1967	
Dunay Sub Base Konyushkovka [redacted]	Operating	--	--	Probably gets support from Dunay Sub Base Razboynik Bay
Strelok Strait Sub Base Pavlovskogo Bay [redacted]	Operating	1	1967	
Petrovka Naval Base & Shipyard [redacted]	Repair	--	--	Nuc subs are decontami- nated before arrival
Petrovka Nuclear Sub Support Facility [redacted]	Repair	--	--	Not yet operational. When complete will have own waste dis- posal system and will decontaminate nuclear submarine here for repair
Total SP barges in Pacific Fleet (Sep 70)		7		
BALTIC FLEET				
Paldiski Naval Base [redacted]	Operating	3	1968	SP barges here prob serve as waste dis- posal system for Paldiski Prob Nuclear Fuels Reprocessing Plant. A Vala AOSR seen here, 1968
Kronshtadt Sub Base [redacted]	Operating	1	1968	An SP barge here for 6 mos, prob from Paldiski
Leningrad Shipyards	New Construction	--	--	New SSN construction only. No opera- tional SSN; no nu- clear repairs made
Total SP barges in Baltic Fleet		3	--	
BLACK SEA FLEET MEDITERRANEAN & EGYPT				
Naval Bases and Ports		--	--	Soviet Mediterranean squadron has nu- clear submarines but no SP barges observed
CUBA				
Cienfuegos Naval Base	Operating	2	1970 (Sep)	First seen on Alligator LST
Total SP barges in Cuba		2		

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Table 1 (continued)

Installation (BE No)	Primary Function	SP Barges		Remarks	
		No	First Seen		
NORTHERN FLEET					
Rosta Naval Base & Ship Repair Yard Sevmorput []	Repair	2* (Aug 70)	1970	SP barges loaded on Alligator LST	
Chelnopushka Ship Repair Yard []	Repair	--	--	Y SSBN seen on two occasions	25X1
SayGa Guba Submarine Base []	Operating	6 (Aug 70)	1966	Y & H SSBN. Before Aug 70, 8 SP barges here	25X1
Severomorsk Naval Base []	Operating	2* (Aug 70)	1970	Surface ship base. SP barges on Alligator LST	25X1
Ara Guba Naval Base []	Operating	--	--	H SSBN or G SSB on occasion	25X1
Litsa Guba Submarine Base North []	Operating		1967	Various nuclear sub- marines have been seen	25X1
Litsa Guba Submarine Base South []	Operating	11 (Aug 70)	1967		25X1
Andreeva Bay Nuclear Submarine Support Fac []	Repair		1967	Nuclear support to submarines based at Litsa Guba	25X1
Pala Guba Naval Base & Ship Repair Yard []	Repair		1967	Major repair work on ships systems, including nuclear submarines	25X1
Severodvinsk Shipyard Amur 402 []	New Construction	--	--	New construction of nuclear submarines	25X1
Severodvinsk Naval Base West []	Operating	2	1968	Primarily surface ships to support sea trials. Transient base for all submarines. SP barges are kept here when not in use.	25X1
Severodvinsk Nuclear Submarine Special Support Facility []	Repair	--	--	Facility has own waste disposal system and decontaminates nu- clear subs in com- plex for repair	25X1
Severodvinsk Shipyard Yagry Island []	Repair	--	--	Nuclear submarines are decontaminated before arrival	25X1
Iokanga Naval Base & Ship Repair Yard []	Operating	8	1966	No major work is done on ships here	25X1
Total SP barges in Northern Fleet		27			

*Two on Alligator LST moved to Cuba in September 1970.

Nuclear Fuels Reprocessing Plant [] where no other low-level waste-disposal system is apparent; and their considerable weight, indicating extensive shielding necessary for handling radioactive materials. The need for such a disposal system is real. It is the practice of the U.S. Navy to dispose of low-level waste from operational submarines in this manner.

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4. The accompanying table summarizes the result of a comprehensive search on KEYHOLE photography for SP barges. All major naval bases and shipyards in the Soviet Union, Egypt, and Cuba were searched. Installations searched which are not included in the table are those at which no nuclear-powered submarines, nuclear support vessels, or SP barges have been seen. The table presents the locations of the SP barges, the number seen at each location, and indications of specific associations with nuclear submarines.

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REFERENCES

IMAGERY

This report is based on all available KEYHOLE and OLD HEAD photography from January 1966 through November 1970.

REQUIREMENT

NPIC/IEG/WGD/WURB Project 150625NA

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