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#1 memo	<del>Helms to the President TS 1 p.</del> <i>Open RAC 5.5.98</i>	<del>11/6/67</del>	<del>A</del>
#1a report	intelligence report - <i>sanitized NLS 98-361 1-23-01</i> TS 6 pp.	11/6/67	A
#2 report	<del>Memorandum S 2 pp.</del> <i>Open RAC 5.5.98</i>	<del>10/31/67</del>	<del>A</del>
#3 memo	<del>Rostow to the President, 6:10 p.m. S 1 p.</del> <i>" " "</i>	<del>8/15/67</del>	<del>A</del>
#3a memo	<del>Robert Ginsburgh to Rostow S 1 p.</del> <i>" " "</i>	<del>8/15/67</del>	<del>A</del>
#3b photo	<del>Hanoi S 1 p.</del> <i>" " "</i>	<del>8/12/67</del>	<del>A</del>
#3c photo	<del>Hanoi S 1 p.</del> <i>" " "</i>	<del>7/26/67</del>	<del>A</del>
#4 memo	<del>Helms to the President - <i>sanitized NLS 98-361 1-23-01</i> TS 1 p.</del> <i>open 11/06</i>	<del>7/26/67</del>	<del>A</del>
#4a report	<del>intelligence report - <i>sanitized NLS 98-361 1-23-01</i> TS 5 pp.</del> <i>(still sanit.)</i>	<del>7/26/67</del>	<del>A</del>

FILE LOCATION

*BLACK SHIELD*  
NSF, Country File, "Vietnam, 3Q, 7/67-11/67, [SANITIZED] Photography," Box 88

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MEMORANDUM FOR: The President

4237

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This is a preliminary assessment of the three overflights of North Vietnam which took place on 28, 29, and 30 October. Although some of the material you have seen, this fuller report I thought worthy of your attention, particularly page 4.

DECLASSIFIED

*Rich*

Authority RAC 10070

Richard Helms

By ics NARA, Date 5-5-98

Attachment - 1

SC No. 10384/67

6 November 1967

(DATE)

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**SANITIZED**  
**E.O. 12958, Sec. 3.6**  
**NLJ 98-361**  
**By Cb, NARA Date 1-17-01**

BLACK SHIELD ASSESSMENT

HANDLE VIA COMINT CHANNELS

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SC No. 10384/67  
6 November 1967

MEMORANDUM

SUBJECT: Preliminary Assessment of Black Shield  
Photography of 28, 29, and 30 October

Summary

Three double-pass Black Shield missions flown over North Vietnam on 28, 29, and 30 October provided cloud-free photographic coverage of about 55 percent of the country, including the Hanoi, Haiphong, Pinghsiang and Dong Dang areas. All of North Vietnam's six major airfields, more than half of the SA-2 sites, over 75 percent of the rail network north of the panhandle, and 42 priority bridges and rail yards for bomb damage assessment were photographed. No evidence of surface-to-surface missile deployment was noted.

Note: This memorandum was prepared by the Directorate of Intelligence.



1. Three double-pass Black Shield missions flown over North Vietnam on 28, 29, and 30 October provided cloud-free photographic coverage of about 55 percent of the country, including the Hanoi, Haiphong, Pinghsiang and Dong Dang areas. Both Mission 6732 (28 October) and Mission 6734 (30 October) flew two passes each over the area of North Vietnam north of the panhandle. One of mission 6732's passes was along the China border area. Mission 6733 (29 October) flew one pass primarily over the panhandle and the other pass along the China border area. No evidence of surface-to-surface missile deployment was noted.

2. Surface-to-Air Missile Sites: Over half of the nearly 260 SA-2 sites in North Vietnam were photographed by the three missions. Two new sites were detected. The 28 October mission alone covered 120 SA-2 sites. Fourteen of these sites were occupied, 70 unoccupied, and 16 could only be identified. The 29 October mission covered 61 SA-2 sites. One of these sites was occupied, 30 unoccupied (including one new site), and 30 could only be identified. The 30 October mission covered 92 SA-2 sites. Thirteen of these sites were occupied (including one new site), 74 unoccupied, and five could only be identified.

3. Airfields: Good coverage of all six of North Vietnam's major airfields was provided by the 28 October mission. With the exception of Haiphong/Cat Bi--which has a cratered runway--all the airfields appeared to be serviceable.

4. At Phuc Yen Airfield, the bomb craters on the runway had been filled in and the airfield seemed to be capable of supporting at least limited fighter


[REDACTED] Other visible bomb damage from the 24 and 25 October air strikes included: bomb craters on the two main parking aprons and the parallel taxiway; interdiction of the taxiway to the northern aircraft revetments by one bomb crater; two MIG-15/17s probably destroyed

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(T)

and two other aircraft possibly destroyed; and seven damaged aircraft revetments.

5. At Hoa Lac Airfield, all bomb craters on the runway had been repaired, and the runway appeared to be serviceable. At Haiphong/Kien An Airfield, all bomb craters on the runway had been repaired, making it serviceable. Other bomb craters could be seen on the half-loop taxiway, in six parking revetments, and adjacent to the parallel taxiway.

6. Photography from the 29 October mission showed continuing construction at Yen Bai Airfield in the northwestern part of North Vietnam. Concrete appears to have been laid for part of the runway and parallel taxiway. Three parking aprons, 13 aircraft revetments, and a dispersal taxiway were identified. This is the first sign of progress at this airfield since 20 June. Photography taken at that time showed that preparations had been made to surface the runway. After four months, the Chinese engineers still have not completed the runway, although they have apparently made progress on some of the adjacent facilities.

7. Air Order-of-Battle: The 28 October photography of the six major airfields showed very few aircraft. At Phuc Yen Airfield, ten aircraft could be seen: two small swept-wing aircraft, four possible aircraft, two probably destroyed MIG-15/17s, and two possibly destroyed aircraft. 

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8. At Hanoi/Gia Lam Airfield, one MIG-15/17 was observed. Two derelict MIG-15/17s and two dummy MIG-21s were noted at Hoa Lac Airfield.

9. Naval Order-of-Battle: The 28 October mission photographed the normal complement of naval vessels in the Haiphong area. Identifiable vessels included three SO-1 class submarine chasers, three or



four Swatow-class gunboats, six P-6 class motor torpedo boats, and two P-4 class motor torpedo boats.

10. Bridges: The 28 October mission provided good coverage of the most important bridges. The Paul Doumer Railroad and Highway Bridge over the Red River was shown to be unserviceable. One span had been dropped into the river and the two adjoining spans had been severely damaged.

11. The Canal des Rapides Railroad and Highway Bridge also was shown to be unserviceable. One span at the south end of the main bridge had been knocked out of position. The alternate rail bypass bridge was also unserviceable.

12. In the Haiphong area, the three main bridges--the railroad and highway bridge and two highway bridges--were observed to be still unserviceable. Ten highway bypass bridges there were serviceable.

13. Transshipment Points: Photography of 28 October showed normal levels of activity at the Pinghsiang and Dong Dang railroad transshipment points. About 390 pieces of rolling stock, including flatcars carrying 42 unidentifiable objects, were noted at Pinghsiang. Approximately 120 pieces of rolling stock and 14 locomotives were observed at the nearby Dong Dang transshipment point.

14. The 28 October photography also showed a probable rail-to-road transshipment point under construction near Ho-Kou, China, just across the border from Lao Cai, North Vietnam. The installation is served by two rail spurs off the Kunming-Hanoi rail line. Construction of such an installation may pre-  
sage an increase in supply shipments via truck to  
northwestern North Vietnam. Chinese engineers have  
been developing the road network and logistical fa-  
ilities in the border area for the past two years.

15. Railroad lines: The 28 October mission covered 100 percent of the Haiphong-Hanoi rail line,

75 percent of the Dong Dang-Hanoi line, 35 percent of the Kep-Thai Nguyen-Hanoi line, 20 percent of the Lao Cai-Hanoi line, and 10 percent of the Hanoi-Dong Hoi line.

16. Hanoi Thermal Power Plant: Photography of 28 October showed damage at and near the plant. A hole in the generator hall roof indicated a penetration and a possible internal detonation. Another hole in the generator hall roof--which had been repaired after the 21 August strike--has been reopened. A possible hit immediately north of the coal conveyor, entered the new boiler-house section. (This possible hit apparently did not detonate.) A crater was visible on the north boundary of the plant. About 35 civilian structures in the area surrounding the plant have been destroyed and 40 damaged. No smoke or steam from the plant was evident.



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31 October 1967

DECLASSIFIED  
Authority RAC 10071  
By js NARA, Date 5-5-98

MEMORANDUM

SUBJECT: Bomb Damage in North Vietnam Shown by  
28 October Black Shield Photography

1. This bomb damage assessment report is based on a first look by NPIC at 28 October Black Shield photography. The track of the 29 October Black Shield mission was outside of the area of recent air strikes, and no information has been received yet on photography from the 30 October Black Shield mission.

2. Hanoi Thermal Power Plant: The photography shows the following damage at and near the plant:

- a. A hole in the generator hall roof, indicating a penetration and a possible internal detonation.
- b. The reopening of another hole in the generator hall roof--which had been repaired after the 21 August strike.
- c. A possible hit immediately north of the coal conveyer, entering the new boiler-house section. This possible hit apparently did not detonate.
- d. A crater on the north boundary of the plant.
- e. About 35 civilian structures destroyed and 40 damaged in the area surrounding the plant. No smoke or steam from the plant was evident.

3. Phuc Yen Airfield: The bomb craters on the runway have been filled in and the airfield appears to be capable of supporting at least limited fighter operations again. Other visible damage from the 24 and 25 October air attacks includes:

- a. Bomb craters on the two main parking aprons and the parallel taxiway.
- b. Taxiway to northern aircraft revetments interdicted by one bomb crater.

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- c. Two aircraft probably destroyed and two others possible destroyed.
- d. Seven damaged aircraft revetments.

4. Paul Doumer Railroad and Highway Bridge: The bridge is unserviceable. One span has been dropped into the Red River, and the two adjoining spans have been severely damaged.

5. Canal des Rapides Railroad and Highway Bridge: One span at the south end of the main bridge has been knocked out of position, making the bridge unserviceable. The alternate rail bypass bridge is also unserviceable. A cable bridge west of the main bridge is serviceable.

6. The Haiphong Bridges: The three main bridges remain unserviceable. Ten highway bypasses are serviceable.

7. Lang Son Railroad Bridge: The bridge is out of operation with three of its five spans dropped or destroyed.

8. Hoa Lac Airfield: All bomb craters on the runway have been repaired, and the runway appears to be serviceable. Two damaged MIG-17s can be seen.

9. Haiphong/Kien An Airfield: Craters on the runway have been repaired, making it serviceable. Other bomb craters can be seen on the half-loop taxiway, in six parking revetments, and adjacent to the parallel taxiway.



THE WHITE HOUSE  
WASHINGTON

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Tuesday, August 15, 1967  
6:10 p. m.

Mr. President:

These pictures came by satellite.

If they hadn't blown a fuse -- or something -- they might have gotten here from Saigon in hours.

The system may prove useful in the future.

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Authority RAC 10072

By iso NARA, Date 5-5-98

W. W. Rostow

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NATIONAL SECURITY COUNCIL  
WASHINGTON, D.C. 20506

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DECLASSIFIED  
Authority RAC 10073  
By is NARA, Date 5-5-98

15 August 1967

MEMORANDUM FOR MR. ROSTOW

Attached are the prints from which the blowups were made, which you received earlier today.

These were transmitted via satellite.

The copies sent by air are expected to arrive in Washington later today. If it had not been for a generator failure, you could have received the pictures three days ago.

This system is still in the R&D stage. The technique was developed by CBS Laboratories, using a precisely controlled high intensity laser beam. The data transmitted from Tan Son Nhut, Vietnam, arrives in the Washington, D.C. area within seconds via a two-hop link, using the Defense Communications Agency Relay Satellite System. The data are encrypted. The system now has the capability of transmitting 25 inches of a strip, like that attached, in one hour. General Steakley hopes to double the capacity in a month.

This system now makes it possible for the President to receive photography on "significant" targets within a few hours after the photos are taken.

A few cautions are in order:

- a. Capacity is limited.
- b. Equipment outages must be expected since the system is still in R&D.
- c. The satellites are not always in the necessary locations.

It would give the system a useful boost if you would casually mention to Mr. McNamara White House interest in this project.

*R*

ROBERT N. GINSBURGH

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W-8A-1644 "VAMPIRE"

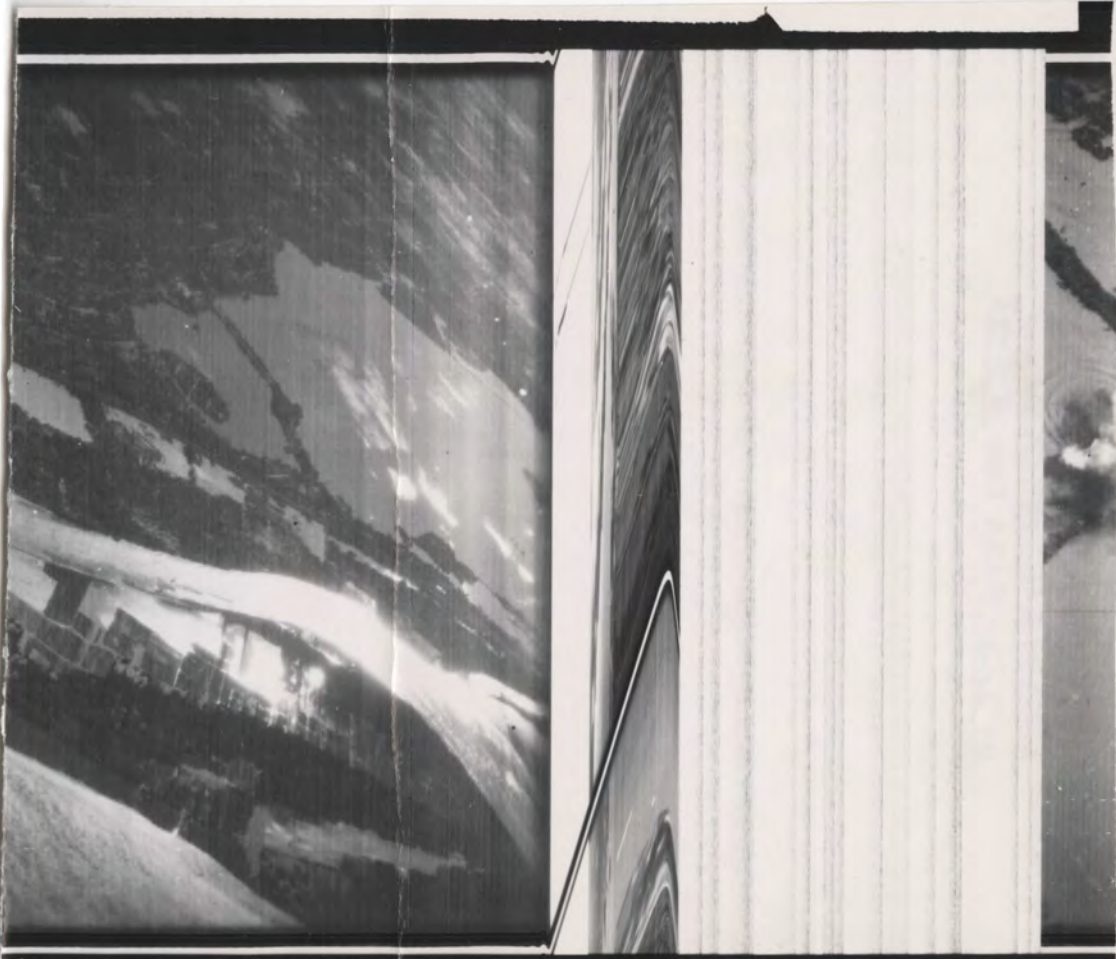
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By iso NARA, Date 5-5-98





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Authority RAC 10075  
By is NARA, Date 5-5-98



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MEMORANDUM FOR: The President

*W*

This will bring you up-to-date on the findings of the most recent OXCART flights over North Vietnam.

*Dick*  
Richard Helms

Att. - SC-08720/67

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Authority NLJ98-3614 RAC 739-015-3-2

By aj NARA, Date 10-3-06 26 July 1967

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**E.O. 12958, Sec. 3.6**  
**NLJ 98-361**  
**By cb, NARA Date 1-17-01**

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SC NO. 08720/67  
26 July 1967

MEMORANDUM

SUBJECT: Preliminary Assessment of 19 and  
20 July 1967 BLACK SHIELD Photography

Summary

Two BLACK SHIELD missions flown about 24 hours apart on 19 and 20 July obtained cloud-free photography of about 80 percent of North Vietnam, including most of the high priority surface-to-surface missile search areas, much of the North Vietnamese air defense system, and many US strike and interdiction target areas. No evidence of surface-to-surface missile deployment was detected.

Note: This memorandum was prepared by the Directorate of Intelligence with the assistance of the Directorate of Science and Technology.

1. Mission 6709 on 19 July obtained photography of about 75 percent of North Vietnam, including the southern DRV down to the DMZ and the Hanoi-Haiphong area. Weather conditions were excellent with the exception of a few scattered areas. Mission 6710 on 20 July covered the DMZ and the area to the north, the Hanoi-Haiphong area, and parts of the Sino-DRV border. Light to heavy haze and cloud cover hampered intelligence exploitation of the 20 July photography, however, especially in the Sino-DRV border area. (A [REDACTED] U-2 mission over South China on 20 July provided some coverage of the border, however.)

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3.4(b)(1)>25Yrs  
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2. No evidence of surface-to-surface missile deployment was obtained by either BLACK SHIELD mission. The two missions covered most of the high priority MRBM search areas west and north of Hanoi and the tactical and coastal defense missile search areas in the southern and central DRV.

3. North Vietnamese air defenses: The mission of 19 July photographed 166 of the almost 200 usable surface-to-air missile (SAM) sites, including four new sites in the Yen Bai area. Of the 137 sites which could be read out, 12 were occupied (including 2 new ones), 124 were unoccupied, and one near Yen Bai has been returned to cultivation. The mission of 20 July covered 80 SAM sites, including two new ones (one occupied) in the Haiphong area. Five sites were occupied, 63 unoccupied, and the occupancy of 12 could not be determined.

4. The level of SAM site occupancy falls slightly below our estimate that the North Vietnamese have between 25 and 35 SAM firing battalions, but we cannot tell how many units may have been shifting locations at the time of the photography. Previous BLACK SHIELD missions have photographed up to 20 firing battalions at one time, [REDACTED]

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5. The two missions together covered the seven major North Vietnamese airfields, but a firm air order of battle (AOB) cannot be derived because



weather conditions and variations in flight paths prevented simultaneous coverage of all seven. Despite these limitations, it appears that the current estimate of fighter strength is fairly accurate. The photography revealed that the mix of fighter types is somewhat different than we have been estimating, however. For example, 10 MIG-21 and 25 MIG-15/17 fighters were photographed on the 19th. Our estimate as of that day was that a total of 29 fighters remained in the DRV--16 MIG-21s and 13 MIG-15/17s.

6. On the basis of this photography--and taking account of subsequent losses as well as aircraft airborne at the time of the photography--it appears that there are now between 25 and 35 jet fighters stationed in the DRV. Of these, at least 10 are MIG-21s.

7. Bomb damage assessment (BDA): The two missions obtained extensive coverage of targets of the US strike effort in North Vietnam. All 23 of the targets being followed at first priority in CIA's BDA studies were covered, as well as nearly all of those being followed at second priority.

8. Coverage of the Hanoi power plant provided the best photography since the US strike of 10 June. Repair work is under way on both the damaged boilerhouse and the control building. The photography confirmed damage to three boilers which supplied steam for about half the generating capacity. Excellent photography of the Nam Dinh powerplant revealed destruction of the coal processing building in a strike on 26 June. Cumulative heavy damage to this facility will probably prevent even partial operation for at least six months. Coverage of the Ben Thuy powerplant showed no change since May, indicating that air strikes in early July inflicted no significant additional damage.

9. Transportation: As in previous BLACK SHIELD missions, wide coverage of rail and road transport routes and facilities was obtained. Detailed analysis of key targets such as bridges and rail yards is under way to assess the current status and

serviceability of the North Vietnamese rail system. Good coverage of the major rail lines between China and the DRV has provided information for analysis of the level of rail transport activity and the inventory of rolling stock available in the DRV. Although the coverage was extensive, however, the resolution is not good enough to determine the extent of the present program to equip the North Vietnamese meter-gauge railway system with an extra track to accommodate Chinese standard-gauge rolling stock.

10. Haiphong--the major ocean port of entry-- was covered, but haze hampered analysis. Pinghsiang, the major Chinese storage area and transportation hub near the northeastern DRV border, was photographed, but scattered clouds prevented a complete count of trucks and rolling stock.

11. Chinese activity in North Vietnam: A figure-8 driver training course was observed for the first time near the area of military camps and storage facilities probably built by Chinese engineers in the Lao Cai area at the northwest Sino/DRV border. The course, which is probably designed to train cargo truck drivers, is similar to other courses in North Vietnam and south China. Interrogation reports have mentioned North Vietnamese truck driver students being sent to south China for training. It is possible that this training is now being carried out in the sanctuary zone of northern North Vietnam.