Top Secret



Weekly Surveyor

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WEEKLY SURVEYOR

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25X1 USSR AND EASTERN EUROPE The Soviets are determined to provide the Soviet Colonel A. Leonov reportedly conagricultural sector with better fertilizer. They firmed that the Soviets are working on a space have produced a propaganda film covering in shuttle. There is as yet no tangible evidence, detail the technology of applying anhydrous however, of actual Soviet development of ammonia in agriculture. The principal disadhardware or preparation of crews for such a vantage of using anhydrous ammonia is the 25X1 program. expensive heavy equipment which must be 25X1 used, but the fertilizer can be expected to increase the yield of grains and other food crops. 25X1 The Soviets have selected a steam generator design for their BN-600 liquid-metal fast breeder reactor. 5X1 The Soviet Smolensk nuclear power station (AES) is scheduled for expansion. The scheduled 25X1 expansion calls for the construction of two 25X1 25X1 OSI-1'SWS-9/75 Secret 3 Mar 75

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	additional reactors. These additi			effort by the Chinese in	
	probably would not become ope the mid-1980s.	rational until	Tokamak research.		_
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	France has declared a 50-kilon	neter danger			
_	zone around Mururoa and Faga	taufa Atolis.	• • • • • • • • • • • • • • • • • • • •		
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lr				it be the core of Japan's	
25X1 ^L			aid programs. Within t	the next 5 years, Japan	
	CHINA			come a significantly	
	The Chinese have built and te	sted a small	development of the	in the technological world's resources and	
	Tokamak device for use in	controlled-	manufacturing ent		
	thermonuclear-fusion research.	This repre-			
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NUCLEAR ENERGY

France Declares Danger Zone for 1975 Nuclear Test Series: The Japanese Maritime Safety Agency today reported that it had obtained a French hydrographic report designating a radius of 55 kilometers around Mururoa and Fagataufa Atolls as a danger zone.

Comment: In the past, the areas around Mururoa and Fagataufa have been declared dangerous to shipping and aircraft at the start of the French nuclear test season. This notice did not specify a time limit, but a Defense Ministry official stated that it had a permanent character "valid all year round." This is probably a reflection of the fact that France is planning to conduct underground rather than atmospheric nuclear tests this year.

The notice probably does not imply an imminent test but does imply an intent to test during the year.

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PRC Announces Operation of Tokamak: On 4 February, the PRC announced that the Institute of Physics, Chinese Academy of Sciences, Peking, has built and tested a small Tokamak device for use in controlled thermonuclear fusion research. The device is completely homemade, with many of its components having been constructed in a makeshift manner or retrieved from junk piles. The PRC claims that more than 800 discharges already have been made with the device and that the building of the device was a national effort

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Comment: Th	is nennese	nts the	first	known	PRC	effort	in
Tokamak research	. •						

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	Consist Consistency News Constant (AEC) is Cohoduled for	2
	Soviet Smolensk Nuclear Power Station (AES) is Scheduled for Expansion: The Leningrad nuclear power station is one of the	
	spearhead projects of the Soviet nuclear power program. The	
	uranium-graphite reactor units, specially designed for thic station, will be widely used in the USSR to build even more	
	powerful nuclear power stations near Kursk and Smolensk in	
	central Russia and at Chernobyl' in the Ukraine (each with a	
	capacity of 4-million kilowatts.	2
	Comment: This is the first indication of plans to enlarge	
	the Smolensk AES. The Smolensk AES was planned originally to	
	use two RBMK-1000 reactors when completed in about 1980 or 1981. The RBMK-1000 is a 1,000 MWe graphite-moderated, pres-	2
	sure-tube reactor; thus the expansion, when complete, would	_
(1	double the electric power capacity of the Smolensk AÉS.	7
(1	Those additional two re-	_
	actors to be built at Smolensk probably would not become operational until the mid-1980s.	
	CLOHEL UNCLE CHE MEG-17000.	
_	25X1	
	Soviets Select Steam Generator Design for the BN-600 Liquid-	2
_	Metal Fast Breeder Reactory 2	.5
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L	The primary considerations in the selection	
-	of this steam generator design were operational reliability and safety. Each section can be isolated by isolation valves.	25
	and safety. Each section can be isolated by table on valves.	
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the Soviets have tested three different steam generator designs.

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SPACE

Soviet Apollo-Soyuz Test Project (ASTP) Pilot Claims USSR has Space Shuttle Program: During the International Astronautical Federation Congress held in Amsterdam, Holland, 14 October 1974, Colonel A. Leonov reportedly "confirmed" that the Soviets are working on a vehicle comparable to the US space shuttle. Leonov, the Soviet command pilot designated for the ASTP joint manned flight, stated that no decisions have been made concerning configuration and orbit of the Soviet spacecraft.

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Comment: In the past year, there have been many rumors concerning a Soviet manned space shuttle effort. Several Soviet space authorities have expressed great interest in the shuttle concept, and there have been suggestions that a new small class of Soviet manned spacecraft (different from Soyuz) is under development. There is as yet no tangible evidence, however, of actual Soviet development of hardware or preparation of crews for such a program.

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AGROTECHNOLOGY AND FOOD RESOURCES

Soviets Promote Use of High-Analysis Nitrogen Fertilizer: The scientific and technical information and propaganda division of Ukrsel'khoztekhnika has produced a film on the use of anhydrous ammonia (Anhy NH3) in agriculture. The film covers in detail the technology of applying Anhy NH3 to the soil, and attempts to convince the viewer of its high effectiveness. The stated purpose of the film is to popularize the use of this nitrogen fertilizer.

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Comment: This is another indication of Soviet intent to provide the agricultural sector with better fertilizers. Anhy NH3 with its high concentration of nitrogen (82%), lower factory cost per unit of nitrogen, and ease of distribution is probably the best form of nitrogen to use as a fertilizer where soil conditions permit. Anhy NH3, formerly reserved largely for cotton—a priority crop in the USSR, can be expected to increase the yield of grains and other food crops. Ammonium nitrate (33% N) and urea (45% N), often of pcor quality, are the primary sources of nitrogen for fertilizer in the USSR.

Anhy NH₃ is stored as a liquid under high pressure (up to 200 psi) and enters the soil as a gas. Its principal disadvantage is the expensive heavy equipment required to inject it into the soil. If the Soviets expect to increase the use of Anhy NH₃ significantly throughout the country, they will need thousands of these applicators in addition to the modern technology for producing ammonia already contracted for from the West.

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SCIENTIFIC AND TECHNICAL RESOURCES

Japan's Foreign Aid Program Stresses Improved Technical
Cooperation: Japanese Prime Minister Niki told the Diet that
assistance to the developing countries will place priority
on technical cooperation. Because Japan's technology is
"foremost in the world," technology must be the core of Japan's
aid programs. Under the slow growth economy, there will be
limits to this cooperation; hence, the quality of aid will have
to be improved. The system for administering aid, including
training programs, also will have to be improved.

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Miki's statements reaffirm Japanese aid policies Comment which have been in effect for at least the last year. In 1974, Japan's technical aid to developing countries increased markedly, especially from private enterprises. Miki's predecessor and other officials have stressed technological assistance in support of Japan's "resources diplomacy" aimed at exchanging technology for scarce resources. Miki is believed to be responding to Japan's need for resources as well as to recent criticisms by certain aid recipients on the poor quality of Japan's technical aid. Nevertheless, many developing countries are soliciting technology from Japan. Also, many new aid agreements have been negotiated with countries rich in natural resources in Latin America, Africa, and the Middle East, in addition to countries in Asia which already have established ties with Jawan.

Japan keenly recognizes its dependence on other countries for natural resources and has sought multilateral investments with the US and European countries in its technical aid projects. Since about mid-1973, the government, in cooperation with industry, has increased markedly Japanese technical surveys, training and consulting programs abroad. A systematic search for suitable locations for resources development and manufacturing also is pursued. Within the next 5 years, Japan probably will become a significantly dominant participant in the technological development of the world's resources and manufacturing enterprises.

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