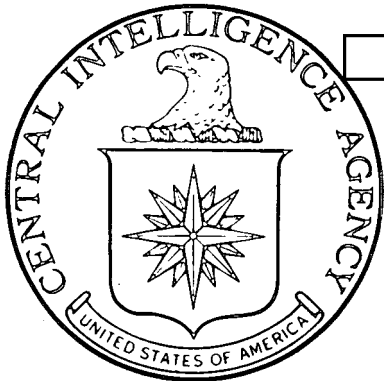


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IMAGERY
ANALYSIS
DIVISION

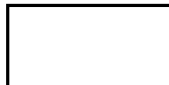
PIR

PHOTOGRAPHIC INTELLIGENCE REPORT

MOSCOW GUIDED MISSILE PLANT 456

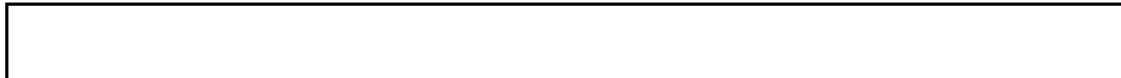
KHIMKI, USSR

CHANGES IN TEST AREA SINCE



25X

Declassification Review by
NIMA/DoD



25X

CIA/PIR 61112

25X

DATE May 1966

COPY 39

PAGES 8

GROUP 1
Excluded from automatic
downgrading and declassification

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Next 1 Page(s) In Document Exempt

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CIA IMAGERY ANALYSIS DIVISION

CIA/PIR-61112

MOSCOW GUIDED MISSILE PLANT 456, KHMINKI, USSR

CHANGES IN TEST AREA SINCE [redacted]

Introduction

The Moscow Guided Missile Plant 456, Khimki, USSR, located 11 nautical miles (nm) northwest of the center of Moscow at 55-54N 37-27E has been involved in the research and development of liquid rocket engines since the late 1940's (Figure 1). The static test facility associated with the plant was first observed on photography in [redacted] and has subsequently been covered entirely or in part by [redacted] missions of varying quality. Some peripheral ground photography of the facility has also been obtained during this period. The test area consists of approximately 30 buildings, including three test stands, a large checkout building, a probable effluent control system, and numerous support buildings (Figures 2 and 3).

Construction Since [redacted]

Significant new facilities were added in the test stand area between [redacted] new construction activity was observed in the bottom of the ravine just north of Test Stands 1 and 2. This activity was not present in [redacted] a circular structure was evident and in [redacted] a 30 foot diameter tank (Figure 3, Item 12) and a 150 foot diameter retaining wall surrounding the tank could be identified. During this same time period, a building (Figure 3, Item 14) measuring approximately 110 by 50 feet was constructed just outside of the wall and to the east. A pipe leads from this building to the test stand area where it joins the line serving Building 10 and then continues to Stand 2 and Building 8. Two large diameter ducts or pipes were also constructed and extend from the two stands down to a point just inside the retaining wall. The quality of the photography precludes reliable measurements of pipes and ducts in the test stand area.

Additional new construction activity was observed in the area between [redacted] About 50 feet north of the retaining wall, a large stack (Figure 3, Item 13) was constructed. It was not present in [redacted] The stack is cylindrical, measures approximately [redacted] in diameter and is 325 feet high. It is built in segments

TOP SECRET

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X1

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25X

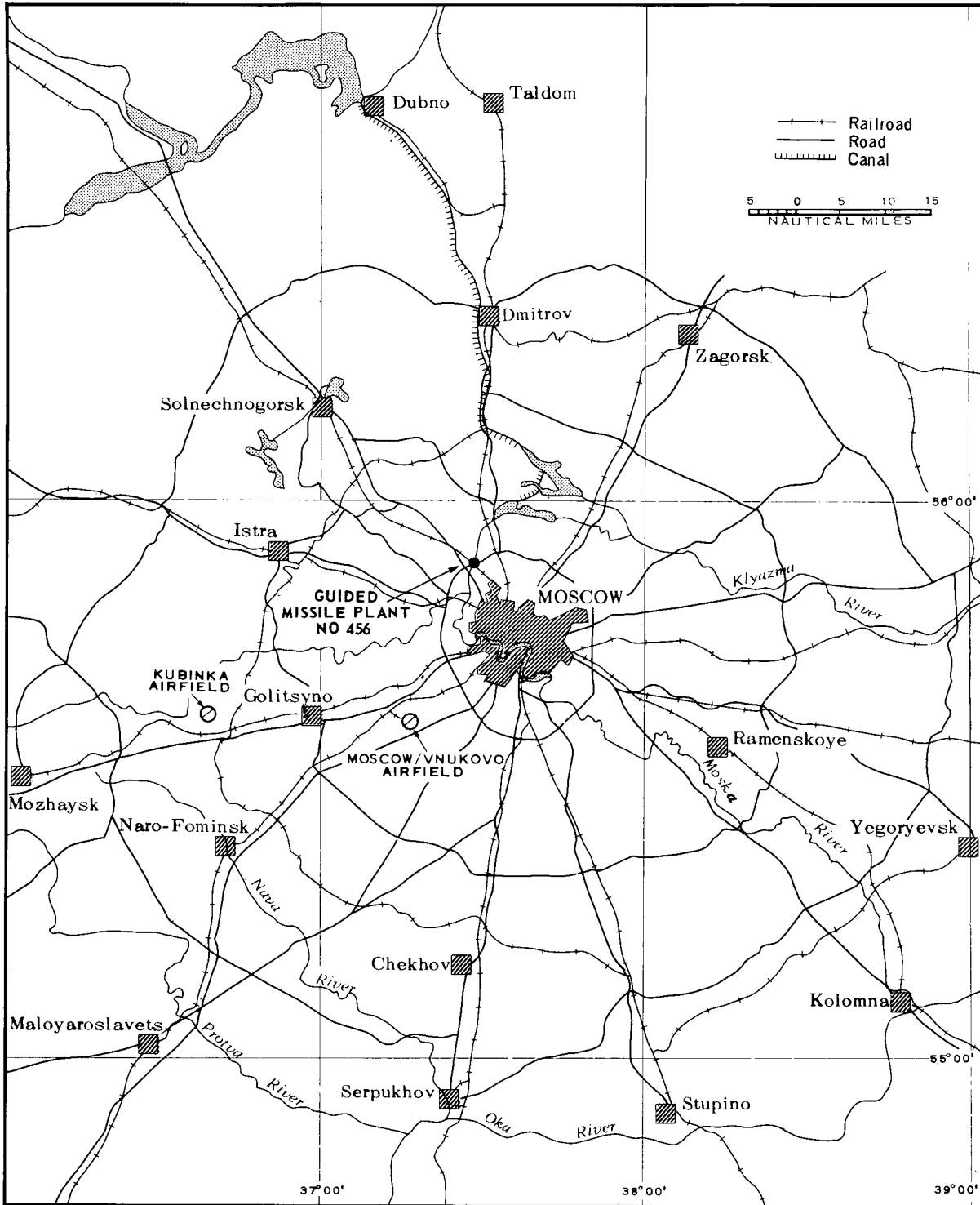


FIGURE 1

TOP SECRET

25X
25X
25X

25X
25X

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X1 approximately [redacted] in height, each of which is made up of five
X1 rings approximately [redacted] At the base of the
stack is a large pipe or duct which connects the stack with the retaining
wall. The first evidence of this structure was observed on ground
photography of 5 July 1965 (Figure 4). At that time the stack was already
at the 190 foot level. The construction crane alongside is identified as a
X1 KB 48/8 crane. By [redacted] the stack had risen to
X1 approximately 250 feet. [redacted] months later ground photography on 25 September
1965 (Figure 5) showed that the stack had reached its full height of 325
feet. Ground photography on 16 December 1965 (Figure 5) revealed that the
construction crane had been moved away from the stack and that the segments
had been painted alternately dark and light.

Stack Mensuration Methodology

X1 Method 1 ([redacted] Photography)

X1 [redacted] An estimate of 250 feet was
derived from measurements of the stack shadow and the image of the partially
completed stack.

X1 [redacted] - The stack, though partly
obscured by smoke in the atmosphere was measured directly using a "z" scale
factor and was found to be approximately [redacted] high.

25X

No diameter measurement could be taken due to the quality of the
photography.

Method 2 (Ground Photography)

Measurements taken from four groups of ground photographs are
based on three assumptions.

1. The KB 48/8 construction crane is a slight variation of the BK-406A crane for which dimensions are available.
2. The stack and crane are at the same distance from the camera.
3. The stack and crane are both at the same base level.

Using the crane to determine scale, the following dimensions were
derived from the ground photographs.

25X
25X

X1

X1

~~TOP SECRET~~

[Redacted]

[Redacted]

[Redacted]
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25X

25X

5 July 1965 - [Redacted] 190 feet (58 m) in height

25X

4 August 1965 - 250 feet (76 m) in height

25 September 1965 - 325 feet (99 m) in height

Conclusions

The new facilities constructed in the test area between [Redacted] appear to be an integrated effluent control system. The large ducts from Test Stands 1 and 2 probably direct the toxic effluent down to the collection area which consists of the tank and retaining wall. The large building adjacent to the wall may be a decontamination facility where the effluent is scrubbed before being pumped back up to the stand area for recycling or disposal. The large stack is a logical addition if there is a necessity to disperse toxic fumes into the atmosphere.

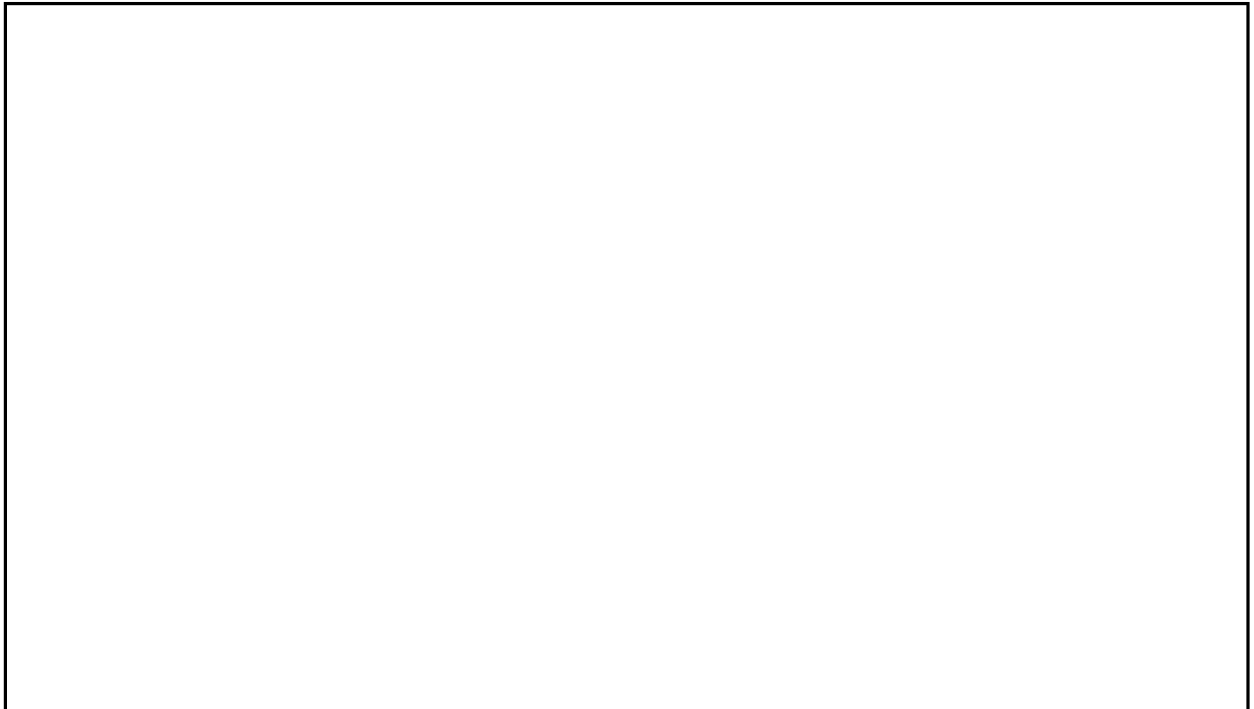
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REFERENCES

PHOTOGRAPHY

25X



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[Redacted]

[Redacted]

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TOP SECRET

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[Redacted]

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DOCUMENTS

NPIC PIR BRIEF [Redacted] New Tower at Moscow Guided Missile Plant
Khimki 456, USSR, August 1965 (TOP SECRET [Redacted])

25X

NPIC PIR [Redacted] Moscow Guided Missile Engine Plant 456 Khimki,
USSR, December 1964 (TOP SECRET [Redacted])

25X

Soviet Cranes and Derricks CIA Joint Publications Research Service
(JPRS) 19,740, 18 June 1963 (UNCLASSIFIED)

REQUIREMENT

C-SI5-83,052

CIA/IAD PROJECT

30455-6

TOP SECRET

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[Redacted]

X1

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**GUIDED MISSILE PLANT
KHIMKI NO 456
TEST AREA**



FIGURE 2

TOP SECRET

TOP SECRET

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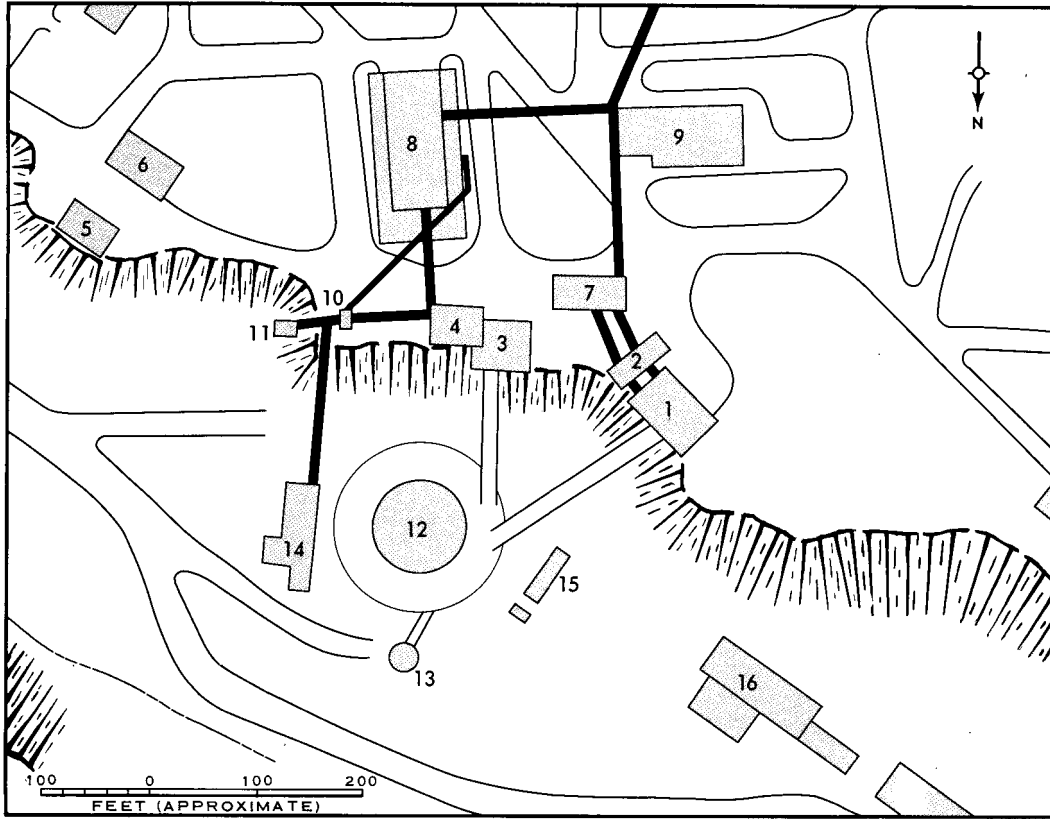


FIGURE 3

Table of Dimensions

<u>Item</u>	<u>Length (feet)</u>	<u>Width (feet)</u>	<u>Description</u>
1	65	55	Test Stand 1
2	65	30	Test Stand Support Building
3	60	45	Test Stand 2
4	50	50	Test Stand Support Building
5	50	50	Test Stand 3
6	60	30	Test Stand Support Building
7	75	40	Test Stand Support Building
8	170	90	Support Building
8	127	40	Highbay
9	115	50	Support Building
10	40	25	Possible Pump House
11	30	30	Possible Pump House
12	80 (diameter)		Tank
12	150 (diameter)		Retaining Wall
13	25 (diameter)	325 (high)	Stack
14	110	50	Effluent Treatment Building
15	45	15	Support Building
16	160	40	Support Building
16	50	30	Support Building

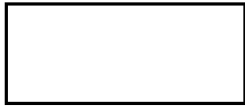
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TOP SECRET 


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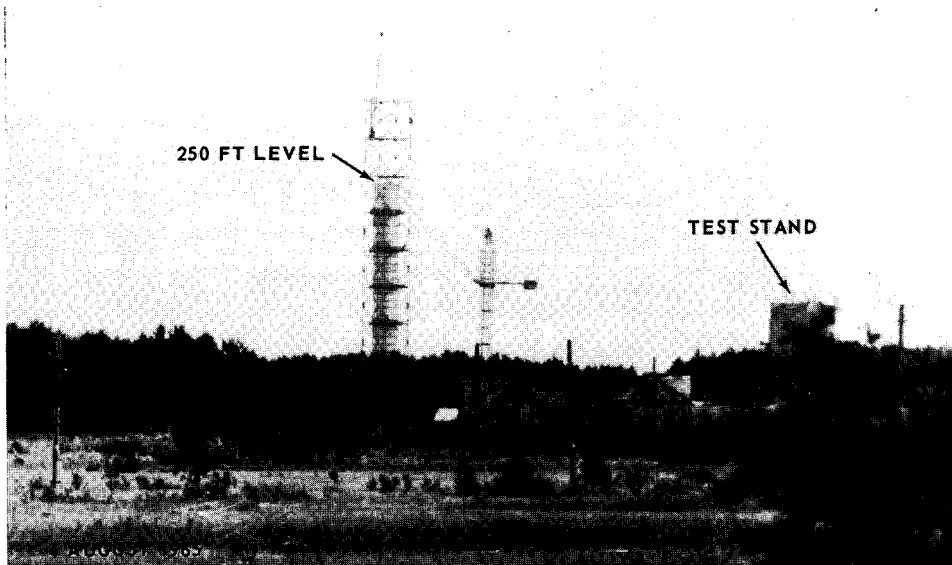
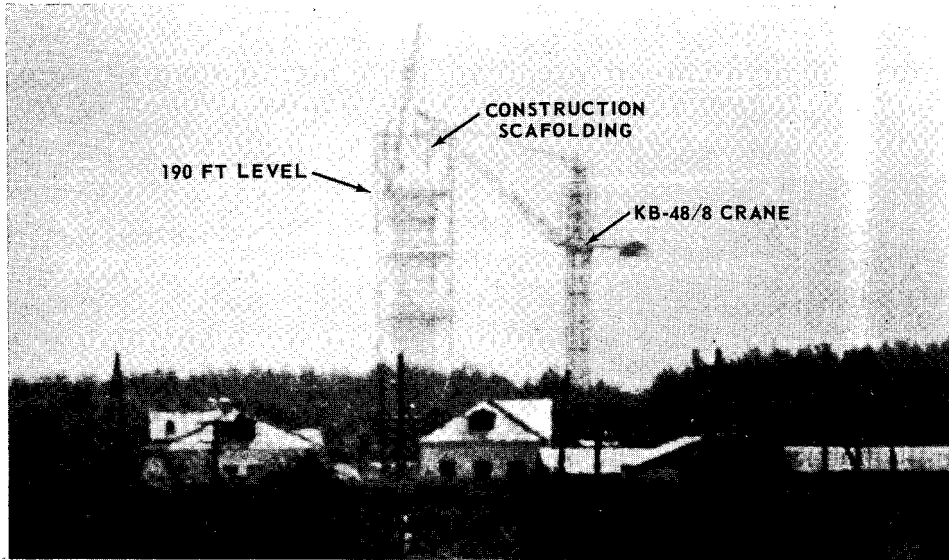
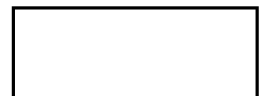


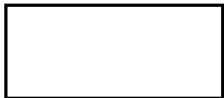
FIGURE 4

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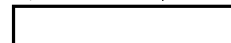
X1



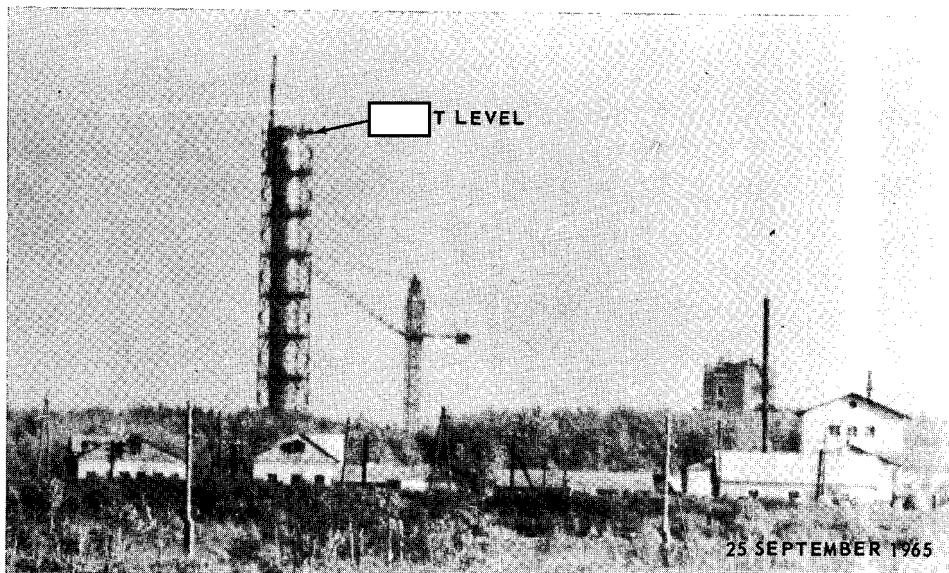
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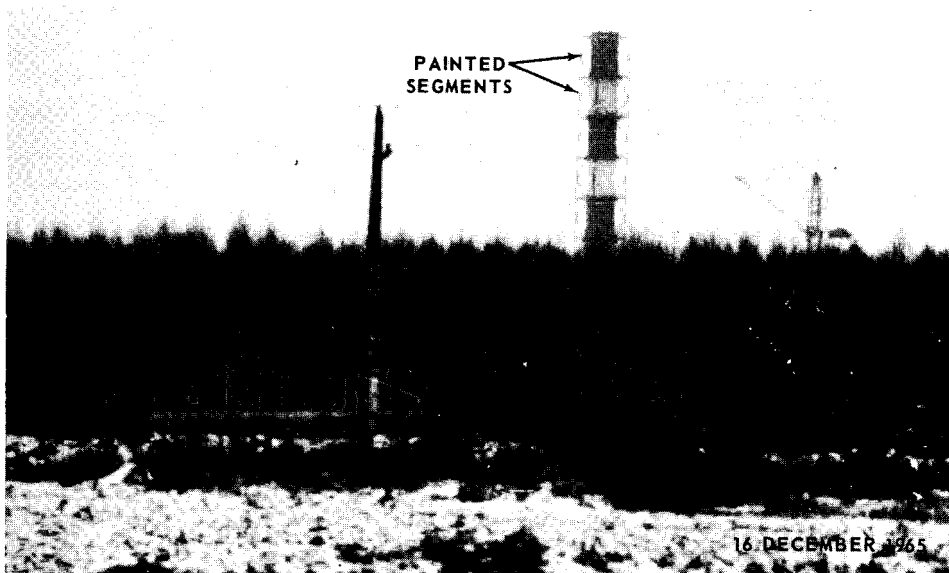
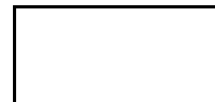


FIGURE 5

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25
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