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basic imagery interpretation report

Soviet Submarine Construction Program During 1982 (S)

STRATEGIC WEAPONS INDUSTRIAL FACILITIES
BE: Various
USSR

Secret

WNINTEL

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RCA-09/0011/83
JUNE 1983
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INSTALLATION OR ACTIVITY NAME					COUNTRY
Submarine Construction Program During 1982					UR
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NO.	COMIREX NO.	NIETB NO.
NA	See below	See below	See below	See below	See below

MAP REFERENCE

SAC. USATC, Series 200, Sheets 0092-22; 0153-04; 0154-25; 0204-08, scale 1:200,000

LATEST IMAGERY USED	NEGATION DATE (If required)
	NA

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Installation	Geographic Coordinates	BE No	Category No	COMIREX No	NIETB No
Severodvinsk Shipyard 402	64-34-38N 039-48-32E				
Leningrad Shipyard Admiralty 194	59-55-03N 030-16-23E				
Leningrad Shipyard Sudomekh 196	59-55-43N 030-16-42E				
Gorkiy Shipyard 112	56-21-42N 043-52-28E				
Komsomolsk Shipyard Amur 199	50-32-31N 137-02-56E				

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ABSTRACT

1. During 1982, the Soviets continued to enhance and to expand their submarine force by constructing ten submarines and by modifying a dismantled submarine. The ten submarines constructed included two nuclear-powered ballistic missile submarines (SSBNs), one nuclear-powered cruise missile attack submarine (SSGN), three nuclear-powered attack submarines (SSNs), and four attack submarines (SSs). Also, a Yankee-class SSN was modified/reconfigured into a new-class SSGN (NPIC interim designator 402W). The most significant submarine construction during 1982 included the launch of Typhoon SSBN unit 2, Oscar SSGN unit 2, and 402W SSGN. (S/WN)

2. This report, updating NPIC report presents an analysis of the Soviet submarine construction program for 1982. The first part of this report discusses submarine construction by class, on a unit-by-unit basis; the second part discusses each of the five shipyards involved in submarine construction. All applicable satellite imagery acquired from was used in the preparation of this report, which includes 15 annotated photographs, nine conceptual drawings of submarines, a location map, and two tables. (S/WN)

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INTRODUCTION

3. The Soviet submarine construction program consists of the construction of two classes of SSBN (Typhoon and Delta III), two classes of SSGN (Oscar and Charlie), two classes of SSN (Victor III and Alfa), and three classes of SS (Tango, Foxtrot, and Kilo). During 1982, construction was completed on ten submarines, including one Typhoon SSBN, one Delta-III SSBN, one Oscar SSGN, three Victor-III SSNs, two Tango SSs, one Foxtrot SS, and one Kilo SS. In addition, a Yankee SSN was converted to a new-class SSGN (402W). Submarine construction in the Soviet Union is conducted at five shipyards, including one at Severodvinsk, two at Leningrad, one at Gorkiy, and one at Komsomolsk (Figure 1 and Table 1). Construction timelines for these 11 units are provided in Table 2. (S/WN)

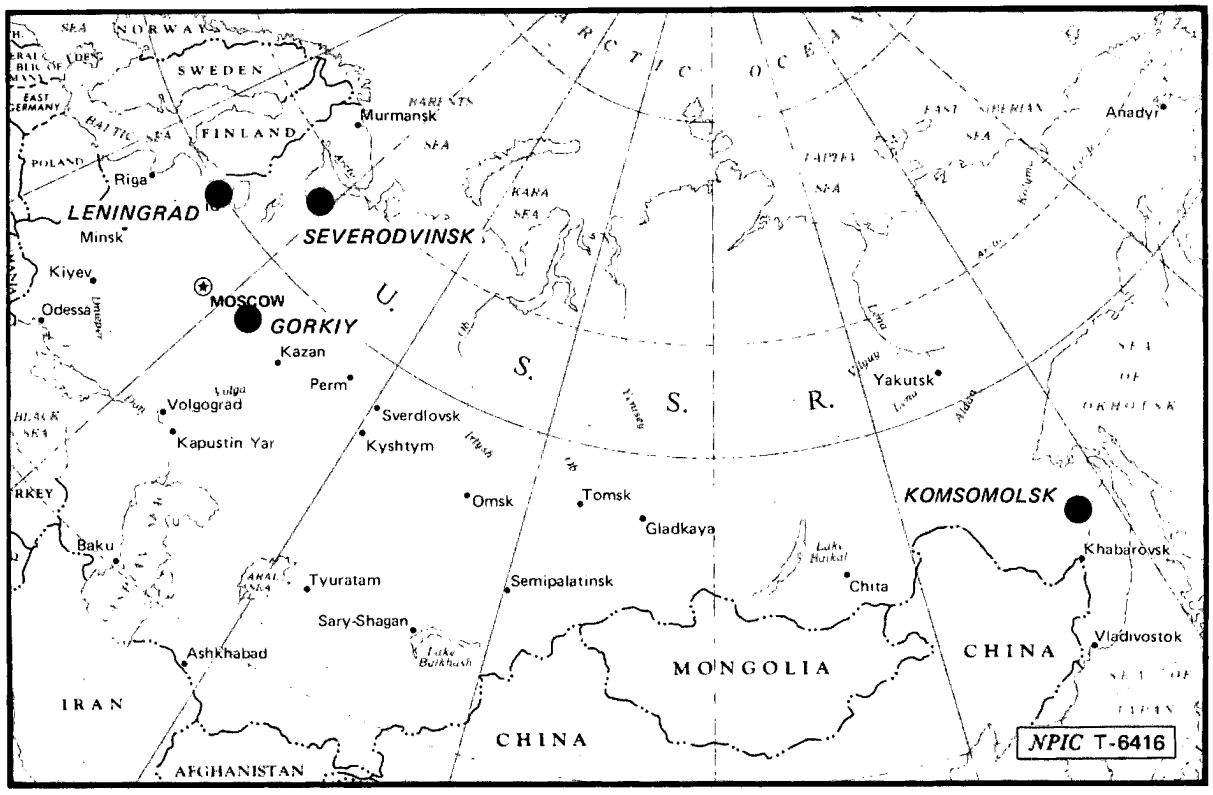


FIGURE 1. SOVIET SUBMARINE CONSTRUCTION FACILITIES

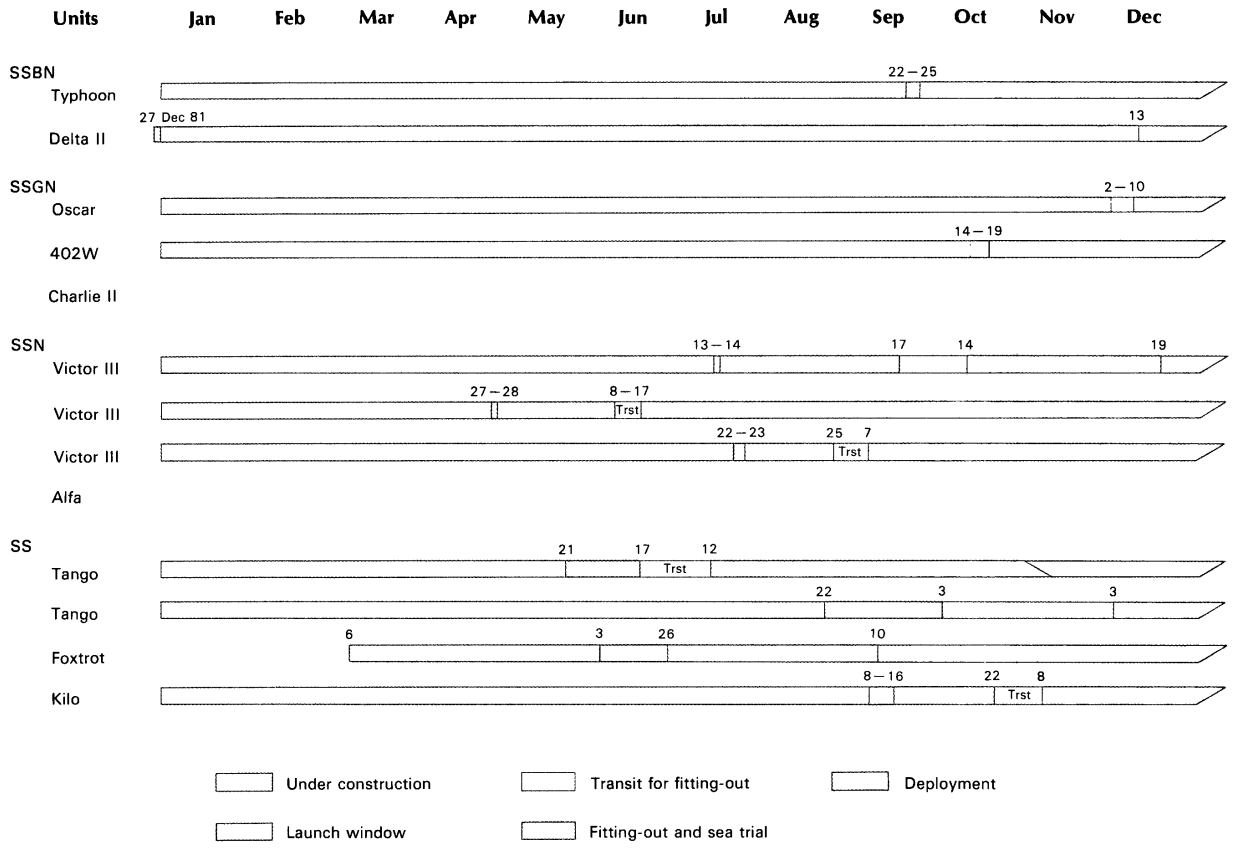
Table 1.
Construction at Soviet Shipyards During 1982

(Items are keyed to Figure 1)

Unit	Facility	Launches Prior to 1982	Launches During 1982	Total Units
Typoon SSBN	Severodvinsk	1	1	2
Delta-III SSBN	Severodvinsk	13	1	14
Oscar SSGN	Severodvinsk	1	1	2
402W SSGN	Severodvinsk	0	1	1
Charlie-I SSGN	Gorkiy	6	0	6
Victor-III SSN	Admiralty 194	4	1	5
	Komsomolsk	9	2	11 (total of 16)
Alfa SSN	Severodvinsk	3	0	3
	Sudomekh 196	4	0	4 (total of 7)
Tango SS	Gorkiy	16	2	18
Foxtrot SS	Sudomekh 196	64	1	65
Kilo SS	Komsomolsk	2	1	3
			Total of 11 (1982)	

This table in its entirety is classified SECRET/WNINTEL

Table 2.
1982 — Soviet Submarine Construction — 1982



This table in its entirety is classified SECRET/WNINTEL

TYPHOON

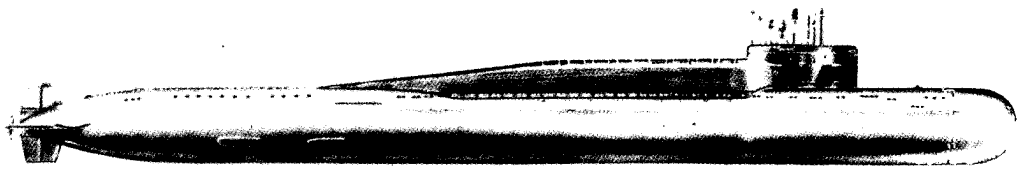
SSBN Construction

Typhoon-class SSBN

4. The second unit of the Typhoon-class SSBN[1] was rolled out of construction hall 3 on launch rail 3 at Severodvinsk Shipyard 402 between 22 and 25 September 1982, 24 months after the rollout of unit 1 in September 1980. By [redacted] Typhoon SSBN unit 2 (Figure 2) had been launched from the dock. This unit fitted-out during the remainder of the year. (S/WN)

5. Typhoon SSBN unit 1, continuing fitting-out, began sea trials during 1982. It was involved in a total of 16 at-sea launches of the SS-NX-20 missile. By late December 1982, this unit had departed the Severodvinsk complex for continued crew training and acceptance at the ice-free operational base at Guba Litsa Submarine Base Southwest [redacted] 25X1
Construction of Typhoon-class SSBNs is continuing. Four additional units are under 25X1
construction inside construction hall 3 at Severodvinsk. (S/WN)

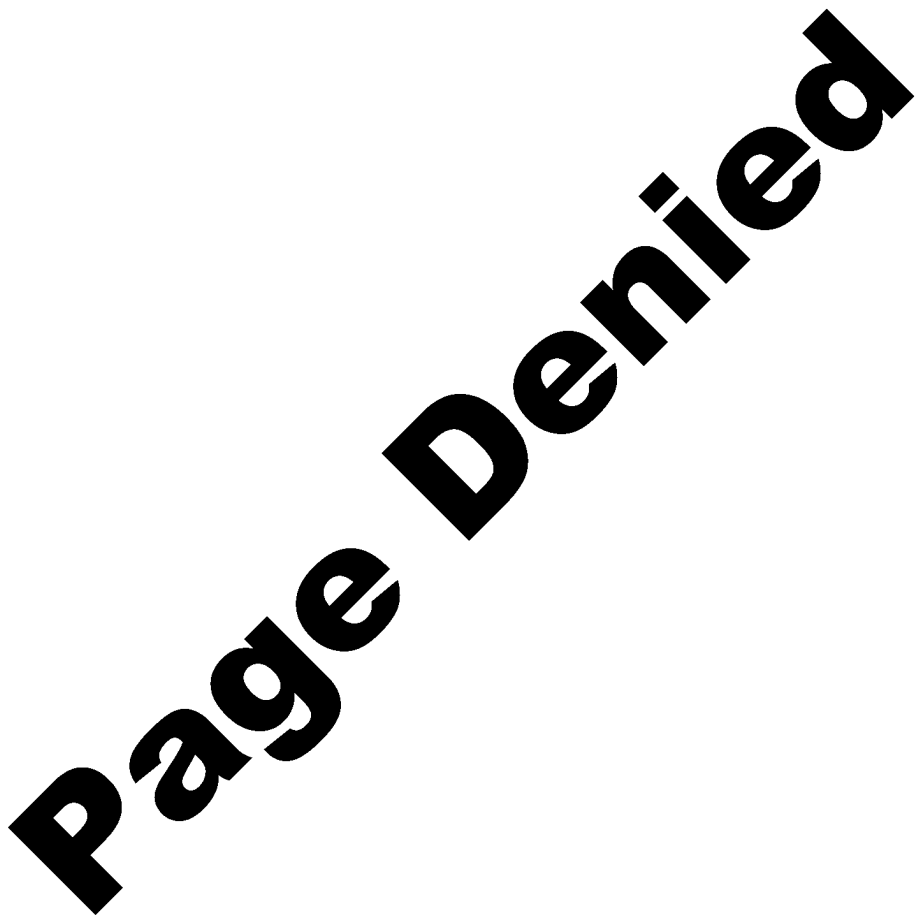
DELTA III



Delta-III class SSBN

6. The fourteenth unit of the Delta-III-class SSBN[1] was rolled out of construction hall 1 at Severodvinsk Shipyard 402 between [redacted] 25X1
[redacted][2] nine months after the rollout of unit 13 in March 1981. Unit 14 remained on the launch rail until at least [redacted] 25X1
and, by [redacted] had been launched and repositioned at the fitting-out quay. Fitting-out of this submarine (Figure 3) continued at the Severodvinsk complex throughout most of the year. This Delta-III SSBN, after completing fitting-out and associated sea trials, was deployed to its operational base by mid-December 1982. (S/WN)

7. Construction of Delta-III-class SSBNs is continuing. Three additional units are under 25X1
construction inside construction hall 1 at Severodvinsk. (S/WN) 25X1



25X1

SSGN Construction

Oscar-class SSGN

8. The second unit of the Oscar-class SSGN[1] was rolled out of construction hall 3 at Severodvinsk Shipyard 402 between [redacted] 32 months after the rollout of unit 1 in April 1980. By [redacted] Oscar unit 2 had been launched from the launch dock, had been positioned at the main fitting-out quay, and had commenced fitting-out. Major design changes have been made to the upper rudder of unit 2 (Figure 4). The overall length of the rudder is [redacted] as compared to the [redacted] rudder on unit 1. Additionally, the leading edge of this upper rudder on unit 2 has a more gradual slope to the hull than that on unit 1, thus increasing the surface area of the rudder and providing unit 2 with better stability. Along with the sloping rudder, a tubular protrusion extends aft from the top of the rudder and is possibly used in the deployment of an antenna for communications or for a towed acoustic array similar to that housed in the pod atop the rudder of the Victor-III SSN. (S/WN)

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25X1

9. No imagery-related evidence of additional Oscar-class SSGN construction has been observed; however, space is available inside construction hall 3 at Severodvinsk Shipyard 402 for constructing two additional units. (S/WN)

25X1
25X1

402W SSGN-(Modified Yankee-class SSN)

10. The first dismantled Yankee-class submarine (Yankee-class SSN unit 4; Figure 5) to be modified/reconfigured was rolled out from construction hall 1 at Severodvinsk Shipyard 402 between [redacted] This unit has an overall length of approximately 147 meters, which includes a newly installed mid-section. This mid-section, with a maximum beam of 14 meters and confirmed to house 12 inclined missile tubes, may serve as a research-and-development platform for a submarine sea-launched cruise missile. (S/WN)

11. During the year, one other Yankee-class SSN unit was in a repair hall (Severodvinsk Shipyard Yagry Island) for probable reconstruction/modification. There were no indications of the type of work being performed on this unit, which remained in the repair hall throughout 1982. As of the end of 1982, there was no significant shipyard activity to indicate future movements of other Yankee-class SSN units into construction/repair halls. (S/WN) 25X1

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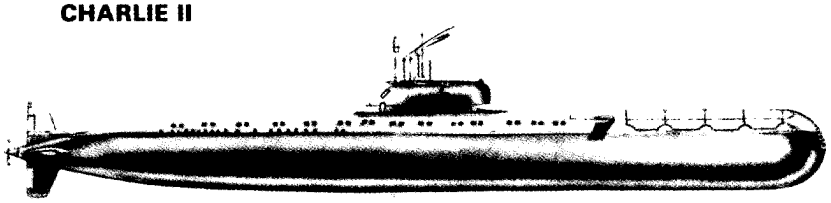
[redacted]

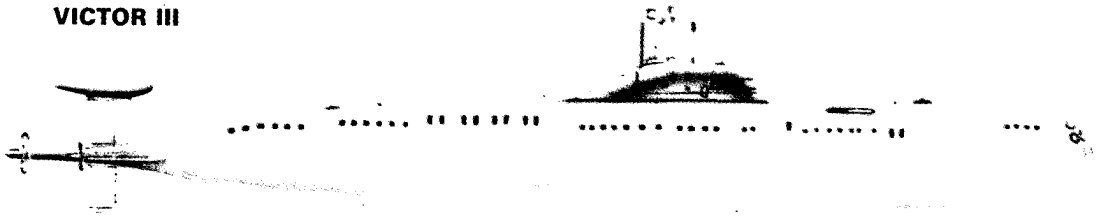
CHARLIE II



Charlie-II-class SSGN

12. No Charlie-II-class SSGNs were launched in 1982. There has not been a launch of a Charlie-II-class SSGN[1] from Gorkiy Shipyard 112 (the only shipyard to build Charlie-II-class units in the past) since unit 6 was launched 30 months ago in September 1980. Up to that time, units 4, 5, and 6 were all launched approximately 12 months apart. (S/WN)

VICTOR III



SSN Construction

Victor-III-class SSN

13. Three Victor-III-class SSNs[1] were launched and deployed in 1982. One Victor-III-class SSN, the fifth unit constructed at Leningrad Shipyard Admiralty 194, and two Victor-III-class SSNs, the 10th and 11th units constructed in the Pacific at Komsomolsk Shipyard Amur 199, became operational during the year. (S/WN)

14. By [redacted] the fifth Victor III constructed at Leningrad had been rolled out of the construction hall into the launch dock, also containing the Victor-III-associated panel tunnel. This SSN (Figure 6) was then launched and fitted out under the panel tunnel through midsummer. Between [redacted] this Victor III was placed inside the Blunt Bow auxiliary repair dock (YRD) for its transfer to Severodvinsk. Once at Severodvinsk, this unit completed its fitting-out and sea trials, and by early December 1982 was deployed to its Northern Fleet operating base. (S/WN)

15. By [redacted] the tenth Pacific-built unit of the Victor-III-class SSN (Figure 7), constructed at Komsomolsk Shipyard, had been rolled out into the launch dock. Al- [redacted] the submarine had been launched from the dock and positioned under the panel tunnel. The launch dock was then readied for transport, and by [redacted] the Victor III had departed Komsomolsk, enroute to Petrovka Naval Base and Shipyard [redacted] it had arrived for final fitting-out. (S/WN)

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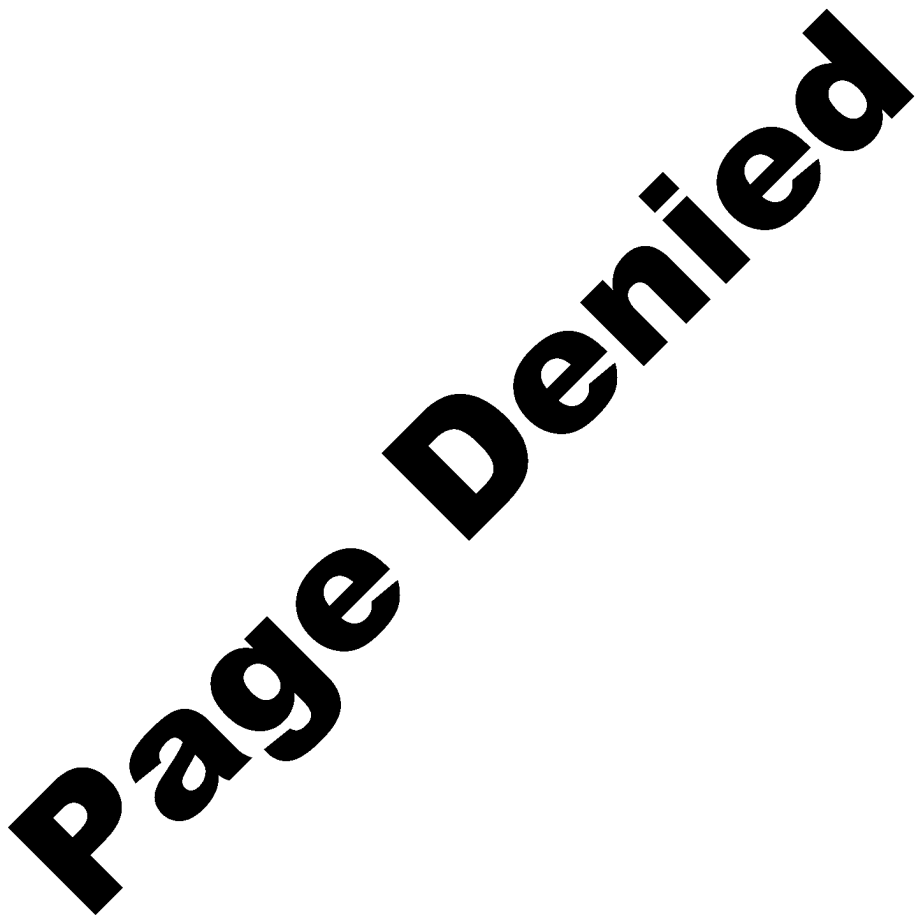

16. By [redacted] the eleventh Pacific-built unit of the Victor-III-class SSN (Figure 8) had been rolled out into the launch dock at Komsomolsk. It also was canvas covered. This unit was then launched from the dock and remained under the panel tunnel through the end of August. By [redacted] this newest Victor III had departed, and by [redacted] had arrived at Petrovka for its final fitting-out. (S/WN) 25X1 25X1 25X1

17. Construction of the Victor-III-class SSN is estimated to continue. (S/WN)

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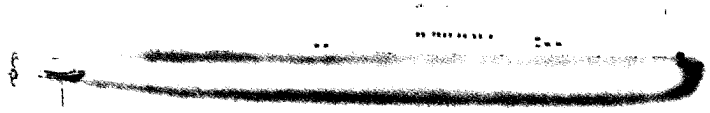
[redacted]

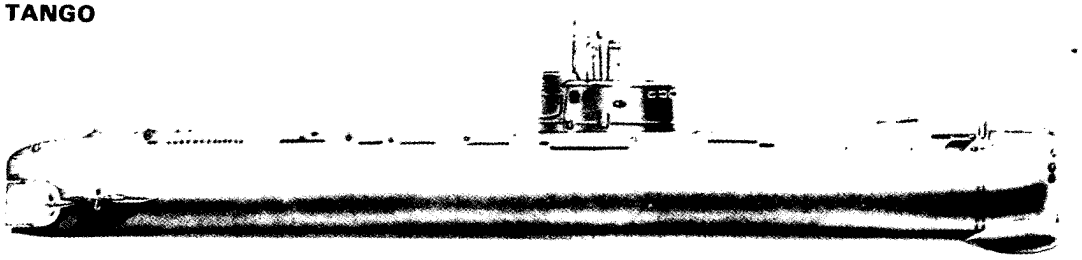
ALFA



ALFA-class SSN

18. During 1982, no Alfa-class SSNs[1] were launched; however, construction of Alfa-class SSNs or possibly of an Alfa SSN follow-on has probably continued throughout the year at both Severodvinsk Shipyard 402 and Leningrad Shipyard Sudomekh 196. During the year, Alfa launch-related activity was observed at Severodvinsk. Construction was completed on an additional launch cradle (eight cradles were present during this reporting period) at the east end of the side launchway of construction hall 2[2] (Figure 9). The last rollout of an Alfa SSN from construction hall 2, in September 1980, utilized only five of seven launch cradles present. The last rollout of an Alfa SSN at Sudomekh was in late March 1981. (S/WN)

TANGO

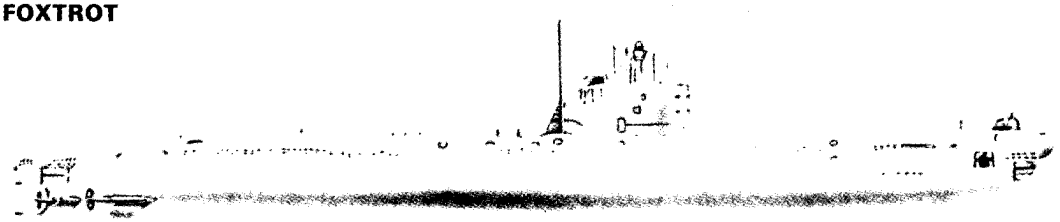


SS Construction

Tango-class SS

19. During 1982, the seventeenth and eighteenth units of the Tango-class SS[1] (Figure 10) were rolled out at Gorkiy Shipyard 112. By [redacted] Tango SS unit 17 had been rolled out and launched, and by [redacted] unit 18 had been rolled out and launched. Both units were transported to Sevastopol Shipyard Sevmorzavod 497 [redacted] by the inland waterway to complete final fitting-out and sea trials. Unit 17 completed fitting-out and was deployed in the fall of 1982; whereas unit 18, which did not arrive at Sevastopol until early December 1982, continued fitting-out through-out the remainder of the year. (S/WN) 25X1 25X1 25X1

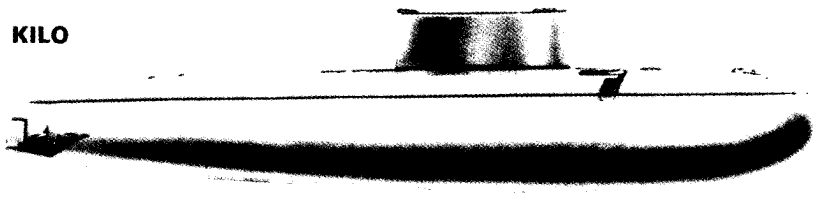
FOXTROT



Foxtrot-class SS

20. One Foxtrot-class SS[1] (Figure 11) was constructed in the floating drydock at Leningrad Shipyard Sudomekh 196. Construction began on this unit between [redacted] and [redacted] it had been launched. This Foxtrot, probably constructed for export, was then positioned inboard of floating screens for fitting-out. 25X1 25X1

KILO



Kilo-class SS

21. By [redacted] one Kilo-class SS[1] (Figure 12) had been rolled out into the launch dock at Komsomolsk Shipyard Amur 199. By [redacted] it had been launched from the launch dock for initial fitting-out at the fitting-out pier before departing for Petrovka. This was the third Kilo SS to be constructed—all have been built at Komsomolsk. (S/WN) 25X1 25X1

Submarine Construction Facilities and Major Improvements During 1982

22. Soviet submarine construction is conducted at five shipyards: Severodvinsk Shipyard 402 in the North; Leningrad Shipyard Admiralty 194 and Leningrad Shipyard Sudomekh 196 in the Baltic; Gorkiy Shipyard 112 on the Volga River; and Komsomolsk Shipyard Amur 199 in the Pacific (Figure 1). Major improvements to these shipyards were ongoing throughout the year. These improvements included the construction of a new launch basin completed at Gorkiy Shipyard and the construction of a submarine pressure hull x-ray building and launch facilities at Komsomolsk. These facilities will enable the launch of submarines from an existing buildingway. (S/WN)

Severodvinsk Shipyard 402

23. At Severodvinsk Shipyard 402 (Figure 13), 19 nautical miles (nm) west of Arkangelsk on the White Sea, Delta IIIs and Typhoon SSBNs, Oscar SSGNs, and Alfa SSNs (none

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were launched in 1982) are constructed. Also this shipyard is responsible for the conversion/modernization of the most recent Yankee-class SSN. Past submarine production at this shipyard has included Delta Is, Delta IIs, Yankee Is, and Hotel SSBNs; Golf SSBs, Papa SSGN, and November SSNs. Facilities at the shipyard include three large construction halls, one launch basin, several large fabrication buildings, one small and two large quays, and extensive support and storage areas. Additional related facilities in the vicinity of Severodvinsk Shipyard 402 include a ship repair yard, immediately north of the facility; a nuclear submarine special-support facility, north west of the facility; a small, naval operating base, west of the facility; and a missile storage area and a satellite communications facility, southwest of the facility. (S/WN)

Leningrad Shipyard Admiralty 194

24. Leningrad Shipyard Admiralty 194 (Figure 14), on the east bank of the Neva River next to Sudomekh Shipyard 196, is in the west-central part of the city of Leningrad. Victor-III SSNs and associated components are constructed at this shipyard, with a capacity to repair and overhaul submarines. Past submarine production at Leningrad Admiralty has included Victor Is and Victor IIs. Facilities at the shipyard include a large six-bay construction hall, two end-launch open buildingways, one subassembly building, one fabrication building, two fitting-out basins, seven quays, and numerous shop and support buildings. (S/WN)

Leningrad Shipyard Sudomekh 196

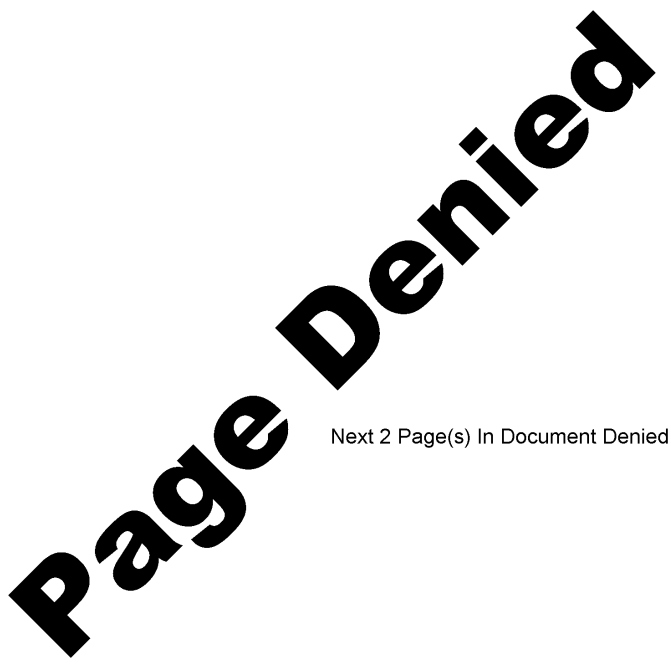
25. Leningrad Shipyard Sudomekh 196 (Figure 15) is in the west-central part of the city of Leningrad, on the south bank of the Neva River, next to Shipyard Admiralty 194. Both nuclear and conventional powered-attack submarines of the Alfa SSN (none were launched in 1982) and Foxtrot SS class are constructed at this shipyard. Foxtrot SSs, usually intended for export, are built in a floating drydock. The Lima Auxiliary Submarine (SSA) was also built in this floating drydock. Past submarine production has included Quebec Coastal Submarines (SSCs) and Romeo SSs. Facilities at the shipyard include a large fabrication building and construction hall, several smaller subassembly fabrication buildings, three quays, and numerous support buildings. (S/WN)

Gorkiy Shipyard

26. Gorkiy Shipyard 112 (Figure 15) is on the northwest edge of the city of Gorkiy on the west bank of Volga River. Charlie-II SSGNs (none were launched in 1982) and Tango SSs are constructed at the shipyard. The Charlie II is transferred by the inland waterway system to Severodvinsk for final fitting-out and acceptance, and the Tango SS is usually transferred to Sevastopol for fitting-out and acceptance. Past submarine production at this shipyard included Victor-II SSNs, Charlie-I SSGNs, Juliett-class Missile Attack Submarines (SSGs) and Whiskey/Romeo SSs. Facilities at the shipyard include two construction halls, one launch basin with a side-haul marine railway and transverser, one open quay, and numerous shop and support buildings. (S/WN)

Komsomolsk Shipyard Amur 199

27. Komsomolsk Shipyard Amur 199 (Figure 16), approximately 350 nm inland on the north bank of the Amur River, is the only submarine construction yard in the Soviet Far East. Victor-III SSNs and Kilo SSs are constructed at this shipyard, and past submarine production has included Delta I and Yankee-I SSBNs, Golf-I ballistic missile submarines (SSBs), Echo-I and Echo-II SSGNs, Whiskey SSs, Bravo Training Submarines (SSTs), and India SSAs. Facilities at the shipyard include one fitting-out pier, one fitting-out quay, one launch basin, one transporter dock, three construction halls, and numerous fabrication and support buildings. S/WN)



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REFERENCES

IMAGERY

All applicable satellite imagery acquired from [redacted] was used in the preparation of this report. The [redacted] imagery provided the most recent usable coverage and coincided with the information cutoff date of this report. (S/WN) 25X1 25X1

MAPS OR CHARTS

SAC. USATC, Series 200, Sheets 0092-22; 0153-04; 0154-25; 0204-08, scale 1:200,000 (UNCLASSIFIED)

DOCUMENTS

1. DIA. DDB-1220-23-82, *The Soviet Submarine Force (U),* May 82 (SECRET/NOFORN/WNINTEL/Rel [redacted] 25X1
2. NPIC. [redacted] RCA-09/0008/82, *Activity at Severodvinsk Shipyard Complex—1 August—31 December 1981 (S),* Jun 82 (TOP SECRET CODEWORD/[redacted] 25X1 25X1

REQUIREMENT

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Project 543030J

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