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*Utilization of nuclear technological servicing ships
and surface ships, with nuclear steam supply systems
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Industrial infrastructure providing utilization of nuclear technological servicing (NTS) ships

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List of the Navy NTS ships on projects and purpose

N N	Project of the ship	Designation of NTS ship	Total number
1	2020	FTB. SNF unloading, temporary storage and shipment to a railway terminal. SNF packaging into casks. LRW and SRW collection and temporary storage. LRW and SRW shipment for processing.	3
2	326	FTB. SNF unloading and temporary storage within cans in the on-board storage facilities, SFA transfer to coastal storage places. LRW and SRW temporary storage.	2
3	326M	FTB. SNF unloading and temporary storage within shrouds in the on-board storage facilities, transfer of the shrouds with SFA to FTB of pr. 2020 or FTB «Lotta». LRW and SRW collection and temporary storage.	6
4	11510	Technical tanker. LRW collection and temporary storage, LRW processing.	2
5	1783	Non-self-propelled technical liquid cargo carrier. LRW storage, transportation and transfer. SRW transportation within containers.	2
6	1783A	Self-propelled technical liquid cargo carrier. LRW storage, transportation and transfer. SRW transportation within containers.	4
7	17975	Floating radiation monitoring station (FRMS).	6
8	TISSA	Self-propelled sea transport (SST) «Severka»	1
9	PEk-50	Floating storage (FS). LRW collection, temporary storage and transfer to TNT, TT	28
	TOTAL		54



Navy NTS ships operated, laid up and utilized

N N	Ship project	Ship type	Total number of the ships	Number of decommissioned ships	Number of ships under utilization, preparation for temporary storage
1	2020	FTB	3	none	none
2	326	FTB	2	2 (100%)	2 (100%)
3	326M	FTB	6	3 (50%)	3 (100%)
4	11510	TT	2	none	none
5	1783	TNT	2	1 (50%)	none
6	1783A	TNT	4	2 (50%)	1 (50%)
7	1797S	FRMS	6	none	none
8	TISSA	SST	1	1 (100%)	1 (100%)
9	PEK-50	FS	28	26 (92%)	3 (11%)
	TOTAL		54	35 (62%)	10 (39%)



Major shipbuilding and radiation characteristics of decommissioned Navy NTS ships

Ship project	Ship type	Displacement, t	Length, m	Width, m	LRW storage characteristics	
					Low-level	Intermediate-level
					Activity Bq/l	Activity Bq/l
326 326M	FTB	3335.0	88.0	13.4	3.7x10 ⁵	3.7x10 ¹⁰
1783 1783A	TNT	2350.0	72.0	11.5	3.7x10 ⁵	3.7x10 ¹⁰
TISSA	SST	1932.0	70.18	10.03	No RW storage envisaged	
PEK-50	SF	132.0	25.0	4.5	3.7x10 ⁵	No storage envisaged



View of the «PM-78» pr. 326M FTB at the berth of FSUE «10 SRP» of RF MD



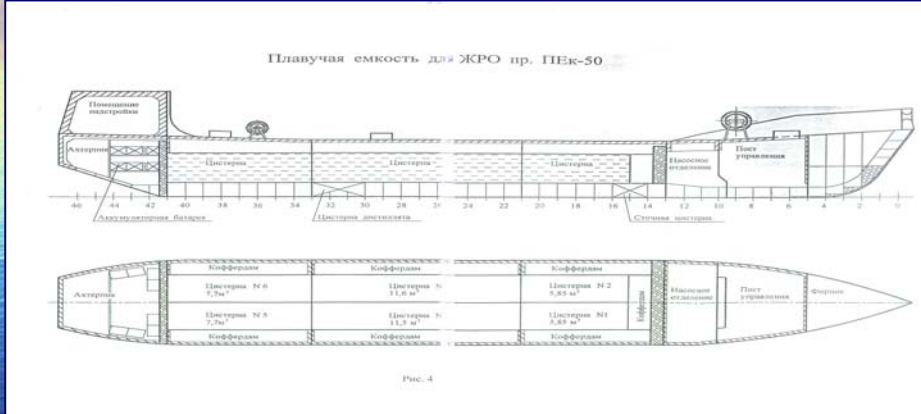
4

View of TNT of pr. 1783A in the open sea



5

Schematic diagram of pr. PEk-50 floating storage



6

View of SST «Severka» at the berth of FSUE «10 SRP» of the RF MD



7

View of the FRMS-14 at the berth of FSUE «10 SRP» of the RF MD

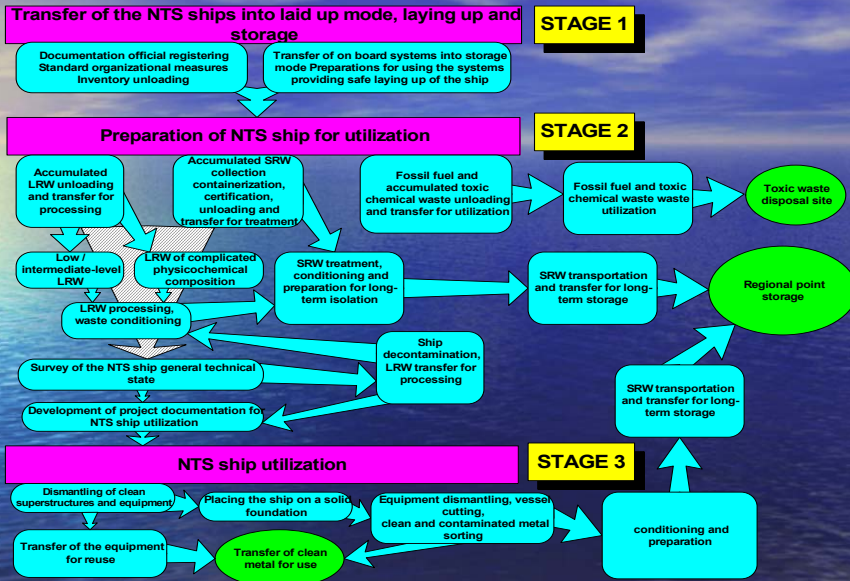


Maximum indices of EDR measurements ($P\gamma$) and surfaces contaminated with beta activity ($N\beta$) on the floating technical bases of «PM-50», «PM-125», «PM-133»

Name of FTB	Place of taking measurements, indices							
	Upper deck		Lower deck		Platform		Hold	
	$P\gamma$, $\mu\text{Sv/h}$	$N\beta$, $1/\text{cm}^2\text{m in}$	$P\gamma$, $\mu\text{Sv/h}$	$N\beta$, $1/\text{cm}^2\text{m in}$	$P\gamma$, $\mu\text{Sv/h}$	$N\beta$, $1/\text{cm}^2\text{m in}$	$P\gamma$, $\mu\text{Sv/h}$	$N\beta$, $1/\text{cm}^2\text{min}$
PM-50	17.9 SFA storage	2400.0 Starboard. Emergency exit area	138.0 Decontamination room	8000.0 Above SFA storage	340.0 Decontamination room	400.0 Dismantled TTK control sensors room	78.0 Pumping room for waste water tanks	90.0 Pumping room for waste water tanks
PM-125	0.81 SFA storage	200.0 Port side. SFA storage area	5.3 Radioactive water storage, starboard	2800.0 SFA storage	2.4 Fresh FA compartment, starboard	30.0 Decontamination room, starboard	5.56 Cofferdam to the stem from SFA storage	<10.0 Diesel generator room, nose reserve room
PM-133	2.73 SFA storage	930.0 Above radioactive water storage	30.2 SFA storage	35000.0 SFA storage	14.5 Storage of hoses and auxiliary equipment	120.0 Storage of hoses and auxiliary equipment	8.3 Cofferdam to the stem from SFA storage	80.0 Cofferdam to the stem from SFA storage



Main stages of the work on the NTS ships utilization



Region	Name of enterprise
North-West	FSUE «Machine-building Enterprise «Zvezdochka», Severodvinsk, Arkhangelsk region
	FSUE «Ship Repair Plant «Nerpa», Snezhnogorsk, Murmansk region
	FSUE «10 Ship Repair Plant» of Ministry of Defense of the RF, Polyarny, Murmansk region
	FSUE «35 Ship Repair Plant» of Ministry of Defense of the RF, Murmansk
	FSUE «Production Association «Northern Machine-building Enterprise, Severodvinsk, Arkhangelsk region
Pacific	FSUE «Far East Plant «Zvezda», Bolshoy Kamen, Primorsky Krai
	FSUE «30 Ship Repair Plant» of Ministry of Defense of the RF, Dunai settlement, Primorsky Krai
	FSUE «North-East Regional Center for Repair and Utilization of Weapons and Military Equipment of the Armed Forces of the Russian Federation, Vilyuchinsk, Kamchatka region



Basic stages of the work aimed at NTS ships utilization

