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PHOTOGRAPHIC
INTERPRETATION
REPORT

NATIONAL PHOTOGRAPHIC
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STATUS OF CSA-1 (SAM) SITES
CHINA

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STATUS OF CSA-1 (SAM) SITES, CHINA

ABSTRACT

1. The Communist Chinese have apparently stabilized their deployment of CSA-1 (SAM) systems. This report discusses the deployment status, as well as training activity and some of the construction activity at CSA-1 sites. The report updates NPIC of August 1973 and provides information current

2. Included are five photographs; artist's concepts of launcher covers, or cocoons; a location map; and a table showing site status.

BASIC DESCRIPTION

Deployment Status

3. China presently contains 65 known operational CSA-1 sites and three known SAM training areas (Figure 1). This represents a decrease of eight CSA-1 sites since June 1973. A breakdown by type shows 28 hardened permanent sites, 31 nonhardened permanent sites, and six field sites (Table 1). All but one of the field sites have been occupied for over two years, and therefore these are considered semipermanent.

4. The inventory of CSA-1 equipment imaged on photography over the past two years has remained fairly constant, although the number of occupied SAM sites has decreased. This inventory of CSA-1 equipment is only an approximation, since all CSA-1 sites, training areas, and support or depot facilities were not imaged on the same dates.

5. The following figures are estimates of CSA-1 battalions based on the number of occupied CSA-1 sites and equipment observed in training areas from January 1972 to March 1974. (The figures represent the highest counts for each year.)

Battalions at	1972	1973	1974 (Jan-Mar)
Occupied sites	56	56	54
Training areas	7	9	11
Total battalions	63	65	65

In addition to the above, an average of two battalions were seen at Shuang-cheng-tzu SAM Launch Areas A and B from January 1972 to March 1974.

6. The Chinese have not as yet shown any indications of collocating antiaircraft artillery with deployed SAM battalions, as has been the practice in other parts of the world.

Construction Activity

7. The trend in SAM deployment in China during this reporting period has been continuing emphasis on hardening and improving existing sites. This hardening and improvement has generally been accomplished in one of two ways:

a. By constructing a completely new and improved site, including permanent on-site support buildings, within 1 or 2 nautical miles of an existing site (Figure 2).

b. By renovating an old site (Figure 3). Renovation usually consists of hardening the guidance and missile-hold areas, improving the revetments, and improving the on-site support area. The site is generally kept operational during this renovation by relocating the SAM equipment in the immediate area.

8. In addition to construction directly related to the hardening and improvement of SA-1 sites, there are other, unique types of construction that do not have a clearly defined purpose.

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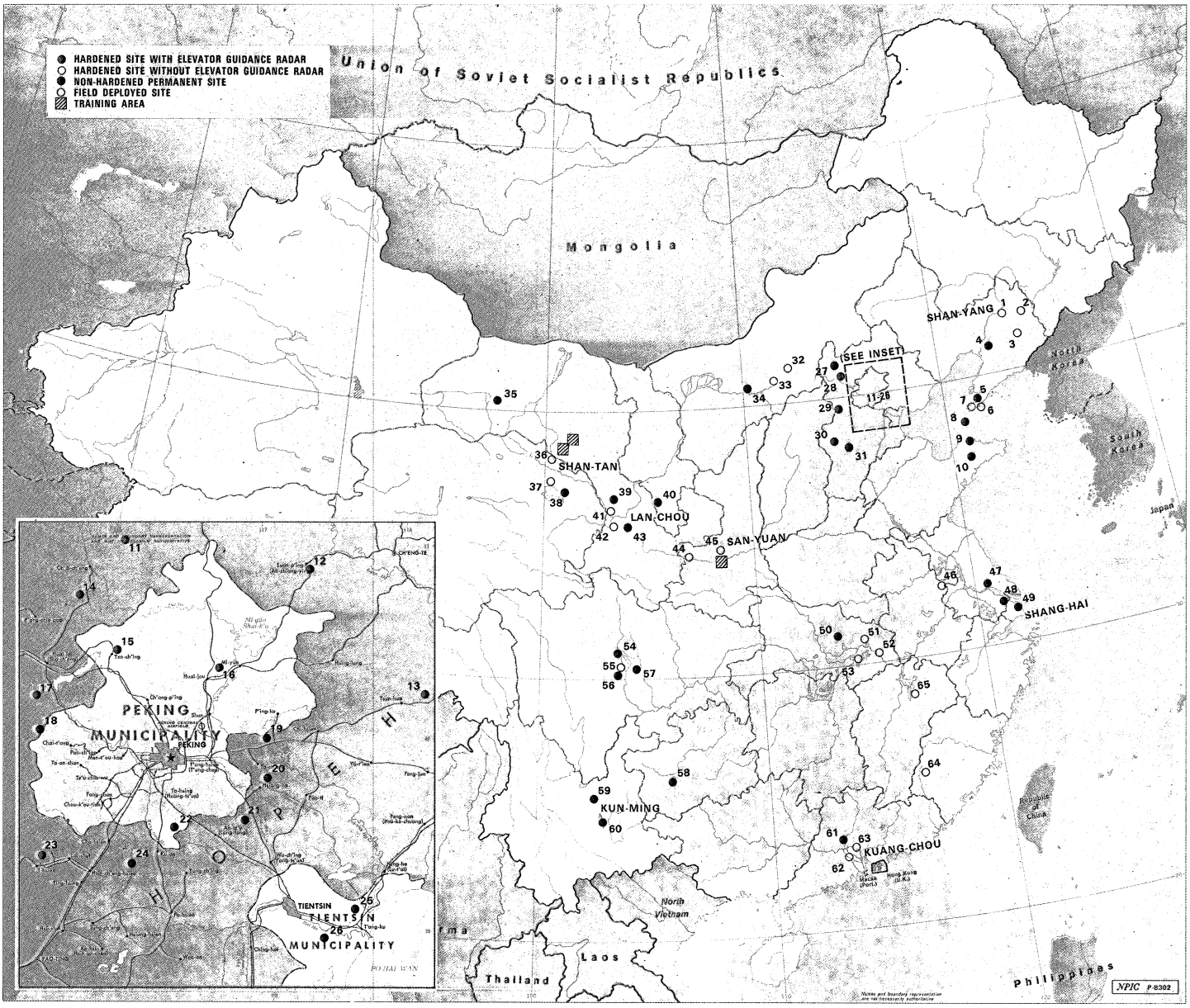

FIGURE 1. LOCATION OF DEPLOYED CSA-1 SITES AND TRAINING AREAS

Table 1. Status of CSA-1 Sites, China (Items are keyed to Figure 1)

Item	Site Designator & BE No	Geographic Coordinates	Occupied	Unoccupied	Site Type: Hardened	Site Type: Permanent	Site Type: Field	Remarks
1	Shen-yang C04-1	42-06-11N 123-41-01E	X		X	X		
2	Fu-shun D08-1	42-00-50N 124-36-30E	X		X	X		
3	Pan-chi B10-1	41-15-39N 124-10-23E	X		X	X		
4	An-shan B23-1	41-00-11N 122-48-25E	X			X		
5	Lu-ta C04-1	39-19-07N 121-58-01E	X			X		
6	Lu-ta B08-1	38-57-42N 121-53-15E		X			X	Unoccupied for over 2 years
7	Lu-ta C26-1	38-46-55N 121-09-50E	X		X	X		
8	Ta-chin SAM Site	38-18-38N 120-49-18E	X		X	X		Rail-served launchers; elevator guidance radars; bunkered acquisition radar
9	Yen-tai D30-1	37-45-51N 120-43-06E	X		X	X		
10	Lai-yang A36-1	37-01-14N 120-41-47E	X			X		Occupied for over 4 years
11	Chih-chang B05-1	41-07-28N 116-05-15E	X		X	X		
12	Cheng-te C27A-1	40-53-50N 117-19-15E	X		X	X		Elevator guidance radar; bunkered missile-hold bldgs; cocoon
13	Tang-shan D36-1	40-12-30N 118-06-54E	X		X	X		Elevator guidance radar; ucon
14	Chang-chia-kou D10-1	40-47-35N 115-35-43E	X		X	X		
15	Pei-ching D33-1	40-27-23N 116-01-10E	X		X	X		Elevator guidance radar; bunkered missile-hold bldgs
16	Pei-ching C03-1	40-21-10N 116-41-02E	X		X	X		Elevator guidance radar; bunkered missile-hold bldgs; cocoons
17	Pei-ching E30A-1	40-13-10N 115-25-00E	X		X	X		Elevator guidance radar; bunkered missile-hold bldgs; cocoons
18	Pei-ching D28-1	39-58-42N 115-42-40E		X		X		Unoccupied for over 2 years
19	Pei-ching D08-1	39-59-45N 117-03-38E		X		X		Unoccupied for over 3 years
20	Pei-ching D11-1	39-46-18N 117-02-29E	X			X		
21	Pei-ching C14-1	39-34-24N 116-45-38E		X		X		Unoccupied for over 3 years
22	Pei-ching C18-1	39-33-39N 116-24-50E		X		X		Unoccupied for over 3 years
23	Pei-ching [redacted]	39-21-58N 115-32-57E	X		X	X		Elevator guidance radar; cocoons
24	Pei-ching D20-1	39-22-40N 116-07-49E	X			X		
25	Tang-ku A36-1	39-07-49N 117-37-26E		X		X		Unoccupied for 2 years
26	Tang-ku B23-1	38-51-29N 117-26-00E	X			X		
27	Chang-chia-kou A15-1	40-41-17N 114-58-48E		X		X		Unoccupied for over 2 years
28	Chang-chia-kou B13-1	40-43-05N 115-06-22E	X		X	X		Elevator guidance radar; bunkered missile-hold bldgs
29	Hsi-ho-ying A19-1	39-53-46N 114-44-58E	X		X	X		New hardened site ucon (coordinates are for old field deployed site); elevator guidance radar
30	Shih-chia-chuang C32-1	38-16-54N 114-08-59E	X		X	X		Elevator guidance radar; cocoons
31	Shih-chia-chuang C10-1	37-59-38N 114-55-17E	X			X		Ucon
32	Chi-ning A30-1	41-04-30N 112-58-41E	X		X	X		
33	Hu-ho-hao-te C12-1	40-41-44N 112-04-21E	X		X	X		
34	Pao-tou A11-1	40-31-37N 110-07-47E	X			X		
35	Yu-men A12A	40-13-08N 097-11-59E	X			X		
36	Shan-tan C19-1	38-26-36N 101-03-20E	X				X	Poss associated with Shan-tan SAM Training Areas A & B
37	Kang-cha A22-1	37-17-30N 100-06-29E	X				X	Occupied for over 2 years
38	Hai-yen B25A-1	36-49-10N 100-45-44E	X			X		
39	Lan-chou F35-1	36-58-29N 103-20-21E	X			X		Ucon
40	Lan-chou E04-1	36-38-48N 104-13-14E	X			X		Occupied for over 4 years
41	Lan-chou C29-1	36-13-02N 103-12-32E	X		X	X		Bunkered bldgs in guidance area
42	Lan-chou C25A-1	35-54-05N 103-16-21E	X		X	X		Bunkered bldgs in guidance area
43	Lan-chou B12A-1	35-57-21N 104-01-41E		X		X		Unoccupied for over 4 years
44	Pao-chi B07-1	34-27-15N 107-21-43E	X			X		Occupied for 2 years; support bldgs ucon
45	San-yuan E28-1	34-44-36N 108-03-19E	X				X	Occupied for over 4 years; prob associated with San-yuan SAM Training Area
46	Nan-ching C01-1	32-27-16N 118-49-30E	X		X	X		Launcher-hold bunkers
47	Nan-tung C31-1	32-15-17N 120-31-15E	X			X		Collocated with airfield
48	Shang-hai B36-1	31-27-04N 121-26-05E	X			X		
49	Shang-hai B09-1	31-14-50N 121-44-30E	X			X		
50	Wu-han E32-1	31-07-08N 113-36-19E	X			X		
51	Wu-han B03-1	30-52-08N 114-26-21E	X		X	X		
52	Huang-shih A02A-1	30-17-06N 115-08-57E	X		X	X		
53	Wu-han B20-1	30-19-22N 114-12-52E	X		X	X		
54	Cheng-tu C33-1	30-59-50N 103-45-32E	X			X		
55	Cheng-tu B26-1	30-36-45N 103-52-40E		X			X	Unoccupied for over 2 years
56	Cheng-tu D23-1	30-13-20N 103-30-30E		X	X	X		Ucon; bunkered bldgs in guidance area
57	Cheng-tu B13-1	30-30-05N 104-18-17E	X			X		
58	An-shun B12-1	26-09-15N 106-07-06E		X		X		Ucon
59	Kun-ming C27-1	25-00-47N 102-17-41E	X				X	
60	Kun-ming B17-1	24-44-05N 102-47-10E	X			X		Ucon
61	Kuang-chou B28-1	23-08-32N 113-03-16E	X		X	X		
62	Kuang-chou B34-1	23-25-22N 113-09-25E	X			X		Collocated with army barracks
63	Kuang-chou A08-1	23-09-02N 113-23-57E	X			X		
64	Lien-chang A21-1	26-38-47N 116-43-10E	X		X	X		
65	Nan-chang C14-1	28-20-35N 116-14-40E	X		X	X		
		Totals	54	11	28	59	6	65 sites

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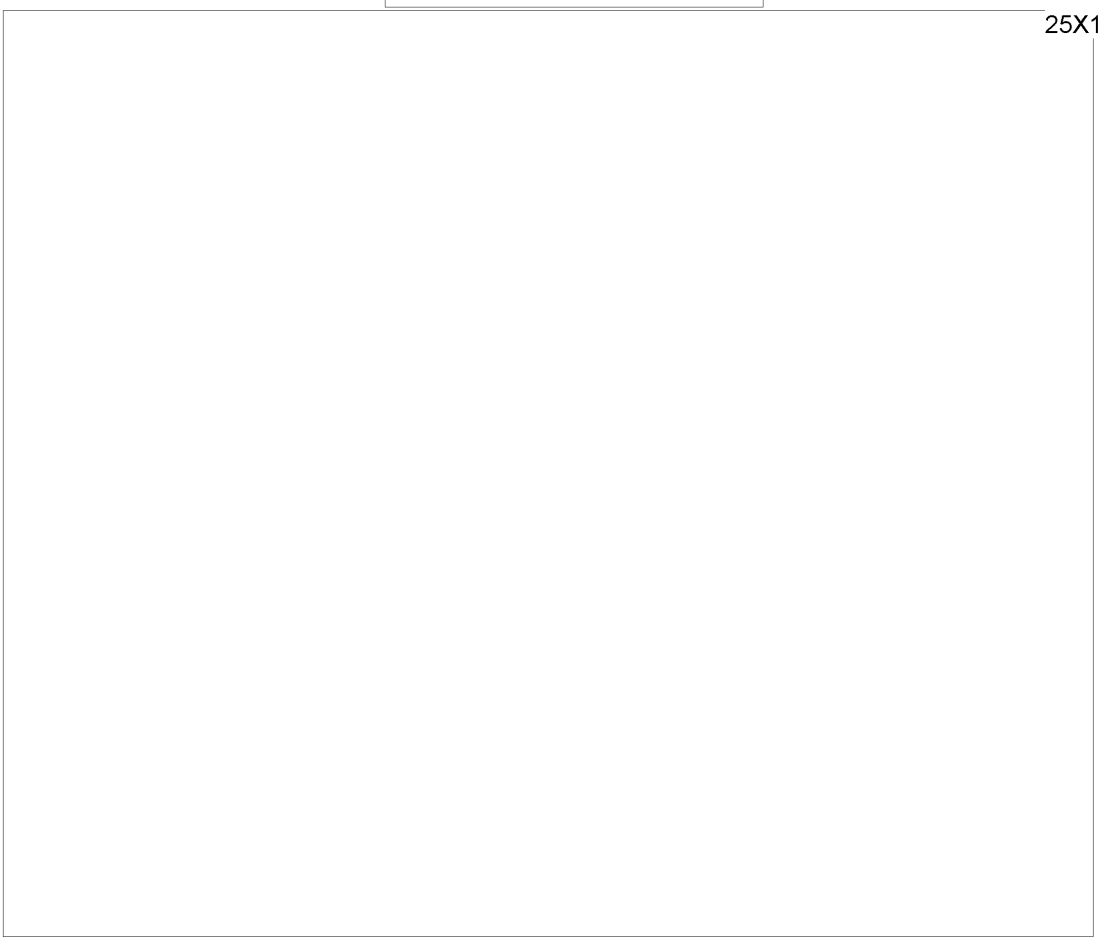

9. An example of such construction has been the building of launcher covers, or cocoons. These cocoons are generally constructed on site and consist of two elongated halves that are mounted on rails at the launch position and can be moved along the rails toward the launcher until they cover it (Figure 4).

10. The construction begins with a framework the same size and shape as the finished cocoon (Figure 5). The type of material used in the finished product is not known, but it is believed to be relatively lightweight; the purpose of the cocoon is probably to protect the CSA-1 launcher from the elements rather than from an enemy attack. There are several reasons that suggest the cocoon is of lightweight construction rather than of the heavy construction that would be expected for a passive defensive measure:

a. The Chinese usually park the CSA-1 transporter with the missile (under canvas) at the launch position rather than placing the missile on the launcher. Therefore, covering the launcher with the cocoon would leave the missile unprotected in the event of enemy attack. If the missile were placed on the launcher, the cocoon would not be large enough to cover both the missile and the launcher.

b. Based on the dimensions of the cocoon, if concrete blocks and poured concrete were the construction materials, each half of the cocoon would weigh approximately 8 tons. The truck-mounted cranes associated with CSA-1 sites have a lifting capacity of only 5.5 tons and therefore could not be used to position the cocoon at the launch area.

c. There is photographic evidence that the cocoons are handled several times before being placed in their final position on the rails. This would suggest relatively light weight and easy handling.

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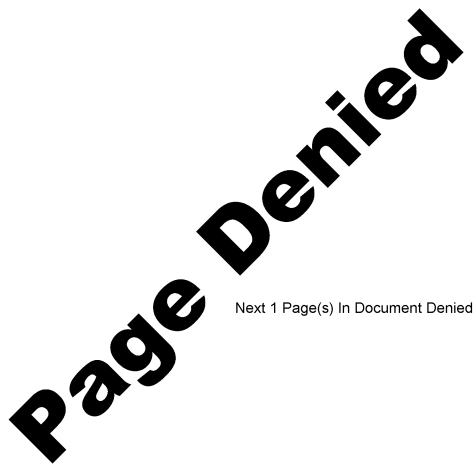

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Training Activity

11. The three known SAM training areas in China (Figure 1) have shown an increase in activity since June 1973.

12. The San-yuan SAM Training Area continued to be the most active area and presently contains nine and possibly ten battalions of CSA-1 equipment. The activity was probably centered around the guidance radars, indicating two possibilities -- a concentrated training program for radar operators or the modification of the guidance radars or other electronics equipment.

13. At Shan-tan SAM Training Area A the amount of support equipment had increased to the level of early 1972, which was approximately 85 vehicles. This increase occurred after a steady decrease in support equipment through the remainder of 1972 and early 1973, when the equipment count reached a low of 24 vehicles

14. Shan-tan SAM Training Area B a live-fire training area, was occupied by three launchers and other support equipment (no missiles) which was the first time that missile equipment had been observed here The equipment was no longer present

REFERENCES

MAPS OR CHARTS

US Air Target Chart, Series 200, scale 1:200,000

RELATED DOCUMENTS

DDI/IAR *SAM Training Areas in China,* Mar 68 (TOP SECRET RUFF)

NPIC PIN-052/73, *CSA-1 SAM Site Displaying New Hardening Concept, Ta-chin-tao, China,* May 73 (TOP SECRET RUFF)

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REQUIREMENT

Project 120704NB

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