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**MEMORANDUM OF UNDERSTANDING REGARDING THE
ESTABLISHMENT OF THE DATA BASE FOR THE TREATY BETWEEN THE
UNION OF SOVIET SOCIALIST REPUBLICS AND THE UNITED STATES OF
AMERICA ON THE ELIMINATION OF THEIR INTERMEDIATE-RANGE AND
SHORTER-RANGE MISSILES**

Pursuant to and in implementation of the Treaty Between the Union of Soviet Socialist Republics and the United States of America on the Elimination of Their Intermediate-Range and Shorter-Range Missiles of December 8, 1987, hereinafter referred to as the Treaty, the Parties have exchanged data current as of November 1, 1987, on intermediate-range and shorter-range missiles and launchers of such missiles and support structures and support equipment associated with such missiles and launchers.

I. Definitions

For the purposes of this Memorandum of Understanding, the Treaty, the Protocol on Elimination, and the Protocol on Inspection:

1. The term "missile production facility" means a facility for the assembly or production of solid-propellant intermediate-range or shorter-range GLBMs, or existing types of GLCMs.
2. The term "missile repair facility" means a facility at which repair or maintenance of intermediate-range or shorter-range missiles takes place other than inspection and maintenance conducted at a missile operating base.
3. The term "launcher production facility" means a facility for final assembly of launchers of intermediate-range or shorter-range missiles.
4. The term "launcher repair facility" means a facility at which repair or maintenance of launchers of intermediate-range or shorter-range missiles takes place other than inspection and maintenance conducted at a missile operating base.
5. The term "test range" means an area at which flight-testing of intermediate-range or shorter-range missiles takes place.
6. The term "training facility" means a facility, not at a missile operating base, at which personnel are trained in the use of intermediate-range or shorter-range missiles or launchers of such missiles and at which launchers of such missiles are located.
7. The term "missile storage facility" means a facility, not at a missile operating base, at which intermediate-range or shorter-range missiles or stages of such missiles are stored.

8. The term "launcher storage facility" means a facility, not at a missile operating base, at which launchers of intermediate-range or shorter-range missiles are stored.

9. The term "elimination facility" means a facility at which intermediate-range or shorter-range missiles, missile stages and launchers of such missiles or support equipment associated with such missiles or launchers are eliminated.

10. The term "support equipment" means unique vehicles and mobile or transportable equipment that support a deployed intermediate-range or shorter-range missile or a launcher of such a missile. Support equipment shall include full-scale inert training missiles, full-scale inert training missile stages, full-scale inert training launch canisters, and training launchers not capable of launching a missile. A listing of such support equipment associated with each existing type of missile, and launchers of such missiles, except for training equipment, is contained in Section VI of this Memorandum of Understanding.

11. The term "support structure" means a unique fixed structure used to support deployed intermediate-range missiles or launchers of such missiles. A listing of such support structures associated with each existing type of missile, and launchers of such missiles, except for training equipment, is contained in Section VI of this Memorandum of Understanding.

12. The term "research and development launch site" means a facility at which research and development booster systems are launched.

II. Total Numbers of Intermediate-Range and Shorter-Range Missiles and Launchers of Such Missiles Subject to the Treaty

1. The numbers of intermediate-range missiles and launchers of such missiles for each Party are as follows:

	USA	USSR
Deployed missiles	429	470
Non-deployed missiles	260	356
Aggregate number of deployed and non- deployed missiles	689	826
Aggregate number of second stages	236	650
Deployed launchers	214	484
Non-deployed launchers	68	124
Aggregate number of deployed and non-	282	608

deployed launchers

2. The numbers of shorter-range missiles and launchers of such missiles for each Party are as follow:

	USA	USSR
Deployed missiles	0	387
Non-deployed missiles	170 [*]	539
Aggregate number of deployed and non-deployed missiles	170 [*]	926
Aggregate number of second stages	175 [*]	726
Deployed launchers	0	197
Non-deployed launchers	1	40
Aggregate number of deployed and non-deployed launchers	1	237

[Whereas the printed numbers match the previous edition, the changes marked match the Treaty as it will be printed in T.I.A.S. by State/Legal.]

III. Intermediate-Range Missiles, Launchers of Such Missiles and Support Structures and Support Equipment Associated With Such Missiles and Launchers

1. Deployed

The following are the deployment areas, missile operating bases, their locations and the numbers, for each Party of all deployed intermediate-range missiles listed as existing types in Article III of the Treaty, launchers of such missiles and the support structures and support equipment associated with such missiles and launchers. Site diagrams, to include boundaries and center coordinates, of each listed missile operating base are appended to this Memorandum of Understanding. The boundaries of deployment areas are indicated by specifying geographic coordinates, connected by straight lines or linear landmarks, to include national boundaries, rivers, railroads or highways.

Missiles

Launchers

Support Structures and Equipment

(a) **UNITED STATES OF AMERICA**

(i) Pershing II

Deployment Area One

The Federal Republic of Germany

Boundaries: The territory of The Federal Republic of Germany bounded on the north

by 51 degrees 00 minutes 00 seconds north latitude; on the east by 012 degrees 00 minutes 00 seconds east longitude; on the south by 48 degrees 00 minutes 00 seconds north latitude; and within the national boundaries of The Federal Republic of Germany.

Missile Operating Bases

Schwaebisch-Gmuend 48 48 54 N 009 48 29 E	40 (includes 4 spares)	36	Launch Pad Shelter-0 Training Missile Stage-24
Neu Ulm 48 22 40 N 010 00 45 E	40 (includes 4 spares)	43 (includes 7 spares)	Launch Pad Shelter-0 Training Missile Stage-24
Waldheide-Neckarsulm 49 07 45 N 009 16 31 E	40 (includes 4 spares)	36	Launch Pad Shelter-0 Training Missile Stage-24

(ii) BGM-109G

Deployment Area One

The United Kingdom of Great Britain and Northern Ireland

Boundaries: The territory of The United Kingdom bounded on the north by 52 degrees 40 minutes 00 seconds north latitude; on the west by 003 degrees 30 minutes 00 seconds west longitude; on the south by the English Channel; and on the east by the English Channel and the North Sea.

Missile Operating Base

Greenham Common 51 22 35 N 001 18 12 W	101 with launch canister (includes 5 spares)	29 (includes 5 spares)	Training Missile-0 Training Launch Canister-7
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Deployment Area Two

The United Kingdom of Great Britain and Northern Ireland

Boundaries: The territory of The United Kingdom bounded on the north by 53 degrees 45 minutes 00 seconds north latitude; on the west by 002 degrees 45 minutes 00 seconds west longitude; on the south by 51 degrees 05 minutes 00 seconds north latitude; and on the east by the English Channel and the North Sea.

Missile Operating Base

Molesworth	18* with launch canister	6*	Training Missile-0 Training Launch Canister-7
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*In preparation for operational status.

Deployment Area

The Republic of Italy

Boundaries: The territory of The Republic of Italy within the boundaries of the Island of Sicily.

Missile Operating Base

Comiso 36 59 44 N 014 36 34 E	108 with launch canister (includes 12 spares)	31 (includes 7 spares)	Training Missile-0 Training Launch Canister-7
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Deployment Area

The Kingdom of Belgium

Boundaries: The territory of The Kingdom of Belgium.

Missile Operating Base

Florennes 50 13 35N 004 39 00E	20 with launch canister (includes 4 spares)	12 (includes 8 spares)	Training Missile-0 Training Launch Canister-7
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Deployment Area Two

The Federal Republic of Germany

Boundaries: The territory of The Federal Republic of Germany bounded on the north by 51 degrees 25 minutes 00 seconds north latitude; on the east by 009 degrees 30 minutes 00 seconds east longitude; on the south by 48 degrees 43 minutes 00 seconds north latitude; and on the west by the national boundaries of The Federal Republic of Germany.

Missile Operating Base

Wueschheim 50 02 33 N 007 25 40 E	62 with launch canister (includes 14 spares)	21 (includes 9 spares)	Training Missile-1 Training Launch Canister-10
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Deployment Area

The Kingdom of the Netherlands

Boundaries: The territory of The Kingdom of the Netherlands bounded on the north by 52 degrees 30 minutes 00 seconds north latitude and within the national boundaries of The Kingdom of the Netherlands.

Missile Operating Base

Woensdrecht	0	0	Training Missile-0
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51 26 12 N 004 21 15 E

with launch
canister

Training Launch
Canister-0

(b) UNION OF SOVIET SOCIALIST REPUBLICS

(i) SS-20

Deployment Area

Postavy

55 12 13 N 027 00 00 E

54 52 47 026 41 18

54 43 58 026 04 07

55 01 13 026 03 43

Missile Operating Base

Postavy

9

9

55 09 47 N 026 54 21 E

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Vetrino

55 28 44 N 028 42 29 E

55 01 03 028 15 03

55 01 16 027 48 46

55 16 22 027 49 05

Missile Operating Base

Vetrino

9

9

55 24 19 N 028 33 29 E

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Polotsk

55 37 36 N 028 23 49 E

55 28 07 029 20 25

54 32 15 029 09 47

54 39 32 028 10 40

Missile Operating Base

Polotsk

9

9

55 22 34 N 028 44 17 E

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9

Training Missile-0

Deployment Area

Smorgon'
54 37 43 N 026 52 34 E
54 22 37 026 52 37
54 37 18 025 41 58
54 45 21 026 15 13

Missile Operating Base

Smorgon'
54 36 16 N 026 23 05 E

9 9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Smorgon'
54 29 01 N 026 26 40 E
54 05 04 025 53 59
54 24 14 025 31 18
54 35 27 026 19 10

Missile Operating Base

Smorgon'
54 31 36 N 026 17 20 E

9 9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Lida
53 45 24 N 025 29 02 E
53 34 00 024 49 35
53 42 25 024 38 15
53 58 05 025 10 17

Missile Operating Base

Lida
53 47 39 N 025 20 27 E

9 9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Gezgaly
53 38 53 N 025 25 38 E

53 23 48 025 26 12
53 12 46 025 08 38
53 22 57 024 35 43

Missile Operating Base

Gezgaly
53 32 50 N 025 16 48 E

6

6

Launch Canister-6
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-6
Training Missile-0

Deployment Area

Slonim
52 58 15 N 025 55 42 E
52 45 02 025 31 08
53 04 08 025 09 00
53 08 45 025 30 20

Missile Operating Base

Slonim
52 55 54 N 025 21 59 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Ruzhany
52 55 21 N 024 58 40 E
52 46 32 024 48 25
52 45 52 024 16 26
53 07 34 024 22 14

Missile Operating Base

Ruzhany
52 49 29 N 024 45 45 E

6

6

Launch Canister-6
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-6
Training Missile-0

Deployment Area

Zasimovichi
52 37 55 N 024 48 50 E
52 22 00 024 10 52
52 32 36 023 56 54
52 45 52 024 16 26

Missile Operating Base

Zasimovichi 52 30 38 N 024 08 43 E	6	6	Launch Canister-6 Missile Transporter Vehicle-0 Fixed Structure for Launcher-6 Training Missile-0
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Deployment Area

Mozyr'
52 05 31 N 029 13 04 E
51 39 05 029 39 31
51 42 00 029 01 30
51 52 57 028 51 32

Missile Operating Base

Mozyr' 52 02 27 N 029 11 15 E	9	9	Launch Canister-9 Missile Transporter Vehicle-0 Fixed Structure for Launcher-9 Training Missile-0
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Deployment Area

Petrikov
52 16 29 N 029 03 04 E
52 08 06 028 48 40
52 08 33 028 13 37
52 27 47 028 28 17

Missile Operating Base

Petrikov 52 10 29 N 028 34 52 E	6	6	Launch Canister-6 Missile Transporter Vehicle-0 Fixed Structure Launcher-6 Training Missile-0
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Deployment Area

Zhitkovichi
52 23 40 N 028 10 31 E
52 08 35 028 10 07
52 08 55 027 14 01
52 24 01 027 14 06

Missile Operating Base

Zhitkovichi 52 11 36 N 027 48 07 E	6	6	Launch Canister-6 Missile Transporter Vehicle-0 Fixed Structure for Launcher-6
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Training Missile-0

Deployment Area

Rechitsa

52 26 34 N 030 21 10 E

52 05 27 030 43 26

51 47 47 030 23 27

52 13 08 030 00 53

Missile Operating Base

Rechitsa

6

6

52 11 58 N 030 07 11 E

Launch Canister-6
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-6
Training Missile-0

Deployment Area

Slutsk

53 28 29 N 027 57 50 E

53 02 31 028 07 59

53 13 35 027 25 09

53 28 40 027 28 55

Missile Operating Base

Slutsk

9

9

53 14 20 N 027 42 15 E

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Lutsk

51 08 14 N 025 54 51 E

50 50 45 025 34 49

51 16 24 025 16 49

51 20 51 025 26 59

Missile Operating Base

Lutsk

9

9

50 56 07 N 025 36 26 E

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Lutsk

51 10 05 N 025 27 21 E

50 43 54 025 07 49
50 47 35 024 33 38
51 11 22 024 35 49

Missile Operating Base

Lutsk
50 50 06 N 025 04 02 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Brody
50 14 00 N 025 29 11 E
50 00 46 025 09 30
50 17 32 024 41 55
50 22 10 024 58 33

Missile Operating Base

Brody
50 06 09 N 025 12 14 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Chervonograd
50 41 07 N 024 33 58 E
50 13 10 024 38 45
50 19 02 024 11 30
50 36 26 024 17 15

Missile Operating Base

Chervonograd
50 22 45 N 024 18 16 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Slavuta
50 18 55 N 027 03 22 E
50 08 07 027 03 21
50 07 59 026 16 22
50 29 38 026 29 34

Missile Operating Base

Slavuta 9 9 Launch Canister-9
50 17 05 N 026 41 31 E Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Belokorovichi
51 10 19 N 028 12 04 E
50 51 05 027 51 07
51 21 28 027 01 43
51 21 22 027 37 54

Missile Operating Base

Belokorovichi 9 9 Launch Canister-9
51 10 45 N 028 03 20 E Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Lipniki
51 11 38 N 029 10 28 E
50 52 28 028 55 56
51 05 53 028 22 14
51 20 57 028 26 07

Missile Operating Base

Lipniki 9 9 Launch Canister-9
51 12 22 N 028 26 37 E Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Vysokaya Pech'
50 29 13 N 028 21 10 E
50 09 49 028 20 37
50 10 10 027 40 19
50 29 33 027 43 58

Missile Operating Base

Vysokaya Pech' 6 6 Launch Canister-6
50 10 11 N 028 16 22 E Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-6

Training Missile-0

Deployment Area

Vysokaya Pech'
50 13 33 N 029 01 05 E
49 56 07 029 10 23
49 52 42 028 06 47
50 07 39 028 20 33

Missile Operating Base

Vysokaya Pech'
50 05 43 N 028 22 09 E

6

6

Launch Canister-6
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-6
Training Missile-0

Deployment Area

Korosten'
50 54 31 N 029 02 51 E
50 41 34 029 02 16
50 42 05 028 28 20
50 55 01 028 28 44

Missile Operating Base

Korosten'
50 52 22 N 028 31 17 E

6

6

Launch Canister-6
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-6
Training Missile-0

Deployment Area

Lebedin
50 35 26 N 034 41 41 E
50 12 10 034 00 31
50 14 25 033 50 28
50 35 42 034 21 21

Missile Operating Base

Lebedin
50 33 06 N 034 26 02 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Glukhov
52 02 16 N 033 52 28 E

51 36 21 033 55 26
51 34 22 033 27 42
52 02 21 033 38 28

Missile Operating Base

Glukhov
51 41 00 N 033 30 56 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Glukhov
51 42 59 N 033 27 47 E
51 23 31 033 37 56
51 23 37 032 56 33
51 43 02 033 10 25

Missile Operating Base

Glukhov
51 36 44 N 033 29 17 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Akhtyrka
50 17 58 N 034 54 32 E
49 49 59 034 50 05
50 10 03 033 57 06
50 18 24 034 24 13

Missile Operating Base

Akhtyrka
50 16 01 N 034 49 53 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Akhtyrka
50 10 43 N 035 34 34 E
49 54 08 035 00 16
50 18 14 034 24 13
50 26 42 034 48 07

Missile Operating Base

Akhtyrka 9 9 Launch Canister-9
50 21 59 N 034 57 03 E Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Novosibirsk
55 51 09 N 083 52 28 E
55 14 33 083 49 49
55 21 52 083 08 41
55 30 29 083 09 09

Missile Operating Base

Novosibirsk 9 9 Launch Canister-9
55 22 05 N 083 13 52 E Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Novosibirsk
55 06 17 N 083 34 11 E
54 57 40 083 33 38
55 04 53 082 52 45
55 24 16 082 53 40

Missile Operating Base

Novosibirsk 9 9 Launch Canister-9
55 22 57 N 082 55 16 E Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Novosibirsk
55 31 47 N 084 08 57 E
55 13 26 082 56 55
55 20 01 082 49 41
55 40 13 084 00 42

Missile Operating Base

Novosibirsk 9 9 Launch Canister-9
55 19 32 N 082 56 18 E Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9

Training Missile-0

Deployment Area

Novosibirsk
55 08 01 N 083 53 07 E
54 52 56 083 52 02
55 11 17 082 56 49
55 22 00 083 01 07

Missile Operating Base

Novosibirsk
55 18 44 N 083 01 38 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Novosibirsk
55 03 58 N 084 18 27 E
54 53 12 084 19 10
55 04 49 082 56 30
55 22 00 083 01 07

Missile Operating Base

Novosibirsk
55 19 07 N 083 09 59 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Drovyanaya
51 44 02 N 113 08 33 E
51 22 28 113 07 32
51 22 49 112 46 52
51 44 16 112 54 39

Missile Operating Base

Drovyanaya
51 27 20 N 113 03 42 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Drovyanaya
51 37 34 N 113 08 14 E

51 22 28 113 07 32
51 18 39 112 36 23
51 27 14 112 40 08

Missile Operating Base

Drovyanaya
51 26 10 N 113 02 43 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Drovyanaya
51 24 52 N 112 53 51 E
51 20 36 112 50 13
51 18 54 112 15 44
51 23 13 112 15 51

Missile Operating Base

Drovyanaya
51 22 59 N 112 49 55 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Drovyanaya
51 26 54 N 113 00 50 E
51 18 13 113 03 54
51 18 47 112 26 03
51 29 39 112 19 29

Missile Operating Base

Drovyanaya
51 20 18 N 113 00 54 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Drovyanaya
51 33 19 N 113 04 35 E
51 22 32 113 04 05
51 22 49 112 46 52
51 33 36 112 47 17

Missile Operating Base

Drovyanaya 51 23 49 N 112 52 13 E	9	9	Launch Canister-9 Missile Transporter Vehicle-0 Fixed Structure for Launcher-9 Training Missile-0
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Deployment Area

Barnaul
53 54 32 N 084 01 02 E
53 43 46 084 01 48
53 35 30 083 43 07
53 44 16 083 36 24

Missile Operating Base

Barnaul 53 46 08 N 083 57 11 E	9	9	Launch Canister-9 Missile Transporter Vehicle-0 Fixed Structure for Launcher-9 Training Missile-0
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Deployment Area

Barnaul
53 29 21 N 084 31 45 E
52 58 43 083 47 57
53 13 47 083 48 56
53 29 02 084 17 18

Missile Operating Base

Barnaul 53 18 21 N 084 08 47 E	9	9	Launch Canister-9 Missile Transporter Vehicle-0 Fixed Structure for Launcher-9 Training Missile-0
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Deployment Area

Barnaul
53 16 38 N 084 43 16 E
52 59 32 084 51 20
52 55 09 084 47 58
53 16 02 084 14 31

Missile Operating Base

Barnaul 53 13 29 N 084 40 10 E	9	9	Launch Canister-9 Missile Transporter Vehicle-0 Fixed Structure for Launcher-9
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Training Missile-0

Deployment Area

Barnaul

53 27 33 N 084 49 55 E

53 16 42 084 46 52

53 16 02 084 14 31

53 26 58 084 21 02

Missile Operating Base

Barnaul

9

9

53 18 47 N 084 30 27 E

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Kansk

56 32 14 N 096 12 14 E

56 15 16 095 34 54

56 28 30 095 20 13

56 34 39 095 36 13

Missile Operating Base

Kansk

9

9

56 22 31 N 095 28 35 E

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Kansk

56 30 47 N 095 12 33 E

56 19 53 095 19 41

56 13 45 094 59 58

56 31 03 094 56 58

Missile Operating Base

Kansk

9

9

56 20 09 N 095 16 34 E

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Kansk

56 19 29 N 096 20 56 E

56 08 43 096 21 41
56 08 17 096 02 24
56 19 14 095 50 42

Missile Operating Base

Kansk
56 11 19 N 096 03 13 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

Deployment Area

Kansk
56 14 50 N 096 05 46 E
55 59 57 096 14 35
55 59 41 096 03 03
56 15 00 095 46 30

Missile Operating Base

Kansk
56 02 19 N 096 04 58 E

9

9

Launch Canister-9
Missile Transporter
Vehicle-0
Fixed Structure for
Launcher-9
Training Missile-0

(ii) SS-4

Deployment Area

Sovetsk
55 05 33 N 021 52 38 E
55 03 22 021 56 20
54 57 04 021 29 58
55 01 23 021 26 16

Missile Operating Base

Sovetsk
54 59 07 N 021 36 36 E

5

6
(Launch
Stand)

Missile Transporter
Vehicle-11
Missile Erector-7
Propellant Tank-52
Training Missile-6

Deployment Area

Gusev
54 46 02N 022 07 07 E
54 24 14 022 28 42
54 20 01 022 21 10
54 43 58 021 55 53

Missile Operating Base

Gusev 5 7
54 43 59 N 022 03 27 E (Launch Stand) Missile Transporter Vehicle-12
Missile Erector-7
Propellant Tank-52
Training Missile-7

Deployment Area

Malorita
51 53 50 N 024 05 39 E
51 43 09 024 09 49
51 42 59 023 57 07
51 53 45 023 57 50

Missile Operating Base

Malorita 5 6
51 51 47 N 024 01 55 E (Launch Stand) Missile Transporter Vehicle-14
Missile Erector-7
Propellant Tank-48
Training Missile-5

Deployment Area

Pinsk
52 15 03 N 025 49 43 E
52 04 09 025 39 30
52 03 56 025 22 00
52 14 54 025 35 40

Missile Operating Base

Pinsk 5 5
52 10 56 N 025 41 27 E (Launch Stand) Missile Transporter Vehicle-13
Missile Erector-6
Propellant Tank-47
Training Missile-6

Deployment Area

Vyru
57 49 33 N 027 00 00 E
57 43 05 027 00 00
57 43 04 026 43 54
57 49 32 026 43 51

Missile Operating Base

Vyru 5 6
57 45 47 N 026 47 13 E (Launch Stand) Missile Transporter Vehicle-11
Missile Erector-5
Propellant Tank-51
Training Missile-6

Deployment Area

Aluksne

57 25 51 N 026 56 00 E
57 21 32 026 56 01
57 17 12 026 40 06
57 25 49 026 40 01

Missile Operating Base

Aluksne 57 25 04 N 026 49 46 E	5	6 (Launch Stand)	Missile Transporter Vehicle-12 Missile Erector-6 Propellant Tank-45 Training Missile-6
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Deployment Area

Ostrov
57 38 21 N 028 20 22 E
57 21 04 028 23 43
57 21 14 028 07 47
57 38 28 028 08 19

Missile Operating Base

Ostrov 57 31 53 N 028 12 19 E	5	8 (Launch Stand)	Missile Transporter Vehicle-12 Missile Erector-7 Propellant Tank-48 Training Missile-6
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Deployment Area

Karmelava
55 06 12 N 024 22 04 E
54 57 49 024 33 51
54 55 00 024 04 05
55 01 28 024 03 36

Missile Operating Base

Karmelava 55 00 51 N 024 14 16 E	5	5 (Launch Stand)	Missile Transporter Vehicle-13 Missile Erector-6 Propellant Tank-47 Training Missile-6
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Deployment Area

Ukmerge
55 17 41 N 024 59 06 E
55 04 25 024 40 58
55 08 35 024 33 12
55 19 43 024 51 26

Missile Operating Base

Ukmerge 55 07 51 N 024 38 36 E	5	6 (Launch Stand)	Missile Transporter Vehicle-14
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Stand) Missile Erector-7
Propellant Tank-50
Training Missile-6

Deployment Area

Taurage

55 18 07 N 022 30 42 E

55 09 30 022 30 22

55 03 10 022 18 52

55 13 35 022 21 01

Missile Operating Base

Taurage

5

5
(Launch
Stand)

Missile Transporter
Vehicle-12
Missile Erector-6
Propellant Tank-47
Training Missile-6

55 04 58 N 022 19 38 E

Deployment Area

Kolomyya

48 45 01 N 024 55 59 E

48 36 23 024 56 20

48 36 04 024 40 04

48 44 42 024 39 40

Missile Operating Base

Kolomyya

5

6
(Launch
Stand)

Missile Transporter
Vehicle-12
Missile Erector-6
Propellant Tank-46
Training Missile-7

48 39 32 N 024 48 04 E

Deployment Area

Stryy

49 19 59 N 023 58 46 E

49 11 22 023 58 29

49 21 09 023 31 57

49 29 46 023 32 24

Missile Operating Base

Stryy

5

7
(Launch
Stand)

Missile Transporter
Vehicle-12
Missile Erector-7
Propellant Tank-49
Training Missile-7

49 25 23 N 023 34 56 E

Deployment Area

Skala-Podol'skaya

48 54 37 N 026 17 26 E

48 48 09 026 17 32

48 48 02 026 01 12

48 54 30 026 01 04

Missile Operating Base

Skala-Podol'skaya 48 51 02 N 026 08 36 E	5	6 (Launch Stand)	Missile Transporter Vehicle-12 Missile Erector-6 Propellant Tank-46 Training Missile-5
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2. Non-Deployed

The following are missile support facilities, their locations and the numbers, for each Party of all non-deployed intermediate-range missiles listed as existing types in Article III of the Treaty, launchers of such missiles and support structures and support equipment associated with such missiles and launchers. Site diagrams for agreed missile support facilities, to include boundaries and center coordinates, are appended to this Memorandum of Understanding.

(a) UNITED STATES OF AMERICA

(i) Pershing II

Missile Production Facilities:

Hercules Plant #1 Magna, Utah 40 39 40 N 112 03 14 W	0	0	Launch Pad Shelter- 0 Training Missile Stage-0
--	---	---	---

Launcher Production Facilities:

Martin Marietta Middle River, Maryland 39 35 N 76 24 W	0	0	Launch Pad Shelter- 0 Training Missile Stage-0
--	---	---	---

Missile Storage Facilities:

Pueblo Depot Activity Pueblo, Colorado 38 19 N 104 20 W	11	0	Launch Pad Shelter- 0 Training Missile Stage-4
---	----	---	---

Redstone Arsenal Huntsville, Alabama 34 36 N 086 38 W	1	0	Launch Pad Shelter- 0 Training Missile Stage-20
---	---	---	--

Weilerbach Federal Republic of Germany 49 27 N 007 38 E	12	0	Launch Pad Shelter- 0 Training Missile Stage-0
---	----	---	---

Launcher Storage Facilities:

Redstone Arsenal Huntsville, Alabama 34 35 N 086 37 W	0	1	Launch Pad Shelter- 0 Training Missile Stage-0
---	---	---	---

Missile/Launcher Storage Facilities:

NONE

Missile Repair Facilities:

Pueblo Depot Activity Pueblo, Colorado 38 18 N 104 19 W	0	0	Launch Pad Shelter- 0 Training Missile Stage-0
---	---	---	---

Launcher Repair Facilities:

EMC Hausen Frankfurt, Federal Republic of Germany 50 08 N 008 38 E	0	0	Launch Pad Shelter- 0 Training Missile Stage-0
---	---	---	---

Redstone Arsenal Huntsville, Alabama 34 37 N 086 38 W	0	10	Launch Pad Shelter- 0 Training Missile Stage-0
---	---	----	---

Ft. Sill Ft. Sill, Oklahoma 34 40 N 098 24 W	0	2	Launch Pad Shelter- 0 Training Missile Stage-0
--	---	---	---

Pueblo Depot Activity Pueblo, Colorado 38 19 N 104 20 W	0	0	Launch Pad Shelter- 0 Training Missile Stage-0
---	---	---	---

Missile/Launcher Repair Facilities:

NONE

Test Ranges:

Complex 16 Cape Canaveral, Florida 28 29 N 080 34 W	3	0	Launch Pad Shelter- 0 Training Missile Stage-0
---	---	---	---

Training Facilities:

Ft. Sill Ft. Sill, Oklahoma 34 41 N 098 34 W	0	38	Launch Pad Shelter- 0 Training Missile Stage-78
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Elimination Facilities:

(Not determined)

<u>Missiles, Launchers, and Support Equipment in Transit:</u>	0	0	Training Missile Stage-4
(ii) BGM-109G			
<u>Missile Production Facilities:</u>			
McDonnell-Douglas Titusville, Florida 28 32 N 080 40 W	52 with launch canister	0	Training Missile-0 Training Launch Canister-0
General Dynamics Kearney Mesa, California 32 50 N 117 08 W	48 with launch canister	0	Training Missile-0 Training Launch Canister-0
<u>Launcher Production Facilities:</u>			
Air Force Plant 19 San Diego, California 32 45 N 117 12 W	2 with launch canister	4	Training Missile-0 Training Launch Canister-0
<u>Missile Storage Facilities:</u>			
NONE			
<u>Launcher Storage Facilities:</u>			
NONE			
<u>Missile/Launcher Storage Facilities:</u>			
NONE			
<u>Missile Repair Facilities:</u>			
SABCA Gosselies, Belgium 50 27 N 004 27 E	16 with launch canister	0	Training Missile-0 Training Launch Canister-0
<u>Launcher Repair Facilities:</u>			
NONE			
<u>Missile/Launcher Repair Facilities:</u>			
NONE			
<u>Test Ranges:</u>			
Dugway Proving Grounds, Utah 40 22 N 113 04 W	0 with launch canister	0	Training Missile-0 Launch Training Canister-0
<u>Training Facilities:</u>			
Davis-Monthan AFB Tucson, Arizona 32 11 N 110 53 W	0 with launch canister	7	Training Missile-2 Training Launch Canister-27
Ft. Huachuca Ft. Huachuca, Arizona 31 29 N 110 19 W	0 with launch canister	6	Training Missile-0 Training Launch Canister-8

Elimination Facilities:

(Not determined)

<u>Missiles, Launchers, and Support Equipment in Transit:</u>	15 with launch canister	0	Training Missile-0 Training Launch Canister-2
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(b) UNION OF SOVIET SOCIALIST REPUBLICS

(i) SS-20

Missile Production Facilities:

Votkinsk Machine Building Plant Udmurt ASSR, RSFSR 57 01 30 N 054 08 00 E	36*	0	Launch Canister-36 Missile Transporter Vehicle-0 Fixed Structure for Launcher-0 Training Missile-0
--	-----	---	---

* In various stages of manufacture.

Launcher Production Facilities:

Barrikady Plant Volgograd 48 44 N 044 32 E	0	1	Launch Canister-0 Missile Transporter Vehicle-0 Fixed Structure for Launcher-0 Training Missile-0
--	---	---	--

Missile Storage Facilities:

NONE

Launcher Storage Facilities:

NONE

Missile/Launcher Storage Facilities:

Postavy 55 10 N 026 55 E	2	3	Launch Canister-3 Missile Transporter Vehicle-10 Fixed Structure for Launcher-0 Training Missile-1
Gezgaly 53 36 N 025 28 E	2	2	Launch Canister-6 Missile Transporter Vehicle-10 Fixed Structure for Launcher-0 Training Missile-4
Mozyr' 52 03 N 029 11 E	2	2	Launch Canister-4 Missile Transporter Vehicle-10

Lutsk 50 53 N 025 30 E	1	1	Fixed Structure for Launcher-0 Training Missile-2 Launch Canister-3 Missile Transporter Vehicle-10
Belokorovichi 51 09 N 028 00 E	2	2	Fixed Structure for Launcher-0 Training Missile-2 Launch Canister-3 Missile Transporter Vehicle-10
Lebedin 50 36 N 034 25 E	2	1	Fixed Structure for Launcher-0 Training Missile-1 Launch Canister-5 Missile Transporter Vehicle-10
Novosibirsk 55 16 N 083 02 E	1	1	Fixed Structure for Launcher-0 Training Missile-3 Launch Canister-3 Missile Transporter Vehicle-10
Drovyanaya 51 30 N 113 03 E	2	2	Fixed Structure for Launcher-0 Training Missile-2 Launch Canister-4 Missile Transporter Vehicle-10
Kansk 56 16 N 095 39 E	1	1	Fixed Structure for Launcher-0 Training Missile-2 Launch Canister-2 Missile Transporter Vehicle-1
Barnaul 53 34 N 083 48 E	1	1	Fixed Structure for Launcher-0 Training Missile-1 Launch Canister-1 Missile Transporter Vehicle-3
			Fixed Structure for Launcher-0 Training Missile-0

Kolosoovo 53 31 N 026 55 E	144	0	Launch Canister-144 Missile Transporter Vehicle-0 Fixed Structure for Launcher-0 Training Missile-0
Zherebkovo 47 51 N 029 54 E	20	0	Launch Canister-21 Missile Transporter Vehicle-2 Fixed Structure for Launcher-0 Training Missile-1
<u>Missile Repair Facilities:</u>			
NONE			
<u>Launcher Repair Facilities:</u>			
NONE			
<u>Missile/Launcher Repair Facilities:</u>			
Bataysk 47 08 N 039 47 E	0	11	Launch Canister-2 Missile Transporter Vehicle-4 Fixed Structure for Launcher-0 Training Missile-2
<u>Test Ranges:</u>			
Kapustin Yar 48 37 N 046 18 E	0	8	Launch Canister-0 Missile Transporter Vehicle-3 Fixed Structure for Launcher-1 Training Missile-0
<u>Training Facilities:</u>			
Serpukhov 54 54 N 037 28 E	0	6	Launch Canister-4 Missile Transporter Vehicle-1 Fixed Structure for Launcher-0 Training Missile-4
Krasnodar 40 03 N 038 58 E	0	1	Launch Canister-2 Missile Transporter Vehicle-1 Fixed Structure for Launcher-0 Training Missile-2

Training Center at Test Range Kapustin Yar 48 38 N 046 10 E	0	7	Launch Canister-12 Missile Transporter Vehicle-1 Fixed Structure for Launcher-3 Training Missile-12
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Elimination Facilities:

Sarny 52 21 N 026 35 E	29	68	Launch Canister-32 Missile Transporter Vehicle-35 Fixed Structure for Launcher-0 Training Missile-3
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Aral'sk 46 50 N 61 18 E	0	0	Launch Canister-0 Missile Transporter Vehicle-0 Fixed Structure for Launcher-0 Training Missile-0
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Chita 52 22 N 113 17 E	0	0	Launch Canister-0 Missile Transporter Vehicle-0 Fixed Structure for Launcher-0 Training Missile-0
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Kansk 56 20 N 095 06 E	0	0	Launch Canister-0 Missile Transporter Vehicle-0 Fixed Structure for Launcher-0 Training Missile-0
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Missiles, Launchers, and Support
Equipment in Transit:

NONE

(ii) SS-4

Missile Production Facilities:

NONE

Launch Production Facilities:

NONE

Missile Storage Facilities:

NONE

Launcher Storage Facilities:

NONE

Missile/Launcher Storage Facilities:

Kolosovo 53 31 N 026 55 E	35	1 (Launch Stand)	Missile Transporter Vehicle-9 Missile Erector-10 Propellant Tank-59 Training Missile-31
Zherebkovo 47 51 N 029 54 E	56	3 (Launch Stand)	Missile Transporter Vehicle-5 Missile Erector-4 Propellant Tank-11 Training Missile-30

Missile Repair Facilities:

Bataysk 47 08 N 039 47 E	0	0 (Launch Stand)	Missile Transporter Vehicle-0 Missile Erector-0 Propellant Tank-0 Training Missile-6
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Launcher Repair Facilities:

NONE

Missile/Launcher Repair Facilities:

NONE

Test Ranges:

Kapustin Yar 48 35 N 046 18 E	14	2 (Launch Stand)	Missile Transporter Vehicle-4 Missile Erector-2 Propellant Tank-4 Training Missile-1
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Training Facilities:

NONE

Elimination Facilities:

Lesnaya 52 59 N 025 46 E	0	0 (Launch Stand)	Missile Transporter Vehicle-0 Missile Erector-0 Propellant Tank-0 Training Missile-0
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Missiles, Launchers, and Support
Equipment in Transit:

NONE

(iii) SS-5

Missile Production Facilities:

NONE

Launcher Production Facilities:

NONE

Missile Storage Facilities:

Kolosovo	6	0
53 31 N 026 55 E		

Launcher Storage Facilities:

NONE

Missile/Launcher Storage Facilities:

NONE

Missile Repair Facilities:

NONE

Launcher Repair Facilities:

NONE

Missile/Launcher Repair Facilities:

NONE

Test Ranges:

NONE

Training Facilities:

NONE

Elimination Facilities:

Lesnaya	0	0
52 59 N 025 46 E		

Missiles, Launchers, and Support

Equipment in Transit:

NONE

3. Training Launchers

In addition to the support equipment listed in paragraphs 1 and 2 of this Section, the Parties possess vehicles, used to train drivers of launchers of intermediate-range missiles, which shall be considered for purposes of this Treaty to be training launchers. The number of such vehicles for each Party is:

- (a) for the United States of America--29; and
- (b) for the Union of Soviet Socialist Republics--65.

Elimination of such vehicles shall be carried out in accordance with procedures set forth in the Protocol on Elimination.

IV. Shorter-Range Missiles, Launchers of Such Missiles and Support Equipment Associated With Such Missiles and Launchers

1. Deployed

The following are the missile operating bases, their locations and the numbers, for each Party, of all deployed shorter-range missiles listed as existing types in Article III of the Treaty, and launchers of such missiles, and the support equipment associated with such missiles and launchers. Site diagrams, to include boundaries and center coordinates, of each listed missile operating base are appended to this Memorandum of Understanding.

	<u>Missiles</u>	<u>Launchers</u>	<u>Support Structures and Equipment</u>
<u>(a) UNITED STATES OF AMERICA</u>			
(i) Pershing IA			
<u>Missile Operating Base:</u>			
NONE			
<u>(b) UNION OF SOVIET SOCIALIST REPUBLICS</u>			
(i) SS-12			
<u>Missile Operating Bases:</u>			
Koenigsbrueck, German Democratic Republic 51 16 40 N 013 53 20 E	19	11	Missile Transporter Vehicle-9 Training Missile-10
Bischofswerda, German Democratic Republic 51 08 33 N 014 12 18 E	8	5	Missile Transporter Vehicle-0 Training Missile-4
Waren, German Democratic Republic 53 32 40 N 012 37 30 E	22	12	Missile Transporter Vehicle-9 Training Missile-7
Wokuhl, German Democratic Republic 53 16 20 N 013 15 50 E	5	6	Missile Transporter Vehicle-0 Training Missile-7
Hranice, Czechoslovak Socialist Republic 49 33 00 N 017 45 00 E	39	24	Missile Transporter Vehicle-15 Training Missile-13
Pashino 55 16 37 N 082 59 42 E	0	4	Missile Transporter Vehicle-1 Training Missile-5
Gornyy 51 33 10 N 113 01 30 E	36	14	Missile Transporter Vehicle-4 Training Missile-10

Lapichi 53 25 30 N 028 30 00 E	9	5	Missile Transporter Vehicle-1 Training Missile-10
Kattakurgan 39 38 18 N 065 58 40 E	9	5	Missile Transporter Vehicle-1 Training Missile-6
Saryozek 44 31 58 N 077 46 20 E	36	15	Missile Transporter Vehicle-3 Training Missile-16
Novosyoyevka 44 11 58 N 133 26 05 E	37	14	Missile Transporter Vehicle-5 Training Missile-17

(ii) SS-23

Missile Operating Bases:

Weissenfels, German Democratic Republic 51 11 50 N 011 59 50 E	6	4	Missile Transporter Vehicle-3 Training Missile-18
Jena-Forst, German Democratic Republic 50 54 55 N 011 32 40 E	47	12	Missile Transporter Vehicle-8 Training Missile-3
Stan'kovo 53 38 30 N 027 13 20 E	40	18	Missile Transporter Vehicle-18 Training Missile-10
Tsel' 53 23 38 N 028 28 06 E	26	12	Missile Transporter Vehicle-11 Training Missile-9
Slobudka 52 30 30 N 024 31 30 E	26	12	Missile Transporter Vehicle-12 Training Missile-10
Bayram-Ali 37 36 18 N 062 10 40 E	0	12	Missile Transporter Vehicle-12 Training Missile-0
Semipalatinsk 50 23 00 N 080 09 30 E	22	12	Missile Transporter Vehicle-12 Training Missile-4

2. Non-Deployed

The following are missile support facilities, their locations and the numbers, for each Party of all non-deployed shorter-range missiles listed as existing types in Article III of the Treaty, and launchers of such missiles and support equipment associated with such missiles and launchers. Site diagrams for agreed missile support facilities, to include boundaries and center coordinates, are appended to this Memorandum of Understanding.

	<u>Missiles</u>	<u>Launchers</u>	<u>Support Structures and Equipment</u>
(a) UNITED STATES OF AMERICA			
(i) Pershing IA			
<u>Missile Production Facilities:</u>			
Longhorn Army Ammunition Plant Marshall, Texas 32 39 N 094 08 W	0	0	Training Missile Stage-0
<u>Launcher Production Facilities:</u>			
Martin Marietta Middle River, Maryland 39 35 N 076 24 W	0	0	Training Missile Stage-0
<u>Missile Storage Facilities:</u>			
Pueblo Depot Activity Pueblo, Colorado 38 19 N 104 20 W	169	0	Training Missile Stage-53
<u>Launcher Storage Facilities:</u>			
NONE			
<u>Missile/Launcher Storage Facilities:</u>			
NONE			
<u>Missile Repair Facilities:</u>			
NONE			
<u>Launcher Repair Facilities:</u>			
Pueblo Depot Activity Pueblo, Colorado 38 19 N 104 20 W	0	1	Training Missile Stage-0
<u>Missile/Launcher Repair Facilities:</u>			
NONE			
<u>Test Ranges:</u>			
NONE			
<u>Training Facilities:</u>			

NONE

Elimination Facilities:

(Not determined)

<u>Missiles, Launchers, and Support Equipment in Transit:</u>	1	0	Training Missile Stage-0
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(b) UNION OF SOVIET SOCIALIST REPUBLICS

(i) SS-12

Missile Production Facilities:

Votkinsk Machine Building Plant	0	0	Missile Transporter Vehicle-0
Udmurt ASSR, RSFSR 57 01 30 N 054 08 00 E			Training Missile-0

Launcher Production Facilities:

Barrikady Plant Volgograd 48 46 50 N 044 35 44 E	0	0	Missile Transporter Vehicle-0 Training Missile-0
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Missile Storage Facilities:

Lozovaya 48 55 N 036 22 E	126	0	Missile Transporter Vehicle-0 Training Missile-12
Ladushkin 54 35 N 020 12 E	72	0	Missile Transporter Vehicle-0 Training Missile-18
Bronnaya Gora 52 37 N 025 04 E	170	0	Missile Transporter Vehicle-0 Training Missile-3
Balkhash 46 50 N 075 36 E	138	0	Missile Transporter Vehicle-0 Training Missile-47

Launcher Storage Facilities:

Berezovka 50 20 N 028 26 E	0	15	Missile Transporter Vehicle-10 Training Missile-0
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Missile/Launcher Storage Facilities:

NONE

Missile Repair Facilities:

NONE

Launcher Repair Facilities:

NONE

Missile/Launcher Repair Facilities:

NONE

Test Ranges:

NONE

Training Facilities:

Saratov 51 34 N 046 01 E	0	3	Missile Transporter Vehicle-2 Training Missile-0
Kazan' 55 58 N 049 11 E	0	2	Missile Transporter Vehicle-2 Training Missile-0
Kamenka 53 11 N 044 04 E	0	0	Missile Transporter Vehicle-0 Training Missile-0

Elimination Facilities:

Saryozek (Missiles) 44 32 N 077 46 E	0	0	Missile Transporter Vehicle-0 Training Missile-0
Stan'kovo (Launchers and Missile Transporter Vehicles) 53 38 N 027 13 E	0	0	Missile Transporter Vehicle-0 Training Missile-0

Missiles, Launchers, and Support
Equipment in Transit:

NONE

(ii) SS-23

Missile Production Facilities:

Votkinsk Machine Building Plant Udmurt ASSR, RSFSR 57 01 30 N 054 08 00 E	0	0	Missile Transporter Vehicle-0 Training Missile-0
--	---	---	--

Launcher Production Facilities:

V.I. Lenin Petropavlovsk Heavy Machine Building Plant Petropavlovsk 54 51 N 069 09 E	0	0	Missile Transporter Vehicle-0 Training Missile-0
<u>Missile Storage Facilities:</u>			
Ladushkin 54 35 N 020 12 E	33	0	Missile Transporter Vehicle-0 Training Missile-42
<u>Launcher Storage Facilities:</u>			
Berezovka 50 20 N 028 26 E	0	13	Missile Transporter Vehicle-5 Training Missile-0
<u>Missile/Launcher Storage Facilities:</u>			
NONE			
<u>Missile Repair Facilities:</u>			
NONE			
<u>Launcher Repair Facilities:</u>			
NONE			
<u>Missile/Launcher Repair Facilities:</u>			
NONE			
<u>Test Ranges:</u>			
NONE			
<u>Training Facilities:</u>			
Saratov 51 34 N 046 01 E	0	3	Missile Transporter Vehicle-2 Training Missile-0
Kazan' 55 58 N 049 11 E	0	3	Missile Transporter Vehicle-2 Training Missile-0
Kamenka 53 11 N 044 04 E	0	1	Missile Transporter Vehicle-1 Training Missile-0
<u>Elimination Facilities:</u>			
Saryozek (Missiles) 44 32 N 077 46 E	0	0	Missile Transporter Vehicle-0

Stan'kovo (Launchers and Missile Transporter Vehicles) 53 38 N 027 13 E	0	0	Training Missile-0 Missile Transporter Vehicle-0 Training Missile-0
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Missiles, Launchers, and Support
Equipment in Transit:

NONE

V. Missile Systems Tested, But Not Deployed, Prior to Entry into Force of the Treaty

The following are the missile support facilities, their locations and the numbers, for each Party of all intermediate-range and shorter-range missiles, and launchers of such missiles, which were tested prior to entry into force of the Treaty, but were never deployed, and which are not existing types of intermediate-range or shorter-range missiles listed in Article III of the Treaty. Site diagrams for agreed missile support facilities, to include boundaries and center coordinates, are appended to this Memorandum of Understanding.

	<u>Missiles</u>	<u>Launchers</u>	<u>Support Structures and Equipment</u>
(a) UNITED STATES OF AMERICA			
(i) Pershing IB			
<u>Missile Production Facilities:</u>			
NONE			
<u>Launcher Production Facilities:</u>			
NONE			
<u>Missile Storage Facilities:</u>			
NONE			
<u>Launcher Storage Facilities:</u>			
NONE			
<u>Missile/Launcher Storage Facilities:</u>			

NONE

Missile Repair Facilities:

NONE

Launcher Repair Facilities:

NONE

Missile/Launcher Repair Facilities:

NONE

Test Ranges:

NONE

Training Facilities:

NONE

Elimination Facilities:

NONE

Missiles, Launchers, and Support
Equipment in Transit:

NONE

(b) UNION OF SOVIET SOCIALIST REPUBLICS

(i) SSC-X-4

Missile Production Facilities:

NONE

Launcher Production Facilities:

Experimental Plant of the
Amalgamated Production
Works "M.I. Kalinin
Machine Building Plant,"
Sverdlovsk
56 47 24 N 060 47 03 E

0 0
with launch
canister

Missile Storage Facilities:

NONE

Launcher Storage Facilities:

NONE

Missile/Launcher Storage Facilities:

Jelgava	84	6
56 40 N 024 06 E	with launch canister	

Missile Repair Facilities:

NONE

Launcher Repair Facilities:

NONE

Missile/Launcher Repair Facilities:

NONE

Test Ranges:

NONE

Training Facilities:

NONE

Elimination Facilities:

Jelgava	0	0
56 40 N 024 06 E	with launch canister	

Missiles, Launchers, and Support
Equipment in Transit:

NONE

VI. Technical Data

Following are agreed categories of technical data for missiles and launchers subject to the Treaty, support structures and support equipment associated with such missiles and launchers and the relevant data for each of these categories. Photographs of missiles,

launchers, support structures and support equipment listed below are appended to this Memorandum of Understanding.

	P-II	BGM-109G	SS-20	SS-4	SS-5	SSC-X-4
1. Intermediate-Range Missiles						
(a) <u>Missile Characteristics:</u>						
(i) Maximum number of warheads per missile	1	1	3	1	1	1
(ii) Length of missile, with front section (meters)	10.61	6.40	16.49	22.77	24.30	8.09
(iii) Length of 1st stage (meters)	3.68	----	8.58	18.60	21.62	----
2nd stage (meters)	2.47	----	4.60	----	----	----
(iv) Maximum diameter of 1st stage (meters)	----	0.53	----	1.65	2.40	0.51
2nd stage (meters)	1.02	----	1.79	----	----	----
(v) Weight of GLBM, in metric tons (without front section; for liquid-fueled missiles, empty weight)	6.78	----	----	3.35	4.99	----
1st stage	4.15	----	26.63	----	----	----
2nd stage	2.63	----	8.63	----	----	----
Missile in canister	----	----	42.70	----	----	----
(vi) Weight of assembled GLCM, in metric tons (with fuel)						
In canister	----	1.71	----	----	----	2.44
Without canister	----	1.47	----	----	----	1.70
(b) <u>Launcher Characteristics:</u>						
(i) Dimensions (maximum length, width, height in meters)	9.60	10.64	16.81	3.02	----	12.80
	2.49	2.44	3.20	3.20	----	3.05
	2.86	2.64	2.94	3.27	----	3.80
(ii) Maximum number of missiles each launcher is capable of carrying or containing at one time	1	4	1	1	----	6
(iii) Weight	12.04	14.30	40.25	6.90	----	29.10

(in metric tons)

(c) Characteristics of Support Structures

Associated With Such Missiles and Launchers:

Dimensions of support structures are as follows
(maximum length, width, height in meters):

(i) Fixed structure	----	----	27.70	----	----	----
for a launcher	----	----	9.07	----	----	----
	----	----	6.82		----	----
	74.00	----	----	----	----	----
(ii) Launch pad shelter	14.60	----	----	----	----	----
	10.00	----	----	----	----	----

(d) Characteristics of Support Equipment

Associated With Such Missiles and Launchers:

Dimensions of support equipment are as follows
(maximum length, width, height in meters):

(i) Launch canister	----	6.94	19.32	----	----	8.39
(Diameter)	----	0.53	2.14	----	----	0.65
(ii) Missile transporter	----	----	17.33	22.85	----	----
vehicle (number of	----	----	3.20	2.72	----	----
missiles per vehicle)	----	----	2.90	2.50	----	----
	----	----	(1)	(1)	----	----
	----	----	----	15.62	----	----
(iii) Missile erector	----	----	----	3.15	----	----
	----	----	----	3.76	----	----
(iv) Propellant tank						
(Transportable)						
	----	----	----	11.38	----	----
Fuel	----	----	----	2.63	----	----
	----	----	----	2.96	----	----
	----	----	----	10.70	----	----
Oxidizer	----	----	----	2.63	----	----
	----	----	----	3.35	----	----
	Pershing IA	Pershing IB		SS-12		SS-23

2. Shorter-Range Missiles

(a) Missile Characteristics:

(i) Maximum number
of warheads per
missile

	1	1	1	1
(ii) Length of missile,	10.55	8.13	12.38	7.52

with front section (meters)				
(iii) Length of 1st stage	2.83	3.68	4.38	5.17
2nd stage (meters)	2.67	----	5.37	----
(iv) Maximum diameter of				
1st stage	1.02	1.02	1.01	0.97
2nd stage (meters)	1.02	----	1.01	----
(v) Weight of GLBM, in metric tons				
(without front section)	4.09	4.15	8.80	3.99
1st stage	2.45	----	4.16	----
2nd stage	1.64	----	4.64	----
(b) <u>Launcher Characteristics:</u>				
(i) Dimensions	9.98	9.60	13.26	11.76
(maximum length, width, height in meters)	2.44	2.49	3.10	3.13
	3.35	2.86	3.45	3.00
(ii) Maximum number of missiles each launcher is capable of carrying or containing at one time	1	1	1	1
(iii) Weight (in metric tons)	8.53	12.04	30.80	24.07

**(c) Characteristics of Support Equipment
Associated With Such Missile and Launchers:**

Dimensions of support equipment are as follows
(maximum length, width, height in meters):

Missile transporter	----	----	13.15	11.80
vehicle (number of	----	----	3.10	3.13
missiles per vehicle)	----	----	3.50	3.00
	----	----	(1)	(1)

VII. Research and Development Booster Systems

Following are the numbers and locations for each Party of launchers of research and development booster systems.

Number of Launchers

1. Research and Development Launch Sites

(a) UNITED STATES OF AMERICA

Eastern Test Range, Florida
28 27 N 080 42 W

Eglin AFB, Florida 30 36 N 086 48 W	5
White Sands Missile Range, New Mexico 32 30 N 106 30 W	4
Green River, Utah 38 00 N 109 30 W	2
Poker Flats Research Range, Alaska 65 07 N 147 29 W	6
Roi Namur, Kwajalein 09 25 N 167 28 E	3
Barking Sands, Kauai, Hawaii 22 06 N 159 47 W	4
Western Test Range, California 34 37 N 120 37 W	1
Cape Cod, Massachusetts 42 01 N 070 07 W	1
Wake Island 19 18 N 166 37 E	2
Wallops Island, Virginia 37 51 N 075 28 W	1

(b) UNION OF SOVIET SOCIALIST REPUBLICS

Plesetskaya 62 53 N 040 52 E	3
Kapustin Yar 48 32 N 046 18 E	2

Each Party, in signing this Memorandum of Understanding, acknowledges it is responsible for the accuracy of only its own data. Signature of this Memorandum of Understanding constitutes acceptance of the categories of data and inclusion of the data contained herein.

This Memorandum of Understanding is an integral part of the Treaty. It shall enter into force on the date of entry into force of the Treaty and shall remain in force so long as the Treaty remains in force.

DONE at Washington on December 8, 1987, in two copies, each in the English and Russian languages, both texts being equally authentic.

FOR THE UNITED STATES
OF
AMERICA:
Ronald Reagan
President of the United States

FOR THE UNION OF
SOVIET
SOCIALIST REPUBLICS:
Mikhail Gorbachev
General Secretary of the

of America

Central
Committee of the CPSU