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Imagery Analysis Monthly Review

June 1980

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Imagery Analysis Monthly Review

June 1980

This publication of the Office of Imagery Analysis contains substantive findings and analytical judgments that were derived principally from analysis of imagery. (U)

Comments and queries on the contents of this publication are welcomed. They should be directed to the analyst whose name and green line extension appear after each article. (U)

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Contents

Soviet Mobile Direction-Finding Station Shipped to Cuba (S)

The Soviets have shipped a tactical direction-finding station—the Turn Twist—to Cuba. The truck-mounted Turn Twist is a passive direction-finding system that operates by intercepting and collecting aircraft communications. Turn Twist belongs to a new family of Soviet intelligence collection systems that previously had been seen only with Soviet line divisions in the Warsaw Pact, and that recently have been seen with a Soviet independent motorized rifle brigade in Afghanistan. (S WNINTEL)

Satellite imagery of Nikolayev Port Facilities South, the major Soviet port for military exports to the Third World, showed that one Turn Twist—present [redacted]—had been shipped out by [redacted] Ground photography showed a Turn Twist on the deck of the Soviet arms carrier Kreml as it exited the Bosphorus [redacted] The Kreml with the Turn Twist still on deck was subsequently photographed at sea from a US Navy aircraft—in the western Mediterranean [redacted] ary and in the Caribbean just east of Cuba [redacted] According to US Navy reports, the Kreml arrived at the Cuban port of Mariel, Cuba, on 1 March. The Turn Twist has not been seen in Cuba since the reported arrival of the Kreml. (S WNINTEL)

The Turn Twist will provide the forces in Cuba with a mobile, aircraft direction-finding system. An aircraft direction-finding capability was previously available only at fixed facilities in Cuba. (S WNINTEL)

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Modernization of a Fourth Soviet Sverdlov-Class Light Cruiser (S)

Imagery analysis shows that a Sverdlov-class light cruiser (CL), the Mikhail Kutuzov, is undergoing modernization at Sevastopol Shipyard Semorzavod 497. This is the fourth Sverdlov-class CL to be modernized since 1973. The modernization of these ships consists of the addition of a weapons system with a more effective low-altitude air defense capability, including some capability against cruise missiles. (SWNINTEL)

, eight weapons positions with twin 30-mm guns and four Drum Tilt radar positions were seen installed aboard the Mikhail Kutuzov. A new superstructure serves as support for the air defense weapons. (TSR)

The Soviets built 14 Sverdlov-class CLs between 1950 and 1955. Three--the Oktyb'skaya Revolutisiya, the Admiral Ushakov, and the Alexsandr Suvorov were modernized between mid-1973 and late 1978. In addition, two Sverdlov-class CLs have been scrapped, one was converted to a guided missile cruiser, and two were converted to command light cruisers. Five Sverdlov-class CLs have retained their original configuration except for minor modifications. Two of these, however, are currently undergoing overhaul—the Alexsandr Nevsky at the Rosta Naval Base and Shipyard Sevmorput and the Dimitry Pozharsky at the Vladivostok Naval Base and Shipyard 202. Based on the activity seen at the repair bases, these two vessels appear to be candidates for modernization in the near future. (TSR)

The modernization of the Sverdlov-class indicates that the Soviet Navy intends to keep warships of this class in active service. The Sverdlov-class CLs and Kotlin-class destroyers are the only two deployed classes of warships that the Soviets are known to have tasked to provide naval gunfire support for amphibious assault operations. Such support requires an effective air defense system. (SWNINTEL)

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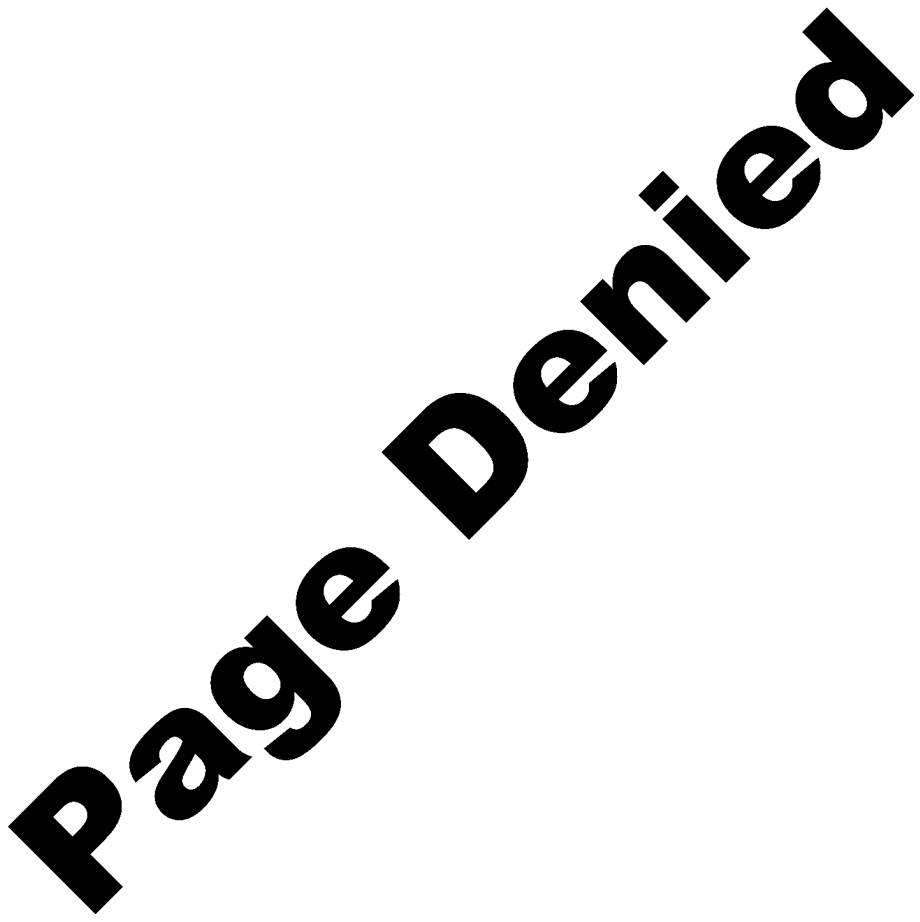

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First Electricity Generated at Ekibastuz Thermal Power Plant, USSR (U)

the first 500-megawatt (MW) turbine generator at the Ekibastuz Thermal Power Plant GRES-1 is in operation. This plant is the first of five major regional thermal power plants that the Soviets plan to build by 1980 in the Ekibastuz coal basin in western Siberia. Each plant will have eight 500-MW turbine-generator sets. With a combined generating capacity of 20,000 MW, the five plants will constitute the electrical power base for the Ekibastuz fuel and energy complex. The output capacity of these plants will nearly equal that of the 41 hydroelectric and thermal power plants which form the electrical power base of the Tennessee Valley Authority. (SWNINTEL)

The Soviets are constructing on-site power plants to make the most economical use of the lignite deposits in the Ekibastuz coal basin. The lignite is not coked, and because of its high ash content and impurities it cannot be transported economically. The Soviets are also testing an experimental section of a 1,500-kilovolt direct-current transmission line at a substation north of Moscow. They plan to build a transmission line of the same type to carry electricity generated at Ekibastuz to the western USSR. (U)

The Soviets are about a year behind schedule in constructing the first Ekibastuz plant. Their original plan was to put the first two turbine generators into operation in September and December 1979, and then to place one unit on line every six months thereafter, completing the plant in late 1982. Analysis of June 1980 photography shows that only the first unit is operational and that the second unit probably will not become operational before late 1980. None of the six remaining 500-MW units at Ekibastuz is likely to become operational before 1981. The rate of construction at Ekibastuz was criticized by Secretary Brezhnev in November 1979, and the Soviets are reportedly taking steps to accelerate development of the Ekibastuz complex. (SWNINTEL)

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Location of Ekibastuz Thermal Power Plant (U)

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First Seaborne Delivery of Petroleum to North Korean Refinery (S)

North Korea is now receiving seaborne deliveries of petroleum for its Unggi Petroleum Refinery. a coastal tanker was observed at the new ship-to-shore petroleum transfer facilities 3.5 kilometers (km) from the refinery at Unggi. The tanker was linked by hose to one of the two petroleum loading/unloading manifolds that are connected to a pipeline system serving the Unggi refinery. Construction of the transfer facility began in late 1977 and was completed sometime between May 1979 and May 1980. Before the completion of this facility, all petroleum delivered to the Unggi refinery had been transported by rail from the Soviet Union. (TS R)

North Korea's recently acquired 95,500 metric-ton-capacity supertanker, the Onsung, was anchored in Unggi Bay approximately 3 km from the petroleum transfer facility. The supertanker was higher in the water toward the bow, indicating that some of its cargo had been offloaded. Because the water at the quay is too shallow for deep-draft ships, it seems likely that the coastal tanker was being used to carry crude oil from the Onsung to the petroleum transfer facility. On the the coastal tanker was docked in a new position at the quay, next to the other loading/unloading manifold, but it could not be determined if the ship was linked by hose to the manifold. The Onsung was probably present at Unggi but its anchorage area was not covered TS R)

North Korea's only other ship-to-shore petroleum transfer facility is at Songnim, 30 km south-southwest of Pyongyang on the Taedong River. At Songnim, a single loading/unloading manifold transfers petroleum via pipeline to a nearby storage facility containing seven petroleum products storage tanks. (S WNINTEL)

Construction of the Songnim transfer facility was under way in early 1968 and was completed by early 1970. Songnim is also unable to handle deep-draft vessels. (S WNINTEL)

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Locations of North Korea's Ship-to-Shore Petroleum Transfer Facilities (S NF WNINTEL)

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R&D Institute For Testing High-Voltage Transmission Equipment Identified Near Wuhan, China (S)

A facility under construction near Wuhan—previously identified from imagery as being associated with electromagnetic pulse (EMP) simulation—is a research and development institute for testing high-voltage transmission equipment. The institute is the first high-voltage research facility identified on photography in China. When complete, it will give the Chinese the capability to develop and test new designs of high-voltage equipment needed to upgrade their electric power transmission system, which currently has a capacity of only 220 kilovolts. (TS R)

According to a recent US delegation to China, this facility will be the largest and most modern high-voltage research and development institute in China. Under construction since 1977, it includes a modern office and laboratory area, a support area, and a 340-meter-long high-voltage transmission line testing area. The office and laboratory area and the support area appear to be complete. The high-voltage testing area, however, is still under construction. (S WNINTEL)

Within the testing area are several high-voltage test towers and a 20-meter-tall surge generator. The surge generator, which is similar in appearance to surge generators produced in Sweden and East Germany, will be used to discharge high-voltage power along a transmission line to determine the ability of line components to operate at various power levels. Although surge generators are used at EMP facilities to subject military equipment to the effects of electromagnetic radiation, there are no indications that the Wuhan facility will be engaged in EMP simulation activity. (S WNINTEL)

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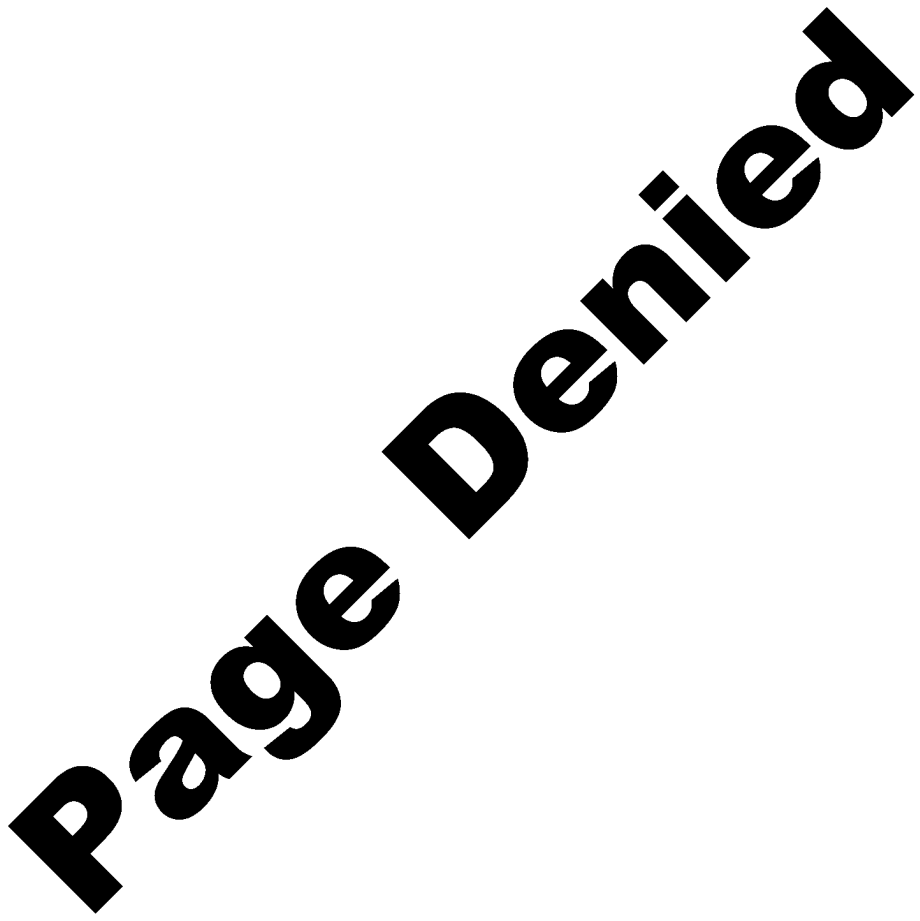

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New OIA Publications

The following reports have been published by the Office of Imagery Analysis since the last issue of the *Imagery Analysis Monthly Review.*

Imagery Research Papers

1. IS 80-10048J, *Photographic Signatures of Soviet Divisional Combat Readiness,* May 1980 (Top Secret MULTIPLE CODEWORD 25X1 25X1

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3. IS 80-10020K, *Chinese Urban Personnel Shelters,* June 1980 (Top Secret RUFF 25X1 25X1

4. IS 80-10084J, *SS-11 Mod 1 Booster Reconfiguration Program,* June 1980 (Top Secret MULTIPLE CODEWORD) 25X1

5. IS 80-10079K, *Analysis of the SH-08 ABM and Its Launch Facilities at Sary Shagan, USSR,* June 1980 (Top Secret RUFF 25X1 25X1

6. IS 80-10032K, *Expansion of China's Space Launch Capability,* June 1980 (Top Secret RUFF) 25X1

Imagery Analysis Memorandums

1. IS 80-10081K, *New Construction and Explosives Test Activities at Pu-hsin Explosives-Related Facility, Taiwan* (Secret) 25X1

25X1

3. IS 80-10105K, *Correlation of Telemetry Van Movements From Severomorsk With Associated Northern Fleet Naval Missile Firings,* 1977-1980 (Secret) 25X1

4. IS 80-10114, *Mensuration of Unidentified Objects Seen on Soviet W-Class Submarine* (Confidential)

5. IS 80-10097J, *Iranian Military Forces Near the Afghanistan Border* (Top Secret MULTIPLE CODEWORD 25X1 25X1

6. IS 80-10111K, *Expansion of Selected Egyptian Military Production and Repair Facilities—1975 to 1980* (Top Secret RUFF) 25X1

7. IS 80-10099, *The Shiraz Textile Mill, Iran* (Secret 25X1

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9. IS 80-10119K, [redacted] *Status of Oil Handling Facilities at Khark Island—1-13 June 1980* (Top Secret RUFF) 25X1

[redacted] 25X1

11. IS 80-10121K, [redacted] *Status of Oil Handling Facilities at Khark Island—14-20 June* (Top Secret RUFF) 25X1

12. IS 80-10096K, [redacted] *SS-9 ICBM Dismantlement at Balashov SSM Repair Plant, USSR* (Top Secret RUFF [redacted] 25X1 25X1

13. IS 8-10086K, [redacted] *Booster Thrust Estimate and Payload Projections for Launch Site W, Tyuratam Missile/Space Test Center* (Top Secret RUFF [redacted] 25X1 25X1

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15. IS 80-10116K, [redacted] *Search for SS-X-16/SS-20 Mobile Missile Equipment at Soviet Missile Support Rear Depots* (Top Secret RUFF) 25X1

16. IS 80-10104K, [redacted] *Destruction of Type III-X Launch Control Capsules* (Top Secret RUFF) 25X1

17. IS 80-10093JX, [redacted] *Leningrad Production Association Arsenal, USSR* (Top Secret MULTIPLE CODEWORD [redacted] 25X1 25X1

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