

TOP SECRET

Copy 111

54 Pages



May 1966



EVALUATIONS OF SOVIET
SURFACE-TO-SURFACE
MISSILE DEPLOYMENT
23RD REVISION

A Report of the Deployment Working Group
of the
Guided Missile and Astronautics Intelligence Committee



TOP SECRET

GROUP 1
Excluded from automatic
downgrading and declassification

TOP SECRET

EVALUATIONS OF SOVIET
SURFACE-TO-SURFACE
MISSILE DEPLOYMENT
23RD REVISION

A Report of the Deployment Working Group
of the
Guided Missile and Astronautics Intelligence Committee

May 1966

TOP SECRET

TOP SECRET

25X1

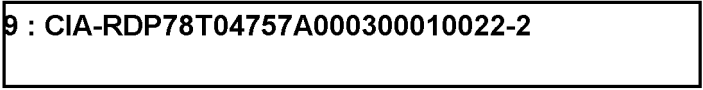
The Guided Missile and Astronautics Intelligence Committee (GMAIC) wishes to express its appreciation to the National Photographic Interpretation Center for its assistance in the editing, illustration, and publication of this report.

TOP SECRET

25X1



TOP SECRET



GUIDED MISSILE AND ASTRONAUTICS INTELLIGENCE COMMITTEE



25X1

DEPLOYMENT WORKING GROUP

MEMBERSHIP

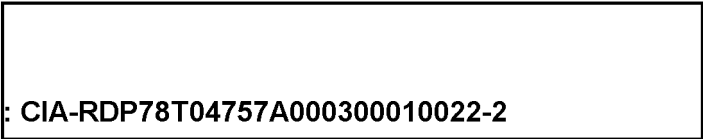
25X1



Photographic Interpreter support is provided by the Photographic Analysis Group, NPIC.

NOTE: All correspondence relative to this report should be directed to the Chairman, Guided Missile and Astronautics Intelligence Committee (GMAIC).

25X1



TOP SECRET

TOP SECRET

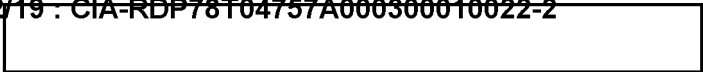
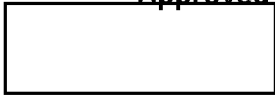
PREFACE

This report, published bimonthly by the GMAIC Deployment Working Group (DWG), provides a comprehensive, ready-reference listing of all ICBM, IRBM, and MRBM deployment locations, types of site configurations, photographic references, estimated construction and operational status, and other evaluations by the DWG. These data constitute the majority view of the DWG membership, and may not correspond precisely to individual assessments by each member. Additional data may be added to future revisions.

Dissemination of the report was previously limited to holders of the DWG report, Soviet Surface-to-Surface Missile Deployment. Because the information contained herein is both supplemental and self-sustaining, distribution will no longer be limited to holders of the above report.

TOP SECRET

TOP SECRET



X1

5X

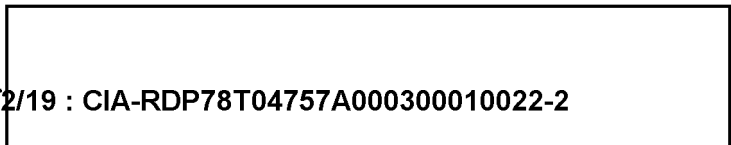
CONTENTS

	Page
Introduction	1
Soviet ICBM Deployment	1
Soviet IRBM/MRBM Deployment	15
Table 1. Summary of Estimated Status of Identified ICBM, IRBM, and MRBM Launchers at Deployed Complexes, 	18
Table 2. Summary Evaluation of Soviet ICBM Deployment	19
Table 3. Summary Evaluation of Launch Facilities, Tyuratam Missile Test Center	27
Table 4. Summary Evaluation of Soviet IRBM Deployment	28
Table 5. Summary Evaluation of Soviet MRBM Deployment	30
Table 6. Summary Evaluation of Selected Launch Facilities, Kapustin Yar Missile Test Center	38
Table 7. Summary Evaluation of Soviet Fixed Field Sites (SSM Fixed Field Positions)	39
Table 8. Summary Evaluation of Soviet IRBM/MRBM Sites Without Support Facilities.	43
Table 9. Composition of IRBM/MRBM Complexes	44
Table 10. Soviet ICBM, IRBM, and MRBM Systems, Estimated Technical Characteristics and Performance	45

25X

25X

TOP SECRET



TOP SECRET

ILLUSTRATIONS

	Page
Figure 1. Deployment of Soviet ICBM Complexes	Facing 1
Figure 2. Typical Configurations of ICBM Launch Sites, and Explanation of Types.	3
Figure 3. Deployment of Soviet IRBM/MRBM Complexes	14
Figure 4. Typical Configurations of IRBM/MRBM Launch Sites, With Associated Missile Systems	16
Figure 5. Kapustin Yar Missile Test Center	17

TOP SECRET

TOP SECRET

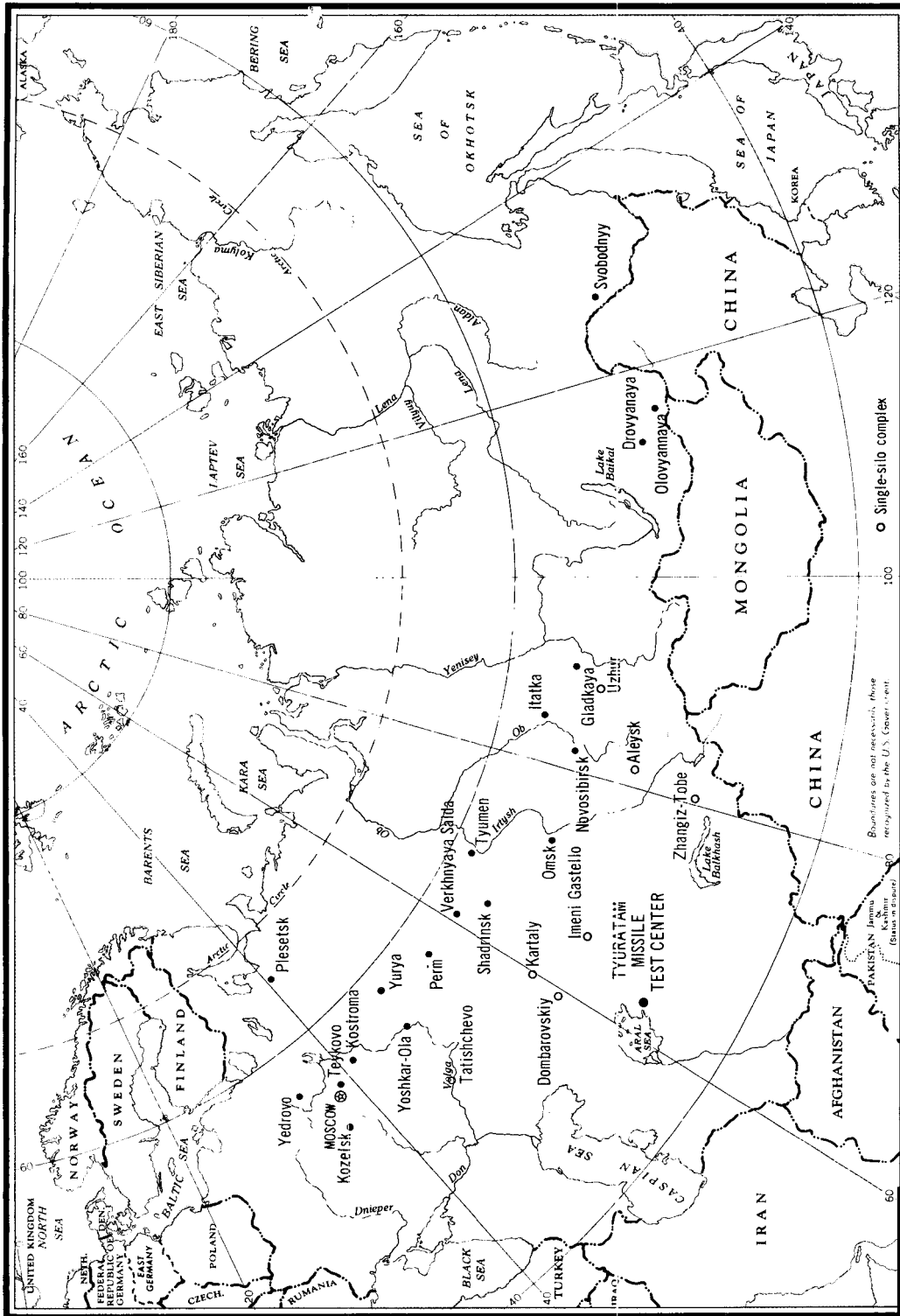


FIGURE 1. DEPLOYMENT OF SOVIET ICBM COMPLEXES.

TOP SECRET

TOP SECRET

INTRODUCTION

This report is the 23rd Revision of Evaluations of Soviet Surface-to-Surface Missile Deployment prepared by the Deployment Working Group (DWG) of the Guided Missile and Astronautics Intelligence Committee (GMAIC). The information contained in this and previous revisions is self-sustaining and supplements the basic DWG report Soviet Surface-to-Surface Missile Deployment which provides detailed information on individual launch facilities of the Soviet Strategic Rocket Forces. The basic report, dated 1 January 1962 (Control Number [redacted]) has been revised and updated on a periodic basis. Further updating is accomplished in reports prepared and published for GMAIC by the National Photographic Interpretation Center (NPIC).

This 23rd Revision covers the period from [redacted]

[redacted] and continuing analysis of previous missions and other sources have provided additional information on the Soviet strategic missile deployment program. The new data are reflected in Tables 1 through 9. Technical characteristics of Soviet ICBM, IRBM, and MRBM systems currently operational or under development are given in Table 10. Cutoff date for information in this report is [redacted]

SOVIET ICBM DEPLOYMENT

Significant developments in the Soviet ICBM deployment program since the publication of our 22nd Revision include the identification of additional single silos under construction at deployed complexes, and the discovery of initial

single-silo deployment at 2 more of the older SS-7 complexes and 1 SS-8 complex.

CURRENT DEPLOYMENT

No new ICBM complexes have been discovered since our last revision; the number identified remains at 25. See Figure 1 for locations of deployed ICBM complexes. These complexes now contain a total of 524 confirmed and probable launchers, of which 150 are soft and 374 are hard. This represents an increase of 80 launchers over the number reported in our 22nd Revision. Included in the hard launcher count are 296 single silos in various stages of construction. In addition, we are presently carrying 22 single-silo sites in the possible category which are not reflected in the total launcher count.

Of the 524 confirmed and probable launchers, 250 are estimated to be operational, including 104 in a hard configuration. We believe that 44 of the 55 launchers at Tyuratam are now completed and, although not normally considered as part of the operational ICBM force, they could be used operationally. The ICBM sites have been designated by type, as shown and explained in Figure 2.

Evaluation of all evidence received since our last revision has resulted in the following additions or changes at the complexes indicated:

ALEYSK, Launch Site 4, abandoned and deleted from the tables; Launch Site 12, Type IIIC, newly identified
 DOMBAROVSKIY, Launch Sites 15, 16, 17, and 19 through 26, Type IIIC, newly identified
 DROVYANAYA, Launch Site 35, Type IIID, newly identified
 GLADKAYA, Launch Sites 19, 38, 39, and 40, Type IIID, newly identified; Launch Site G7, previously carried as a possible site,

TOP SECRET

has been dropped from the tables
 IMENI GASTELLO, Launch Sites 16, 17, 18,
 Type IIC, newly identified
 KARTALY, Launch Sites 18, 19, 20, 21, and
 Possible Launch Sites 22 and 23, Type
 IIC, newly identified; Launch Sites L
 and M, previously carried as possible
 sites, have been dropped from the tables
 KOZELSK, Probable Launch Sites 7 and 8,
 Type IID, newly identified, under con-
 struction
 OLOVYANNAYA, Launch Site 55 and Pos-
 sible Launch Site 52, Type IID, newly
 identified
 PERM, Launch Sites 29, 30, 31, 33, 34, 35,
 36, 38, 39, 40, 41, and Possible Launch
 Sites 32, 37, and 42, Type IID, newly
 identified; Launch Sites 28(G9) and 24
 (G16), previously carried as probable
 sites, have been invalidated and dropped
 from the tables
 SVOBODNY, Launch Sites 9, 10, 11, 12, 14,
 15, 16, 17, 18, Type IID, newly identified
 TATISHCHEVO, 24 confirmed and probable
 and 2 possible Type IID launch sites
 newly identified (See Table 2)
 UZHUR, Launch Sites 20, 21, 22, and Pos-
 sible Launch Site 23, Type IIC, newly
 identified
 YEDROVO, 3 Type IID launch sites under
 construction, newly identified
 ZHANGIZ-TOBE, Launch Sites 13, 14, and
 15, Type IIC, newly identified.

SINGLE-SILO DEPLOYMENT

General

Confirmed single-silo deployment has now been detected at 3 more of the older complexes: the Yedrovo and Svobodny SS-7 complexes, and the Kozelsk SS-8 Complex. There are now 7 of

the older and 1 newer complex associated with Type IID single-silo deployment, but Type IIC deployment is still limited to the 6 newer complexes. The number of sites at these complexes continues to grow, and there are some indications that more of the older complexes may possibly be involved in single-silo deployment in the near future.

Type IIC Sites

GENERAL

Deployment of Type IIC single-silo launch sites is still confined to the Aleysk, Dombarovskiy, Imeni Gastello, Kartaly, Uzhur, and Zhangiz-Tobe complexes where a total of 110 sites has been identified, 6 of which are being carried as possible sites.

Since our 22nd Revision, excellent coverage of the Type IIC complexes shows that deployment is continuing at a steady pace. Twenty-five new Type IIC single-silo launch sites have been identified in varying stages of construction since our last revision. Activity observed at the various Type IIC complexes is described below.

ALEYSK COMPLEX

The Aleysk Complex was covered by Mis-

launch site had been constructed about 700 feet north-northwest of Launch Site 4 which apparently had been abandoned. The new site has been designated Launch Site 12. Launch Site 3 now appears to be externally complete, but the associated electronic facility is still under construction. A silo liner was observed on the rectangular mound adjacent to Launch Site 2, indicating that construction has progressed to midstage. The Aleysk Complex now consists of 11 confirmed Type IIC launch sites.

TOP SECRET

25X1

Approved For Release 2003/12/19 : CIA-RDP78T04757A000300010022-2

Approved For Release 2003/12/19 : CIA-RDP78T04757A000300010022-2

~~TOP SECRET~~

DOMBAROVSKIY COMPLEX

The Dombarovskiy Complex was covered

[redacted] Highlight of this coverage was the identification of 11 new Type IIC single-silo sites. Launch Sites 15, 17, 19, and 20 were newly identified on [redacted] and Launch Sites 16, and 21 through 26 were newly identified

[redacted] Launch Site 15, located approximately 19.5 nm south-southwest of the complex support facility, consists of an excavation in a cleared area and a support facility with 4 large rectangular buildings. Launch Site 16, located approximately 9.5 nm south-southwest of the complex support facility, consists of a support facility and a launch site in the early stages of construction. Launch Site 17, located 15 nm south of the complex support facility, consists of an excavation, 8 buildings, and track activity. Launch Site 19 is 24 nm south-southwest of the complex support facility, and consists of a fenced scarred area and a second area with 2 large rectangular buildings. Launch Site 21, located 11 nm southeast of the complex support facility, contains a launch site in the early stages of construction and a site support facility. Launch Site 22, located 15 nm south-southeast of the complex support facility, contains an excavation, track activity, and 1 rectangular building. Launch Sites 23 through 26 were in a very early stage of construction and can be negated on [redacted] Other activity at the complex is suggestive of further expansion, but construction has not progressed sufficiently at some locations to determine intended functional associations.

Launch Site 1 was still in a midstage of construction, as indicated by 2 sections of a probable silo liner located on the rectangular earth mound just northwest of the silo. At Launch Site 9 the probable L-shaped electronic facility can

now be confirmed. It consists of an excavation at the apex of an L-shaped ground scar.

IMENI GASTELLO COMPLEX

This complex was covered by [redacted] which resulted in the discovery of 3 new Type IIC sites designated Launch Sites 16, 17, and 18. All 3 sites are in an early stage of construction. Launch Site 16, located approximately 17.5 nm west-southwest of the complex support facility, consists of a fenced shallow excavation with an adjacent spoil pile. A building is under construction approximately 1,200 feet south-southwest of the fenced excavation. Launch Site 17, located 23.5 nm west-southwest of the complex support facility, consists of a shallow excavation with an adjacent spoil pile. Three buildings are under construction approximately 1,500 feet southeast of the excavation. Launch Site 18, located approximately 20 nm west-southwest of the complex support facility, consists of a fenced excavation and an adjacent spoil pile. There is also an area of ground scarring and track activity approximately 1,500 feet southeast of the site.

Launch Site 1 appears complete, and several pieces of equipment were visible on the loop road surrounding the silo. At Launch Site 4 construction was still continuing on the legs of the electronic facility. An electronic facility was under construction at Launch Site 7, and the site remains in the midstage of development.

A rail transloading facility was newly identified about 2 nm south-southwest of the complex support facility, and 0.5 nm further south there is a large secured building.

KARTALY COMPLEX

This complex was covered by [redacted] Six new Type IIC launch sites are newly identified, 4 confirmed and 2 possible. The confirmed sites are designated Launch Sites 18 (52-51N 60-38E),

~~TOP SECRET~~

TOP SECRET

25X

19 (52-53N 60-74E), 20 (52-58N 60-55E), and 21 (52-52N 60-55E). All are in the midstage of construction. The possible sites are designated Possible Launch Sites 22 (52-48N 60-44E) and 23 (52-42N 60-30E). Both are in an early stage of construction.

The sites previously listed as Possible Launch Sites L and M were viewed in sufficient clarity to determine that the activity was not related to silo construction, and both these sites have been dropped from our tables. The Kartaly Complex now consists of 18 confirmed and probable sites and 2 possible sites.

Extensive work is still underway, and progressing at a normal pace, at the rail-to-road transfer point.

UZHUR COMPLEX

[redacted] revealed the existence of 4 new Type IIIC launch sites, 3 of which are probable and 1 possible, at the Uzhur Complex. They have been designated Launch Sites 20 through 23. Launch Site 20 is located about 24 nm southwest of the complex support facility. It consists of an area of extensive excavation and an on-site support facility. An area of activity just southwest of the silo excavation and the existence of 2 long, arch-roofed buildings near the site support facility indicate that it may have a collocated control facility. Launch Site 21, located about 20 nm southwest of the complex support facility, consists of an excavation and a support facility. Launch Site 22 is located about 22 nm south-southwest of the complex support facility and consists of track activity, 2 large rectangular buildings, and a few smaller buildings. The site was in an early stage of construction, and a definite site pattern was not discernible. Launch Site 23 has been evaluated as possible, although its location in the complex and the nature of initial earth scarring are indicative of normal launch site

development. The site is located about 28 nm southwest of the complex support facility. There are other areas of unidentified activity in the complex, and general expansion is probably underway.

The Uzhur Complex now consists of 22 confirmed and probable, and 1 possible Type IIIC launch sites. A collocated control facility can now be confirmed at Launch Site 12, since 1 leg of the L-shaped electronic facility can be seen on photography. There is also an area of unidentified activity about 0.5 nm south of Launch Site 12.

ZHANGIZ-TOBE COMPLEX

This complex was covered by [redacted] which revealed the existence of 3 newly identified Type IIIC launch sites designated Launch Sites 13, 14, and 15.

Launch Site 13, located 4 nm southeast of the complex support facility, consists of a fenced area where excavation has already begun. There is a site support facility under construction to the south of the excavation. This area was first evident on [redacted] and was not present on Mission [redacted] Launch Site 14, located 8 nm east-southeast of the complex support facility, consists of a fenced excavation with a square earth mounding on the southeast side, and a support facility. This area was first evident on [redacted] and was not present on [redacted] Launch Site 15, located approximately 13 nm east-southeast of the complex support facility, consists of a fenced excavation. The area was first evident on [redacted] with a support facility only, and was not present on [redacted]

The Zhangiz-Tobe Complex now consists of 14 confirmed and probable, and 1 possible Type IIIC launch sites.

25X

25X
25X
25X

25X
25X
25X

25X
25X
25X

25X

TOP SECRET

TOP SECRET

Type IIID Sites

GENERAL

A total of 191 confirmed and probable, and 16 possible Type IIID small single-silo ICBM launch sites has been identified at 7 complexes in the USSR. This represents an increase of 55 confirmed and probable, and 3 possible Type IIID launch sites since publication of our 22nd Revision. Included in the new total are discovery of the first Type IIID launch sites at the Svobodnyy, Kozelsk, and Yedrovo complexes; new launch groups at Tatishchevo and Drovyanaya; and additional sites at Gladkaya.

The discovery of Type IIID launch sites at Kozelsk, an SS-8 complex, and at Svobodnyy and Yedrovo, SS-7 complexes, is the most significant development revealed by [redacted]

[redacted] These discoveries, along with the large number of newly identified Type IIID launch sites at the 5 previously known complexes, indicate the IIID deployment program has regained momentum and is progressing at a pace faster than previously observed.

Despite the many sites under construction, some for more than 2 years, apparently only 1 launch group (Drovyanaya, Launch Sites 7-18) has been completed. The estimate made in the 22nd Revision that 1 group at Tatishchevo (Launch Sites 1-3 and 5-11) was complete and became operational in the first quarter of 1966 was in error, since continuing construction activity was observed at all 10 site in [redacted]

The continued absence of L-shaped electronic facilities at the Drovyanaya, Gladkaya, and Perm complexes suggests that there are at least 2 kinds of Type IIID deployment. It is not possible at this time to say whether this indicates different missiles, different guidance systems, or a different targeting philosophy (i.e., area versus pinpoint).

Two complexes, Olovyannaya and Tatishchevo, have 1 site that is not associated with any existing launch group. In each case, this site (Launch Sites 24 at Olovyannaya and 35 at Tatishchevo) is located in or near the rail-to-road transfer point. The Olovyannaya site has an associated L-shaped electronic facility and a larger-than-normal control-type bunker. No such electronic facility or enlarged bunker has yet been identified at Tatishchevo. The lack of any group association, together with the generally centralized location within their respective complexes, suggests that these sites may serve a complex-wide function. We are unable to determine the effect this might have on the operational status of these complexes.

DROVYANAYA COMPLEX

This complex was covered by poor-to-fair photography on [redacted]. One new Type IIID launch site, designated Launch Site 35, was identified. [redacted] revealed areas of unidentified activity east-northeast of the complex support facility. [redacted] shows an excavation and foundations for 4 buildings in the southeast corner of the rail-to-road transfer point. The latest photography on which construction stages could be identified was [redacted]. Launch Sites 15, 20, 22, 23, 24, 25, 26, and 28 were noted to be in the late stage.

The Drovyanaya Complex contains 3 launch groups, with 21 launch sites identified. No L-shaped electronic facilities have been observed at the complex, although control bunkers have been identified at Launch Sites 8 and 15.

GLADKAYA COMPLEX

The Gladkaya Complex was generally cloud covered on [redacted]. Poor-to-good photography [redacted]

TOP SECRET

TOP SECRET

25X

X1 from [redacted] permitted identification of 3 confirmed and 1 probable sites designated Launch Sites 19, 38, 39, and 40. Possible Launch Sites 17 and 24 were upgraded to confirmed and 1 site (G7) was invalidated and dropped from the tables. Launch Sites 19, 39, and 40 were in the late stage of construction and Launch Site 38 was in the midstage. Launch Site 23 was identified as a probable group control site, Launch Site 7 remains a probable group control site, and Launch Site 27 remains a possible group control site.

The Gladkaya Complex now has 30 launch sites, of which 26 are confirmed and probable sites and 4 are possible sites. No L-shaped electronic facilities have been seen at the Gladkaya Complex.

KOZELSK COMPLEX

X1 Highly oblique, poor-quality photography of the Kozelsk SS-8 complex on [redacted] [redacted] shows 2 probable Type IIID launch sites located southeast of Launch Site 2. This photography also reveals construction activity at the rail-to-road transfer point. Little more can be said about this complex until analysis, which is now underway, is completed.

OLOVYANNAYA COMPLEX

X1 The Olovyannaya Complex was covered by poor-to-fair photography on [redacted] [redacted] revealed a new possible Type IIID Site, Launch Site 52, in an undetermined stage of construction. The new site contains a possible silo excavation enclosed by a possible security fence. A new site, designated Launch Site 55, was discovered in an early stage of construction on [redacted]. This site, the first in a new launch group, is located 16 nm north-east of the complex support facility. One building was seen near the site, which is enclosed by a fence large enough to accommodate

an L-shaped electronic facility.

Launch Sites 8 and 9 remain in the late stage of construction; the other 8 sites in the group (Launch Sites 4-7 and 10-13) were either not covered, or the stage of construction could not be determined. Construction continued at all sites in the group formed by Launch Sites 14 through 23. Launch Sites 17, 19, and 21 have been advanced from the midstage to the late stage of construction; Launch Sites 15 and 23 are in an undetermined stage. The control bunker at Launch Site 17 does not appear to be earth covered. In the group formed by Launch Sites 25 through 34, Sites 25, 26, 27, 29, and 31 have progressed from the midstage to the late stage of construction and Sites 28, 30, and 34 remain in the midstage; Sites 32 and 33 were not covered. Construction activity at the group formed by Launch Sites 35 through 44 includes the L-shaped electronic facility at Launch Site 40, ditching which connects the control building to 2 arch-roofed buildings, a small arch-roofed building on the lip of the control building excavation, and another arch-roofed building northwest of 2 parallel arch-roofed buildings. The only sites covered in the group formed by Launch Sites 45 through 51 were Sites 45 and 51, and they were identified only.

Launch Site 24, which is located near the rail-to-road transfer point, does not properly fit into any launch group. There is an L-shaped electronic facility at the site, and the control building appears to be larger than the normal launch group control building. The uniqueness of this site, and its central location, suggests a possible complex-wide function.

The identification of 1 confirmed and 1 possible new sites on [redacted] [redacted] brings to 49 the total of confirmed and probable sites, and to 2 the number of possible sites, in the 6 launch groups at Olovyannaya.

25X
25X

25X

TOP SECRET

TOP SECRET

PERM COMPLEX

This complex was covered by poor-to-fair photography on [redacted]

[redacted] Ten new Type IIID sites, 7 confirmed and probable and 3 possible, were identified on [redacted] Nine of these sites, most of which were in a late stage of construction, form a new launch group (Launch Sites 29-34, 36, 37, and 42); Launch Site 35 was confirmed in the late stage of construction.

[redacted] revealed 4 additional confirmed new sites: Launch Site 38 in a late stage of construction, 39 in an undetermined stage, 40 in the midstage, and 41 in the mid-stage. Probable Launch Site 22 was confirmed in an undetermined stage of construction. The probable control facility at Launch Site 10 appeared complete, except for backfilling, and the probable control bunker at Launch Site 13 had been earth mounded. Launch Sites 7, 8, 10, 11, 12, 13, 15, 17, 18, 19, 23, 25, and 35 remained in the late stage of construction. About 40 buildings were observed at the rail-to-road transfer point.

The total number of confirmed and probable sites at the Perm Complex is now 25, and the total of possible sites is now 5; no L-shaped electronic facilities have been observed at the complex as yet.

SVOBODNYI COMPLEX

Identification of the first Type IIID launch sites at the Svobodny Complex occurred on [redacted]

On that mission 9 Type IIID launch sites were detected. Launch Sites 10, 11, 12, 14, 15, 16, and 17 were observed in the midstage of construction, and Sites 9 and 18 were in the early stage. Each of the 7 midstage sites contains a typical IIID silo with at least 2 construction sheds nearby; a building in a shallow excavation near the expected entrance to the site; and a long rectangular

gable-roofed building along the access road serving the site. Fencing was not seen at all the sites. Launch Site 18, which is in the early stage of construction, has a 7-sided fence which encloses footings for a long rectangular building. Launch Site 9, also in the early stage of construction, is enclosed by a fence and is identifiable by an excavation and track activity. Extensive road construction and improvement, since [redacted] imply at least some degree of planned expansion at the Svobodny Complex.

TATISHCHEVO COMPLEX

This complex was covered by poor-to-good photography on [redacted]

[redacted] Three new confirmed and 2 possible Type IIID launch sites were discovered on [redacted] Ground scarring and track activity are present at each of the 3 confirmed sites, which are in the early stage of construction, and the 2 possible sites, which are in undetermined stages. The new sites are designated Launch Sites 45, 46, and 47, and Possible Launch Sites 48 and 49. The track activity and ground scarring were not evident on [redacted]

[redacted] revealed 6 additional confirmed and 1 probable Type IIID launch sites in the group formed by Launch Sites 51, 58-63, 65, 66, and 68. The additional sites are designated Launch Sites 51, 58, 59, 60, 61, 62, and Probable Launch Site 63. The probable group control facility is at Launch Site 58 where some components of known control sites can be seen.

Launch Site 10 is now in the late stage of construction. New construction at all launch sites in the group formed by Launch Sites 1-3 and 5-11 is evidenced by the 4 small excavations of undetermined purpose situated in a rectangular pattern around each launch site. All sites in the group formed by Launch Sites

TOP SECRET

TOP SECRET

12-17, 19, 21, 29, and 30 were in the late stage of construction on [redacted] In the group formed by Launch Sites 20, 22, 24-28, 32, 34, and 36, Launch Sites 22 (no activity observed for [redacted] months) and 34 were dropped from the tables and 2 newly identified sites, Launch Sites 44 and 57, were added. In addition, the new Possible Launch Site 64 was identified. All sites in this group are confirmed and in the midstage of construction, except Possible Launch Site 64 which is in the early stage.

The confirmed Launch Site 52, Probable Launch Sites 53 and 54, and Possible Launch Site 55 were first observed on [redacted] All sites in the group formed by Launch Sites 36-42 and 52-54 are in an early stage of construction. Launch Sites 45, 46, and 47, which form part of a group, were still in the early construction stage, and Possible Launch Sites 48 and 49 were in undetermined stages of construction on [redacted]

Launch Site 35 is confirmed in the late stage of construction on [redacted] This site, located in the rail-to-road transfer point, is not associated with any of the existing launch groups; its location suggests a complex-wide function.

The rail-to-road transfer point also contains 3 rail spurs, 2 large POL storage tanks, 3 large warehouse-type buildings, 3 earth-mounded buildings, a probable arch-roofed building under construction, 6 probable vehicle/equipment maintenance buildings, a probable arch-roofed building at the terminus of a large ditch, several miscellaneous buildings, [redacted]

[redacted]

Usable photography from [redacted] showed little or no change at the complex since

[redacted]

Coverage of the Tatishchevo Complex, particularly of the group formed by Launch Sites 1-3 and 5-11, on [redacted] shows the group to be in a late stage of construction. The incompleteness of the group and the construction evident at all sites in mid-[redacted] make it apparent that the group did not become operational in the first quarter of 1966 as was estimated in the 22nd Revision. It now appears more likely that this group will become operational during the second quarter of 1966.

The total number of confirmed and probable sites at Tatishchevo is 56, with an additional 5 possible sites. This is an increase of 24 confirmed and probable, and 2 possible, sites since our last revision.

YEDROVO COMPLEX

Review of photography from [redacted] shows 2 confirmed and 2 probable Type IIID launch sites at the Yedrovo SS-7 Complex. No further information is available at this time.

TYURATAM MISSILE TEST CENTER

Test Range Facilities

[redacted]

provided good-to-excellent coverage of the Tyuratam Missile Test Center. Highlights of this coverage included the identification of missiles and/or missile components at several launch complexes; a new large building under construction in the main support base; evidence of expansion at Launch Site G1-G2; the observation of significant activity at Launch Site N2-N3 indicating that recent SS-11 launches probably occurred from this site; and additional activity at other sites.

At the main support base a newly identified building at least several hundred feet in length

TOP SECRET

TOP SECRET

[redacted]

[redacted]

X1

is located northwest of the batch plant. Footings for this building were visible as far back as [redacted] but walls were not identified until [redacted]. The long time span between the appearance of the footings and the walls indicates a lack of urgency in the completion of construction. When last observed on [redacted] [redacted] construction had progressed to the point that a portion of the structure was under roof, but the final shape and size of the building cannot yet be firmly determined. Rails cannot be identified entering this new building; however, rail lines presently extend from the main support base and pass near the building. The extension of rail service to this building would necessitate only the installation of rail spurs and a common switch. The function of this building has not been determined but its location near existing rail lines suggests the possibility of a receiving, inspection, storage, and transshipping point.

X1

X1

X1

X1

X1

[redacted] missiles were erected at both Launch Sites C2 and C3 at Complex C. This is the first time that erected missiles have been observed simultaneously on adjacent Tyuratam launchers. The missile on Pad C3 is probably the same one seen erected [redacted]. These missiles are probably SS-7s, and Launch Complex C has long been associated with this ICBM. It is possible that the missile erected at Launch Site C3 was the SS-7 launched to Kamchatka on [redacted]. Another SS-7 launched to Kamchatka on [redacted] could have been the missile erected at Launch Site C2. These missile launchings may have represented the initial Soviet attempt to fire from one surface launcher while a missile was erected on an adjacent launcher. If this is true, then the SS-7 firing 8 days later on [redacted] would indicate a successful exercise.

X1

X1

X1

X1

X1

No significant changes in facilities were observed at Launch Complex H. However, on [redacted] a missile approximately 100 to 105 feet high was erected at Launch Site H1. A cylindrical object was seen in a horizontal position at this site [redacted]. It is possible that this object was the missile observed being prepared for erection. Flight testing of the SS-9 was associated with Complex H early in the development program (through 1964). On [redacted] an SS-9 was launched from Tyuratam to Kamchatka. It is possible that this was the missile erected at Launch Site H1 on [redacted].

Although there have been no significant changes noted in facilities at Launch Complexes E and F during recent missions, the identification of considerable numbers of vehicles, possible missile dollies, and other equipment indicates continuing activity at these sites associated with the SS-8 weapon system. Equipment at Launch Complex F on [redacted] [redacted] could have been associated with the SS-8 firing on [redacted] the only SS-8 firing thus far this year.

Construction is continuing on 4 new buildings in the Complex G maintenance and support area, with the western building now roofed. Roofing of this building went from one-half complete to complete in less than 10 days. Identification of missile rail cars, similar to those previously observed at Launch Site G3-G4, at the unidentified facility located between the Complex G support area and Launch Site G1-G2 indicates that the unidentified facility is probably associated in some way with Launch Site G3-G4.

Considerable construction activity continues at Launch Site G1-G2. The overall launch area is being enlarged, and new security fencing has been identified on the northeast and northwest sides. The quality of coverage on [redacted] [redacted] revealed a probable fourth rail line entering

[redacted]

TOP SECRET

5X

5X

25X

25X

25X

5X

5X

25X

5X

25X

5X

25X

25X

TOP SECRET

the missile-ready building at Pad G1. Extensive amounts of construction materials were noted throughout the launch site. A small building is under construction in the excavation forward of Pad G1. Also, earth mounding has been removed from the downrange portion of both mounded buildings at this site. Ditches for footings have been dug so that the ready building at Pad G2 can be extended to the south.

[redacted] cylindrical objects were noted in a horizontal position in front of both ready buildings. In each case, sections approximately [redacted] and 30 feet in length were noted; the sections at Pad G1 were joined and those at Pad G2 were separated. Extreme halation precludes diameter determinations of the cylindrical objects at Pad G1, but the shorter section appears to have a smaller diameter than the longer section. If there is a diameter differential it would preclude any association with the [redacted] whose first 2 stages are of the same diameter. However, the lengths are compatible with those of the vehicle erected at Pad G1 on [redacted] and this vehicle was tentatively associated with the SS-10. This renewed activity at Pads G1 and G2, whether or not actual missile stages are present, may suggest the rebirth of the SS-10 firing program in the near future; the introduction of an SS-10 variant; or the introduction of an entirely new, probably liquid, system.

Considerable activity was apparent at Pad G1 on [redacted] with a missile erected and the gantry halfway up to the pad. The missile, as erected on the pad, was approximately 120 to 140 feet high, with a base diameter of approximately 25 feet and a diameter of approximately 15 feet near the top. Still visible on [redacted] the missile was gone on [redacted] timewise these events equate to the probable [redacted] failure on [redacted]

Since our last revision, there has been significant activity observed at Launch Site N2-N3 to indicate that recent SS-11 launches probably occurred from this site. Coverage of Launch Site N2-N3 on [redacted]

showed an unidentified object within the N3 silo. This object could represent the tip of a missile nosecone -- possibly that of the SS-11 launched on [redacted] Also, on this same photography, a probable missile transporter was backed up to the N2 silo, and nearby was a circular ring. This activity might be associated with the possible SS-11 cancellation on [redacted]

[redacted] On [redacted] a crane was positioned next to the N2 silo. A possible missile transporter was backed up to this crane, and at least 11 unidentified vehicles and/or pieces of equipment were in and about the launch area. The other Tyuratam launchers suspected as used or associated with past SS-11 firings (i.e., Launch Sites G5-G6 and N1) were either less active or completely inactive on [redacted]

[redacted] This suggests that the SS-11 flight of [redacted] took place from the N2 silo. Also significant is the activity at Site N2 observed on [redacted] after this launch. Although there were no indications of refurbishment at the N2 silo on this photography, there was activity involving 2 long transport vehicles parked end-to-end near the N3 silo. A possible crane and a circular ring (like those previously observed at this site) were positioned nearby. This activity might be related to the [redacted] SS-11 launch.

Additional construction details of the Type IIC single silos at Launch Site K1-K2 were observed on [redacted] The K1 silo appeared complete and the silo door was open. In front of this silo was a crane, and other vehicles and/or pieces of equipment were positioned nearby. At the southwest K2 silo the

TOP SECRET

TOP SECRET

door was also open and, for the first time, probable exhaust vents were identified in a curved pattern on either side of the silo aperture. The curved shape of the exhaust vents, and their location adjacent to the silo aperture, indicates the probability that Type IIC single silos are equipped with an inner silo liner. Consequently, the 110- to 120-foot-long cylindrical object seen positioned on the rectangular earthen mound at various Type IIC single silos is probably a liner. A portion of the space between the liner and inside wall of the silo probably serves as an exhaust duct outlet. The presence of exhaust vents confirms the belief that the SS-9 uses an in-silo hot-flyout launch concept. The reaction time for an in-silo launch of a storable liquid propellant missile, such as the SS-9, would be a minimum of 60 seconds.

Construction continues at Launch Complex J. Vertical walls were being constructed on the square-shaped structure located slightly below the lip of both the Site J1 and J2 excavations, and between their respective downrange blast deflectors. At least 7 compartments are contained within these walls. A new extension of the railbed or rail line had been added to the rail line at the J2 launch point. This rail line now approaches J2 and proceeds west to the vicinity of the security fence, near an excavation containing several pieces of equipment.

Launch Site J1 was the farthest advanced, and has been under construction the longest. At Site J1 deck beams or crossmembers were clearly evident on all 3 blast deflector structures. Sidewalls were being constructed for the blast deflector structures at Launch Site J2. Probable precast concrete slabs had been emplaced at the outer terminus of the J2 blast deflector arms. This technique was not observed earlier at Launch Site J1. Extensive ditching and piping was observed throughout the area, indicating the launch stands will most

probably be water cooled. All indications are that both launch stands will be alike, and that J1 will probably be ready to support firings by mid-1967.

A single cylindrical structure was observed in the center of the J1 launcher. The outside and inside diameters of this structure are approximately 40 and 25 feet, respectively. This structure is probably intended to support a large booster, but its inner aperture does not seem large enough to accept all the exhaust indicated by the 3 blast deflector outlets. Thus, it is possible that the planned booster will consist of strap-on's clustered around a center core. Consequently, additional exhaust inlets may eventually appear grouped around that now visible in the center of the J1 launcher; these would accept the exhaust from the strap-on's.

Three buildings on the east side of the large missile assembly/checkout building at Launch Complex J appeared complete, and 2 buildings on the west side were still under construction. The strings of rail cars previously observed west of the large building were no longer visible, and it appears that rail trackage has been removed in this area. Footings for the gantry tracks between the large building and the launch area were not complete. A newly dug trench leads from the vicinity of the 3 eastern buildings toward the electronic installation at Launch Site A. This is another indication of the association between facilities at Launch Complexes A and J.

Construction was continuing at the unidentified facility located 3.2 nm southwest of the Complex J support base. This facility now contains 4 cylindrical tanks, and footings were visible to accommodate at least 2 more. A ditch extends generally southwest from the unidentified facility and terminates at a dry lake. This could indicate that a reservoir is planned to satisfy water requirements at Complex J

TOP SECRET

TOP SECRET

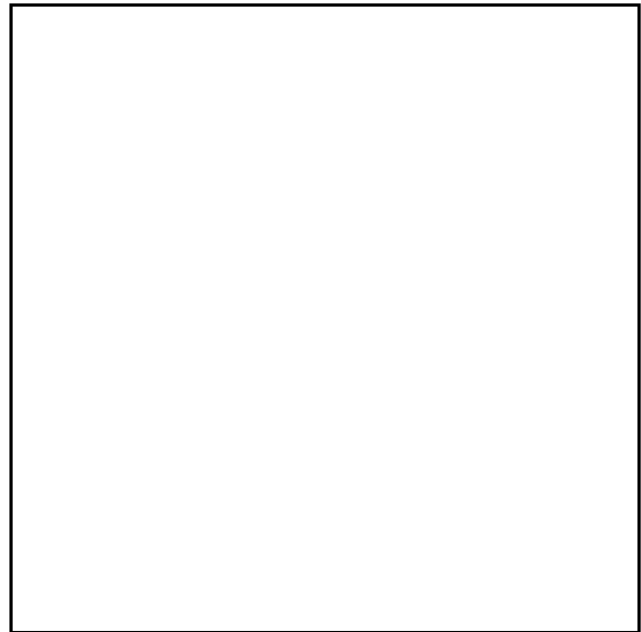
for both launchings and general purposes. The dry lake may eventually be developed into a reservoir, and the [redacted] may serve as a water treatment and pumping facility.

Construction activities were continuing at the Type IIID sites at Launch Complex L. A drive-in mounded structure was either complete or under construction at each site. Also, a lattice tower was observed to the rear of the drive-in building at some of these sites and small excavations were in the same relative position at other sites. The purpose of this activity remains unknown.

Construction activity also continues at Launch Complex M. None of the 3 silos under construction has taken on the exact characteristics of either Type IIIC or IIID silos. All 3 silo corings are approximately [redacted] in diameter. Launch Sites M2 and M3 have excavations adjacent to the silo excavations. These new excavations appear almost as deep as the silo cuts, but it is too early to tell the intended purpose of the new excavations. All 3 sites are secured, but only the security fence around Launch Site M1 is large enough to contain an L-shaped electronic facility similar to those noted at other single-silo sites. As yet, there is no indication of such a facility.

Test Range Activity

During the period covered by this revision there were a total of 14 ICBM firings from the Tyuratam Missile Test Center. Included in this activity was the successful launch of 6 SS-11s to the Kamchatka Impact Area. Other successful events included 3 SS-9 firings (1 to the mid-Pacific Impact Area on [redacted], an SS-8 launch, and 4 SS-7 firings. A summary of these launches is presented below:



TOP SECRET

TOP SECRET

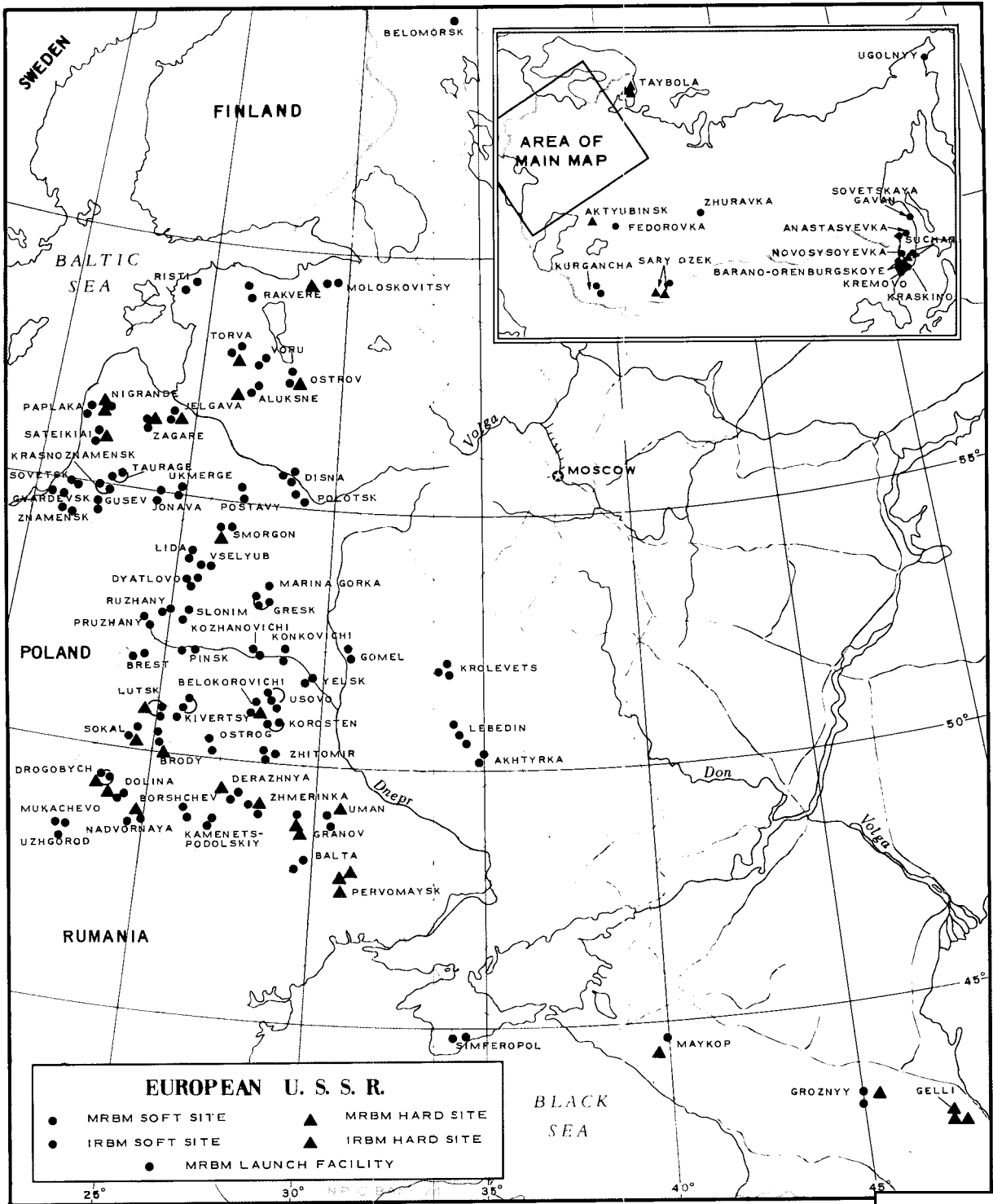


FIGURE 3. DEPLOYMENT OF SOVIET IRBM/MRBM COMPLEXES.

TOP SECRET

TOP SECRET

25X

SOVIET IRBM/MRBM DEPLOYMENT**GENERAL**

[redacted] photography since our 22nd Revision covers 5 of the 14 IRBM, and 32 of the 67 MRBM complexes. This coverage has not revealed any significant changes. The locations of deployed IRBM/MRBM complexes are shown in Figure 3. Typical configurations of the launch sites, and the weapons system associated with each, are depicted in Figure 4.

We still believe that the singly deployed sites discussed in our 20th Revision (See Table 8) are being phased out, although adequate photography to confirm the deactivation of the Kraskino and Uzhgorod MRBM sites, and the Ramoye, Traktovyy, and Zhuravka IRBM sites still has not been received. These 6 sites are therefore still included in the totals shown in Table 1.

IRBM DEPLOYMENT**Current Force Level**

The IRBM element of the Strategic Rocket Forces still consists of 32 sites containing a total of 109 launch positions, including 51 in a hard configuration (Table 4). All of these sites are estimated to be operational.

MRBM DEPLOYMENT**Current Force Level**

The MRBM element of the Strategic Rocket Forces still consists of 156 sites containing a total of 624 launch positions, including 84 in a hard configuration (Table 5). All of these sites are considered to be operational.

The unidentified construction east of Dolina MRBM Launch Site 1, first visible on [redacted] is now seen to consist of a tall rectangular drive-through building on a loop road, a smaller building, and a round excavation. The drive-through building, which is approximately 50 feet high, contains a 35-

foot-high door. A trench, possibly for a steam-line, leads to a probable heating plant in the support site. A search is presently underway to determine whether similar installations exist at other MRBM sites. The significance of this construction has not yet been determined.

KAPUSTIN YAR MISSILE TEST CENTER**Test Range Facilities**

[redacted] provided coverage of the Kapustin Yar Missile Test Center (Figure 5). A brief description of the activity at each of the facilities covered is given in the following paragraphs.

Activity or equipment is evident at all 5 launch areas of Launch Complex C, and rail cars are evident in the rail-served unidentified facility north of the complex support facilities.

A rail car is behind the pad at Launch Site 1C2.

Unidentified equipment or activity is observed in the center of the pads at Launch Sites 2C1 and 2C2. The object on Pad 2C1 is probably the service tower observed on [redacted]

[redacted] Two prepared hardstands are alongside the road between the operations center and Launch Area 2C. The hardstand nearest the launch area has a small structure on it.

The probable missile checkout tent is still present on the southern dumbbell of Launch Area 3C.

Scattered clouds and cloud shadow prevent determination of the status of the southwest silo at Launch Site 4C1. The other 3 silos are covered: the northeast silo by a tall structure, and the other 2 by the silo doors. Two possible missile transporters are located at Launch Site 4C2; all 3 silo doors are in the closed position.

Probable missile transporters and erectors are on both pads at Launch Site 5C1. Additional vehicles are parked on the hardstands in the launch area.

TOP SECRET

25X

25X1

Approved For Release 2003/12/19 : CIA-RDP78T04757A000300010022-2

Approved For Release 2003/12/19 : CIA-RDP78T04757A000300010022-2

25X1

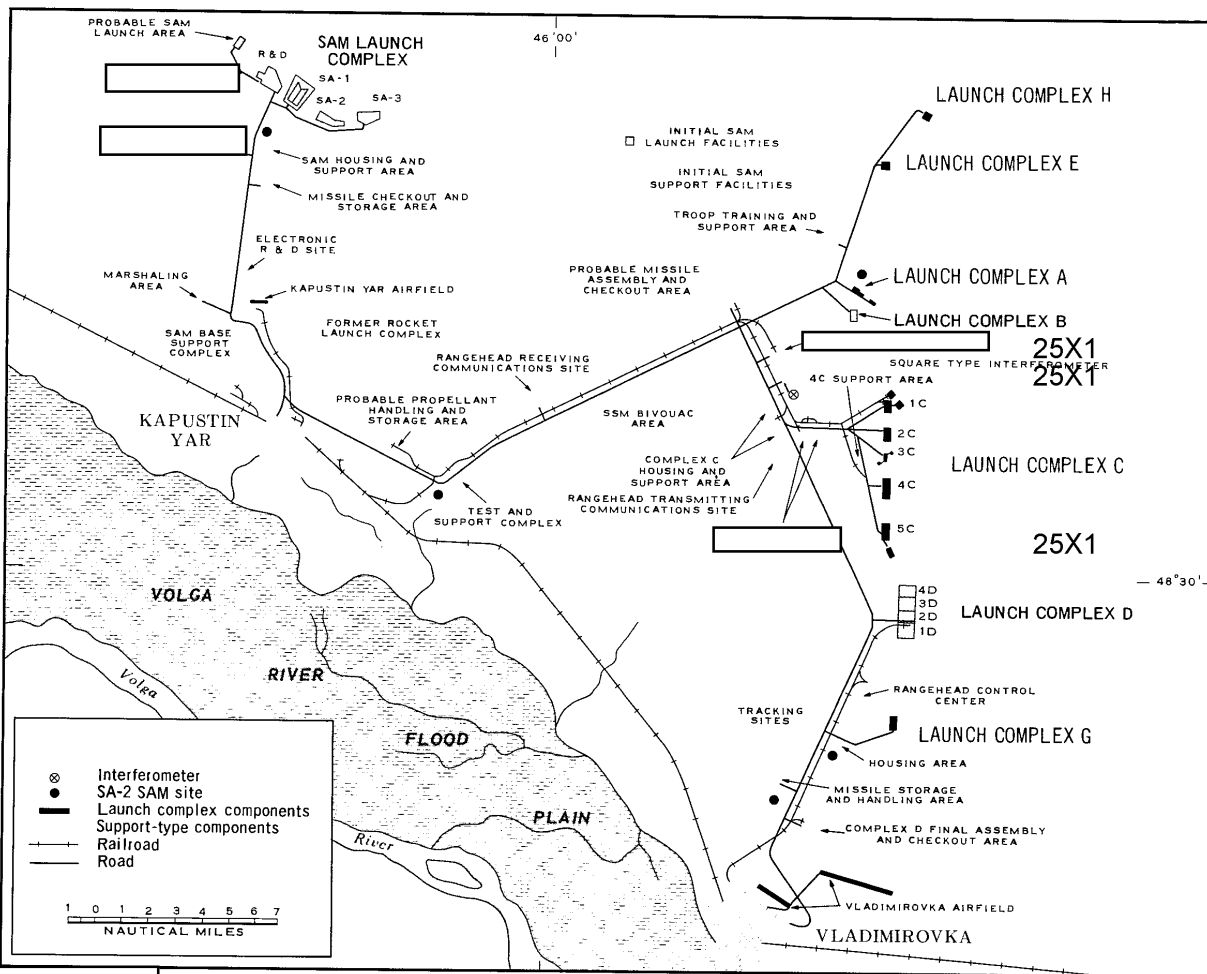


FIGURE 5. KAPUSTIN YAR MISSILE TEST CENTER.

TABLE 1. SUMMARY OF ESTIMATED STATUS OF IDENTIFIED ICBM, IRBM, AND MRBM LAUNCHERS AT DEPLOYED COMPLEXES, [REDACTED] 25X1

Type	Sites	Launchers	Operational**	U/C	Type	Sites	Launchers	Operational	U/C
ICBM					IRBM				
IA	3	4	4	0	III	15	58	58	0
IB	2	4	0	4	IV	17	51	51	0
IIA	5	10	10	0	TOTALS	32	109	109	0
IIB	29	58	58	0	MRBM				
IIC	7	14	14	0	I	84	336	336 ^{25X1}	0
IID	30	60	60	0	II	51	204	204	0
IIIA	23	69	69	0	IV	21	84	84	0
IIIB	3	9	9	0	TOTALS	156	624	624	0
IIIC ₁ /	105	105	6	99	GRAND				
IIID ₂ /	191	191	20	171	TOTALS	188	733	733	0
TOTALS	398	524	250	274					

*See Tables 2, 4, and 5 for details. Figures include 3 launch silos at Type IIIA and IIIB ICBM and Type IV IRBM sites, and 4 launch silos at Type IV MRBM sites. Type IIIC and IIID ICBM sites contain single silos.

**In order to assess the greater threat, one member considers that 65 of the ICBM sites were completed in the first quarter of 1966, and a total of 289 launchers is now considered to be operational.

1/Figures do not include 6 sites carried in the possible category.

2/Figures do not include 16 sites carried in the possible category.

TOP SECRET

TOP SECRET

25X1

25X1

TABLE 2. SUMMARY EVALUATION OF SOVIET ICBM DEPLOYMENT

Location	BE Number	Coordinates	Type of Site	Number of Launchers		Site Negated		First Coverage		Latest Coverage		Stage of Const on Last Usable Coverage			Estimated Quarter Site Operational				Estimated Status
				Soft	Hard	Date	Msn	Date	Msn	Date	Msn	Date	Msn	Const*	1st	2nd	3rd	4th	
ALEYSK																			
Site 1		52-27N 82-35E	IIIC	1								Complete							Complete
Site 2		52-29N 82-40E	IIIC	1								Mid							U/C
Site 3		52-33N 82-42E	IIIC	1								Complete							Complete
Site 5		52-35N 82-30E	IIIC	1								Mid							U/C
Site 6		52-36N 82-36E	IIIC	1								Mid							U/C
Site 7		52-23N 82-46E	IIIC	1								Late	67						U/C
Site 8		52-17N 82-49E	IIIC	1								Mid	67						U/C
Site 9		52-15N 82-39E	IIIC	1								Mid							U/C
Site 10		52-10N 82-36E	IIIC	1								Mid							U/C
Site 11 Probable		52-12N 82-44E	IIIC	1								UNDETECT							U/C
Site 12		52-32N 82-34E	IIIC	1								Mid							U/C
DOMBAROVSKIY																			
Site 1		50-58N 59-32E	IIIC	1								Mid							U/C
Site 2		51-01N 59-41E	IIIC	1								Complete	66						Complete
Site 3		51-06N 59-39E	IIIC	1								Complete	66						Complete
Site 4		51-11N 59-37E	IIIC	1								Complete	66						Complete
Site 6		51-04N 59-28E	IIIC	1								Mid							U/C
Site 7		51-09N 59-31E	IIIC	1								UNDETECT	67						U/C
Site 8		51-02N 59-57E	IIIC	1								Mid							U/C
Site 9		51-06N 59-50E	IIIC	1								Mid							U/C
Site 10		51-09N 59-44E	IIIC	1								UNDETECT	67						U/C
Site 11		51-12N 59-51E	IIIC	1								Mid							U/C
Site 12		51-10N 59-58E	IIIC	1								Mid							U/C
Site 13		51-05N 60-04E	IIIC	1								Mid							U/C
Site 14		50-50N 59-35E	IIIC	1								Mid							U/C
Site 15		50-44N 59-36E	IIIC	1								Early							U/C
Site 16		50-52N 59-42E	IIIC	1								Early							U/C
Site 17		50-46N 59-45E	IIIC	1								Early							U/C
Site 18		50-39N 59-39E	IIIC	1								Early							U/C
Site 19		51-01N 59-48E	IIIC	1								Early							U/C
Site 20 Possible		50-51N 59-58E	IIIC	1								Early							U/C
Site 21		50-46N 59-50E	IIIC	1								Early							U/C
Site 22 Probable		50-46N 60-11E	IIIC	1								Early							U/C
Site 25 Possible		50-52N 60-10E	IIIC	1								Early							U/C
DROVYANAYA																			
Site 1		51-25N 113-00E	IIIB	2								Complete	63						Operational
Site 2		51-25N 113-04E	IIIA		3							Complete	64						Operational
Site 3		51-20N 113-01E	IID	2								Complete	64						Operational
Site 4		51-28N 113-04E	IID	2								Complete							Operational
Site 5		51-23N 112-50E	IIIA		3							Complete							Operational
Site 6		51-20N 112-55E	IIIA		3							Complete							Operational
Site 7		51-38N 113-05E	IID	1								Complete	66						Operational
Site 8		51-34N 113-04E	IID	1								Complete	66						Operational
Site 9		51-36N 113-02E	IID	1								Complete	66						Operational
Site 10		51-33N 113-07E	IID	1								Complete	66						Operational
Site 11		51-36N 113-07E	IID	1								Complete	66						Operational
Site 12		51-29N 113-00E	IID	1								Complete	66						Operational
Site 13		51-31N 113-04E	IID	1								Complete	66						Operational
Site 14		51-29N 113-06E	IID	1								Complete	66						Operational
Site 15		51-26N 113-02E	IID	1								Late							U/C
Site 16		51-35N 113-12E	IID	1								Late							U/C
Site 18		51-31N 113-00E	IID	1								Complete	66						Operational
Site 19		51-21N 112-51E	IID	1								Late							U/C
Site 20		51-22N 112-57E	IID	1								Late							U/C
Site 21		51-20N 113-04E	IID	1								Late							U/C
Site 22		51-22N 113-02E	IID	1								Late							U/C
Site 23		51-25N 113-09E	IID	1								Late							U/C
Site 24		51-23N 113-06E	IID	1								Late							U/C
Site 25		51-18N 112-57E	IID	1								Late							U/C
Site 26		51-21N 112-47E	IID	1								Late							U/C
Site 28		51-24N 112-52E	IID	1								Late							U/C
Site 35			IID	1								Mid							U/C

25X1

25X1

25X1

25X1

TOP SECRET

TOP SECRET

25X1

25X1

TABLE 2. (Continued)

Location	BE Number	Coordinates	Type of Site	Number of Launchers		Site Negated		First Coverage		Latest Coverage		Stage of Const on Last Usable Coverage			Estimated Quarter Site Operational				Estimated Status	
				Soft	Hard	Date	Msn	Date	Msn	Date	Msn	Const*	1st	2nd	3rd	4th				
GLADKAYA																				
Site 2		56-25N 92-27E	IID	2								Complete	64						Operational	
Site 3		56-20N 92-18E	IID	2								Complete							Operational	
Site 5		56-20N 92-13E	IIIA		3							Complete							Operational	
Site 7		56-14N 92-13E	IID		1							Late	66						U/C	
Site 8		56-17N 92-18E	IID		1							Late	66						U/C	
Site 9		56-14N 92-21E	IID		1							Late	66						U/C	
Site 10		56-12N 92-15E	IID		1							UNDET	66						U/C	
Site 11		56-11N 92-10E	IID		1							Late	66						U/C	
Site 12		56-12N 92-08E	IID		1							Late	66						U/C	
Site 14		56-18N 92-22E	IID		1							Late	66						U/C	
Site 15		56-17N 92-13E	IID		1							Late	66						U/C	
Site 16		56-14N 91-45E	IID		1							Late					66		U/C	
Site 17		56-12N 91-44E	IID		1							Late					66		U/C	
Site 18		56-13N 91-55E	IID		1							Late					66		U/C	
Site 19		56-12N 91-39E	IID		1							Late					66		U/C	
Site 20		56-12N 92-05E	IID		1							Late	66						U/C	
Site 21		56-13N 92-00E	IID		1							Late					66		U/C	
Site 22		56-14N 92-26E	IID		1							Late	66						U/C	
Site 23		56-13N 91-49E	IID		1							Late					66		U/C	
Site 24		56-09N 91-44E	IID		1							Late					66		U/C	
Site 25		56-12N 92-33E	IID		1							Late					66		U/C	
Site 26 Probable		56-11N 92-39E	IID		1							Mid	67						U/C	
Site 27		56-13N 92-39E	IID		1							Mid	67						U/C	
Site 28		56-11N 92-45E	IID		1							Mid	67						U/C	
Site 29 Probable		56-12N 92-50E	IID		1							Mid	67						U/C	
Site 30 Probable		56-15N 92-45E	IID		1							Mid	67						U/C	
Site 31 Possible		56-15N 92-52E	IID		1							UNDET	67						U/C	
Site 32 Possible		56-18N 92-57E	IID		1							UNDET	67						U/C	
Site 33 Possible		56-17N 92-39E	IID		1							UNDET	67						U/C	
Site 34 Possible		56-17N 92-33E	IID		1							UNDET	67						U/C	
Site 36		56-10N 91-46E	IID		1							Mid							U/C	
Site 39		56-12N 91-52E	IID		1							Late							U/C	
Site 40		56-14N 91-51E	IID		1							Late							U/C	
IMENI GASTELLO																				
Site 1		51-03N 66-06E	IIIC		1							Complete	66						U/C	
Site 2		51-06N 66-02E	IIIC		1							Mid					66		U/C	
Site 3		51-10N 66-06E	IIIC		1							Complete	66						U/C	
Site 4		51-07N 66-13E	IIIC		1							Late	66						U/C	
Site 5		51-13N 66-13E	IIIC		1							Mid					66		U/C	
Site 6		51-13N 66-05E	IIIC		1							Mid							U/C	
Site 7		50-57N 66-09E	IIIC		1							Mid	67						U/C	
Site 8		50-58N 66-00E	IIIC		1							Mid					67		U/C	
Site 9		50-58N 66-17E	IIIC		1							Mid	67						U/C	
Site 10		50-52N 66-19E	IIIC		1							Mid					67		U/C	
Site 11		50-52N 66-59E	IIIC		1							Mid					67		U/C	
Site 12		50-51N 66-09E	IIIC		1							Mid					67		U/C	
Site 13		50-56N 65-49E	IIIC		1							UNDET					68		U/C	
Site 14		50-54N 65-42E	IIIC		1							Early							U/C	
Site 15		50-54N 65-33E	IIIC		1							Early							U/C	
Site 16		51-02N 65-50E	IIIC		1							UNDET							U/C	
Site 17		51-01N 65-41E	IIIC		1							Early							U/C	
Site 18		50-59N 65-33E	IIIC		1							Early							U/C	
ITATKA																				
Site 1		56-59N 85-32E	IIB	2								Complete						62		Operational
Site 2		57-01N 85-39E	IIB	2								Complete	63							Operational
Site 3		56-54N 85-39E	IID	2								Complete							63	Operational

25X1

TOP SECRET

25X1

TOP SECRET

25X1

25X1

TABLE 2. (Continued)

Location	BE Number	Coordinates	Type of Site	Number of Launchers		Site Negated		First Coverage		Latest Coverage		Stage of Const on Last Usable Coverage			Estimated Quarter Site Operational				Estimated Status	
				Soft	Hard	Date	Man	Date	Man	Date	Man	Date	Man	Const*	1st	2nd	3rd	4th		
KARTALY																				
Site 1		53-01N 60-26E	IIC	1																
Site 2		52-56N 60-31E	IIC	1																
Site 3		52-55N 60-24E	IIC	1																
Site 4		52-51N 60-27E	IIC	1																
Site 5		53-00N 60-16E	IIC	1																
Site 6		53-04N 60-18E	IIC	1																
Site 7		53-09N 60-42E	IIC	1																
Site 8		53-08N 60-34E	IIC	1																
Site 10		53-09N 60-25E	IIC	1																
Site 11		53-12N 60-32E	IIC	1																
Site 12		53-12N 60-39E	IIC	1																
Site 13		53-15N 60-24E	IIC	1																
Site 14		53-00N 60-47E	IIC	1																
Site 15		52-56N 60-39E	IIC	1																
Site 18		52-51N 60-38E	IIC	1																
Site 19		53-05N 60-07E	IIC	1																
Site 20		53-12N 60-11E	IIC	1																
Site 21		52-52N 60-55E	IIC	1																
Site 22 Possible		52-48N 60-44E	IIC																	
Site 23 Possible		52-42N 60-30E	IIC																	
KOSTROMA																				
Site 1		58-02N 41-22E	IIB	2																
Site 2		58-02N 41-07E	IIB	2																
Site 3		57-59N 41-09E	IIB	2																
Site 4		58-05N 41-40E	IIB	2																
Site 5		57-58N 41-14E	IIB	2	3															
Site 6		57-55N 41-10E	IIB	2	3															
Site 7		58-06N 41-32E	IIB	2																
KOZELSK																				
Site 2		53-48N 35-47E	IIC	2																
Site 3		53-54N 35-45E	IIC	2																
Site 4		53-54N 35-51E	IIC	2																
Site 5		53-51N 35-41E	IIB	3																
Site 6		53-41N 35-39E	IIB	3																
Site 7 Probable		53-47N 35-49E	IIB	1																
Site 8 Probable		53-47N 35-54E	IIB	1																
NOVOSIBIRSK																				
Site 1		55-19N 83-02E	IIB	3																
Site 2		55-19N 83-10E	IIB	2																
Site 3		55-25N 82-54E	IIB	3																
Site 4		55-22N 83-14E	IIB	2																
Site 5		55-20N 82-56E	IIB	2																

25X1

25X1

TOP SECRET

TOP SECRET

25X1

25X1

TABLE 2. (Continued)

Location	BE Number	Coordinates	Type of Site	Number of Launchers		Site Negated		First Coverage		Latest Coverage		Stage of Const on Last Usable Coverage			Estimated Quarter Site Operational				Estimated Status
				Soft	Hard	Date	Msn	Date	Msn	Date	Msn	Const*	1st	2nd	3rd	4th			
OLOVYANNAYA																			
Site 1		50-54N 115-48E	IIIA	3								Complete	64						Operational
Site 2		50-55N 115-45E	IIIA	3								Complete							Operational
Site 3		51-01N 115-58E	IIID	1								Late	66						U/C
Site 4		51-07N 116-08E	IIID	1								Late	66						U/C
Site 5		51-04N 116-08E	IIID	1								UNDET	66						U/C
Site 6		51-04N 116-04E	IIID	1								Late	66						U/C
Site 7		51-02N 116-09E	IIID	1								Late	66						U/C
Site 8		51-02N 116-02E	IIID	1								Late	66						U/C
Site 9		51-03N 115-59E	IIID	1								Late	66						U/C
Site 10		51-05N 115-59E	IIID	1								Late	66						U/C
Site 11		51-05N 116-15E	IIID	1								Late	66						U/C
Site 12		51-08N 116-08E	IIID	1								Late	66						U/C
Site 13		51-06N 116-12E	IIID	1								Late	66						U/C
Site 14		51-00N 116-01E	IIID	1								Late	66						U/C
Site 15		50-57N 116-01E	IIID	1								UNDET	66						U/C
Site 16		50-54N 116-02E	IIID	1								Late	66						U/C
Site 17		50-56N 115-58E	IIID	1								Late	66						U/C
Site 18		50-55N 115-52E	IIID	1								Late	66						U/C
Site 19		50-53N 115-56E	IIID	1								Late	66						U/C
Site 20		50-59N 115-54E	IIID	1								Late	66						U/C
Site 21		50-57N 115-49E	IIID	1								Mid	66						U/C
Site 22		51-00N 115-47E	IIID	1								Late	66						U/C
Site 23		51-01N 115-51E	IIID	1								UNDET	66						U/C
Site 24		50-51N 115-51E	IIID	1								Mid	67						U/C
Site 25		50-43N 115-44E	IIID	1								Late	67						U/C
Site 26		50-46N 115-42E	IIID	1								Late	67						U/C
Site 27		50-47N 115-45E	IIID	1								Mid	67						U/C
Site 28		50-45N 115-49E	IIID	1								Late	67						U/C
Site 29		50-41N 115-50E	IIID	1								Late	67						U/C
Site 30		50-40N 115-46E	IIID	1								Mid	67						U/C
Site 31		50-41N 115-41E	IIID	1								Mid	67						U/C
Site 32		50-39N 115-49E	IIID	1								Mid	67						U/C
Site 33		50-38N 115-41E	IIID	1								Mid	67						U/C
Site 34		50-49N 115-42E	IIID	1								Mid	67						U/C
Site 35		50-50N 115-56E	IIID	1								Mid	67						U/C
Site 36		50-48N 115-57E	IIID	1								Mid	67						U/C
Site 37		50-47N 115-54E	IIID	1								Mid	67						U/C
Site 38		50-49N 115-51E	IIID	1								Mid	67						U/C
Site 39		50-51N 116-00E	IIID	1								Mid	67						U/C
Site 40		50-49N 116-03E	IIID	1								Mid	67						U/C
Site 41		50-52N 116-07E	IIID	1								Mid	67						U/C
Site 42		50-49N 116-07E	IIID	1								Mid	67						U/C
Site 43		50-46N 116-02E	IIID	1								Mid	67						U/C
Site 44		50-45N 115-48E	IIID	1								Mid	67						U/C
Site 45		50-40N 115-54E	IIID	1								Mid	67						U/C
Site 46		50-40N 115-58E	IIID	1								Mid	67						U/C
Site 47		50-42N 115-02E	IIID	1								Mid	67						U/C
Site 48		50-44N 116-07E	IIID	1								Mid	67						U/C
Site 49		50-41N 116-05E	IIID	1								Mid	67						U/C
Site 50		50-37N 116-03E	IIID	1								Mid	67						U/C
Site 51		50-42N 115-57E	IIID	1								Mid	67						U/C
Site 52 Possible		50-38N 116-11E	IIID	1								UNDET	67						U/C
Site 55		50-58N 116-11E	IIID	1								Early	67						U/C
Site 56 Probable		50-58N 116-08E	IIID	1								UNDET	67						U/C
OMSK																			
Site 1		55-09N 73-38E	IIIB	3								Complete	64						Operational

25X1

TOP SECRET

25X1

TOP SECRET

25X1
25X1

TABLE 2. (Continued)

Location	BE Number	Coordinates	Type of Site	Number of Launchers		Site Negated		First Coverage		Latest Coverage		Stage of Const on Last Usable Coverage			Estimated Quarter Site Operational				Estimated Status				
				Soft	Hard	Date	Msn	Date	Msn	Date	Msn	Date	Msn	Const*	1st	2nd	3rd	4th					
PERM																							
Site 1		57-41N 56-11E	IIB	2																Complete	25X1	62	Operational
Site 2		57-44N 55-55E	IIB	2																Complete			Operational
Site 3		57-38N 56-07E	IIB	2																Complete			Operational
Site 4		57-41N 56-04E	IIIA		3															Complete	63	64	Operational
Site 5		57-45N 56-00E	IID	2																Complete	64		Operational
Site 6		57-42N 55-47E	IID	2																Complete			Operational
Site 7		57-42N 56-00E	IIID		1															Complete		63	Operational
Site 8		57-42N 55-54E	IIID		1															Late	66		U/C
Site 10		57-42N 55-50E	IIID		1															Late	66		U/C
Site 11		57-43N 56-06E	IIID		1															Late	66		U/C
Site 12		57-46N 56-10E	IIID		1															Late	66		U/C
Site 13		57-44N 56-16E	IIID		1															Late	66		U/C
Site 15		57-41N 56-11E	IIID		1															Late	66		U/C
Site 16		57-45N 55-46E	IIID		1															Late		66	U/C
Site 17		57-46N 55-49E	IIID		1															Late		66	U/C
Site 18		57-42N 56-22E	IIID		1															Late	66		U/C
Site 19		57-41N 56-16E	IIID		1															Late	66		U/C
Site 20		57-39N 56-08E	IIID		1															Late	66		U/C
Site 22		57-45N 55-38E	IIID		1															UNDET			U/C
Site 23		57-40N 56-23E	IIID		1															UNDET			U/C
Site 25		57-50N 55-48E	IIID		1															Late		66	U/C
Site 26 Possible		57-50N 55-42E	IIID		1															Late			U/C
Site 29		57-49N 56-27E	IIID		1															Early			U/C
Site 30		57-49N 56-32E	IIID		1															Late			U/C
Site 31 Probable		57-47N 56-38E	IIID		1															Late			U/C
Site 32 Possible		57-49N 56-38E	IIID		1															UNDET			U/C
Site 33		57-52N 56-43E	IIID		1															UNDET	25X1		U/C
Site 34		57-50N 56-44E	IIID		1															Late			U/C
Site 35		57-45N 56-19E	IIID		1															Late			U/C
Site 36		57-47N 56-24E	IIID		1															Late			U/C
Site 37 Possible		57-46N 56-36E	IIID		1															UNDET			U/C
Site 38		57-48N 55-45E	IIID		1															UNDET			U/C
Site 39		57-45N 55-42E	IIID		1															Late			U/C
Site 40		57-50N 56-18E	IIID		1															Late			U/C
Site 41		57-40N 55-49E	IIID		2															Mid			U/C
Site 42 Possible		57-52N 56-32E	IIID		1															Mid			U/C
PLESETSK																							
Site 1		62-56N 40-27E	IA	2	2															Complete	60		Operational
Site 2		62-56N 40-32E	IA	1																Complete	60		Operational
Site 3		62-58N 40-41E	IA	1																Complete		60	Operational
Site 4		62-59N 40-47E	IIA	2																Complete		61	Operational
Site 5		63-03N 40-57E	IIB	2																Complete	63	62	Operational
Site 6		63-01N 40-53E	IIIA		3															Complete			Operational
Site 7		62-51N 40-35E	IIC	2																Complete	63	63	Operational
Site 8		62-54N 40-47E	IIC	2																Complete		63	Operational
Site 9		62-53N 40-51E	IB	2																Complete		63	Operational
Site 10		62-53N 40-52E	IB	2																Mid			U/C
Site F 1/		62-52N 40-44E	IIID		1															Mid			U/C
SHADRINSK																							
Site 1		56-09N 63-51E	IIIA		3															Complete	64	63	Operational
Site 2		56-10N 64-02E	IIIA		3															Complete			Operational
Site 3		56-07N 63-57E	IIIA		3															Complete		64	Operational
SVOBODNY																							
Site 1		51-49N 128-19E	IIB	2																Complete		62	Operational
Site 2		51-53N 128-22E	IIB	2																Complete		62	Operational
Site 3		51-55N 128-10E	IIB	2																Complete		62	Operational
Site 4		51-58N 128-07E	IID	2																Complete	64		Operational
Site 5		51-53N 128-13E	IID	2																Complete		63	Operational
Site 6		51-43N 128-00E	IID	2																Complete		63	Operational
Site 7		51-38N 127-58E	IIIA		3															Complete		64	Operational
Site 8		52-03N 128-06E	IID	2																Complete	64		Operational
Site 9		51-27N 128-01E	IIID		1															Early			Operational
Site 10		51-47N 128-09E	IIID		1															Mid			Operational
Site 11		51-53N 128-10E	IIID		1															Mid			Operational
Site 12		51-48N 128-03E	IIID		1															Mid			Operational
Site 14		51-50N 128-08E	IIID		1															Mid			Operational
Site 15		51-55N 128-05E	IIID		1															Mid			Operational
Site 16		51-51N 128-02E	IIID		1															Mid			Operational
Site 17		51-54N 127-59E	IIID		1															Mid			Operational
Site 18		51-44N 127-56E	IIID		1															Early			Operational

25X1

25X1

TOP SECRET

TOP SECRET

25X1

25X1

TABLE 2. (Continued)

Location	BE Number	Coordinates	Type of Site	Number of Launchers		Site Negated		First Coverage		Latest Coverage		Stage of Const on Last Usable Coverage			Estimated Quarter Site Operational				Estimated Status		
				Soft	Hard	Date	Msn	Date	Msn	Date	Msn	Date	Msn	Const*	1st	2nd	3rd	4th			
TATISHCHEVO																					
Site 1		1-48N 45-39E	IID	1																Late	U/C
Site 2		1-51N 45-41E	IID	1																Late	U/C
Site 3		1-38N 45-45E	IID	1																Late	U/C
Site 5		1-45N 45-41E	IID	1																Late	U/C
Site 6		1-44N 45-35E	IID	1																Late	U/C
Site 7		1-47N 45-34E	IID	1																Late	U/C
Site 8		1-50N 45-34E	IID	1																Late	U/C
Site 9		1-49N 45-29E	IID	1																Late	U/C
Site 10		1-53N 45-36E	IID	1																Late	U/C
Site 11		1-32N 45-31E	IID	1																Late	U/C
Site 12		1-36N 45-30E	IID	1																Late	U/C
Site 13		1-34N 45-23E	IID	1																Late	U/C
Site 14		1-33N 45-29E	IID	1																Late	U/C
Site 15		1-32N 45-35E	IID	1																Late	U/C
Site 16		1-29N 45-28E	IID	1																Late	U/C
Site 17		1-36N 45-35E	IID	1																Late	U/C
Site 19		1-31N 45-23E	IID	1																Late	U/C
Site 20		1-33N 45-18E	IID	1																Late	U/C
Site 21		1-38N 45-24E	IID	1																Late	U/C
Site 24		1-32N 45-16E	IID	1																Late	U/C
Site 25		1-26N 45-16E	IID	1																Late	U/C
Site 26		1-28N 45-10E	IID	1																Late	U/C
Site 27		1-28N 45-15E	IID	1																Late	U/C
Site 28		1-27N 45-21E	IID	1																Late	U/C
Site 29		1-26N 45-33E	IID	1																Late	U/C
Site 30		1-40N 45-29E	IID	1																Late	U/C
Site 32		1-25N 45-10E	IID	1																Late	U/C
Site 35		1-41N 45-32E	IID	1																Late	U/C
Site 36		1-42N 45-13E	IID	1																Late	U/C
Site 37 Possible		1-45N 45-17E	IID	1																Late	U/C
Site 38 Probable		1-40N 45-02E	IID	1																Early	U/C
Site 39		1-46N 45-06E	IID	1																Early	U/C
Site 40 Possible		1-43N 45-02E	IID	1																Early	U/C
Site 41 Probable		1-43N 45-09E	IID	1																Early	U/C
Site 42		1-45N 45-11E	IID	1																Early	U/C
Site 44		1-39N 45-12E	IID	1																Early	U/C
Site 45		1-52N 45-46E	IID	1																Early	U/C
Site 46		1-54N 45-46E	IID	1																Early	U/C
Site 47		1-55N 45-43E	IID	1																Early	U/C
Site 48 Possible		1-54N 45-52E	IID	1																UNDET	U/C
Site 49 Possible		1-57N 45-50E	IID	1																UNDET	U/C
Site 51		1-49N 45-11E	IID	1																Early	U/C
Site 52		1-42N 45-11E	IID	1																Early	U/C
Site 53 Probable		1-42N 45-05E	IID	1																Early	U/C
Site 54 Probable		1-39N 45-09E	IID	1																Early	U/C
Site 57		1-34N 45-09E	IID	1																Mid	U/C
Site 58		1-54N 45-52E	IID	1																Early	U/C
Site 59		1-45N 45-21E	IID	1																Early	U/C
Site 60		1-53N 45-10E	IID	1																Early	U/C
Site 61		1-52N 45-14E	IID	1																Early	U/C
Site 62		1-56N 45-18E	IID	1																Early	U/C
Site 63 Probable		1-56N 45-23E	IID	1																Early	U/C
Site 64 Possible		1-42N 45-13E	IID	1																Early	U/C
Site 65 Probable		1-49N 45-18E	IID	1																Early	U/C
Site 66 Probable		1-51N 45-25E	IID	1																Early	U/C
Site 67		1-52N 45-26E	IID	1																Mid	U/C
Site 68 Probable		1-47N 45-24E	IID	1																Early	U/C
Site 69 Probable		1-08N 45-24E	IID	1																Early	U/C
Site 70 Probable		1-08N 45-30E	IID	1																Early	U/C
Site 71 Probable		1-03N 45-31E	IID	1																Early	U/C
Site 72 Probable		1-39N 45-14E	IID	1																Early	U/C
Site 74 Possible		1-08N 45-17E	IID	1																Early	U/C
TEYKOVO																					
Site 1		56-55N 40-27E	IIB	2																Complete	Operational
Site 2		56-56N 40-38E	IIB	2																Complete	Operational
Site 3		56-55N 40-17E	IIB	2																Complete	Operational
Site 4		56-59N 40-40E	IIB	2																Complete	Operational
Site 5		56-49N 40-10E	IIB	2																Complete	Operational
Site 6		56-55N 40-22E	IIB	2																Complete	Operational

25X1

TOP SECRET

25X1

TOP SECRET

25X1

25X1

TABLE 2. (Continued)

Location	BE Number	Coordinates	Type of Site	Number of Launchers		Site Negated		First Coverage		Latest Coverage		Stage of Const on Last Usable Coverage			Estimated Quarter Site Operational				Estimated Status
				Soft	Hard	Date	Msn	Date	Msn	Date	Msn	Date	Msn	Const*	1st	2nd	3rd	4th	
TYUMEN																			
Site 2		56-51N 65-27E	IIC	2															
Site 3		56-52N 65-34E	IIC	2															
UZHUR																			
Site 1		55-20N 88-43E	IIC	1															
Site 2		55-18N 89-38E	IIC	1															
Site 3		55-20N 89-33E	IIC	1															
Site 4		55-17N 89-26E	IIC	1															
Site 5		55-13N 89-33E	IIC	1															
Site 6		55-25N 89-39E	IIC	1															
Site 7		55-22N 89-27E	IIC	1															
Site 8		55-19N 89-20E	IIC	1															
Site 9		55-13N 89-21E	IIC	1															
Site 10		55-12N 89-09E	IIC	1															
Site 11		55-16N 89-10E	IIC	1															
Site 12		55-08N 89-37E	IIC	1															
Site 13		55-13N 89-42E	IIC	1															
Site 14		55-25N 89-15E	IIC	1															
Site 15		55-05N 89-48E	IIC	1															
Site 16		55-01N 89-33E	IIC	1															
Site 17		55-02N 89-43E	IIC	1															
Site 18		54-57N 89-40E	IIC	1															
Site 19		55-16N 89-44E	IIC	1															
Site 20		55-01N 89-17E	IIC	1															
Site 21		55-03N 89-22E	IIC	1															
Site 22 Probable		54-58N 89-27E	IIC	1															
Site 23 Possible		54-56N 89-15E	IIC																
VERKHNYAYA SALDA																			
Site 1		58-06N 60-21E	IIA	2															
Site 2		58-09N 60-16E	IIB	2															
Site 3		58-10N 60-28E	IIA	2															
Site 4		58-12N 60-34E	IIB	2															
Site 5		58-14N 60-35E	IIB	2															
Site 7		58-14N 60-41E	IIA																
Site 8		58-13N 60-49E	IIA																
Site 9		58-08N 60-13E	IID	2															
Site 10		58-09N 60-32E	IID	2															
YEDROVO																			
Site 1		57-48N 33-14E	IIB	2															
Site 2		57-48N 33-36E	IIB	2															
Site 3		57-52N 33-27E	IIA																
Site 4		57-48N 33-28E	IID	2															
Site 5		57-49N 33-08E	IID	2															
Site 6		57-44N 33-06E	IID	2															
Site 7		57-47N 33-02E	IID	2															
Site 8		57-52N 33-18E	IIA																
Site 10		57-48N 33-32E	IID	1															
Site 11		57-47N 33-02E	IID	1															
Site 12 Probable		57-52N 33-37E	IID	1															
Site 13 Probable			IID	1															
YOSHKAR-OLA																			
Site 1		56-35N 48-09E	IIB	2															
Site 2		56-35N 48-18E	IIB	2															
Site 3		56-32N 48-27E	IIB	2															
Site 4		56-31N 48-20E	IID	2															
Site 5		56-34N 48-13E	IID	2															
Site 6		56-36N 48-28E	IID	2															

25X1

TOP SECRET

25X1

TOP SECRET

25X1

25X1

TABLE 2. (Continued)

Location	BE Number	Coordinates	Type of Site	Number of Launchers		Site Negated		First Coverage		Latest Coverage		Stage of Const on Last Usable Coverage			Estimated Quarter Site Operational				Estimated Status				
				Soft	Hard	Date	Msn	Date	Msn	Date	Msn	Date	Msn	Const*	1st	2nd	3rd	4th					
YURYA																							
Site 1		59-09N 49-40E	IIA	2																Complete	25X1	61	Operational
Site 2		59-10N 49-32E	IIA	2																Complete		61	Operational
Site 3		59-13N 49-25E	IIB	2																Complete	62	62	Operational
Site 4		59-16N 49-22E	IIB	2																Complete			Operational
Site 5		59-23N 49-17E	IIIA		3															Complete		62	Operational
Site 6		59-04N 49-51E	IIIA		3															Complete	64		Operational
Site 7		59-21N 49-14E	IIB	2																Complete	63		Operational
Site 8		59-11N 49-47E	IID	2																Complete		63	Operational
Site 9		59-06N 49-45E	IID	2																Complete	64		Operational
Site 10		59-13N 49-18E	IIIA		3															Complete		64	Operational
Site 11		59-06N 49-25E	IID	2																Complete	64		Operational
ZHANGIZ-TOBE																							
Site 1		49-12N 81-00E	IIIC		1															Late		66	U/C
Site 2		49-16N 80-59E	IIIC		1															Late		66	U/C
Site 3		49-06N 81-03E	IIIC		1															Mid		66	U/C
Site 4		49-11N 80-54E	IIIC		1															Late		66	U/C
Site 5		49-10N 81-04E	IIIC		1															Mid		66	U/C
Site 6		49-08N 80-58E	IIIC		1															Mid		66	U/C
Site 7		49-19N 80-50E	IIIC		1															Mid		67	U/C
Site 8		49-26N 80-57E	IIIC		1															UNDET		67	U/C
Site 9		49-25N 80-49E	IIIC		1															Mid		67	U/C
Site 10		49-21N 80-58E	IIIC		1															UNDET		67	U/C
Site 11		49-17N 81-05E	IIIC		1															Early		67	U/C
Site 12 Possible		49-22N 81-06E	IIIC		1															UNDET		67	U/C
Site 13 Probable		49-09N 81-14E	IIIC		1															Early	25X1		U/C
Site 14 Probable		49-10N 81-21E	IIIC		1															Early			U/C
Site 15 Probable		49-08N 81-29E	IIIC		1															Early			U/C
				150	374																		

*To clarify the terms used in referring to construction stages at single-silo sites, identifiable steps in the construction process have been categorized as follows: early stage, clearing and grading, open-cut silo excavation, silo coring; midstage, silo under construction, silo backfilling; late stage, final backfill and grading, silo door installed; complete final configuration apparent; operational, equipment installed and checked out (estimated). One member considers a launch site to be operational when backfilling and grading have been completed, the silo door installed, and the final road pattern evident. If a valid site should not be observed in a completed stage because of the lack of adequate repetitive photographic coverage at the time, the site is considered to be complete and operational after the passage of 21 months of construction time.

1/Not considered an operational ICBM site (see 16th Revision).

25X1

25X1
25X1

TABLE 3. SUMMARY EVALUATION OF LAUNCH FACILITIES, TYURATAM MISSILE TEST CENTER

Location	BE Number	Coordinates	Type of Site	Number of Launchers		Site Negated		First Coverage		Latest Coverage		Stage of Const on Last Usable Coverage			Estimated Status
				Soft	Hard	Date	Msn	Date	Msn	Date	Msn	Date	Msn	Const	
Launch Complex A															
Site A1		45-55N 63-21E	I	1										Complete	Operational
Site A2		45-55N 63-21E	I	1										Complete	Operational
Site A3			I	1										Complete	Operational
Launch Complex B															
Site B1		46-00N 63-34E	IA	1										Complete	Operational
Site B2		46-00N 63-34E	II	1										Complete	Operational
Launch Complex C															
Site C1		45-48N 63-38E	II	1										Complete	Operational
Site C2		45-48N 63-39E	II	1										Complete	Operational
Site C3		45-48N 63-39E	II	1										Complete	Operational
Launch Complex D															
Site D1		45-59N 63-57E	IIIA		3									Complete	Operational
Site D2		45-59N 63-57E	IIIA		3									Complete	Operational
Launch Complex E															
Site E1		45-48N 63-12N	IIC	1										Complete	Operational
Site E2		45-48N 63-12N	IIC	1										Complete	Operational
Site E3		45-48N 63-12N	IIC	1										Complete	Operational
Launch Complex F															
Site F1		46-02N 63-06E	IIIB		3									Complete	Operational
Launch Complex G															
Site G1-G2		46-03N 62-56E	I	2										Complete	Operational
Site G3-G4		46-03N 62-56E	I	2										Complete	Operational
Site G5-G6		46-05N 62-54E	II	2										Complete	Operational
Launch Complex H															
Site H1		45-59N 63-42E	I	2										Complete	Operational
Launch Group I															
Site I1		45-56N 63-26E	IIIC		1									Complete	Operational
Site I2		45-56N 63-26E	III		1									Early	U/C
Site I3			III		1									Early	U/C
Site I4		45-54N 63-20E	IIIC		1									Complete	Operational
Site I5		45-59N 63-33E	IIIC		1									Complete	Operational
Site I6			III		1									Complete	Operational
Launch Complex J															
Site J1		45-54N 63-54E	I	2										Early	U/C
Launch Group K														Mid	U/C
Site K1		46-02N 63-03E	IIIC		1									Late	U/C
Site K2		46-02N 63-03E	IIIC		1									Late	U/C
Site K3		46-04N 62-56E	IIIC		1									Late	U/C
Launch Group L															
Sites L1-L10		46-03N 62-59E	IIID		10									Complete	Operational
Launch Group M															
Site M1			III		1									Early	U/C
Site M2			III		1									Early	U/C
Site M3			III		1									Early	U/C
Launch Group N															
Site N1		46-02N 63-02E	IIID		1									Complete	Operational
Site N2		46-04N 62-57E	III		1									Complete	Operational
Site N3		46-04N 62-57E	III		1									Complete	Operational

25X1

25X1

TOP SECRET

25X1

TOP SECRET

25X1

25X1

TABLE 4. SUMMARY EVALUATION OF SOVIET IRBM DEPLOYMENT

LOCATION*	BE NUMBER	COORDINATES	TYPE	NO OF PADS/ LAUNCHERS	DATE OF LATEST PHOTOGRAPHY	ESTIMATED CONSTR
AKTYUBINSK Launch Complex PETROVSKIY		50-00-30N 56-58-00E	IV	3		25X1 Complete
BELOMORSK Launch Complex RAMOYE		64-25-45N 34-18-15E	III	4		Complete
FEDOROVKA Launch Complex TRAKTOVYY		53-25-15N 62-23-00E	III	4		Complete
GELLI Launch Complex KAKASHURA		42-38-45N 47-27-00E	IV	3		Complete
GELLI		42-26-30N 47-28-30E	IV	3		Complete
PARAUL		42-47-30N 47-23-00E	IV	3		25X1 Complete
GRANOV Launch Complex GRANOV 1		48-56-15N 29-30-15E	III	4		Complete
GRANOV 2		48-50-00N 29-28-45E	IV	3		Complete
KALNIK		48-59-30N 29-21-45E	IV	3		Complete
KROLEVETS Launch Complex KROLEVETS 1		51-36-45N 33-29-30E	III	4		Complete
KROLEVETS 2		51-40-45N 33-31-15E	III	4		Complete
BEREZA		51-43-45N 33-43-45E	III	2		Complete
LEBEDIN Launch Complex LEBEDIN 1		50-33-00N 34-25-45E	III	4		Complete
LEBEDIN 2		50-35-45N 34-24-30E	III	4		Complete
LEBEDIN 3		50-38-00N 34-27-30E	III	4		Complete
NIGRANDE Launch Complex NIGRANDE		56-31-00N 22-02-15E	III	4		Complete
SKRUNDA		56-35-30N 21-49-15E	IV	3		Complete
VAINODE		56-28-30N 21-50-15E	IV	3		Complete
NOVOSYSOYEVKA Launch Complex NOVOSYSOYEVKA 1		44-11-45N 133-26-15E	III	4		Complete
NOVOSYSOYEVKA 2		44-07-15N 133-28-30E	IV	3		Complete

25X1

25X1

TOP SECRET

TOP SECRET

25X1
25X1

TABLE 4. (Continued)

LOCATION*	BE NUMBER	COORDINATES	TYPE	NO OF PADS/ LAUNCHERS	DATE OF LATEST PHOTOGRAPHY	ESTIMATED CONSTR	
PERVOMAYSK Launch Complex		47-58-00N 30-53-15E	IV	3		Complete	
KAMENNNY MOST		47-58-45N 30-59-00E	IV	3		Complete	
SEMENOVKA 1		47-53-30N 30-58-45E	IV	3		Complete	
SEMENOVKA 2							
SARY OZEK Launch Complex			44-32-00N 77-46-15E	III		4	Complete
KARA BABAU 1		44-31-00N 77-58-45E	IV	3		Complete	
KARA BABAU 2		44-30-15N 77-41-15E	IV	3		Complete	
KARA BABAU 3							
SMORGON Launch Complex			54-31-45N 26-17-30E	III		4	Complete
SMORGON 1		54-26-00N 26-18-30E	IV	3		Complete	
SMORGON 2		54-36-15N 26-22-30E	III	4		Complete	
SMORGON 3							
TAYBOLA Launch Complex		68-28-00N 33-15-30E	IV	3	Complete		
TAYBOLA 1	68-30-30N 33-23-15E	IV	3	Complete			
TAYBOLA 2							
ZHURAVKA Launch Complex		54-36-30N 76-39-45E	III	4	Complete		
ZHURAVKA							

*TDI site designators have been adopted for IRBM launch sites.

25X1

TOP SECRET

25X1

TOP SECRET

25X1

25X1

25X1

TABLE 5. SUMMARY EVALUATION OF SOVIET MRBM DEPLOYMENT

LOCATION*	BE NUMBER	COORDINATES	TYPE	NO OF PADS/ LAUNCHERS	DATE OF LATEST PHOTOGRAPHY	ESTIMATED CONSTR
AKHTYRKA Launch Complex						
AKHTYRKA 1		50-16-00N 34-50-15E	II	4		Complete
AKHTYRKA 2		50-22-00N 34-57-00E	II	4		Complete
ALUKSNE Launch Complex						
LEJASCIEMS 1		57-21-00N 26-44-45E	II	4		Complete
RUSKI		57-25-15N 26-50-00E	II	4		Complete
LEJASCIEMS 2		57-13-00N 26-33-30E	IV	4		Complete
ANASTASYEVKA Launch Complex						
ANASTASYEVKA 1		48-34-15N 135-37-45E	II	4		Complete
ANASTASYEVKA 2		48-35-45N 135-41-00E	II	4		Complete
BALTA Launch Complex						
BALTA 1		48-01-45N 29-34-00E	II	4		Complete
BALTA 2		48-07-00N 29-34-30E	II	4		Complete
BARANO-ORENBURGSKOYE Launch Complex						
SOFIYE ALEKSEYEVSKOYE		44-16-15N 131-22-30E	I	4		Complete
BARANO-ORENBURGSKOYE		44-19-45N 131-30-45E	I	4		Complete
BELOKOROVICHI Launch Complex						
OLEVSK 1		51-08-45N 28-03-15E	I	4		Complete
OLEVSK 2		51-10-30N 27-59-30E	I	4		Complete
RUDNYA ZLOTINSKAYA		51-03-30N 28-07-30E	IV	4		Complete
BORSHCHEV Launch Complex						
SKALA PODOLSKAYA 1		48-51-00N 26-08-30E	I	4		Complete
SKALA PODOLSKAYA 2		48-52-45N 26-03-30E	I	4		Complete
BREST Launch Complex						
BREST 1		51-48-45N 24-00-45E	II	4		Complete
BREST 2		51-51-45N 24-01-45E	II	4		Complete
BRODY Launch Complex						
BRODY 1		50-06-00N 25-12-15E	IV	4		Complete
BRODY 2		50-12-46N 25-05-00E	I	4		Complete
BERESTECHKO		50-20-00N 25-05-30E	I	4		Complete

25X1

25X1

25X1

TOP SECRET

TOP SECRET

25X1

TABLE 5. (Continued)

LOCATION*	BE NUMBER	COORDINATES	TYPE	NO OF PADS/ LAUNCHERS	DATE OF LATEST PHOTOGRAPHY	ESTIMATED CONSTR
DERAZHNYA Launch Complex						
DERAZHNYA 1		49-21-00N 27-26-30E	II	4		Complete
DERAZHNYA 2		49-26-15N 27-29-00E	II	4		Complete
KHMELNITSKIY		49-24-45N 27-08-45E	IV	4		Complete
DISNA Launch Complex						
DISNA		55-35-15N 28-16-00E	I	4		Complete
ZELKI		55-35-45N 28-24-30E	I	4		Complete
BORKOVICHI		55-41-45N 28-27-00E	II	4		Complete
DOLINA Launch Complex						
DOLINA 1		49-03-30N 24-03-30E	I	4		Complete
DOLINA 2		49-06-15N 24-08-30E	I	4		Complete
BOLEKHOV		49-06-45N 23-51-15E	IV	4		Complete
DROGOBYCH Launch Complex						
MEDENITSA		49-22-15N 23-45-30E	I	4		Complete
DROGOBYCH		49-25-30N 23-34-45E	I	4		Complete
STRYY		49-16-45N 23-43-00E	IV	4		Complete
DYATLOVO Launch Complex						
DYATLOVO		53-32-45N 25-16-45E	I	4		Complete
BEREZOVKA		53-35-30N 25-17-30E	I	4		Complete
ZBLYANY		53-35-45N 25-27-30E	II	4		Complete
GOMEL Launch Complex						
BORKHOV 1		52-18-30N 30-42-45E	II	4		Complete
BORKHOV 2		52-24-45N 30-39-00E	II	4		Complete
GRESK Launch Complex						
GRESK 1		53-14-15N 27-42-30E	I	4		Complete
GRESK 2		53-17-00N 27-40-45E	I	4		Complete
URECHYE		53-11-00N 27-58-30E	II	4		Complete
GROZNYI Launch Complex						
SUNZHENSKOYE		43-08-15N 44-54-15E	I	4		Complete
NESTEROVSKAYA		43-11-30N 44-57-00E	I	4		Complete
ACHKHOY-MARTAN		43-10-30N 45-10-30E	IV	4		Complete

25X1

25X1

25X1

TOP SECRET

TOP SECRET

25X1

25X1

TABLE 5. (Continued)

LOCATION*	BE NUMBER	COORDINATES	TYPE	NO OF PADS/ LAUNCHERS	DATE OF LATEST PHOTOGRAPHY	ESTIMATED CONSTR
GUSEV Launch Complex						
GUSEV 1		54-41-30N 22-05-00E	I	4		Complete
GUSEV 2		54-44-00N 22-03-30E	I	4		Complete
GVARDEYSK Launch Complex						
GVARDEYSK 1		54-40-30N 21-07-30E	I	4		Complete
GVARDEYSK 2		54-45-15N 21-09-15E	I	4		Complete
JELGAVA Launch Complex						
IECAVA 1		56-35-30N 24-04-00E	II	4		Complete
IECAVA 2		56-39-45N 24-07-30E	II	4		Complete
IECAVA 3		56-33-00N 24-20-30E	IV	4		Complete
JONAVA Launch Complex						
KARMELAVA		54-57-15N 24-05-45E	II	4		Complete
JONAVA		55-01-00N 24-14-15E	II	4		Complete
KAMENETS-PODOLSKIY Launch Complex						
KAMENETS-PODOLSKIY		48-51-15N 26-42-30E	II	4		Complete
DUNAYEVTSY		48-55-15N 26-59-00E	II	4		Complete
KIVERTSY Launch Complex						
KIVERTSY 1		50-53-15N 25-31-00E	I	4		Complete
KIVERTSY 2		50-56-00N 25-36-15E	I	4		Complete
TROSTYANETS		50-58-30N 25-39-30E	II	4		Complete
KONKOVICHI Launch Complex						
PETRIKOV		52-10-30N 28-34-45E	I	4		Complete
KONKOVICHI		52-15-30N 28-37-45E	I	4		Complete
KOROSTEN Launch Complex						
KOROSTEN 1		50-51-45N 28-18-15E	II	4		Complete
KOROSTEN 2		50-52-15N 28-31-00E	II	4		Complete
KOZHANOVICHI Launch Complex						
KOZHANOVICHI 1		52-10-15N 27-51-30E	I	4		Complete
KOZHANOVICHI 2		52-11-30N 27-48-00E	I	4		Complete

25X1

25X1

25X1

TOP SECRET

TOP SECRET

25X1

TABLE 5. (Continued)

LOCATION*	BE NUMBER	COORDINATES	TYPE	NO OF PADS/ LAUNCHERS	DATE OF LATEST PHOTOGRAPHY	ESTIMATED CONSTR
KRASKINO Launch Complex KRASKINO		42-44-00N 130-40-15E	II	4		Complete
KRASNOZNAMENSK Launch Complex VIESVILLE		55-01-30N 22-23-00E	I	4		Complete
RAGNIT		55-01-15N 22-11-15E	I	4		Complete
KREMOVO Launch Complex KREMOVO		44-01-24N 132-20-39E	I	4		Complete
LYALICHI		44-02-30N 132-26-26E	I	4		Complete
KURGANCHA Launch Complex KURGANCHA 1		39-37-45N 65-57-30E	I	4		Complete
KURGANCHA 2		39-37-30N 65-57-00E	I	4		Complete
TYM		39-35-15N 65-42-45E	IV	4		Complete
LIDA Launch Complex LIDA 1		53-47-30N 25-20-30E	I	4		Complete
LIDA 2		53-57-15N 25-27-45E	I	4		Complete
LUTSK Launch Complex LUTSK 1		50-46-45N 25-03-00E	I	4		Complete
LUTSK 2		50-50-30N 25-04-15E	I	4		Complete
VLADIMIR-VOLYNSKIY		50-48-30N 24-42-30E	IV	4		Complete
MARINA GORKA Launch Complex MARINA GORKA		53-26-30N 27-45-30E	II	4		Complete
MAYKOP Launch Complex KURDZHIPSKAYA		44-31-45N 40-00-45E	II	4		Complete
SHIRVANSKAYA		44-25-30N 39-54-00E	IV	4		Complete
MOLOSKOVITSY Launch Complex MOLOSKOVITSY 1		59-28-45N 29-06-00E	II	4		Complete
MOLOSKOVITSY 2		59-29-30N 29-12-15E	II	4		Complete
GURLEVO		59-25-00N 28-53-15E	IV	4		Complete
MUKACHEVO Launch Complex MUKACHEVO 1		48-18-45N 22-30-45E	I	4		Complete
MUKACHEVO 2		48-19-30N 22-37-15E	I	4		Complete

25X1

25X1

TABLE 5. (Continued)

LOCATION*	BE NUMBER	COORDINATES	TYPE	NO OF PADS/ LAUNCHERS	DATE OF LATEST PHOTOGRAPHY	ESTIMATED CONSTR
NADVORNAYA Launch Complex						
PARYSHCHE		48-37-45N 24-42-00E	I	4		Complete
NOVA VES		48-39-30N 24-48-15E	I	4		Complete
OTYNYA		48-47-30N 24-50-30E	IV	4		Complete
OSTROG Launch Complex						
OSTROG 1		50-14-00N 26-43-15E	I	4		Complete
OSTROG 2		50-17-15N 26-41-00E	I	4		Complete
OSTROV Launch Complex						
ASANOVSHCHINA		57-31-45N 28-12-15E	I	4		Complete
SHEVELEVO		57-37-00N 28-12-15E	I	4		Complete
REDKINO		57-24-30N 28-26-00E	IV	4		Complete
PAPLAKA Launch Complex						
PAPLAKA 1		56-24-00N 21-17-30E	I	4		Complete
PAPLAKA 2		56-25-00N 21-16-45E	I	4		Complete
PINSK Launch Complex						
IVANOVO		52-10-45N 25-41-15E	I	4		Complete
MOTOL		52-12-30N 25-44-30E	I	4		Complete
POLOTSK Launch Complex						
POLOTSK 1		55-22-30N 28-44-30E	II	4		Complete
POLOTSK 2		55-24-15N 28-33-45E	II	4		Complete
POSTAVY Launch Complex						
POSTAVY 1		55-09-45N 26-53-45E	II	4		Complete
KOZYANY		55-20-30N 26-51-30E	II	4		Complete
POSTAVY 2		55-06-15N 27-00-15E	IV	4		Complete
PRUZHANY Launch Complex						
PRUZHANY 1		52-30-30N 24-08-45E	II	4		Complete
PRUZHANY 2		52-33-30N 24-06-15E	II	4		Complete
RAKVERE Launch Complex						
SIMUNA		59-08-45N 26-26-45E	II	4		Complete
VAIKE MAARJA		59-11-15N 26-20-45E	II	4		Complete

25X1

25X1

25X1

25X1

TOP SECRET

TOP SECRET

25X1

25X1

TABLE 5. (Continued)

LOCATION*	BE NUMBER	COORDINATES	TYPE	NO OF PADS/ LAUNCHERS	DATE OF LATEST PHOTOGRAPHY	ESTIMATED CONSTR
RISTI Launch Complex						
RISTI 1		59-04-00N 24-04-30E	I	4		Complete
RISTI 2		59-07-45N 24-06-45E	I	4		Complete
RUZHANY Launch Complex						
KRUPA 1		52-47-45N 24-42-30E	II	4		Complete
KRUPA 2		52-49-15N 24-45-30E	II	4		Complete
SATEIKIAI Launch Complex						
SALANTAI 1		55-59-45N 21-38-15E	I	4		Complete
SALANTAI 2		56-02-15N 21-41-30E	I	4		Complete
ZEMAICIU KALVARIJA		56-01-45N 21-54-30E	IV	4		Complete
SIMFEROPOL Launch Complex						
MAZANKA		44-53-45N 34-20-00E	I	4		Complete
BALKI		44-57-00N 34-26-00E	I	4		Complete
SLONIM Launch Complex						
BYTEN 1		52-52-30N 25-21-30E	I	4		Complete
BYTEN 2		52-55-45N 25-22-15E	I	4		Complete
SOKAL Launch Complex						
SOKAL 1		50-22-45N 24-18-15E	I	4		Complete
SOKAL 2		50-27-15N 24-20-00E	I	4		Complete
SOKAL 3		50-20-15N 24-26-15E	IV	4		Complete
SOVETSK Launch Complex						
SLAVSK 1		54-59-15N 21-36-30E	I	4		Complete
SLAVSK 2		54-59-45N 21-28-30E	I	4		Complete
SUCHAN Launch Complex						
NOVITSKOYE		43-01-45N 133-17-00E	I	4		Complete
SEVERNYY SUCHAN		43-10-00N 133-20-05E	I	4		Complete
TAURAGE Launch Complex						
TAURAGE 1		55-10-15N 22-20-30E	I	4		Complete
TAURAGE 3		55-05-00N 22-20-00E	I	4		Complete

25X1

25X1

25X1

25X1

TOP SECRET

TOP SECRET

25X1

25X1

25X1

TABLE 5. (Continued)

LOCATION*	BE NUMBER	COORDINATES	TYPE	NO OF PADS/ LAUNCHERS	DATE OF LATEST PHOTOGRAPHY	ESTIMATED CONSTR
TORVA Launch Complex						
TORVA 1		57-56-00N 26-04-00E	I	4		Complete
TORVA 2		57-59-15N 26-05-00E	I	4		Complete
TSIRGULIINA		57-49-45N 26-12-30E	IV	4		Complete
UGOLNYY Launch Complex						
UGOLNYY		64-47-32N 177-56-15E	II	4		Complete
UKMERGE Launch Complex						
VEPRIAI		55-07-45N 24-38-30E	I	4		Complete
UKMERGE		55-11-00N 24-42-30E	I	4		Complete
UMAN Launch Complex						
MOLODETSKOYE		48-53-45N 30-27-45E	I	4		Complete
MANKOVKA		48-57-45N 30-23-45E	I	4		Complete
KISHENTSY		49-00-15N 30-13-45E	IV	4		Complete
USOVO Launch Complex						
OVRUCH 1		51-17-15N 28-16-15E	I	4		Complete
OVRUCH 2		51-18-30N 28-10-30E	I	4		Complete
LIPNIKI		51-12-15N 28-26-30E	II	4		Complete
UZHGOROD Launch Complex						
UZHGOROD		48-33-30N 22-13-15E	II	4		Complete
VORU Launch Complex						
VORU 1		57-46-00N 26-47-15E	II	4		Complete
VORU 2		57-49-00N 26-50-30E	II	4		Complete
VSELYUB Launch Complex						
VSELYUB 1		53-45-45N 25-43-00E	I	4		Complete
VSELYUB 2		53-48-00N 25-46-45E	I	4		Complete

25X1

25X1

TOP SECRET

TOP SECRET

25X1

25X1

TABLE 5. (Continued)

LOCATION*	BE NUMBER	COORDINATES	TYPE	NO OF PADS/ LAUNCHERS	DATE OF LATEST PHOTOGRAPHY	ESTIMATED CONSTR
YELSK Launch Complex						
YELSK 1		51-42-30N 29-12-30E	I	4		Complete
YELSK 2		51-47-15N 29-18-15E	I	4		Complete
ZAGARE Launch Complex						
ZAGARE 1		56-23-15N 23-19-15E	I	4		Complete
ZAGARE 2		56-29-00N 23-20-45E	I	4		Complete
LIELELEJA		56-24-30N 23-36-45E	IV	4		Complete
ZHITOMIR Launch Complex						
ZHITOMIR 1		50-04-45N 28-15-45E	II	4		Complete
ZHITOMIR 2		50-10-00N 28-16-15E	II	4		Complete
BERDICHEV		50-05-30N 28-22-00E	II	4		Complete
ZHMERINKA Launch Complex						
GNIVAN		49-09-00N 28-11-45E	II	4		Complete
ZHMERINKA		49-10-15N 28-05-00E	II	4		Complete
VINNITSA		49-17-30N 28-20-15E	IV	4		Complete
ZNAMENSK Launch Complex						
ZNAMENSK 1		54-32-45N 21-11-15E	I	4		Complete
ZNAMENSK 2		54-35-15N 21-07-30E	I	4		Complete

*TDI site designators have been adopted for MRBM launch sites.

25X1

25X1

TOP SECRET

TOP SECRET

25X1

Table 6. Summary Evaluation of Selected Launch Facilities, Kapustin Yar Missile Test Center

25X1
25X1

Complex/Area/Site	BE Number	Coordinates	Type of Site	Number of Positions		Site Negated		First Coverage		Latest Coverage		Stage of Construction on Last Usable Coverage			Estimated Status
				Soft	Hard	Date	Msn	Date	Msn	Date	Msn	Date	Msn	Const	
Complex A															
Launch Site 1A1		48-42N 46-15E	R&D	1	--									Complete	Operational
Launch Site 1A2			R&D/Trng	1	--									Complete	Operational
Launch Site 2A1			R&D	--	1									Complete	Operational
Launch Site 2A2			R&D	--	1									Inactive	Inactive
Complex C															
Launch Site 1C1		48-36N 46-17E	Space R&D*	1	--									Complete	Operational
Launch Site 1C2			Probable Space	1	--									Complete	Operational
Launch Site 1C3			Probable Space	1	--									Complete	Operational
Launch Area 2C		48-35N 46-17E	R&D/Trng	2	--									Complete	Operational
Launch Area 3C		48-34N 46-17E	R&D/Trng	1	--									Complete	Operational
Launch Site 4C1		48-34N 46-17E	Type IV MRBM _p	--	4									Complete,	Undetermined
														being modified	
Launch Site 4C2		48-33N 46-17E	Type IV IRBM _p	--	3									Complete	Operational
Launch Site 5C1		48-32N 46-17E	Undet	2	--									Complete	Operational
Launch Site 5C2		48-32N 46-17E	--	2	--									Never completed	Abandoned
Complex E		48-46N 46-18E	Undet	1	--									Complete	Operational
Complex G		48-24N 46-17E	Trng	2	--									Complete	Operational
Complex H		48-48N 46-20E	Undet	2	--									Late	U/C

*R&D/Trng site on first coverage
 p Prototype.

25X1

TOP SECRET

25X1

25X1

TOP SECRET

TOP SECRET

25X

TABLE 7. SUMMARY EVALUATION OF SOVIET FIXED FIELD SITES (SSM FIXED FIELD POSITIONS)

LOCATION*	BE NUMBER	COORDINATES	NEGATION DATE	FIRST OBSERVED	NO OF LAUNCH POSITIONS
AKHTYRKA Akhtyrka		50-19-30N 34-51-30E			4
ALUKSNE Lejasciems Gulbene		57-15-15N 26-41-15E 57-16-30N 26-54-30E			4 4
ANASTASYEVKA Anastasyevka		48-32-15N 135-31-45E			4
BALTA Kodyma		48-04-15N 29-18-30E			4
BARANO-ORENBURGSKOYE Sofiyе Alekseyevskoye		44-12-00N 131-24-00E			3
BELOKOROVICHI Rudnya Zlotinskaya		51-08-30N 27-59-45E			4
BORSHCHEV Skala Podolskaya 1 Skala Podolskaya 2		48-53-30N 026-13-30E 48-52-30N 026-16-00E			4 4
BREST Pishcha Zamshany		51-35-15N 23-46-45E 51-50-05N 24-02-05E			4 4
BRODY Yazlovchik Stanislavchik		50-05-45N 25-02-00E 50-07-00N 24-56-30E			4 4
DERAZHNYA Khmelnitskiy Letichev 1 Letichev 2		49-25-00N 27-06-30E 49-22-45N 27-43-45E 49-25-15N 27-45-00E			2 4 4
DISNA Dernovichi Demidovo		55-47-45N 28-20-00E 56-01-15N 28-18-45E			4 4
DOLINA Berezhnitsa Rakuv		49-12-45N 23-57-30E 48-58-21N 24-05-35E			4 4
DYATLOVO Ruda Yavorskaya 1 Ruda Yavorskaya 2 Ruda Yavorskaya 3 Berezovka		53-23-15N 25-10-30E 53-23-15N 25-12-45E 53-23-15N 25-13-30E 53-42-30N 25-30-30E			4 5 4 4
GOMEL Gomel 1 Gomel 2		52-20-45N 30-51-30E 52-24-30N 30-50-30E			4 4

25X

TOP SECRET

25X

TOP SECRET

TABLE 7. (Continued)

LOCATION*	BE NUMBER	COORDINATES	NEGATION DATE	FIRST OBSERVED	NO OF LAUNCH POSITIONS
GUSEV Tolmingkensk		54-22-15N 22-20-15E			4
GVARDEYSK Geroysskoye Vysokoye		54-45-45N 21-25-15E 54-44-30N 21-33-45E			2 4
JELGAVA Jelgava 1 Jelgava 2		56-38-45N 23-52-45E 56-44-15N 23-55-15E			2 4
JONAVA Kaisiadorys		54-59-30N 24-29-00E			4
KAMENETS-PODOLSKIY Yarmolintsy Vinkovtsy		49-12-00N 26-46-45E 48-58-20N 27-12-05E			4 4
KIVERTSY Kivertsy		50-50-00N 25-25-00E			4
KONKOVICHI Novoselki 1 Novoselki 2		52-23-00N 28-42-45E 52-25-45N 28-41-00E			4 4
KOROSTEN Litki 1 Yemilchino 1 Yemilchino 2 Litki 2		51-01-30N 28-27-45E 50-52-30N 27-53-00E 50-52-00N 27-53-00E 51-01-15N 28-24-15E			4 4 4 2
KOZHANOVICHI Lyudenevichi		52-18-00N 27-42-30E			4
KRASNOZNAMENSK Krasnoznamensk Sudargas		54-57-30N 22-35-00E 55-00-30N 22-35-00E			4 4
KREMOVO Manzovka		44-12-00N 132-34-00E			4
KURGANCHA Kurgancha		39-41-00N 65-59-00E			4
LIDA Vasilishki		53-44-00N 24-56-15E			4
LUTSK Gorokhov		50-35-45N 24-48-45E			4

TOP SECRET

TOP SECRET

TABLE 7. (Continued)

LOCATION*	BE NUMBER	COORDINATES	NEGATION DATE	FIRST OBSERVED	NO OF LAUNCH POSITIONS
MARINA GORKA					
Shotsk 1		53-27-45N 27-48-00E			4
Shotsk 2		53-26-10N 27-49-30E			4
MAYKOP					
Tulskaya		49-31-15N 40-14-15E			4
Maykop		44-32-30N 39-57-45E			4
MOLOSKOVITSY					
Kotly 1		59-37-45N 28-41-30E			4
Kotly 2		59-39-15N 28-30-00E			4
NADVORNAYA					
Ivanovtsy		48-38-00N 24-54-15E			4
Gorokholina		48-45-15N 24-30-30E			4
OSTROG					
Slavuta		50-16-45N 26-57-45E			3
Shepetovka		50-12-30N 26-59-00E			4
Ostrog		50-22-30N 26-22-00E			4
OSTROV					
Shabany		57-23-45N 28-13-15E			4
PINSK					
Lychkovtsy		52-15-00N 25-21-45E			4
POLOTSK					
Plissa 1		55-12-30N 28-01-45E			3
Plissa 2		55-11-30N 27-54-45E			4
POSTAVY					
Sivtsy		55-09-30N 26-53-45E			1
Bogatoye		54-57-15N 26-28-45E			4
Kobylnik		54-56-30N 26-37-15E			4
PRUZHANY					
Strigovo		53-23-15N 24-14-30E			4
Shcherby		52-23-00N 24-10-00E			4
RAKVERE					
Tamsalu		59-08-45N 26-09-15E			4
Kadina		59-16-30N 26-10-15E			4
Tapa		59-16-45N 26-03-15E			2
RISTI					
Kloostri		59-13-00N 24-03-00E			4
RUZHANY					
Shchitno 1		52-43-15N 24-58-15E			4
Shchitno 2		52-41-00N 24-57-30E			4

TOP SECRET

TOP SECRET

TABLE 7. (Continued)

LOCATION*	BE NUMBER	COORDINATES	NEGATION DATE	FIRST OBSERVED	NO OF LAUNCH POSITIONS
SATEIKIAI					
Telsiai		55-56-45N 22-07-00E			4
Aisedziai		55-00-15N 22-06-00E			4
SLONIM					
Byten		52-54-30N 25-22-00E			2
SMORGON					
Smorgon		54-34-45N 26-21-30E			2
TAURAGE					
Skaudvile		55-23-00N 22-31-00E			4
Taurage		55-10-00N 22-14-30E			2
TORVA					
Valga 1		57-50-15N 25-54-15E			4
Valga 2		57-55-15N 25-46-30E			4
UKMERGE					
Gelvonai		55-07-15N 24-43-45E			4
Balninkai		55-13-00N 25-02-00E			4
USOVO					
Luginy		51-08-00N 28-23-00E			4
Bolsuny		51-06-45N 28-27-00E			4
YELSK					
Yelsk		51-50-45N 29-05-15E			4
ZAGARE					
Dobele 1	56-40-00N 23-11-45E			4	
Dobele 2	56-40-45N 23-06-45E			4	
ZHITOMIR					
Berdichev	49-51-30N 28-25-30E			2	
ZHMERINKA					
Vinnitsa	49-13-15N 28-18-45E			4	
Bar	49-05-30N 27-43-00E			4	
ZNAMENSK					
Pravdinsk	54-23-00N 20-59-45E			3	
Domnovo	54-25-30N 20-53-00E			4	
					TOTAL 352

*TDI site designators have been adopted for the fixed field sites, which are listed under the nearest permanent IRBM/MRBM complex.

TOP SECRET

25X1

TABLE 8. SUMMARY EVALUATION OF SOVIET IRBM/MRBM SITES WITHOUT SUPPORT FACILITIES*

Complex/ Site	BE Number	Coordinates		Type	Site Negated		First Seen/Const Status			Last Msn Site Intact		Dismantling First Observed		Remarks	
					Date	Msn	Date	Msn	Status	Date	Msn	Date	Msn		
Belomorsk Ramoye	[REDACTED]	64-25-45N	34-18-15E	III IRBM	[REDACTED]										2 barracks-type bldgs & RIM bldg removed on [REDACTED] bunkers between never completed
Fedorovka Traktovyy		53-25-15N	62-23-00E	III IRBM											2 barracks-type bldgs removed on [REDACTED]
Kraskino Kraskino		42-44-00N	130-40-15E	II MRBM											2 barracks-type bldgs, 1 small bldg, & a RIM bldg removed [REDACTED]
Marina Gorka Marina Gorka		53-26-30N	27-45-30E	II MRBM											[REDACTED] technical section having 2 poss bldgs first appeared on [REDACTED]
Uzhgorod Uzhgorod		48-33-30N	22-13-15E	II MRBM											No barracks-type bldgs seen associated with launch area
Zhuravka Zhuravka		54-36-30N	76-39-45E	III IRBM											1 barracks-type bldg & RIM bldg removed on [REDACTED] [REDACTED] facility removed since [REDACTED]

*Bayram-Ali, Sledyuki, and Rozhdestvenka have been deleted from this table.

25X1

25X1
25X1

25X1

25X1

25X1
25X1

25X1
25X1
25X1

TOP SECRET

25X1

TABLE 9. COMPOSITION OF IRBM/MRBM COMPLEXES

No of Complexes	Containing Soft Sites Only				Containing Hard Sites Only			Containing Hard and Soft Sites			
	One Site, No Housing or Support Facility	One Site	Two Sites	Three Sites	One Site	Two Sites	Three Sites	Two Soft, One Hard Site	One Soft, One Hard Site	One Soft, Two Hard Sites	
IRBM											
3	3										
2				2							
5								1	1	3	
4					1	1	2				
MRBM											
3	3										
43		1	36	6							
21								20	1		
TOTALS	81	6	1	36	8	1	1	2	21	2	3

TOP SECRET

TOP SECRET

25X1

25X1

25X1

Table 10. Soviet ICBM, IRBM, and MRBM Systems, Estimated Technical Characteristics and Performance

	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9 1/	SS-10 2/	SS-11
Initial operational capability (IOC)	[Redacted]							
Nominal maximum range 4/ (NRE, non-rotating earth)	1,020 nm	2,200 nm	6,000 nm	6,000 nm	6,000 nm	6,500 nm	6,000 nm	6,000 nm
Guidance	Inertial	Inertial	Radio inertial	Inertial	Radio inertial	Radio inertial 5/	Radio inertial	Radio inertial
Circular error probability (CEP)								
Initial	1.25 nm	1.0 nm	2.0 nm	1-2 nm	1.0 nm	0.5-1.0 nm	1.0 nm (approx)	1.0 nm (approx)
Improved/year	--	--	--	1.0 nm/1966	0.8 nm/1967	0.5 nm/1967	0.8 nm/1967	0.8 nm/1968
Re-entry vehicle weight (lbs)	3,200, ± 500	2,500-4,000	8,000, ± 1,000	3,000-4,000 6/	2,500-4,000	10,000, ± 1,000	4000-8000	1,000-2,000
Warhead weight (lbs)	2,200, ± 300	3000-4000	6,000, ± 1,000	2,400-3,200	2,000-3,200	8,000, ± 1,000	3,200-6,500	800-1,600
Gross lift-off weight (lbs)	88,000 (approx)	200,000 (approx)	500,000 (approx)	350,000 (approx)	165,000 (approx)	440,000 (approx)	275,000 (approx)	150,000 (approx)
Configuration	Single-stage	Single-stage	Parallel	Tandem 2-stage	Tandem 2-stage	Tandem 2-stage	Tandem 2-stage	--
Propellant	Storable liquid	Storable liquid	Non-storable liquid	Storable liquid	Non-storable liquid	Storable liquid	Liquid 7/	Storable liquid
Reliability rates: 8/								
Alert	80%	80%	80%	80%	80%	85%	85%	--
Launch	90%	85%	85%	85%	85%	80%	80%	--
Improved/year						85%/1967	85%/1968	
Inflight	90%	90%	85%	90%	90%	85%	85%	--
Improved/year						90%/1967	90%/1968	
Warhead	95%	95%	95%	95%	95%	95%	95%	--
Weapon System	75%	75%	70%	75%	75%	65%	65%	--
Improved/year						75%/1967	75%/1968	
Force	60%	60%	55%	60%	60%	55%	55%	--
Improved/year						65%/1967	65%/1968	

TOP SECRET

TOP SECRET

Table 10. (Continued)

	SS-4		SS-5		SS-6		SS-7		SS-8		SS-9 ^{1/}	SS-10 ^{2/}	SS-11
Reaction time from ready condition: ^{9/}	Soft	Hard	Soft	Hard			Soft	Hard	Soft	Hard			
Condition 3	1-3 hrs	--	1-3 hrs	--	12 hrs (minimum)		1-3 hrs	--	1-3 hrs	--	--	--	--
Condition 2	15-30 min	--	15-30 min	--	1-2 hrs		15-30 min	--	30-45 min	30-45 min	--	--	--
Condition 1	5-15 min	3-5 min	5-15 min	3-5 min	1 hr (approx)		3-5 min	3-5 min	5-10 min	5-10 min	3-5 min	3-5 min	3-5 min
Hold time in ready condition 1 ^{10/}	hrs- days	days	hrs- days	days	1 hr		hrs	days	1 hr (approx)	1 hr (approx)	days	days	days
Refire time ^{11/}	2-4 hrs	--	2-4 hrs	--	12 hrs (minimum)		2-4 hrs	--	2-4 hrs	--	--	--	--

- ^{1/} The SS-9 is believed to be intended for deployment primarily in hard sites.
- ^{2/} Tentative estimates based on limited data.
- ^{3/} If intense flight testing is renewed in the immediate future. The long stand-down in the SS-10 program (last fired [redacted]) makes its role in the ICBM force uncertain.
- ^{4/} Operational range is dependent on weight class of payload used.
- ^{5/} It is believed that the SS-9 has an additional all-inertial guidance capability with a CEP of 1-1.5 nm.
- ^{6/} More than one re-entry vehicle exists within these limits. Another, weighing as much as approximately 5,000 lbs (warhead 4,000 lbs) has been tested to a reduced range (4,700nm).
- ^{7/} Probably a storable propellant if used as an ICBM; probably cryogenic if related to a space program.
- ^{8/} These reliability rates may be too high since they may not sufficiently take into account the effect of Soviet operational methods and troop training, which are at least as important as technical characteristics in determining system reliability. We have little basis for estimating these effects.
- ^{9/} Readiness Condition 3 is believed to be the normal readiness condition for ICBMs deployed at soft sites, Condition 2 for cryogenic propellant missiles at hard sites, and Condition 1 for storable liquid and solid propellant missiles at hard sites; readiness Condition 3 is believed to be the normal readiness condition for MRBM/IRBMs deployed at soft sites, and Condition 1 for hard sites.
- ^{10/} An unfavorable environment could seriously degrade these hold times. Because of the protection afforded a missile in a hardened site, it is given a longer hold time than its soft counterpart. We believe the [redacted] cryogenic properties of non-storable propellants probably limit these missiles to a hold time of about 1 hour.
- ^{11/} Refire capabilities are applicable to soft sites only. Estimated refire times are based on the assumption that the launch sites were designed specifically for an efficient refire capability and that no major refurbishment of ground support equipment or launch stand is necessary.

25X1

TOP SECRET

TOP SECRET

Approved For Release 2003/12/19 : CIA-RDP78T04757A000300010022-2
TOP SECRET

TOP SECRET
Approved For Release 2003/12/19 : CIA-RDP78T04757A000300010022-2