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Basic Imagery Interpretation Report



**NATIONAL
PHOTOGRAPHIC
INTERPRETATION
CENTER**

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**ACTIVITY AT TYURATAM MTC AND PLESETSK MSC
JULY-DECEMBER 1969**

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**STRATEGIC SSM & SPACE FACILITIES
USSR
FEBRUARY 1970**

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INSTALLATION OR ACTIVITY NAME Tyuratam SSM Complex (Tyuratam Missile Test Center)					COUNTRY UR
UTM COORDINATES NA	GEOGRAPHIC COORDINATES 45-56-40N 063-28-00E	CATEGORY	RENUMBER	COMIREX NO.	NIETR NO.
MAP REFERENCE SAC. USATC 200, Sheets M0246-13HL & M0246-14HL, 5th ed, Aug 65, scale 1:200,000 (SE-					
LATEST IMAGERY USED			NEGATION DATE (if required) NA		

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INSTALLATION OR ACTIVITY NAME Plesetsk SSM Complex (Plesetsk Missile and Space Center)					COUNTRY UR
UTM COORDINATES NA	GEOGRAPHIC COORDINATES 62-56-15N 040-37-00E	CATEGORY	RENUMBER	COMIREX NO.	NIETR NO.
MAP REFERENCE SAC. USATC 200, Sheet M0102-9HL, 5th ed, Mar 69, scale 1:200,000 (SECRET					
LATEST IMAGERY USED			NEGATION DATE (if required) NA		

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ABSTRACT

This report is the second in a series of biannual reports which provide an overview of events observed at the Tyuratam Missile Test Center (Tyuratam SSM Complex) and the Plesetsk Missile and Space Center (Plesetsk SSM Complex) based on KEYHOLE photography acquired during specific periods. Photography acquired during the first half of Fiscal Year 1970 has been used in the present compilation and includes

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Significant events observed at the Tyuratam Missile Test Center during the reporting period include: damage at launch pad J1, probably caused by a malfunctioning launch vehicle; the post-disaster presence of a launch vehicle on launch pad J2 on the probable completion of launch group P; the identification of the sixth site (site Q6) of launch group Q; the dismantling of the gantry formerly used at launch pad G1; new construction at launch area G3-G4; new unidentified construction southeast of launch site I1; and construction of a new road and rail-served facility north of the air liquefaction facility. Construction has continued on the second pedestal at the space tracking facility. Missile activity during the reporting period was observed at launch complex C, launch pad G2-A, launch site I7, and at launch pad J2.

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The Plesetsk Missile and Space Center was partially covered by photography of limited interpretability. A second dummy launch site, designated dummy launch site B, was identified in August 1969.

The data derived from photography is presented in textual form proceeding in alphabetical and numerical sequence through launch complexes, groups, and sites, followed by those elements of the test centers not alphabetically or numerically designated. Information on each of these components is presented chronologically and in most cases is directly related to a particular KEYHOLE mission. Annotated photographs, line drawings, and tables are included where pertinent.

INTRODUCTION

Photo-derived information of the Soviet missile test centers has been presented in various formats and publications, as photography has been acquired and exploited. Such reporting, although timely and expedient, makes it difficult for users to correlate and assess the significance of developments. The arrangement of photo-derived data in this report is intended to reduce these difficulties. However, the report is not intended as a substitute for detailed photo interpretation reports and memoranda on specific areas of interest. Locational, environmental, and historical information which is available in other reports has been omitted from this compendium. The previous report¹ in this series was published in October 1969. Tables 1 and 2 present a summary of photographic coverages of the components of the centers. Tables 3 and 4 present listings of scheduled/reported launchings from the centers.

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BASIC DESCRIPTION

Tyuratam Missile Test Center (Figure 1)

LAUNCH COMPLEX A

Summary of Activity

Equipment and vehicles such as SS-6 transporter-erectors, cryogen cars, and rail cars were observed in the complex, but no missile activity was identified. In the complex support facility, the new building at the northeast end of the spacecraft facility appears to be complete, but construction is still in progress on the annex to the spacecraft facility.

LAUNCH COMPLEX B

Summary of Activity

An SS-6 transporter-erector, several rail cars, and miscellaneous vehicles and pieces of equipment which are usually observed at launch complex B were seen during the reporting period. No missile activity or significant changes in facilities were noted.

LAUNCH COMPLEX C

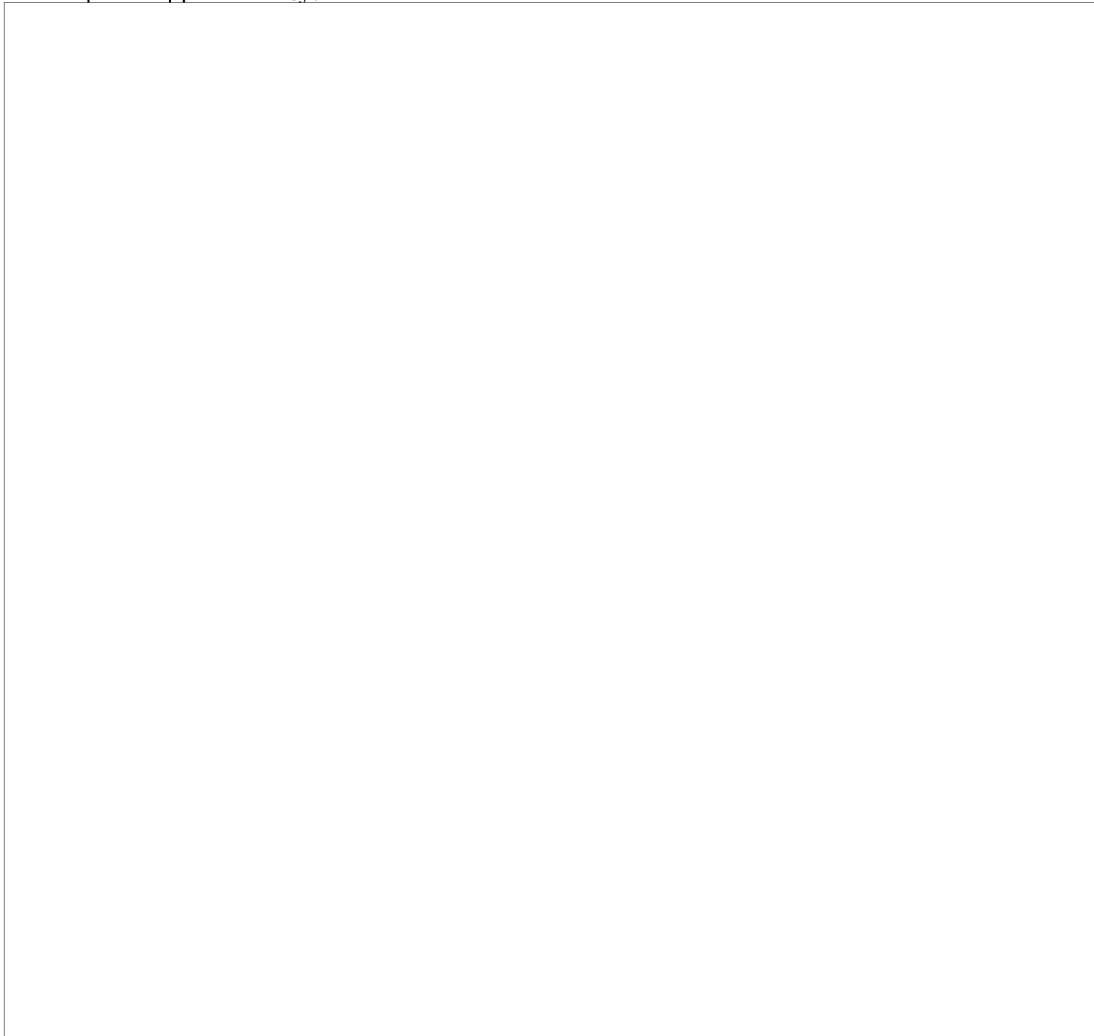
Summary of Activity

On [redacted] two missiles, probably SS-7s, were observed in a horizontal position on the loop road at the east side of launch pad C1 (Figure 2). On [redacted] an erected missile was observed on launch pad C2. No significant changes in facilities were noted during the reporting period. Numerous pieces of SS-7 ground support equipment were observed at various points throughout the launch complex and canvas-covered probable SS-9 stage transporters were observed near the missile checkout buildings in the complex support facility.

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TOP SECRET

RCA-15/0021/70

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LAUNCH COMPLEX D

Summary of Activity

Vehicles and equipment normal to the complex were observed during the reporting period. No missile activity or significant changes in facilities have been observed.

LAUNCH COMPLEX E

Summary of Activity

During August and September 1969, the tall steel probable lightning arrester towers at launch pads E1 and E2 appeared to have been in the process of being removed. However, on [] they appeared to be intact, suggesting that maintenance or modifications had been performed on the towers. Numerous small vehicles and pieces of equipment were observed at various points in the complex on that day. No missile activity or other changes in facilities were observed.

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TYURATAM ICBM TEST SUPPORT FACILITY 5

Summary of Activity

This facility, formerly referred to as the support facility between launch complexes E and F, showed no significant changes during the reporting period.

LAUNCH COMPLEX F

Summary of Activity

Vehicles normal to the complex were observed during the reporting period. On [] [] the right silo door was open and a long vehicle or piece of equipment was parked on the apron in front of it. A second long vehicle or piece of equipment was parked on the loop road just east of the right silo. No changes in facilities were observed.

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LAUNCH COMPLEX G

Summary of Activity

At launch area G1-G2, the gantry on the G1 side of the launch area has been dismantled (Figure 3). On [redacted] a missile component approximately [redacted] (100 feet) in length was observed in a horizontal position at launch pad G2-A. On [redacted] a missile was observed erected on launch pad G2-A. Construction continues on the structure in an excavation north of the launch area.

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Vehicles and equipment normally observed in launch area G3-G4 have been observed during the reporting period.

A second arch-roofed building is under construction at the electronics facility south of launch area G3-G4. The gantry was positioned on G3 on [redacted] and on G4 on [redacted]. On [redacted] a rectangular excavation was observed at the northwest corner of each launch pad and the one at G3 appeared to have a concrete base in it (Figure 4).

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At launch area G5-G6, SS-11 ground support equipment and missile canisters were regularly observed. Approximately 90 canisters are now in open storage in the launch area. The gantry has been parked in its usual position at the switch in the gantry tracks.

In the complex support facility, the usual rail cars and miscellaneous vehicles were observed. Construction continues on four buildings in the SS-11 support area, and normal SS-11 ground support equipment was observed there.

LAUNCH COMPLEX H

Summary of Activity

No missile activity or significant changes in facilities were observed during the reporting period. Several long vehicles, probably fuel trailers, were parked near launch pad H2 on [redacted]. Tank and cryogen cars were regularly observed on the rail spurs in the launch area.

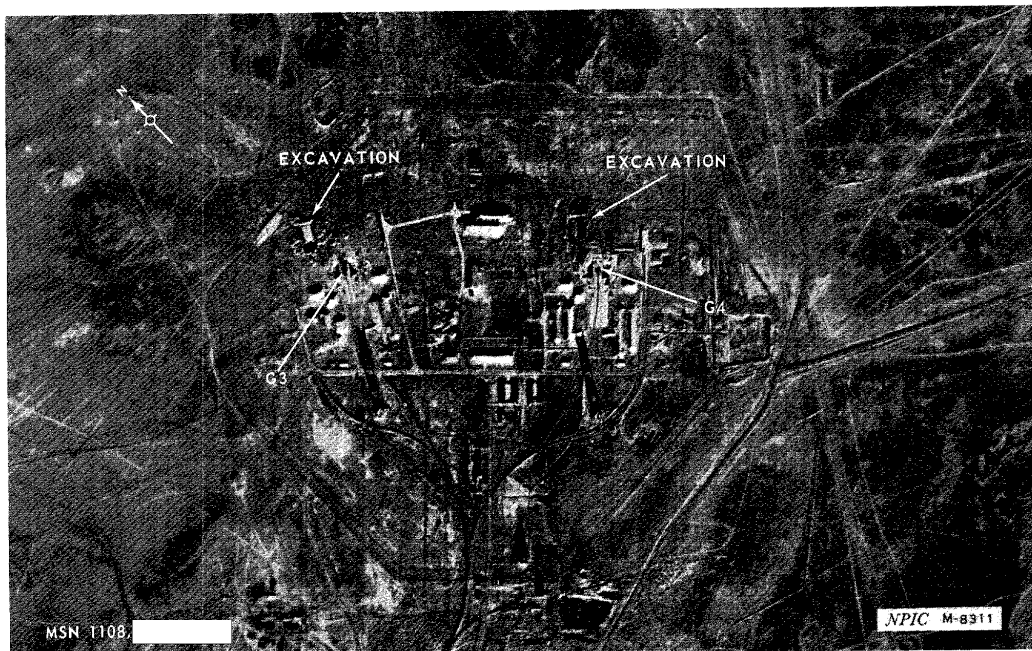
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LAUNCH GROUP I

Summary of Activity

No missile activity or significant changes in facilities were observed at sites I1 through I6 during the reporting period.

A recently constructed unidentified facility is approximately 1 nautical mile southeast of launch site I1 (Figure 5). It consists of an improved road serving two structures adjacent to a large concrete hardstand.



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FIGURE 4. LAUNCH AREA G3-G4, TYURATAM LAUNCH COMPLEX G

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At site I7, two stages of a missile were observed at the center silo on [redacted] (Figure 6), and on [redacted] three long vehicles or pieces of equipment at the north silo appeared to have been involved in a fueling operation.

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LAUNCH COMPLEX J

Summary of Activity

Extensive damage to the pad and ancillary structures, apparently the result of a large explosion, was observed at launch pad J1 on [redacted] (Figure 7). On [redacted] a launch vehicle was observed erected on launch pad J2, and it was also observed at that position on [redacted] Construction was continued on the probable heating and power plant which is under construction west of the vehicle assembly building.

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LAUNCH GROUP K

Summary of Activity

On [redacted] work appeared to be in progress on the east side of the silos at K1 and K2, in the vicinity of the three tanks associated with each silo. This work had previously been noted and was thought to have been completed. No missile activity or other changes in facilities were observed during the reporting period. The ditch, possibly for a cable, between site K1-K2 and site K3 has been backfilled.

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LAUNCH GROUP L

Summary of Activity

The access road to launch site L4 has been repaved and extended beyond the silo apron to form a looped access road. On [redacted] two long and several short vehicles or pieces of equipment were observed at site L4 and one small vehicle was observed at site L9. A few miscellaneous vehicles and pieces of equipment were observed at sites L4 and L9 on [redacted] and at sites L2, L3, and L4 on [redacted]. One small vehicle or piece of equipment was observed at L7 on [redacted]. No significant change in facilities was observed.

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LAUNCH GROUP M

Summary of Activity

No missile activity or significant changes in facilities were observed during the reporting period.

LAUNCH GROUP N



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At N3, a linear horizontal object is across the silo opening, and a small crane is on the apron near the silo. A large crane and probable steel lattice tower components are positioned west of N3 but within the loop road.

The only significant activity observed at sites of the group during the reporting period was the presence of a long vehicle or piece of equipment at N2 on

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LAUNCH GROUP O

Summary of Activity

No missile activity or significant changes in facilities were observed during the reporting period.

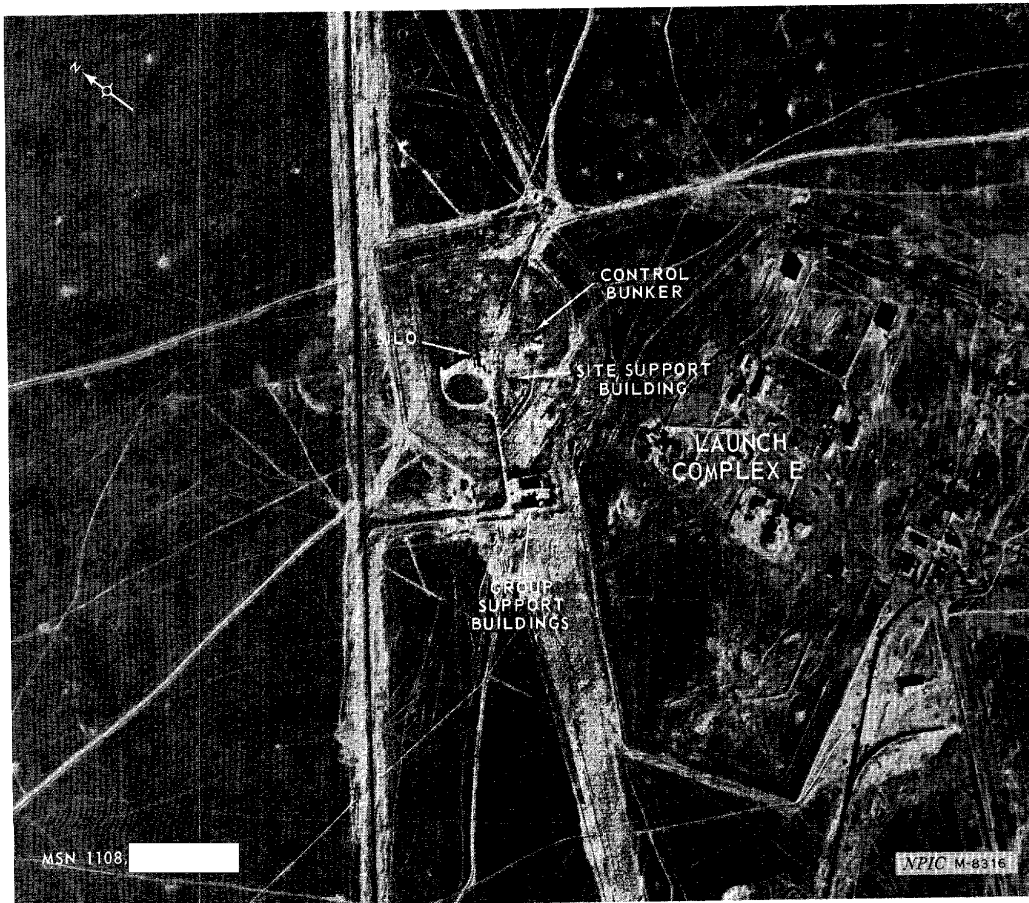
LAUNCH GROUP P

Summary of Activity

All six sites of the group continue to exhibit type IIC site characteristics and the sites were probably externally complete in December 1969. Launch site P3 is the control site for the group (Figure 9).

On approximately ten vehicles or pieces of equipment were observed at site P6. One of these is long, and it is positioned in front of, and near the open silo. This activity may indicate facilities checkout, or may be a loading operation in progress.

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FIGURE 9. CONTROL SITE P3, TYURATAM LAUNCH GROUP P

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LAUNCH GROUP Q

Summary of Activity

A sixth site in this group was identified and designated site Q6 (Figure 10). Construction continues on all six sites of the group and they continue to exhibit type IIIC characteristics. Construction has not progressed sufficiently on any of the silos to make a positive identification of their type. Launch site Q2 has been identified as the control site for the group.

TRACKING FACILITIES

Summary of Activity

At the Tyuratam Space Tracking Facility, a probable pedestal is under construction on the base recently constructed to the east of the control building.

No significant changes in facilities were noted at the Tyuratam Rangehead Tracking Facility.

SUPPORT FACILITIES

Summary of Activity

No unusual activity or significant changes in facilities were observed at the main support base, the air liquefaction facility, or at the storage facilities along the west side of the main north-south rangehead road.

The graveyard at the main support base appears to have been enlarged by an estimated 40 graves since May 1969. This seems to be an unusually large expansion in a short period of time and possibly may have some relation to the disaster at launch complex J.

New Construction

Two areas of unidentified new construction are noted along the main north-south rangehead road (Figure 11). The first of these is approximately 5 nautical miles (nm) north of the air liquefaction facility. A rail spur was extended from the air liquefaction facility to that point, and a road was subsequently constructed from the main north-south rangehead road to the end of the new rail spur.

The second area of new construction is approximately 1 nm west of the storage facility which is opposite the air liquefaction plant and on the west side of the main north-south rangehead road. It consists of a small square structure flanked on its north and south sides by larger rectangular structures that almost appear to be mirror images of each other. A road has been constructed from the storage facility to the new construction.

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Plesetsk Missile And Space Center

In the six-month period from June through December 1969, launch sites 1, 2, 3, 4, 5, 6, 8, 9, 10, 22, the construction support facility, [redacted] and the launch sites 9 and 10 support facility at the Plesetsk Missile and Space Center were observed only once on Mission 1108-2 (Figure 12) and the interpretability of this coverage was not adequate to permit an analysis of activity.

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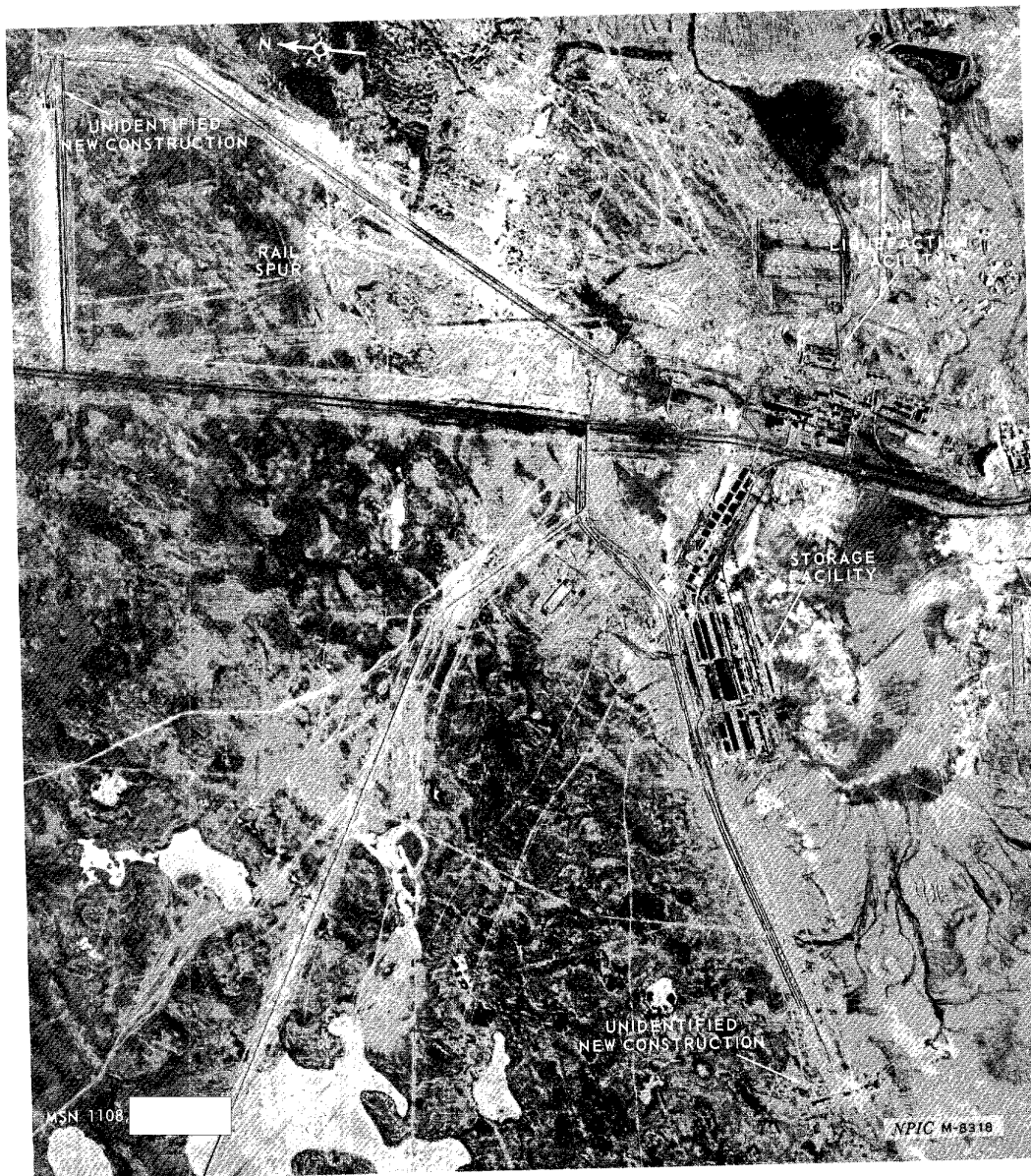
A second dummy launch site, designated dummy launch site B, was identified in August 1969.

Due to the very poor interpretability of Mission 1108-2, this mission is not included in Table 2, the photo-coverage listing for the individual components of the center.

LAUNCH SITE 7 (SS-8 FACILITY)

Summary of Activity

Coverage of launch site 7 was very limited with only one interpretable coverage on which the site was partially observed. No activity was observed.



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FIGURE 11. SUPPORT FACILITIES ALONG THE MAIN NORTH-SOUTH RANGEHEAD ROAD, TYURATAM MISSILE TEST CENTER

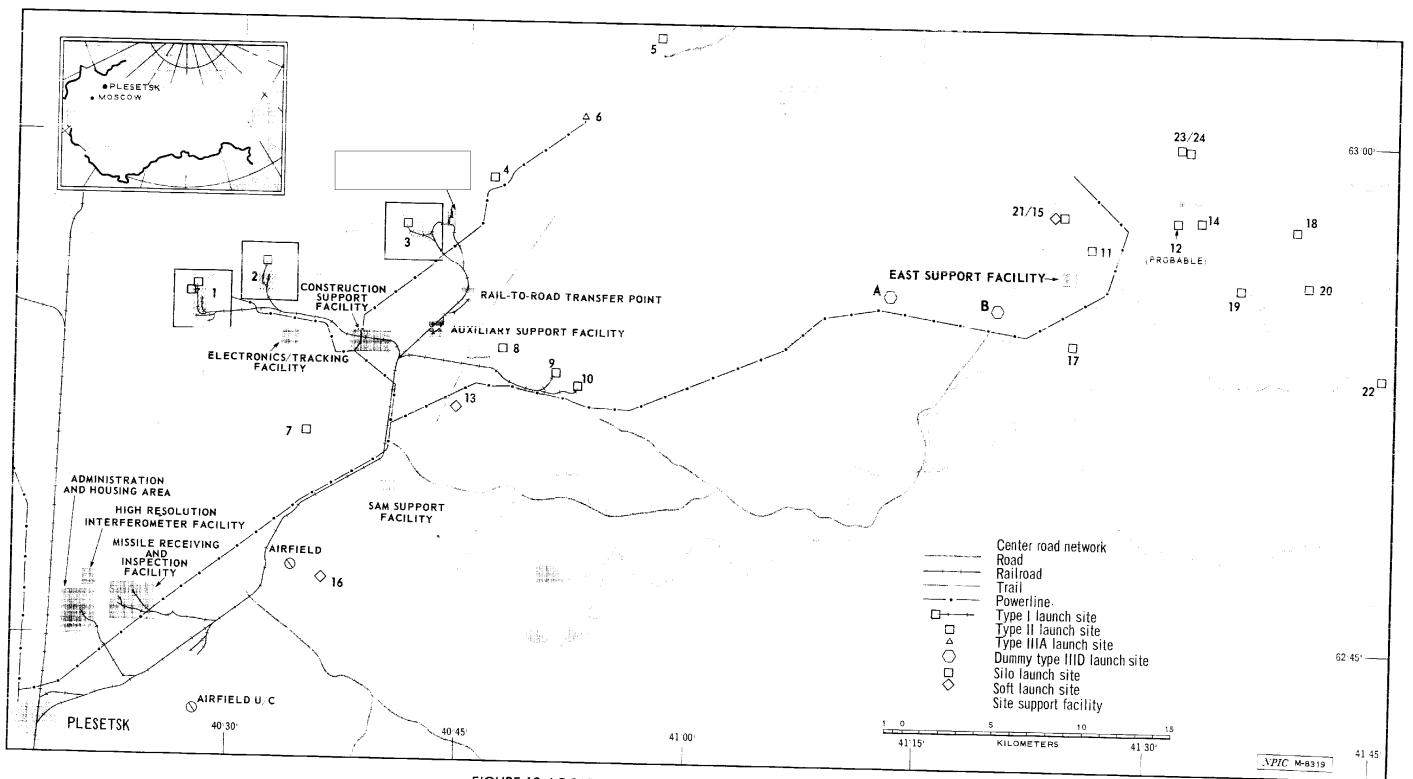


FIGURE 12. LOCATION MAP, PLESETSK MISSILE AND SPACE CENTER

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RCA-15/0021/70

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LAUNCH SITE 13
(SL-8 SPACE LAUNCH FACILITY)

Summary of Activity

No activity has been observed at this site during the reporting period.

LAUNCH SITES 11, 14, 17, 19 20, 23, 24 and
LAUNCH CONTROL FACILITY 12A
(SS-13 FACILITIES)

Summary of Activity

All SS-13-related facilities except launch site 22 were covered at least once on high-resolution photography.

On [redacted] at launch site 14, one van was on the apron adjacent to the silo. At launch site 17, three vans were adjacent to the silo, one was on the silo apron, and one was on the site access. At launch site 11, the silo door of the east silo was open and a circular light-toned probable environmental cover was observed over the silo aperture. Four vans were adjacent to the silo and one was on the site access. 25X1

On [redacted] at launch site 11, the silo door was still in the open position and the probable environmental cover was still in place. Two vans were adjacent to the open silo door, and a truck-mounted crane was parked on the west side of the open silo. No other activity was observed. 25X1

LAUNCH SITES 15, 16, and 21
(ASSOCIATED MISSILE SYSTEM UNKNOWN)

Summary of Activity

No activity was observed at launch site 15. Construction activity at site 21 remained suspended. On [redacted] three vans were on the access road to site 16. No other activity was observed during the reporting period. 25X1

DUMMY LAUNCH SITES A AND B

Description

Dummy launch site A at the Plesetsk Missile and Space Center was the first of two dummy launch sites constructed at the center. When dummy site A was observed in Jan-

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RCA-15/0021/70

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uary 1969, the site signature closely resembled that of a completed type IIID launch site, a type not previously deployed at Plesetsk and it was designated possible launch site 26.

The construction of a second such site, designated dummy site B (Figure 13), during July 1969 provided additional evidence that possible launch site 26 was, in fact, a dummy site.

Dummy site B was first observed in August 1969, but the site was not present in June 1969. The field in which the site was constructed was first cleared of trees in October 1967. No activity was observed in the cleared area until July 1969 when construction of the site support building was begun. The support building was never completed, and no other activity was observed in the cleared area until August 1969 when site B was observed to be nearly complete. The absence of a silo itself and the less than two months' construction time indicate that this is not an operational type IIID site.

SUPPORT FACILITIES

Summary of Activity

Main Support Base. Minor construction continues throughout the housing area. Two large warehouse-type buildings are under construction on the east side of the facility between the main power substation and communications facility 1. A new rail siding is being constructed from the receiving yard tracks and leading into the receiving area.

Rail-to-Road Transfer Point. Except for the presence of normal numbers of rail cars, no significant activity was observed at the transfer point.

Propellant Storage and Handling Facility. Construction at this facility has not progressed since the previous report. The only portion of the facility which appears to be active is the heating plant which also supports the new airfield. No other activity was observed during the reporting period.

Missile Receiving and Inspection Facility. On [redacted] an SS-13 transporter-erector was observed on the hardstand in front of the north building of the central receiving area. Two rail cars were observed at the west receiving area on [redacted] and one rail car was observed there on [redacted]. No other activity was observed during the reporting period.

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SS-13 GROUND SUPPORT EQUIPMENT AREA

Summary of Activity

Two SS-13 transporter-erectors were at the SS-13 silo mockup on [redacted] and a transporter-erector was in the raised position over the silo mock up on [redacted].

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RCA-15/0021/70

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REFERENCES

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MAPS OR CHARTS

SAC. US Air Target Chart 200, Sheets M0246-13HL & M0246-14HL, 5th ed, Aug 65, scale 1:200,000 (SECRET/ [redacted])

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SAC. US Air Target Chart 200, Sheet M0102-9HL, 5th ed, Mar 69, scale 1:200,000 (SECRET [redacted])

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DOCUMENT

- 1. NPIC. [redacted] RCA-15/0007/70, *Developments and Activity at the Tyuratam and Plesetsk SSM Complexes (Tyuratam Missile Test Center and Plesetsk Missile and Space Center), January-June 1969*, Oct 69 (TOP SECRET [redacted])

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RELATED DOCUMENTS

- NPIC. [redacted] *Launch Vehicle on Launch Pad J2, TTMTTC, USSR*, Aug 69 (TOP SECRET [redacted])
- NPIC. [redacted] RCA-15/0003/70, *Tyuratam Launch Group I (Sites II-17), USSR*, Sep 69 (TOP SECRET [redacted])
- NPIC. [redacted] RCA-15/0003/70, *Tyuratam ICBM Launch Test Site C1/2/3, USSR*, Jan 70 (TOP SECRET [redacted])
- NPIC. [redacted] RCA-15/0002/70, *Plesetsk Space Launch Facilities 1, 2, and 3, USSR*, Sep 69 (TOP SECRET [redacted])
- NPIC. [redacted] RCA-15/0010/70, *Plesetsk Dummy Launch Sites A and B, USSR*, Nov 69 (TOP SECRET [redacted])

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REQUIREMENTS

- COMIREX - P03, P05
- NPIC Project 220507AA

"All KEYHOLE photography of the Tyuratam Missile Test Center and the Plesetsk Missile and Space Center from [redacted] up to and including [redacted] was used in compiling this report.

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