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REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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COUNTRY	USSR		REPORT		
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		Soviet indu	strial plants		
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	(six pages). information of		sections, the	65-18), Kurgan Oblas The report includes testing of prime mov	50X1-HUN
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	E 59-40). Che	Lyabinsk Oblast (s	ant No. 66 in ix pages).	Zlatoust (N 55-10.	50X1-HUM
	sections, of L	ne report includes Aircraft Plant No. er of Armaments Pla	18 and Bearin	gs Plant No. O The	50X1-HUN
	c. The Minsk Trac	tor Plant. Minsk O	blast (ten pa	ges and layout sketch). 50X1-HUN
	production fig	gures, plant section	ns, equipment	ncludes information or , and personalities.	50X1-HUM
	d. The Valts Elec	trotechnical Plant	in Riga (thre	ee pages).	
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	untr y: Bject:	USSR (Kurgan Oblas		
	TE OF INFO:	me vargan machtne	Construction Plant in Kurgan	50X1-HUN
PL	ACE ACQUIRED:			
1.			lant (MZ) was lecated in a	•
			f Kurgan, which was connected	
			ity road. The plant employed	
			ree shifts (from 0800 to 1700, urs) and was subordinate to the	
			ction (Ministerstvo Tiazholovo	
	Mashinostroye		(IIIII (IIII (III (III (III (III (III	
2.			the plant manufactured	50X1-HUN
	cranes until	the early 1950's, at w	thich time the plant was	

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plant was expanded and additional buildings were erected by
the Kurgan Construction Trust. In 1953 the plant, as KMZ,
began to produce prime movers (tiagachi), which reportedly
were manufactured under contract for the Moscow Military
District. Military officials, both in groups and individually,
made frequent visits to the plant, particularly toward the end
of the month when the successful completion of the monthly production quota was in doubt.

- departments and workshops. The site was surrounded by a slag-brick (shlakobeton) wall 2.5 meters high topped by barbed wire. The many entrances and installations of the plant were guarded by semi-military guard (VOKhR). Workers' entry permits were usually only superficially inspected. When visiting military officials visited the plant toward the end of the month, however, the permits were carefully examined in an effort to demonstrate the efficiency of secrecy and security arrangements at the plant. Ordinarily when workers forgot their permits they would borrow them from their friends to gain entrance. If discovered doing this, they were only reprimanded.
- 4. KMZ comprised the following departments:
 - a. A toolmakers shop (instrumentalniy tsekh), including a thermal workshop and a large forge. It was supervised by the technical office, which inspected the quality of its products. The shop employed about 600

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workers in three shifts.

- b. A components finishing department, in which a precise
 finish was given to all parts prior to their being assembled.
 The semi-finished parts were supplied by a number of
 unspecified factories. The various types of components
 and finishing operations were divided among the department's six sections. One of these sections, for example,
 prepared all the track components for the prime movers.
- c. A casting shop. The shop, still under contruction in 1956, was in its final stage of completion in early 1958. Reportedly, this shop was being established so that all necessary components could be cast exclusively on the premises of KMZ.
- d. An experimental department (ispitatelniy tsekh), officially called Workshop No. 420 (Tsekh No. 420). This department could be entered only by people whose permits bore a special mark. The department manufactured prototypes of various designs and new models based on drawings provided by the contractors' office. It also tested the ability of the engines installed in the prime movers to withstand different loads, and examined the durability of the fuel tanks in the prime movers. The department employed some 120 to 150 metalworkers, latheworkers, milling machine operators, electricians, mechanics, and others, in two shifts.

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е.	An assembly department, officially called Workshop No.	
	360. This department was out of bounds to all except	
	those employed there and was guarded by a reinforced	
	squad of semi-military guards. The assembled prime	
	movers left the plant from Workshop No. 360. Military	
	personnel were regularly employed with the civilian	
	workers at this department (no details) and, in addition	
	to the regular military employees, soldiers from outside	
	the plant were employed in the department for periods	
	ranging from two weeks to one month.	
The	extremely powerful engines which were fitted into the prime	
move	ers were supplied by other plants.	50X1-HUM
	workers from KMZ	
were	e often sent to study and gain practical experience at the	
ChT	Z Tractor Factory in Chelyabinsk.	

The vehicles were removed from the assembly department, both 6. for testing and for delivery, only after dark. The prime movers were tested at a special testing ground

and only by military personnel. They reportedly

were taken from the plant by military personnel sent from Moscow especially for this purpose. Railroad flatcars arrived in the plant area on a special spur and were parked in the vicinity of the assembly department. Each freight train comprised fifteen to twenty of these cars, and there were individual stands for

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	each	vehicle. The	e prime movers were c	overed with tarpaulins	
	and 1	were loaded of	n the trains which we	ere escorted by military	
	pers	onnel.			
7.	The c	driver's cabi	n of the prime mover	was similar to the cabin	n
	of a	ny freight tr	ack, with room to sea	t three or four people.	
	Atta	ched to the c	abin was a box constr	ucted of steel plates	
	with	drop sides.	The box was one and	one-half to two meters	
	wide	, two and one	-half to three meters	long, and one and one-	
	half	meters high.	The prime mover was	tracked.	
8.	While	e the prime m	overs were being load	led onto the railroad	
	flate	cars, the wor	cers could see an una	pecified object pro-	
	ject:	ing from arou	nd the driver's cabin	and pointing in the	
	dire	ction of the	box. The object was	assumed to be a gun	
	barr	el			50X1-HUM
9.	The	following peo	ple were employed at	KMZ:	
	a.	Gorbunov (fm	u), director of the p	plant until late 1956;	
			Instead of	of a new director	50X1-HUM
		being appoin	ted, the plant was ma	maged directly,	
		over a long	period, by the Minist	ry of Machine	
		Construction	in Moscow.		
	b •	Captain Berm	an (fnu), an army off	licer who was	
		regularly em	ployed in the plant's	experimental	
		department,	in testing fuel tanks	of prime movers.	
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э.	Rodionov (fnu), director	of the exp	perimenta	l depar	t-	
,	ment					50X1-HU
i.	Shulz (fmu), head of nor	ms (normiro	ovshchik)			
		•				
9.	Kozakov (fnu), director	of the ther	mal labor	ratory		
	in the toolmakers' shop					50X1-HUN
[•	Chernov (fnu), director	of the tool	lmakane!	shon		
•	onernov (ma), director	01 016 0001	mirevel.e.	anop		

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: USSR (Kuybyshev Oblast and Chelyabinsk Oblast)

SUBJECT

DATE OF INFO

1. Industrial Plants in the Bezymyanka Quarter

of Kuybyshev.

2. Armaments Plant No. 66 in Zlatoust

PLACE ACQUIRED	

Aircraft Plants in Bezymyanka

1. The Bezymyanka quarter of Kuybyshev contained three aircraft plants:

No. 1, 18, and 24. A fourth plant, No. 454, was apparently indirectly connected with the aircraft industry. Plants No. 1 and 18 were adjacent to each other and were located near the electric railroad line connecting Bezymyanka and Kuybyshev. Despite their physical proximity, the two were plants/separate and distinct and did not share a common entrance.

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- 2. Plant No. 18 produced IL-2 aircraft until the beginning of 1950, after which time it switched over to TU-4's (type unknown) and suspended production of the former. (The TU-4 was a four-engined heavy bomber with eleven gun positions for machine guns and cannons). The plant's departments (Tsekhi) included the following:
 - a. Department No. 5, which produced fuel tanks of rubber and of some plastic material, and small-diameter rubber fuellines. Among the department's equipment were two presses operated by vapor pressure; they were used in the production of plastic parts.
 - b. Department No. 7, the fuselage assembly department. A mobile crane with a hoisting capacity of 25 tons was installed in this department in 1951.
 - c. Department No. 9, which contained a number of lathes (Karuzelniy Stanok) 9 meters long. They were used in the production of a metal, bow-shaped part similar in appearance to a length of railway track.
 - d. Department No. 15, which produced various parts and was equipped with polishers, milling machines, and other machine tools.
 - e. The compressor department, which supplied compressed air to the entire plant. Each department could control its supply by a set of valves for the various pressures. The compressed air was used for riveting (aluminum rivets) and for cleaning parts before their assembly.
 - f. Department No. 41, which prepared <u>longerons</u> (Lanzheron) of durluminum for the TU-4's. During 1950 this work was done by hand with the use of files; the workers employed in this exacting work were paid high wages and were permitted to put in an unlimited amount of overtime. At the end of that year, however, the plant installed

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two machines designed to perform this task, called "longitudinal copying milling machine with revolving heads" (Prodolnofreizerniy Kopirovalniy Stanok S Povorotnoy Golovkoy). These machines, each of which was 12 meters long, were assembled from a number of ordinary planing machines (Strugalniye Stanki). The area surrounding each machine was insulated against the vibrations it caused by means of a trench, 1 meter deep, filled with pressed wool. Since 1950, the longerons had no longer been made by hand.

- g. Department No. 22, which produced jacks for installation in the aircraft, two per plane. They operated on a glycerine-alcohol mixture, and each had an effective lifting capacity of 20 tons, though they were capable of sustaining greater loads.
- 3. The aircraft produced by this plant were tested at an airfield located near the plant. The field maintained its own staff of testpilots and, in 1950, had only one runway. The armament with which the aircraft were to be equipped were tested at a firing range in the vicinity of the airfield.
- 4. Plant No. 18 collaborated with the aircraft plants in Kazan and Saratov and frequently sent its employees to be trained at the two plants. The operators of the "longitudinal copying milling machines with revolving heads" were also sent to (one of?) these plants for training. The men chosen for this work were veteran workers of proven technical skill, patience and accuracy.
- 5. The engines for the TU-4 aircraft produced at Plant No. 18 were manufactured by Plant No. 24.

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- 6. In 1950, Plant No. 1 produced jet engines (Reaktivniy Dvigatiel RD) for MIG aircraft. At that time, the aircraft industry was struggling with the problem of preventing the engine's exhaust pipe from heating up to the point where it would disintegrate, a fault that limited the aircraft to 30-40 minutes in the air. The crux of the problem was, apparently, the composition of the metal used in making the exhaust. The difficulty was overcome at a later date.
- 7. Plant No. 454 was situated near the Stakhanova railroad station. It was known to be connected in some way with the production of aircraft at Plants Nos. 1, 18 and 24, but the products of the plant and how it was connected to the aircraft plants were not known to source.

Bearings Plant No. 9

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8. Bearings Plant No. 9 (9 GPZ - Gosudarstvenniy Podshipnikoviy Zavodim. Kuybyshev) was located near the electric railroad tracks and Bezymyanka's open-air market. It contained seven production buildings, each 40 to 50 meters long, 20 to 25 meters wide and 10 to 12 meters high. Their roofs were covered with asbestos sheets. The plant was surrounded by a wooden fence 2 meters high. The workers' identity cards were kept at the guarded entrance and each worker had to identify himself upon entering. The card was checked and given to the worker, who in turn surrendered it to the foreman or registrar (Tabelshchik) in his department until the end of the day. The plant's offices were situated near the entrance and could be entered from outside the plant or from within.

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- 9. The plant, which employed about 1,000 workers in three shifts, contained the following departments (Tsekhi):
 - a. Department No. 1, the polishing department (Shlifovalniy Tsekh), which employed 150 to 170 workers in the production of races.

 It contained the following machinery: 32/50-B automatic machines (Stanki Avtomati) (2), 63/30 automatic machines, eccentric polishing machines, Churchill-type polishing machines, one Vatan-type polishing machine, and bearing assembly machines. Part of Department No. 1 produced ball, conical and roller bearings that were designed for use in the aircraft industry. It was out-of bounds for all except those directly connected with the work of the section.
 - b. Department No. 2, the automatic lathes department (Avtomatno-Tokarniy Tsekh), which processed the races produced in the forge.
 - c. Department No. 3, which carried out the thermal processing of both the races and the balls. They were hardened in electric furnaces and tempered in oil.
 - d. The forge (Kuzniechniy Tsekh), which produced the races from ShKh type steel.
 - e. The roller bearing department, which assembled roller-bearings.
 - f. The cages department (Separatorniy Tsekh), which produced the cages for the bearings.
 - g. The oils department, which was in charge of the storing and supply of the large quantities of various types of oils needed by the plant's machinery in general and by the polishing machines in particular.

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(Note: The departments in which the bearings are assembled are classed according to the sizes of the bearings on which they work).

- h. The two extra-large bearings (Svierkh Krupno-Gabaritniye departments, which assembled bearings with diameters of 400 to 500 mm. according to the orders placed by the Ministry of Machinery and Tractors.
- i. The large bearings (Krupno-Gabaritniye) department, which assembled bearings with 150,170, and 200 mm.-diameters.
- j. The conical and roller bearings (Konicheskiye-Rolivoyiye Podshipniki)

 /Department/. These bearings came in diameters of 100 mm. and less.

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The plant worked according to a predetermined program, and production reports were tendered daily to the Ministry of Machinery in Moscow. Everything the plant produced was marketed immediately, since the supply of bearings did not satisfy the demand.

Construction and Assembly Trust No. 11

11. The central offices of Construction and Assembly Trust No. 11 (Trest Montazhno-Stroitelnikh Rabot Nr. 11) were located in downtown Bezymyanka near the city MVD Directorate (Gorodtelenie MVD). Its workshops and machine sheds were located opposite the registration office (Pasportniy Stol) on Ul. Pobedy. The machine sheds contained various types of earthmoving equipment, drills and construction machinery. The workshops

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serviced this equipment and produced spur wheels and other spare parts. They contained the following machine tools: lathes, drill presses, planing machines, spot welders, electric welders, metal-bending machines for the production of boilers, etc. The trust was subordinate to the Ministry of Aircraft Production. It maintained construction branches (Stroitelniye Uchastki) in all of Bezymyanka's aircraft plants, including Plant No. 454, to carry out all their construction and assembly projects.

Armaments Plant No. 66 in Zlatoust

8 to 10 kilometers from Zlatoust, near the Urzhumkarailroad station.

During the war, the plant produced artillery pieces (details unknown) and Vintsentiy Yartseva machine guns. It also produced various items (details unknown) in whose production a 6-ton Chambersburg steam-hammer (Parivoy Molot) and a 2-ton Erie steam-hammer were used.

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Personalities

13.

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a. Abram Lvovich Godenko, chief engineer of Plant No. 18 in Kuybyshev/Bezymyanka until 1952/1953, at which time he was transferred to Plant No. 454.

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b. Alexander Bielanski, director of Plant No. 18 in Bezymyanka until
1952, who subsequently became a general employed at the Air Ministry.

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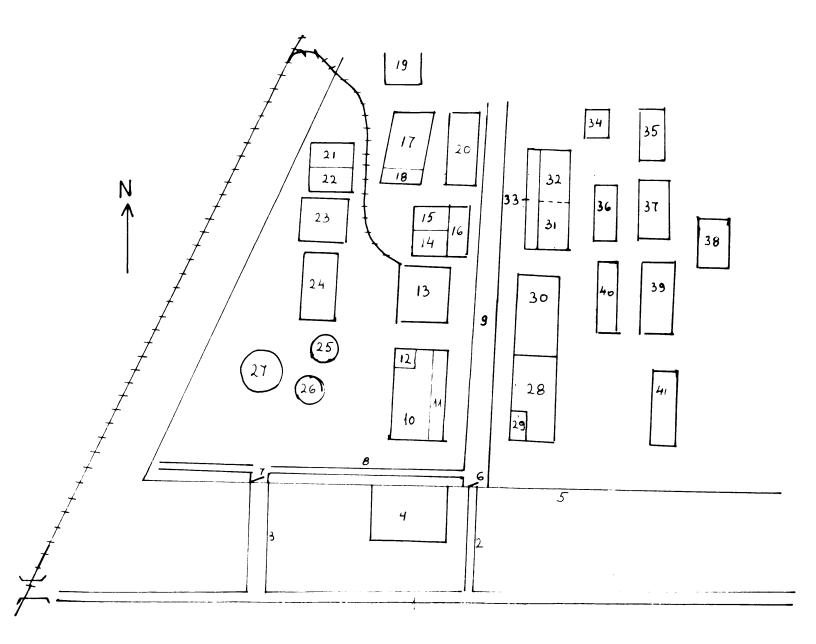
c. Col. Kudish (fnu), an air force officer and deputy director for

ati;
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personnel at Plant No. 1 in Bezymyanka
Zorin (fnu), deputy minister for the Aircraft Industry and a
frequent visitor at Plant No. 1 in Bezymyanka.

e. Poluboyarov (fnu), deputy director for personnel at the Armaments plant in Zlatoust.

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COUNTRY	: USSR (Belorussian SSR)	
SUBJECT	: The Minsk Tractor Factory in Minsk	

DATE OF INFO

PLACE ACQUIRED

1. The Minek Tractor Factory (Minskiy Traktorniy Zavod - MTZ) was located in the eastern part of town, at the end of Dolgobrodskaya Street in Minsk. The factory was situated on the left-hand side of the road and was surrounded by a brick wall 2.5 meters high, topped with barbed wire. The plant area could be entered from a number of directions, but entry was restricted to holders of special permits. The permits were in the permanent possession of the employees, who presented them for inspection when they reported for work. They were marked with the hours of the bearers' shifts and were collected by the timekeeper (Tabelshchik) in each department, who returned them after work so they could be re-inspected

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when the workers left the plant. The entrances were guarded by members of the factory's semimilitary guard unit (VOKhR). The main entrance on Dolgobrodskaya was guarded by three or four men, while only one man guarded each of the other entrances. At night the guards were reinforced by additional VOKhR personnel, accompanied by watchdogs. The factory occupied a site, where, prior to World War II, work had been started on the construction of an aircraft plant. Immediately after the war, the existing buildings were refitted and new ones were constructed for the tractor factory. It was subordinate to the All-Union Ministry of the Tractor Industry and, in 1958, employed some 15,000 workers.

- 2. MTZ manufactured the following two types of tractors:
 - a. The KT (Kirovets Trelovochniy) log-hauling tractor, which was used in forestry work (hauling logs to be floated down rivers, etc.).
 - b. The Byelorus agricultural tractor.
 - In 1957/1958, the factory had a daily output of 20 to 22 KT's and 70 to 80 Byelorus's, in contrast to a daily output of only two tractors in 1951.
- 3. The Byelorus tractor was fitted with a diesel engine, whereas diesel engines had been fitted in the KT type only since 1956/1957. Until then, the KT tractor was fitted with a wood burning "gas generator" (?) engine, which was supplied by the Yaroslavl Engine Works. The different types of KT's are designated according to their horsepower, KT-35, KT-40, KT-45, etc. The Byelorus was a 45-HP rubber-wheeled tractor. In 1958, however, the factory's design office was preparing a new 50-HP type.

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- A. Rumors based on the production plans of recent years claimed that MTZ was about to go over to the production of a single type of tractor, the Byelorus. The output of the KT type had gradually fallen, and it was rumored that in the future they would be manufactured by an unspecified tractor plant in the Altayskiy Kray. Meanwhile, however, MTZ continued to manufacture KT tractors par allel to the new plant, apparently until such time as the latter was ready to go into full production. Among the technical staff it was rumored that MTZ was to stop producing diesel engines, that the engines were to be supplied by other plants so that MTZ could concentrate on assembling some 300 to 350 tractors per day.
- 5. The factory's planning and design office employed about 100 engineers who designed new tractor models. An experimental department attached to the office built prototypes of the new designs, which were tested on the surrounding kolkhozy. The design office also had a collection of tractors from all over the world, which were studied by the designers who occasionally copied certain components. In 1957, the office was engaged in designing a new tractor, the Byelorus-50, in addition to an all-purpose, self-propelled chassis (Samokhodniye Shassi) for agricultural work.
- 6. The Byelorus tractor, which was an agricultural implement, could be adapted for all types of field work. It was also used for towing combines; it could pull two combines coupled together. The tractor had a rear-mounted, power take-off gear which could be used for operating threshing drums.
- 7. MTZ had the following departments:
 - a. Assembly department for forestry tractors (Trelovochniy Tsekh).
 - b. Tractor assembly department No. 1
 - c. Tractor assembly department No. 2.



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- d. Diesel engine department.
- e. Press shop.
- f. Iron casting shop.
- g. Steel casting shop.
- h. Casting shop for repairs.
- i. Tinsmithy.
- j. Toolmakers' shop.
- k. Manufacturing department for automatic bolts, etc.
- 1. Testing department
- m. Electricity department.
- n. Motor transport department.
- o. Railroad installations maintenance department.
- p. Thermal treatment shop.
- q. Starting engines department.
- r. Chief mechanic's section.
- s. Chief technologist's section.
- t. Chief metallurgist's section.
- u. Chiefelectrician's section.
- v. Compressor section.
- w. Mechanical repairs section.
- 8. MTZ was equipped with German machinery, which was acquired from Germany as war booty, and Soviet-made machines. The following were installed in the presses department:
 - a. Forty 13-16-ton presses.
 - b. Ten 100-ton presses.

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	ate.	
	c. Eight 150-200-ton presses.	50X1-HUM
	d. Three 400-ton presses.	
	e. Two 630-ton presses.	
	f. One 800-ton press.	
	g. Two 1250-ton presses.	
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9•	The tinsmithy was equipped with pneumatic hammers, steam hammers, a	nd
	mechanical hammers for hot pressing. All were 5-7 ton hammers.	
10.	The special section, which was engaged in miling precision componen	ts,
	was equipped with SIP machines. These machines were ext	remely 50X1-HUN
	delicate and were operated by skilled, senior workers. The section	was
	out of bounds to all unauthorized persons.	
11.	Iron was cast in coke-burning cupola furnaces (Vagranki), while the	steel
	was cast in three electric furnaces.	
12.	In the early years of the MTZ, there was a high percentage of waste	•
	Recently, however, the percentage had fallen, and only in the casti	ng
	departments was the waste percentage, particularly in the casting	
	diesel engine oil sumps, still above normal. A large number of oil	00/(1 110IVI
	were declared falty after inspection	
	MTZ cooperated in an exchange of know-how with other plants, and exc	
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	which was carried out under the auspices of the Ministry of the Tra	
	Industry. Every year, MTZ employees were sent to study the techniq	Įues

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of the tractor factories at Kharkov, Chelyabinsk and the Altay Province, and of the vehicle works at Gorkiy and Minsk. Alternately workers from other plants in the USSR and from satellite countries (Poland, Czechoslovakia, etc.) were sent to study the production techniques at MTZ.

- 14. TETS-3 power station was located in the vicinity of MTZ and furnished the plant with its current supply. However, MTZ was also connected to the Byelorusenergo electricity network, which controlled all the current supplies to the Byelorussian industrial centers, and which allocated quantities of current to plants suffering from power shortages. A 10,500-Volt high tension high tension cable led from TETS-3 to the tractor factory. In the early 1950's there were many break-downs and irregularities in the current supply, but since TETS-3, with its four 25-megawatt generators, had been in operation, the current supply had been stable. Within the plant area, there was a covered transformer station, and each of the main departments had a 380-volt transformer.
- obstacles. Formerly production was held up because of lack of experience or because of a shortage of raw materials. In the early 1950's certain raw materials or special parts had to be transported by air to avoid delays in production. In recent years, however, supplies had been reasonably regular and in sufficient quantities. Rubber tractor wheels were supplied by a plant at Yaroslavl and diesel injectors were supplied by the

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	Comb	oustion Equipment Factory (Zavod Toplivnovo Oborudovania) of Noginsk.	
16.	The	forestry tractors were manufactured to meet the needs of the USSR	
	and	were delivered to the Ministry of the Forestry Industry (Ministerstvo	
	Lesi	noy Prom'Ishlennosti). Some of the output of Byelorus tractors was	
	expo	orted to China, and Yugoslavia. In 1956, Marshal	50X1-HUN
	Tito	o was sent a gift of 40 tractors from the Minsk factory.	
17.	In I	1954, work was begun on the construction of a spare parts factory in	
	the	vicinity of MTZ. In 1957, the plant was completed and began producing	<u>s</u>
	spai	re parts for tractors and automobiles. A completely independent	
	ente	erprise, the new plant was incorporated within the framework of the	
	Min	sk Sovnarkhoz	50X1-HUN
18.	The	following persons were employed at the Minsk Tractor factory:	
	a.	Aleksandr Mikhaylovich Tarasov, director of the plant from 1954 to	
		1958,	50X1-HUN
	b.	Piotr Ilich Shvartsburg, chief engineer since 1952,	_

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c.	Yosif Ivanovich Drong, head of the designers office since the plant	50X1-H
	was established	
d.	Valetov (fnu), deputy director for manpower at the plant and former	
	chief electrical engineer there	50X1-H
е.	Zakharov (fnu), director of the cadres department at the plant,	
		50X1-HI
		00/(11)
f.	Ivan Ivanovich Demchenko, director of the press shop	
g.	Vacinaliar (from about mashania at the said	
6•	Yasinskiy (fnu), chief mechanic at the platn	
Atta	ached is a layout-sketch of the Minsk Tractor Factory, with legend.	
1.	Dolgobrodskaya.	
2.	Pedestrian entrance.	
3.	Vehcile entrance.	
<u> </u>	Plant management building.	
5.	Wall.	
5.	Pedestrian check point.	
7.	Vehicle check point.	
3.	Internal Road.	
).	Main intermal road.	
1.0.	Toolmakers shop.	
Ll.	Automatic bolt and miscellaneous parts manufacturing shop	

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- 12. Models shop.
- 13. Press shop.
- 14. Experimental department.
- 15. Electricity department.
- 16. Designers department.
- 17. Mechanical repairs shop.
- 18. Chief Mechanic's section.
- 19. New Chief Mechanic's department, under construction (since late 1957).
- 20. Raw materials store.
- 21. Lumber processing workshop.
- 22. Metal hardening department (using high frequency current).
- 23. Initial Investments Directorate stores.
- 24. Tractor assembly department.
- 25. Fuel stores.
- 26. Chemicals stores.
- 27. Water reservoir.
- 28. Diesel engine manufacturing shop.
- 2). Thermal workshop for treating metals.
- 30. KT tractor assembly shop.
- 31. Tractor workshop No. 1.
- 32. Tractor workshop No. 2.
- 33. Central plant laboratory.
- 34. Compressor building.

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- 35. Casting repairs workshop.
- 36. Iron casting shop.
- 37. Steel casting shop.
- 38. Electricity and steam department.
- 39. Aluminum casting shop.
- 40. Bronze casting shop.
- 41. Tinsmithy.

	SECRET	att.	D	50X1-HUM
COUNTRY:	USSR (Latvian SSR)			
SUBJECT:	The Valsts Electrotechning	ical Plant (VEF)		
DATE OF INFO:				50X1-HUM
PLACE ACQUIRED:				
-	,			

- 1. The Valsts Electrotechnical Plant (VEF) in Riga began receiving radio tubes from the Saratov plant in late 1956. It was believed that production of these tubes had just begun at the Saratov plant, for until March 1957 they were marked "Experimental" and bore the date of production.
- 2. The tubes for the Turist sets were replicas of American products, and until late 1956 they had not been manufactured in

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the USSR. The following are details on the tubes used in the Turist set:

- a. Two 1-K-2-P tubes, one for high frequency amplification and one for intermediate frequency amplification (Promezhutochnaya Chastota).
 - b. One 1-A=2-P tube, the mixer (Preobrazovatel).
 - c. One 2-P=2-P tube for low frequency amplification.
 - d. One 1-B=2-P tube for low frequency amplification.
- 3. When the aforementioned tubes were installed in the Turist receivers, 70 to 80 percent of the 1-B=2-P tubes were found to be unsuited to the set.

 the electrodes inside the tubes were too close to each other and this caused dissonant reproduction. The workers would test the tubes by flicking them lightly with their fingers and listening for the vibration of the electrodes. Even tubes which passed the special laboratory tests were sometimes discovered to be unsuited when installed in the sets. (The other subes used in the Turist were more or less suited for the set, apparently because they were for high frequency amplification and hence were less sensitive.)

4. The VMF made frequent complaints to the Saratov plant

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concerning the 1-B=2-P tubes, but as of mid-1957 no attempt had been made to rectify the situation. To avoid falling behind in production, the VEF ordered large quantities of the tubes and from these the technicians chose those that were suitable; the others were sent back to the warehouse. Eventually the VEF decided to regulate the amplifier automatically by return communication (Obratnaya Sviaz). Although this permitted the use of the 1-B=2-P tubes without the consequent dissonance, the higher tones were weakened by the condenser, thereby lowering the quality of the receiver.

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