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basic imagery interpretation report

Yoshkar-Ola SSM Complex (S)

DEPLOYED STRATEGIC SSM FACILITIES
BE: Various
USSR

Top Secret

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INSTALLATION OR ACTIVITY NAME					COUNTRY
Yoshkar-Ola SSM Complex					UR
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NO	COMIREX NO	NIETB NO
NA	56-47-40N 048-39-58E				

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MAP REFERENCE

SAC. USATC Series 200, Sheets 0155-17 and -22, scale 1:200,000
ACIC. USATC Series 200, Sheets 0155-18 and -23, scale 1:200,000

LATEST IMAGERY USED	NEGATION DATE (If required)
	NA

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ABSTRACT

1. (TSR) The Yoshkar-Ola SSM Complex consists of 60 SS-13 launch sites in six launch groups of ten sites each, six dismantled SS-7 launch sites (now designated as SSM launch positions), a training site, complex support facilities, and a rail-to-road transfer point (RTP). All of the SS-13 launch sites are complete, and 40 of the launch sites had been modernized as of September 1979. Only minor construction activity has occurred in the complex support facilities and the RTP.

2. (TSR) This report covers the period from April 1972 to late September 1979 and summarizes and supersedes all previous NPIC reports on the complex. Included are a location map, a table providing basic data on all facilities at the complex, five annotated photographs of the complex support facilities and RTP, and three tables of mensural data on important buildings.

INTRODUCTION

3. (TSR) The Yoshkar-Ola SSM Complex (Figure 1), USSR, is east of the Ural Mountains and covers an area of approximately 1,225 square nautical miles (nm), with a length and width of approximately 35 nm. The complex support facilities are approximately 7 nm east of the city of Yoshkar-Ola.[1]

4. (TSR) The complex is served by a road network connecting all launch sites and launch control facilities and linking them to the RTP and the complex support facilities. The railhead and storage area of the complex support facilities and the RTP are on a spur from the rail line that extends north from Kazan to Yoshkar-Ola. The complex is also served by helicopter.

5. (TSR) This report supersedes all previous NPIC reports on this complex. All launch sites have been completed, the last as of January 1972. A modernization program, which began in March 1976, is continuing; if it progresses at the same rate, it should be complete by February 1981. This will constitute the last basic report on the complex unless significant new developments are observed.

BASIC DESCRIPTION

6. (TSR) The Yoshkar-Ola SSM Complex consists of six dismantled SS-7 launch sites, 60 SS-13 (type IIIE) single-silo launch sites, complex support facilities, and an RTP (Table 1).

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7. (TSR) Construction for this complex began in January 1961, when the complex support facilities are estimated to have been started. Construction on the first of six SS-7 launch sites was started in April 1961. After the sixth SS-7 launch site had been completed in June 1964, no construction activity was noted until July 1967, when construction of the SS-13 launch sites was started.

8. (TSR) No new launch site construction has been observed since the completion of the last SS-13 launch group in January 1972; however, a modernization program for the SS-13 launch sites was started in March 1976 and is still underway. The absence of new silo construction components in the railhead and storage area and the absence of upgrading of the complex support facilities indicates that construction of new silos is not likely in the near future.

Dismantled SS-7 Launch Sites

9. (TSR) Construction of the first SS-7 launch site was started in April 1961. By June 1964, all six of the SS-7 launch sites were complete. These launch sites have now been dismantled, the last in August 1978.

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SS-13 Launch Sites

10. (TSR) The 60 SS-13 launch sites are deployed in six launch groups consisting of one launch control facility (LCF) and ten launch sites per group. The launch groups are designated A through F.

11. (TSR) Launch groups A and B were started in July and September 1967, respectively; C and D in May and June 1968; and E and F in May 1969.

12. (TSR) Launch group A had been completed by August 1969; group B by March 1970; groups C and D by May and August 1971, respectively; and groups E and F by January 1972. Launch group A required the shortest construction time—25 months—and launch group D the longest construction time—38 months.

13. (TSR) In March 1976, a modernization program on the IIIE launch sites was started. During this modernization program, no apparent major change in the silos was noted, but minor refurbishment took place in the silos, and intersite cables were replaced. In addition, a new, partially underground security/surveillance building was constructed (Figure 2). As of September 1979, four of the six launch groups had been modernized.

Complex Support Facilities

14. (TSR) The complex support facilities (Figure 3), first observed under construction in June 1961, consist of an administration and housing area and a railhead and storage area. The administration and housing area (Figure 4 and Table 2) is southeast of the city of Yoshkar-Ola. This area is made up of an administration area, a housing area, a headquarters command and control facility (described separately below), a vehicle maintenance and motor pool area, and a dismantled temporary housing area. Within these areas are administration buildings, barracks, recreation and civic facilities, and maintenance garages.

15. (TSR) The railhead and storage area (Figure 5 and Table 3) is immediately southwest of the administration and housing area. It contains a receiving and storage area, a sewage treatment plant, a utilities area, a construction support area, and a forced labor camp.

16. (TSR) The railhead and storage area is no longer considered an active part of the complex support facilities. It was expanded and extremely active during the SS-13 launch site construction program, when it was used for storage, handling, and distribution of silo construction materials. Since the end of the launch site construction program in January 1972, the level of activity has dropped, and although the area is still used for the storage and fabrication of building materials, none of these materials can be associated with silo construction or modification.

Rail-To-Road Transfer Point

17. (TSR) The RTP (Figure 6 and Table 4) is approximately 0.5 nm east of the complex support facilities. This RTP is estimated to have been started in January 1962, when it supported only the SS-7 missile system. In March 1968, construction began for the areas to support the SS-13 missile system. Since the dismantlement of the SS-7 launch sites, this RTP now supports only the SS-13 missile system.

18. (TSR) The RTP contains an SS-13 receiving, inspection, and maintenance (RIM) facility; a propellant facility and a maintenance area (which were constructed to support the SS-7 missile system); a general support area; an SS-13 shop and maintenance area; a receiving area; an SS-13 ground support equipment (GSE) training area; an SS-13 component storage area; an SS-13 support area; and an SS-13 training site.

Headquarters Command And Control Facility

19. (TSR) The headquarters command and control facility (Figure 4), at the eastern end of the administration and housing area of the complex support facilities, includes two arch-roofed, earth-mounded buildings; a single-story support building; a surrounding antenna field; a nearby communications satellite (comsat) station; and two multistory headquarters/administration buildings.

20. (TSR) The comsat transceiving building was first observed under construction in July 1970. It was externally complete in August 1970, and the parabolic dish antennas were first observed in position in March 1972.

21. (TSR) The alternate command and control facility is collocated with LCF E.

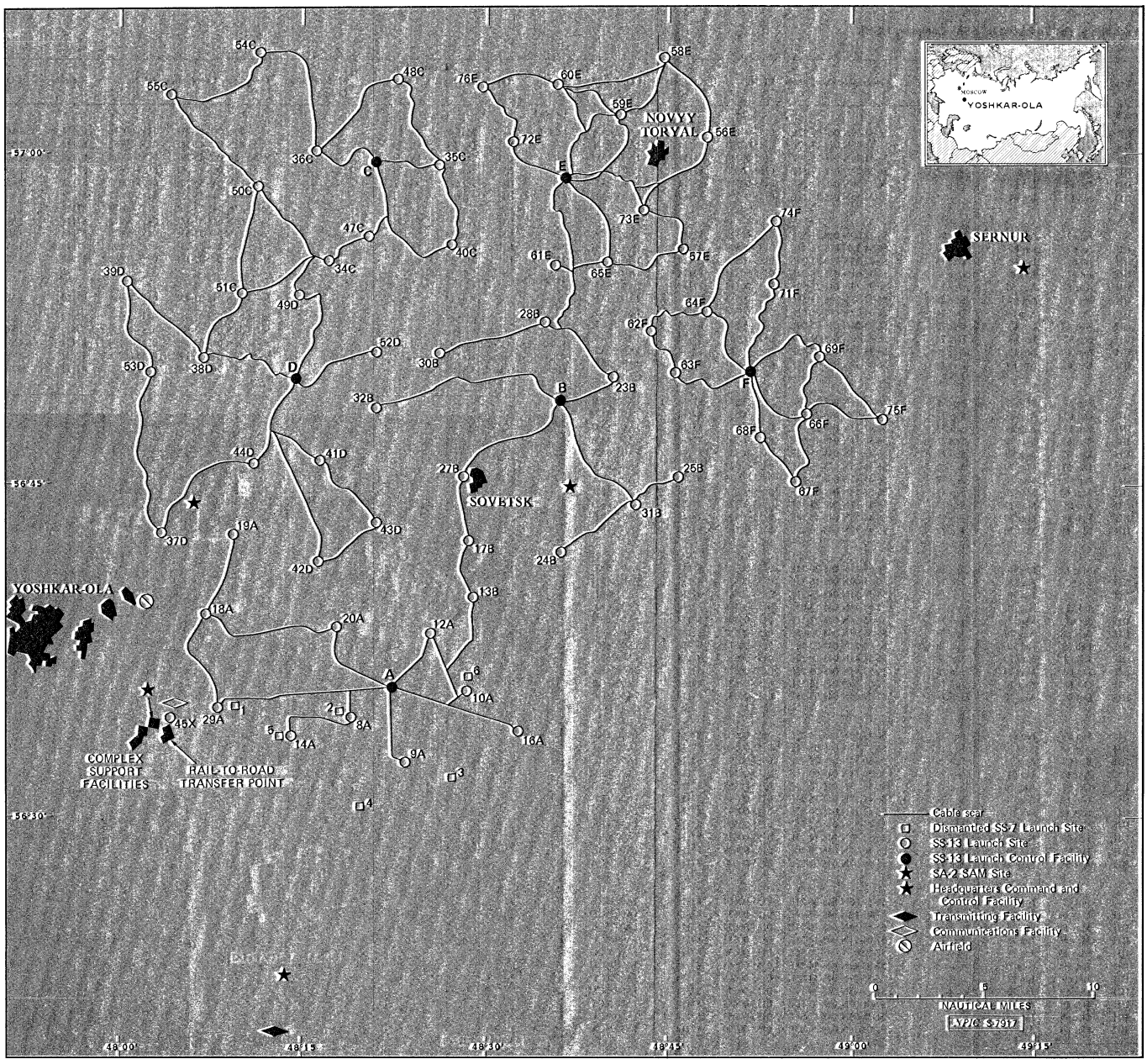

FIGURE 1. LOCATION OF FACILITIES AT YOSHKAR-OLA SSM COMPLEX, USSR

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Table 1.
Data on Facilities at the Yoshkar-Ola SSM Complex, USSR

This table in its entirety is classified TOP SECRET RUFF

Launch Site	Type	Construction Est Start	Construction Complete	Modernization Complete	Geographic Coordinates	BE No	Category	COMIREX No
***SS-7 Launch Sites**								
1	11B	Apr 61	Jun 62	—	56-34-59N 048-09-22E			
2	11B	Aug 61	Jun 63	—	56-34-48N 048-17-57E			
3	11B	Feb 62	Jun 63	—	56-31-56N 048-26-59E			
4	11D	Jun 62	Jul 63	—	56-30-27N 048-19-51E			
5	11D	Jun 62	Jun 64	—	56-33-39N 048-12-58E			
6	11D	Jun 62	Jun 64	—	56-36-35N 048-28-18E			
SS-13 Group A								
LCF A	—	Jul 67	Jun 69	Dec 76	56-36-00N 048-21-59E			
8A	111E	Jul 67	Jun 69	Dec 76	56-34-25N 048-18-49E			
9A	111E	Jul 67	Jun 69	Dec 76	56-32-23N 048-23-09E			
10A	111E	Jul 67	Aug 69	Dec 76	56-36-01N 048-28-04E			
12A	111E	Aug 67	Aug 69	Dec 76	56-38-23N 048-25-30E			
14A	111E	Sep 67	Jun 69	Dec 76	56-33-35N 048-13-58E			
16A	111E	Oct 67	Aug 69	Dec 76	56-34-02N 048-31-01E			
18A	111E	Nov 67	Jun 69	Dec 76	56-39-04N 048-07-09E			
19A	111E	Sep 67	Jun 69	Dec 76	56-42-50N 048-09-09E			
20A	111E	Nov 67	Jun 69	Dec 76	56-38-27N 048-17-43E			
29A	111E	Dec 67	Apr 69	Dec 76	56-34-49N 048-07-18E			
Group B								
LCF B	—	Sep 67	Mar 69	Sep 77	56-49-14N 048-36-03E			
13B	111E	Oct 67	Aug 69	Sep 77	56-40-07N 048-28-38E			
17B	111E	Sep 67	Aug 69	Sep 77	56-42-32N 048-28-08E			
23B	111E	Dec 67	Mar 70	Sep 77	56-50-21N 048-40-05E			
24B	111E	Dec 67	Aug 69	Sep 77	56-42-12N 048-35-32E			
25B	111E	Dec 67	Mar 70	Sep 77	56-45-25N 048-45-51E			
27B	111E	Jan 68	Mar 70	Sep 77	56-45-49N 048-27-47E			
28B	111E	Mar 68	Mar 70	Sep 77	56-52-38N 048-34-27E			
30B	111E	Jan 68	Mar 70	Sep 77	56-51-17N 048-25-36E			
31B	111E	Feb 68	Mar 70	Sep 77	56-44-25N 048-42-14E			
32B	111E	Mar 68	Mar 70	Sep 77	56-48-29N 048-20-40E			
Group C								
LCF C	—	May 68	Sep 70	Jun 78	56-59-41N 048-20-14E			
34C	111E	Jul 68	Aug 70	Jun 78	56-55-09N 048-16-33E			
35C	111E	Jun 68	Jun 70	Jun 78	56-59-31N 048-25-21E			
36C	111E	Jul 68	Aug 70	Jun 78	57-01-46N 048-15-03E			
40C	111E	Jul 68	May 71	Jun 78	56-55-54N 048-27-11E			
47C	111E	Aug 68	Aug 70	Jun 78	56-56-09N 048-20-05E			
48C	111E	Feb 69	Jun 70	Jun 78	57-03-21N 048-22-10E			
50C	111E	Jan 69	Nov 70	Jun 78	56-58-41N 048-10-10E			
51C	111E	Jan 69	May 71	Jun 78	56-53-41N 048-09-23E			
54C	111E	Oct 68	Aug 70	Jun 78	57-04-30N 048-10-55E			
55C	111E	Oct 68	Aug 70	Jun 78	57-02-40N 048-03-25E			
Group D								
LCF D	—	Jun 68	Jun 71	Sep 79	56-49-56N 048-14-35E			
37D	111E	Aug 68	Aug 70	Sep 79	56-42-57N 048-03-11E			
38D	111E	Sep 68	Aug 71	Sep 79	56-50-34N 048-06-49E			
39D	111E	Aug 68	Jun 71	Sep 79	56-54-11N 048-00-14E			
41D	111E	Oct 68	Aug 70	Sep 79	56-46-13N 048-16-14E			
42D	111E	Nov 68	Aug 70	Sep 79	56-41-28N 048-16-23E			
43D	111E	Nov 68	Jun 70	Sep 79	56-43-26N 048-20-43E			
44D	111E	Nov 68	Aug 70	Sep 79	56-45-52N 048-11-55E			
49D	111E	Feb 69	Nov 70	Sep 79	56-53-32N 048-14-23E			
52D	111E	Jan 67	Sep 70	Sep 79	56-50-02N 048-20-40E			
53D	111E	Apr 69	May 71	Sep 79	56-49-57N 048-01-55E			
Group E								
LCF E	—	Jun 69	Nov 71	—	56-59-08N 048-36-21E			
56E	111E	May 69	Jun 71	—	57-01-10N 048-47-44E			
57E	111E	May 69	Jun 71	—	56-55-58N 048-46-11E			
58E	111E	May 69	Jun 71	—	57-04-41N 048-44-38E			
59E	111E	May 69	Jun 71	—	57-02-05N 048-40-56E			
60E	111E	Jun 69	Aug 71	—	57-03-49N 048-34-38E			
61E	111E	Jun 69	Jun 71	—	56-55-27N 048-34-06E			
65E	111E	Dec 69	Jan 72	—	56-55-43N 048-39-27E			
72E	111E	Dec 69	Aug 71	—	57-01-07N 048-32-50E			
73E	111E	Dec 69	Jan 72	—	56-58-05N 048-42-00E			
76E	111E	Dec 69	Aug 71	—	57-03-15N 048-29-43E			
Group F								
LCF F	—	May 69	Jan 72	—	56-50-40N 048-51-41E			
62F	111E	Oct 69	Oct 71	—	56-52-07N 048-42-58E			
63F	111E	Oct 69	Oct 71	—	56-50-11N 048-45-29E			
64F	111E	Nov 69	Oct 71	—	56-53-14N 048-48-05E			
66F	111E	Jul 69	Aug 71	—	56-48-23N 048-56-20E			
67F	111E	Jul 69	Sep 71	—	56-45-40N 048-55-35E			
68F	111E	Nov 69	Jan 72	—	56-47-17N 048-51-26E			
69F	111E	Jun 69	Sep 71	—	56-51-06N 048-57-18E			
71F	111E	Aug 69	Sep 71	—	56-54-31N 048-53-53E			
74F	111E	Dec 69	Oct 71	—	56-57-29N 048-52-15E			
75F	111E	Dec 69	Sep 71	—	56-48-13N 049-02-18E			
Training Site								
45X	111E	Aug 68	—	—	56-33-48N 048-03-45E			
Complex Support Facilities					56-34-01N 048-02-46E			
Rail-To-Road Transfer Point					56-33-36N 048-03-58E			
Headquarters Command and Control Facility					56-34-08N 048-03-10E			
Alternate Headquarters Command and Control Facility					56-59-10N 048-36-19E			
Headquarters Radio Communications Transmitter Station					56-20-24N 048-12-44E			

*All SS-7 launch sites had been dismantled by August 1978.

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Table 2.
Administration and Housing Area
(Keyed to Figure 4)

This table in its entirety is classified TOP SECRET RUFF

Item	Description	Dimensions (m)
Headquarters Command and Control Facility		
1	Bldg (earth mounded)	
2	Command & control bldg (earth mounded)	
3	Vehicle storage bldg (earth mounded)	
4	1-story support bldg	
5	Comsat transceiving bldg	
6	Headquarters/administration bldgs (2)	
7	Administration bldg	
a		
b		
8	Utility bldg	
Vehicle Maintenance and Motor Pool Area		
9	Garage	
10	Vehicle maintenance shop	
11	Vehicle maintenance administration bldg	
12	Maintenance shed	
13	Utility bldg	
14	Maintenance bldg/machine shop	
a		
b		
15	Vehicle maintenance bldg	
16	Utility bldgs (2)	
17	Maintenance shed	
18	Pumphouse	
19	Utility bldg	
20	Clerestory vehicle maintenance bldg	
21	14-bay vehicle maintenance garage	
22	Fire station	
23	Maintenance garage	
24	Parts storage bldg	
25	Vehicle maintenance garage	
26	Vehicle maintenance garage	
27	Vehicle maintenance bldg	
28	Vehicle storage bldg	
29	Maintenance bldg	
a		
b		
30	Garage	
a		
b		
Housing and Administration Areas		
31	Security/check-in bldg	
a		
b		
32	2-story barracks (2)	
33	Storage bldg	
34	Messhall	
35	3-story barracks	
36	Personnel services bldg	
37	4-story barracks	
38	3-story barracks	
39	3-story barracks	
40	Messhall	
41	Bldg	
42	Bldg	
43	Messhall support bldg	
44	Messhall support bldg	
45	Recreation center	
a		
b		
46	Administration bldg	
47	Administration bldg	
48	3-story barracks (2)	
49	Poolhouse	
50	Vehicle storage bldg	

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Table 3.
Railhead and Storage Area
(Keyed to Figure 5)

This table in its entirety is classified TOP SECRET RUFF

Item	Description	Dimensions (m)
Receiving and Storage Area		
1	Batch plant	
a		
b		
c		
d		
2	Vehicle maintenance bldg	
3	Storage bldg	
4	Storage bldg	
5	Administration bldg	
6	Vehicle maintenance bldg	
7	Storage bldgs (2)	
a		
b		
8	Storage bldg	
9	Storage bldgs (2)	
10	Storage bldg	
11	Utility bldg	
12	Storage bldg	
13	Warehouse	
14	Warehouse	
15	Warehouse	
16	Bldg	
17	Storage bldg	
18	Storage bldg	
a		
b		
19	Warehouse	
20	Warehouse	
21	Bldg	
22	Storage bldg	
23	Utility bldg	
24	Storage bldg	
25	Bldg	
26	Bldg	
27	Garage	
28	Storage bldg	
29	Storage bldg	
30	Storage bldg	
31	Storage shed	
32	Garage	
33	Warehouse	
34	Warehouse	
35	Warehouse	
36	Warehouse	
37	Warehouse	
38	Bldg	
39	Bldg	
40	Bldg	
Sewage Treatment Plant		
41	Sewage treatment control bldg	
42	Support bldg	
43	Utility bldg	
Construction Support Area		
44	Warehouse	
45	Bldg	
46	Heating plant	
a		
b		
47	Maintenance bldg	
a		
b		
48	Materials receiving bldg	
49	Batch plant	
50	Bldg	
51	Warehouse	
52	Bldg	
53	Bldg	
a		
b		
54	Warehouse	
55	Maintenance bldg	
56	Warehouse	
a		
b		
57	Bldg	
Forced Labor Camp		
58	Maximum security bldg	
59	Messhall	
60	Barracks	
61	Barracks	
62	Administration bldg	
63	Barracks	
64	Barracks	
65	Administration bldg	
66	Bldg	
67	Bldg	

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Table 4.
Rail-to-Road Transfer Point at Yoshkar-Ola
(Keyed to Figure 6)

This table in its entirety is classified TOP SECRET RUFF

Item	Description	Dimensions (m)
Receiving Area		
1	Bldg	
2	Bldg ucon	
3	General-purpose bldg	
4	Storage bldg	
5	Utility bldg	
Propellant Facility (formerly SS-7)		
6	Open shed, SS-7 transporter oxidizer fillpoint (dismantled)	
7	Open shed, oxidizer storage	
8	Open shed, oxidizer pumphouse	
9	Industrial propellant master control bldg	
10	Bldg	
11	Open shed, SS-7 transporter fuel fillpoint (dismantled)	
12	Open shed, SS-7 fuel storage	
13	Open shed, fuel pumphouse	
14	Utility bldg	
Maintenance Area		
15	Utility bldg	
16	10-bay garage	
17	Utility storage bldg	
18	Utility storage bldg	
19	Utility storage bldg	
20	Clerestory inspection & maintenance bldg	
a		
b	2 sectns	
21	Utility storage bldg	
22	Utility bldg	
23	1-story administration bldg	
24	Utility storage bldg	
25	4-bay garage	
26	2-story administration bldg	
27	6-bay maintenance bldgs (3)	
28	4-bay maintenance bldgs (2)	
29	4-bay maintenance bldg	
30	7-bay maintenance bldg	
General Support Area		
31	Heating plant	
32	Fuel offloading bldg	
SS-13 Component Storage Area		
33	1-bay, drive-in SS-13 component storage bldg	
34	Storage bldg	
35	Storage bldg	
36	Storage bldg	
37	5-bay garage for SS-13 support vehicles	
SS-13 RIM Facility		
38	Clerestory SS-13 inspection & maintenance bldg	
39	Administration bldg	
40	1-bay, SS-13 drive-through inspection bldg	
SS-13 Support Area		
41	Pumphouse	
42	Administration bldg	
43	Open shed	
44	Open shed, vehicle fuel point	
45	Vehicle dispatch bldg	
46	Maintenance/supply bldg	
47	Storage bldg	
48	Bldg	
49	Bldg	
SS-13 Training Site		
50	Administration bldg	
51	Vehicle storage bldg	
52	Training bldg	
a	control section	
b	Launch control capsule simulator section	
53	IIIE Training site	
SS-13 Shop and Maintenance Area		
54	Storage bldg	
a		
b	2 sectns	
55	Utility bldg	
56	Utility bldg	
57	Storage bldg	
58	Earth-mounded storage bldg	
59	2-story administration bldg	
60	9-bay garage	

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REFERENCES

IMAGERY

(TSR) All KEYHOLE imagery of the Yoshkar-Ola Complex from April 1972 [redacted] through September 1979 [redacted] was used in the preparation of this report. 25X1 25X1

MAPS OR CHARTS

SAC. USATC, Series 200, Sheets 0155-17 and -22, scale 1:200,000 (UNCLASSIFIED)
ACIC. USATC, Series 200, Sheets 0155-18 and -23, scale 1:200,000 (UNCLASSIFIED)

DOCUMENT

1. NPIC, [redacted] RCA-01/0027/72, *Yoshkar-Ola ICBM Complex*, Jul 72 (TOP SECRET [redacted] 25X1 25X1

*Extracted material is TOP SECRET RUFF.

REQUIREMENT

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

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