TOP SECRET

( V 29

22 October 1965

SC No. 00693/65B
Copy No. 001



# SPECIAL REPORT

## SOVIET MISSILE DISASTER IN 1960



CENTRAL INTELLIGENCE AGENCY
OFFICE OF RESEARCH AND REPORTS

THIS DOCUMENT CONTAINS CODE WORD MATERIAL NO FOREIGN DISSEM

~~TOP SECRET~~

GROUP 1 Excluded from automatic downgrading and declassification

This document contains classified information affecting the national security of the United States within the meaning of the espionage laws, US Code Title 18, Sections 793, 794, and 798. The law prohibits its transmission or the revelation of its contents in any manner to an unauthorized person, as well as its use in any manner prejudicial to the safety or interest of the United States or for the benefit of any foreign government to the detriment of the United States.

It is to be seen only by US personnel especially indoctrinated and authorized to receive COMMUNICATIONS INTELLIGENCE information; its security must be maintained in accordance with COMMUNICATIONS INTELLIGENCE REGULATIONS.

No action is to be taken on any COMMUNICATIONS INTELLIGENCE which may be contained herein, regardless of the advantages to be gained, unless such action is first approved by the Director of Central Intelligence.

## DISSEMINATION CONTROLS

This document MUST NOT BE RELEASED TO FOREIGN GOVERNMENTS. If marked with specific dissemination controls in accordance with the provisions of DCID 1/7, the document must be handled within the framework of the limitation so imposed.

# SOVIET MISSILE DISASTER IN 1960

**The Western press has recently published accounts of a missile explosion in the USSR in 1960, which killed the chief of the Soviet Rocket Forces and many others. The following account of the incident, pieced together from numerous sources, was originally published in the Weekly Review in November 1961 and is being reprinted because of the public disclosures of the subject. Information which has become available since the initial publication adds only minor details or tends to confirm some points which were tenuous in 1961.**

The USSR for several years has been proclaiming superiority in missiles and space flight, using its successes to imply commensurate military strength. Behind the public facade of Soviet infallibility, however, there have been intermittent but unpublicized failures at the Russian missile test ranges. Recently, evidence has been mounting that one of these was of exceptional proportions, involving an extraordinary on-launcher explosion at Tyuratam in October 1960 which damaged rangehead facilities and may have killed Mitrofan Nedelin, who was the commander in chief of the Soviet Rocket Forces, as well as numerous other technical and industrial experts. If a disaster of the proportions indicated actually did occur, it could explain an apparent delay of four to six months, and possibly more, in a major missile endeavor.

## Reports on Nedelin's Death

The death of Chief Marshal of Artillery Nedelin was reported by TASS on 25 October 1960 as "the result of an air crash on 24 October." An obituary for for a fellow officer who died on 21 October was signed by Nedelin and published on 24 October; this would place Nedelin's death between the 22nd and the 24th. His funeral was held on 27 October in Moscow's Red Square. There is no evidence, however, of an air crash in the Soviet Union on the 24th.

Subsequent reports on Nedelin's death imply unusual circumstances involving variously the crash of a nuclear aircraft, the explosion of a missile with nuclear propulsion, and an ICBM failure.

One report asserts that in October 1960 Nedelin and many specialists in missile technology were at a missile site for the testing of a new engine reportedly involving nuclear propulsion. However, the missile failed to launch at the appointed time. Shortly thereafter Nedelin and others left a nearby underground shelter. At that time the missile exploded unexpectedly, causing many casualties. Reportedly as many as 300 persons were

killed, including Marshal Nedelin, military personnel, and civilian scientists. Further developmental work on the new engine was said not to have been successful by mid-1961.

Another informant--commenting that the "Soviets are lying again"--said Nedelin perished in an ICBM accident. He reported that in September or October 1960, workers at an aircraft plant in Tashkent received a special order to make 60 or 70 aluminum caskets and surmised that these were for Nedelin and the other victims. Still other reports imply that a disastrous explosion occurred in Central Asia in the fall of 1960.

Validity of Reports

The substance of these reports appears valid, except that there is no evidence of any experimentation with nuclear propulsion. 50X1 [redacted] 50X1 [redacted] at the Tyuratam Missile Test Range (TTMTR) indicate that there was a prolonged and unsuccessful attempt to launch an ICBM vehicle on 23 and 24 October 1960. 50X1 [redacted] 50X1 [redacted]

50X1 [redacted]

No further attempt was made to launch an ICBM from Tyuratam until twelve weeks later, in the middle of January 1961, when a first-generation ICBM was launched for the first time since July 1960. Approximately six weeks after 24 October, an earth satellite vehicle was launched there.

The launch attempt of 23-24 October involved 50X1 [redacted] 50X1 [redacted] which has come into frequent use at the range in 1961. This suggests that the ICBM may have been of a new type or that newly completed launch facilities were being used for the first time.

50X1 [redacted] noted a possible explosion in the general area of the Aral Sea on 24 October 1960 shortly after the launch time. 50X1 [redacted] 50X1 [redacted]

Aircraft movements involving the TTMTR during October 1960 reflected a relatively large influx of aircraft after the 24th.

50X1 [redacted]

During the week of the 25th, flights between Tyuratam and Dnepropetrovsk--location of a major ballistic-missile - producing facility--were at the highest level ever noted. 50X1 [redacted]

Aerial photography of the Tyuratam area in 1957, 1959, and 1960 indicates that, as of 50X1 October 1960, there were two completed launch facilities at the TTMTR and one under construction. Anyone leaving the control bunker of either completed launching area would, in order to reach the base, have had to pass the launch pad, where an explosion of a missile of ICBM size would almost certainly produce a large number of casualties.

## Possible Consequences

Because of the launching difficulties and the notable air movements related to Dnepropetrovsk, it is doubtful that the October ICBM was one of the highly reliable "old" type tested since 1957. It seems unlikely that the difficulty involved only a new launching pad. Such difficulty should have been correctable in a relatively brief period and would not explain the lapse of four months before the next effort to launch a new type of missile.

This next attempt--on 2 February 1961--resulted in an in-flight failure. The February firing was possibly the first of a missile subsequently fired intensively at the TTMTR during 1961. This missile may have been a second-generation vehicle*--called "Category B" by Western intelligence--50X1 [redacted]

Almost six months passed from October 1960 until the first firing of a second type--Category C"--in early April. If the October vehicle was a Category B or C, the difficulty which caused the cancellation not only could not be corrected at rangehead facilities--otherwise the attempt would have been promptly rescheduled--but also took four to six months for correction at the developmental or manufacturing facility. If the October attempt involved a vehicle still different from the two new types observed in 1961, as implied in one of the reports, the difficulty has not been corrected yet. CIA Statute 50X1 CIA Statute [redacted] CIA

*The missile that exploded and killed Nedelin is believed to have been the first SS-7, a two-stage liquid-fueled ballistic missile which is now the Soviets' most widely deployed ICBM.