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basic imagery interpretation report

Activity and Developments At Selected Soviet Missile Support Equipment R&D and Production Facilities (S)

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STRATEGIC WEAPONS INDUSTRIAL FACILITIES
BE: VARIOUS
USSR

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INSTALLATION OR ACTIVITY NAME					COUNTRY
Activity and Developments at Selected Soviet Missile Support Equipment Research and Development and Production Facilities					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 0154-14 and 25; 0161-05; 0167-05, -18 and -19; 0168-14; and 0235-16 and -21; scale 1:200,000

LATEST IMAGERY USED

[Redacted]

NEGATION DATE (If required)

NA

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Installation Name	Geographic Coordinates	Category	BE No	COMIREX No	NIETB (MRN No)
Bryansk Guided Missile Support Equipment Plant II	53-17-14N 034-23-51E	[Redacted]			
Bryansk Road Machinery and Guided Missile Support Equipment Plant I	53-14-57N 034-23-11E				
Gorkiy Armaments Plant Novoye Sormovo Stalin 92	56-19-38N 043-53-27E				
Krasnoyarsk Steel and Heavy Equipment and Missile Support Equipment Plant	55-59-46N 092-58-51E				
Minsk Motor Vehicle and Guided Missile Support Equipment Plant	53-51-31N 027-39-31E				
Orel Road Machinery and Missile Support Equipment Plant	52-55-16N 036-01-19E				
Volgograd Remote Test Facility 1	48-55-10N 044-31-19E				
Volgograd Remote Test Facility 3	49-00-10N 044-34-45E				
Volgograd Steel and Machinery Plant Krasnyy Barricada 221	48-46-32N 044-34-52E				

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ABSTRACT

1. (S/WN) This report updates developments at nine Soviet facilities associated with research and development of missile support equipment (MSE) or its production/assembly. The information cutoff date for this report is [Redacted]

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2. (S/WN) SS-20 single-bay garage components continued to be fabricated and shipped at Bryansk Guided Missile Support Equipment Plant II. The presence of SS-N-12 and SS-N-9 crates at Bryansk Road Machinery and Guided Missile Support Equipment Plant I indicates continued involvement with naval missile systems. Production of SA-10 launchers, SH-EL-02 engagement radars, and SA-10 resupply transporter chassis continued at Gorkiy Armaments Plant Novoye Sormovo Stalin 92. A new [Redacted] six-axle chassis was observed at Minsk Motor Vehicle and Guided Missile Support Equipment Plant. The [Redacted] meter, six-axle chassis for the SS-16/-20 TEL, the MAZ-543 and MAZ-543SP chassis, and MAZ-938 semitrailers, as well as a variety of other MAZ products continued in production at the Minsk plant. The Orel plant continued to be involved with MSE for the SA-10, SA-5, and SCUD missile systems. Production continued at Volgograd Steel and Machinery Plant Krasnyy Barricada 221 of MSE for the SS-16/-20, the SS-21, and other missile systems. A sliding-roof, single-bay garage was constructed at Volgograd Remote Test Facility 3, where SS-16/-20 MSE were still observed. The report contains one location map, ten annotated photographs, and nine tables.

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INTRODUCTION

3. (S/WN) The facilities covered in this report (Figure 1) have been discussed in detail in previous NPIC reports with respect to location, physical description, security, and historical association with various missile systems. This report updates activities and developments that have taken place since the last NPIC reports on these facilities were published in July 1980,¹ February 1979,² and September 1978.³

BASIC DESCRIPTION

Bryansk Road Machinery and Guided Missile Support Equipment Plant I

4. (S/WN) Bryansk Plant I (Figure 2) has a history of association with the design and development of MSE for land based and naval strategic missile systems. However, it is engaged mainly in the production of road machinery. Throughout the reporting period, a probable SS-N-3/-12 crate and a probable SS-N-9 crate¹ remained in the area of the plant associated with missile support equipment. No other missile-related equipment was observed. Vehicle tracks near the three-bay building covering the SS-17, SS-18, and SS-11/-19 load test platforms indicated possible MSE activity.

5. (S/WN) Footings for a new building (item 28, Figure 2) had been emplaced by January 1982 in the north side of the plant in an area landfilled and graded in the early 1970s.

Bryansk Guided Missile Support Equipment Plant II

6. (S/WN) The plant continues to be associated with SS-4/-5 and SS-11 MSE, SS-11/-19 missile canisters and fabrication of SS-20 single-bay garage components. Fabrication and shipment of SS-20 single-bay garage components from Bryansk II continued during the reporting period. Coverage during the reporting period was inadequate for accurately assessing component production rates. The figures in Table 1 represent the minimum number of components fabricated and shipped. A review of imagery of the plant revealed that the past method of converting single-bay garage component counts into garage unit counts was invalid. The totals for garages fabricated and shipped since April 1976 have been adjusted in the table to correct this error. Table 2 shows totals for MSE at the plant for the period.

7. (S/WN) Construction activity within the plant was minimal during the reporting period. A large landfill area outside the east wall of the plant was being prepared for probable plant expansion (Figure 3). One of the rail spurs servicing the plant was extended into this area, and construction of a wall around the new area was underway.

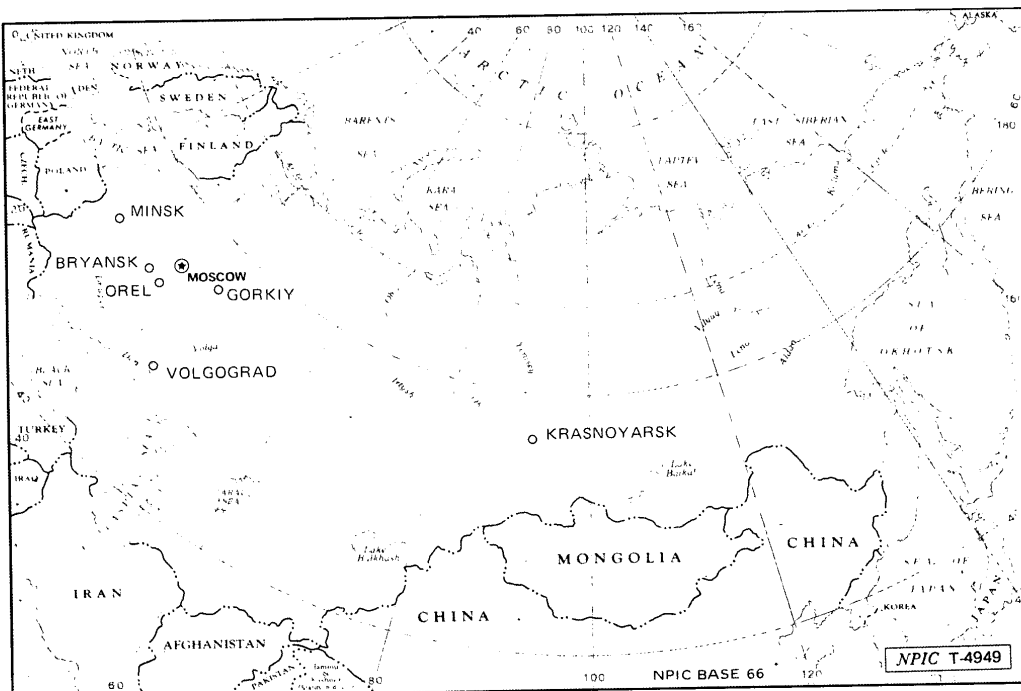


FIGURE 1. LOCATION OF SELECTED SOVIET MISSILE SUPPORT EQUIPMENT RESEARCH, DEVELOPMENT, AND PRODUCTION FACILITIES

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Gorkiy Armaments Plant Novoye Sormovo Stalin 92

8. (S/WN) This plant (Figure 4) is the production facility for SA-10 launchers and SH-EL-02 engagement radar vans and their transporters. It is associated with the production of SA-2 FAN SONG antenna trailers, SA-5 SQUARE PAIR antenna transport trailers, and SAM-associated computer vans. Table 3 identifies the MSE observed at the plant during the reporting period. The presence of MAZ-543SP chassis at the plant suggests that it might be connected with the production or fitting out of the new transporter-erector-launcher (TEL)/resupply vehicle for the SA-10 missile system.

9. (S/WN) Construction began on one possible fabrication building and continued on five previously reported buildings during the reporting period.

Krasnoyarsk Steel and Heavy Equipment and Missile Support Equipment Plant

10. (S/WN) No MSE has been observed at the plant (Figure 5 and Table 4) since February 1977¹ when two long vehicle storage buildings in the separately secured, rail-served transshipment yard were completed. Prior to February 1977, SA-5 transporters were often seen in the old transshipment yard.³ A very active construction program has continued at this plant since the early 1970s. Of the current construction, most was started during the previous reporting period [redacted] Since then, construction has started on six new buildings and two storage tanks, and four previously reported buildings and two additions to buildings have been completed.

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Minsk Motor Vehicle and Guided Missile Support Equipment Plant

11. (S/WN) A new probable mobile-missile TEL chassis (Figure 6) was at the Minsk Motor Vehicle and Guided Missile Support Equipment Plant on [redacted] The new chassis is [redacted] long, [redacted] meters longer than the SS-16/-20 TEL chassis produced at the Minsk plant. The new chassis probably has six axles. The front two axles could not be seen because of shadow, but the rear four axles appeared to have the same positioning as those on the [redacted] SS-16/-20 TEL chassis. The axles on the front of the new chassis may have a larger separation than those on the SS-16/-20 TEL to accommodate the additional length, which appears to be incorporated in the area immediately behind the vehicle's cab. Six-axle chassis of this length have not been identified at any other missile equipment production or development facility. Six-axle chassis, [redacted] were observed at the Minsk plant on [redacted] and [redacted] and at the Bronnitsy Armored Vehicle Research Facility [redacted] It is believed that these vehicles were standard [redacted] chassis with load simulators which overhung the rear, causing the additional length. Ground photography of a standard-length SS-16/-20 chassis on the Minsk ring road in August 1981 supports the analysis (Figure 7). This vehicle was carrying a steel box-like load simulator which overhung the rear of the chassis approximately 1 meter, giving the vehicle an overall length of [redacted] meters.

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Table 3.
MSE Observed at Gorkiy Armament Plant
Novoye Sormovo Stalin 92

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Date	SA-10 Launchers	SH-EL-02 Radar Vans on Trans	SH-EL-02 Radar Van Transporters	MAZ-938 Long-bed Chassis	SAM-assoc Vans	MAZ-543SP Chassis	BTR- 60s
	0	9	2	0	13	0	25
	6	8	4	8	16	0	26
	7	8	6	3	10	0	17
	7	7	5	12	18	0	16
	9	8	0	18	17	0	12
	7	8	7	18	15	1	14
	8	8	3	15	15	0	26
	12	3	0	2	21	0	18
	13	8	0	0	17	0	23
	18	4	1	2	21	0	14
	0	2	4	7	14	0	27
	23	3	5	5	10	2	24
	12	3	3	2	0	1	20
	14	0	3	7	4	0	11
	14	2	5	10	12	0	9
	0	0	2	2	22	0	20
	0	0	0	3	9	0	

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*No usable coverage available from [redacted] to end of reporting period.
Items of equipment seen on any one day could have been the same items seen on earlier or later imagery.

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Table 4.
Additions to Krasnoyarsk Steel and Heavy Equipment and MSE Plant
(Items keyed to Figure 5)

This table is entirely classified SECRET//WNINTEL

Item*	Description/ Function	Dimensions (m)			Floorspace (sq m)	First Seen Ucon	First Seen Completed	Remarks
		L	W	H				
97	Shop add	99	42	15	4,158			25X1
104	Fab/assem bldg				10,488			
a	Sect	120	73	25	8,760			
b	Sect	24	24	8	576			
c	Sect	48	24	18	1,152			
105	Fab/assem bldg				4,992			
a	Sect	85	24	18	2,040			
b	Sect	85	24	18	2,040			
c	Sect	48	19	15	912			
115	Fab/assem bldg				10,338			
a	Sect	84	24	18	2,016			
b	Sect	114	73	18	8,322			
116	Spt bldg				2,286			
a	Sect	90	19	16	1,710			
b	Sect	72	8	9	576			
117	Poss conveyor crusher system	-	-	-	-			
118	Fab/assem bldg				882			
a	Sect	30	18	15	540			
b	Admin/engr sect	19	18	8	342			
119	Spt bldg				800			2 levels
120	Spt bldg	66	24	13	1,584			
121	Spt bldg	30	13	9	390			
122	Spt bldg	25	18	-	450			
123	Spt bldg	-	-	-	-			
124	Spt bldg	-	-	-	-			
125	Poss bunker	27	9	-	243			
126	Poss bunker	38	17	-	646			
127	Unid bldg	-	-	-	-			
128	Storage tanks (2)		(15 diam)		-			Diameter given for each tank
129	Add to fab/assem bldg	102	41	15	4,182			
Total completed floorspace					13,482			

*Numbering sequence is a continuation of that used in an earlier NPIC report.

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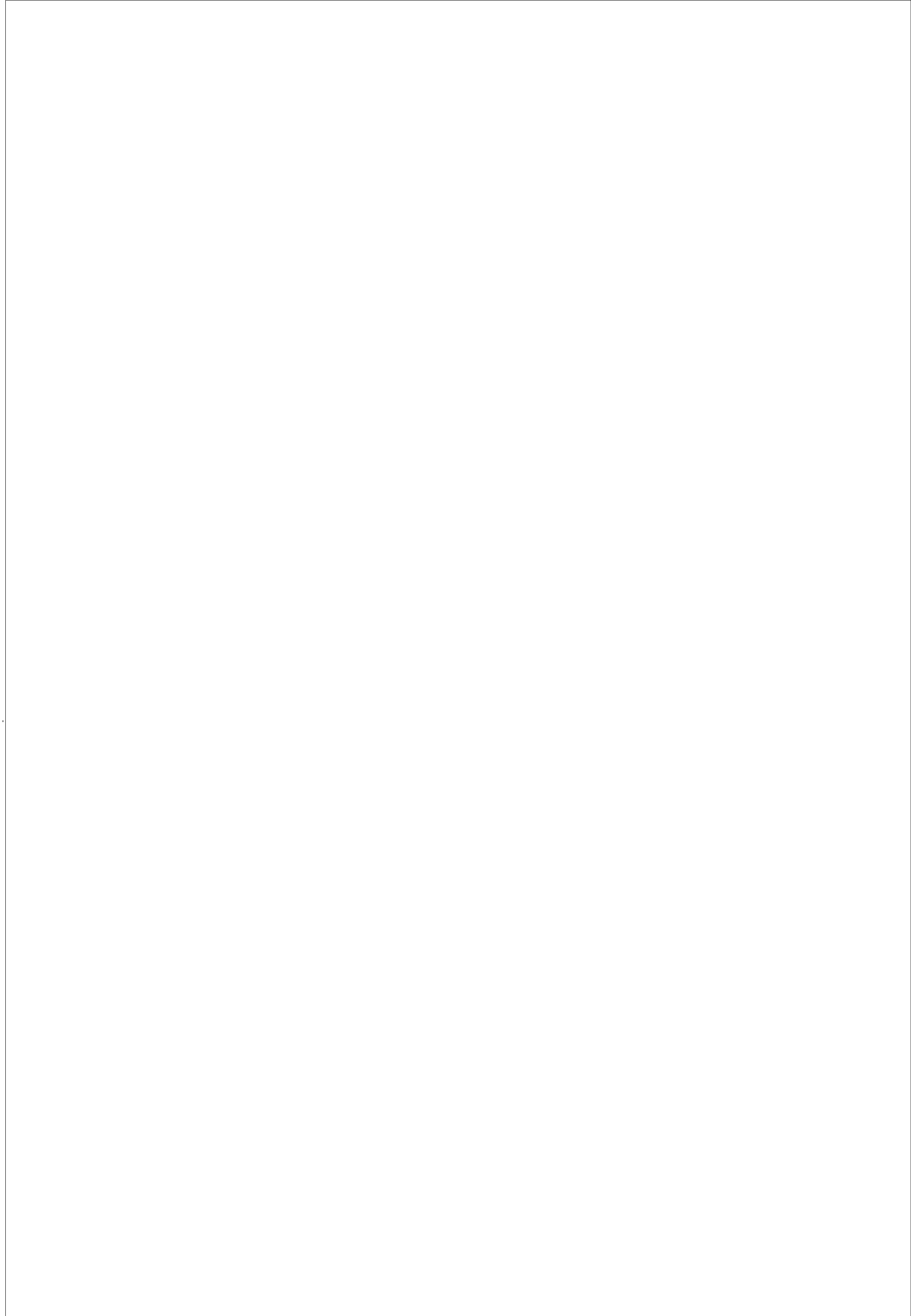
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12. (S/WN) Activities at Plesetsk Missile/Space Test Center SSM [redacted] have suggested the development of a longer TEL for a new mobile ICBM. However, it is conceivable that the [redacted] chassis observed at Minsk is a limited modification of the standard six-axle chassis for application to a function, other than mobile-missile TEL (e.g., heavy-duty mobile crane, large pipe carrier, etc.). Until the longer chassis is observed fitted out as a TEL, it cannot be confirmed for that function. Table 5 identifies the MSE observed at the plant during the reporting period.

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13. (S/WN) Construction outside the fence east of the MSE-associated area (Figure 8) may be for new plant expansion. Other construction at the plant during the period included the start of construction on four buildings, two of which were completed by the end of the reporting period.

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Table 5.
MSE observed At Minsk Motor Vehicle And
Guided Missile Support Equipment Plant

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Date	MAZ Six-Axle Chassis	MAZ-543SP Chassis	MAZ-543 Chassis	MAZ-938 Semi-trailers	MAZ-938 Long-bed Chassis
	0	0	5	22	8
	4	3	8	28	23
	0	13	16	15	14
	3*	13	12	23	19
	1	10	13	29	32
	2	1	8	22	39
	0	10	12	20	15
	1 Prob	6	10	27	19
	0	4	9	25	28

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*One of the six-axle chassis seen was a new chassis.

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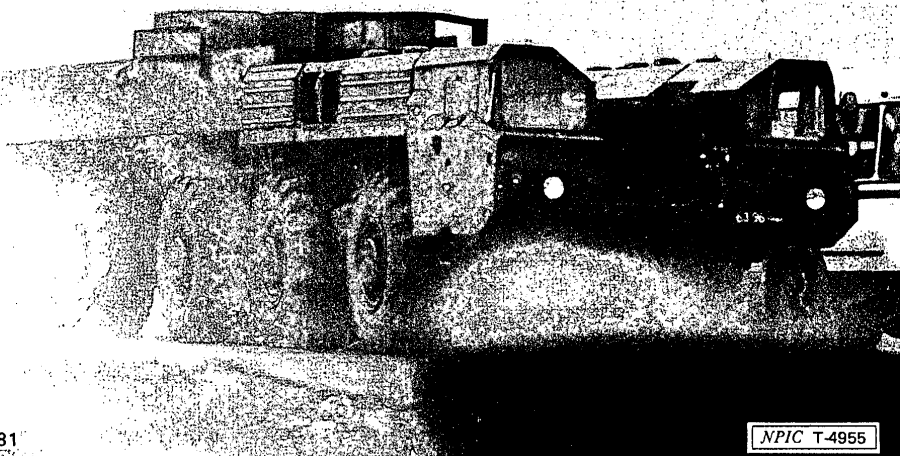
Orel Road Machinery and Missile Support Equipment Plant

14. (S/WN) Missile support equipment associated with this plant includes SA-10-associated transporters, SA-5 transporters, and SCUD resupply transporters. No significant new MSE-related activity or construction occurred at this plant during the reporting period.

Volgograd Steel and Machinery Plant Krasnyy Barricada 221

15. (S/WN) This plant (Figure 9) is one of the major production plants of support equipment associated with the SS-16 and SS-20 missile systems. MSE for the SS-21 and SS-23 missile systems is probably also produced here. Volgograd also has a history of involvement with MSE for the SHADDOCK, FROG, SCUD, and SCALEBOARD missile systems.⁴ Since October 1979, MAZ-543 cranes have been produced at the plant. MAZ six-axle chassis, SS-21 TELs/resupply vehicles (Figure 10), and a missile support van (MSV) were among the missile-associated equipment observed during the reporting period. Table 6 lists all missile-associated equipment observed at the plant. No new construction was started during the reporting period, but construction continued on the large assembly building on the northwest side of the plant.

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FIGURE 7. SS-20 TEL CHASSIS WITH LOAD SIMULATOR ON MINSK RING ROAD. DIA photograph 6901 0573 81 (CONFIDENTIAL)

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Table 6.
Missile-Associated Equipment Observed at
Volgograd Steel and Machinery Plant Krasnyy Barricada 221

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Date	MAZ 6-Axle Chassis	15.2-m MSV	MAZ- 543SP Chassis	MAZ- 543 Cranes	SS-21 TELs/ Resupply Vehicles	Prob MSVs	Zil- 135s
	4			2-3			
	7		1	3	5		
	8			4	5		
				3			
	1			3			
	1	1		4		1	4
				5			1
				2			
				2		2	
						3	
				2		3	
				2		2	
				1		2	

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Volgograd Remote Test Facility 1

16. (S/WN) Little activity was observed at this facility during the reporting period. The only MSE observed was an SS-21 TEL/resupply vehicle which was seen twice, once in July 1980 and again in June 1981. No construction took place during the reporting period.

Volgograd Remote Test Facility 3

17. (S/WN) This facility (Figure 11) is involved in testing of MSE produced at Plant 221. A standard single-bay, sliding-roof garage was constructed a short distance outside the gully entrance to the facility between [redacted]. A six- by 8-meter annex was added to the west end of the garage in May 1982. This type of garage is known to be associated only with the SS-20 IRBM system. A 2-meter-longer version of the single-bay garage was constructed between March and June 1982 at Plesetsk Missile/Space Test Center SSM and is thought to be associated with a new mobile ICBM under development. The construction of the garage at Volgograd at this time suggests that it was being adapted for use with a new system or possibly a follow-on to the SS-20 IRBM. One to three probable [redacted] MSVs were at the facility between [redacted] and the end of the reporting period. The canvas-covered, six-axle MAZ chassis usually at the facility was present until [redacted]. Other construction observed during the reporting period included the starting of construction on a 31- by 10-meter garage or storage shed at pad A. in May 1982, the erecting of a security fence around the SS-20 single-bay garage, and the building of two low retaining walls on the gully sides of launch pad C. Minor improvements were also made on the road connecting the launch pads with the main facility.

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REFERENCES

IMAGERY

(S/WN) All relevant satellite imagery acquired between [redacted] the information cutoff date, was used in the preparation of this report. 25X1

MAP OR CHART

SAC. US Air Target Chart; Series 200; Sheets 0154-14 and -25; 0161-05; 0167-05, -18, and -19; 0168-14; and 0235-16 and -21; scale 1:200,000 (UNCLASSIFIED)

DOCUMENTS

- 1. NPIC. [redacted] RCA-09/0012/80, *Activity and Developments at Selected Soviet Missile Support Equipment Research, Development, and Production Facilities (TSR)*, Jul 80 (TOP SECRET, [redacted]) 25X1
[redacted] 25X1
- 2. NPIC. [redacted] RCA-09/0003/79, *Developments at Selected Soviet Missile Support Equipment Research and Development and Production Facilities (S)*, Feb 79 (TOP SECRET [redacted]) 25X1
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- 3. NPIC. [redacted] RCA-09/0020/78, *Developments at Selected Soviet Missile Support Equipment Research and Development and Production Facilities (S)*, Sep 78 (TOP SECRET [redacted]) 25X1
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- 4. NPIC. [redacted] RCA-09/0017/76, *Volgograd Steel and Machinery Plant Krasnyy Barricada*, Nov 75 (TOP SECRET [redacted]) 25X1
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*Extracted material is classified SECRET/WNINTEL.

REQUIREMENT

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Comments and queries regarding this report are welcome. They may be directed to [redacted] Soviet Strategic Forces Division, Imagery Exploitation Group, NPIC, [redacted] 25X1
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