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INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY



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C-O-N-F-I-D-E-N-T-I-A-L

COUNTRY USSR (Saratov Oblast)

REPORT

SUBJECT Aviation Plant No. 292 in Saratov

DATE DISTR. 24 April 1961

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A twenty-seven page report on the Aviation Plant No. 292 in Saratov [redacted] This report identifies the plant, describes a number of leading personalities at the plant, outlines plant security measures, discusses helicopter production and aircraft production, provides details of structural components, and provides sketches of a helicopter manufactured at Plant No. 292, a "product No. 17" (a YAK-type aircraft), structural details of "product No. 17" and a Plant 292 layout with a 42 point legend.

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COUNTRY : USSR ( Saratovskaya oblast )

SUBJECT : AVIATION PLANT No. 292 IN SARATOV

Identification

1. Aviation Plant No. 292, aviatsionnyy zavod nomer 292, at the end of 50X1-HUM
Chapayeva ulitsa, Stalinskiy rayon, Saratov RSFSR
Until the start of WW II, it was named Sarato- 50X1-HUM
Agricultural Machinery Plant, Saratovskiy zavod kombaynov. During WW II it was made subordinate to the Ministry of Aviation Industry of the USSR to which it was still subordinate in September 1956. In 1957, when the ministries were transformed into National Economic Councils, sovnarkhoz, the plant was made subordinate to the National Economic Council of the city of Saratov which was subordinate to the National Economic Council of Saratovskaya oblast.

50X1-HUM

the telephone number of the plant telephone exchange was the same as city telephone numbers, which consisted of five digits and a letter. Up to 1954 within the plant any shop could be reached by requesting its number from the plant switchboard. After 1954, automatic telephones operating without tokens were installed for inter-plant calls. All plant telephone numbers consisted of three digits and there were telephone numbers which began with two and five. shop No. 24, plazovyy tsekh nomer 24, had telephone number 204. Plant employees were not allowed to telephone the city or receive calls from outside the plant.

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Plant Personalities

2. The most outstanding technicians and engineers at the plant were as follows:

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a) Aleksey SHIBAYEV Alekseyevich, plant director;

b) Mirosnichenko (fnu), chief plant engineer

c) Milkov (fnu), chief plant technologist

d) Ivanov (fnu), designer constructor in shop No. 24

50X1-HUM



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e) Kozirev (fnu), a technician in shop No. 24

f) Nikolay Alekseyev, a designer in shop No. 24

g) Dubinin (fnu), a design engineer in shop No. 24

h) Mangritsa (fnu), an aviation engineer who worked as deputy chief of shop No1

50X1-HUM

i) Yuriy Matveyev, a technical designer in shop No. 24

j) Granovich (fnu), an engineer who worked as chief of a Plant No. 292 shop that manufactured aircraft fuselages

k) Sorokin (fnu), chief of shop NO. 3

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50X1-HUM

o) Morozov (fnu), an engineer and chief of the SKB, seriynnyy konstruktorskiy byuro, at Plant No. 292

p) Gorokhov (fnu), an engineer and chief of the OTK at Plant No. 292

50X1-HUM

Plant Security

3.

a) The plant was surrounded by a wood fence approximately tow to two-and-a-half meters high painted with lime (?) and in good condition. There was no barbed wire. The main plant facade faced north and was approximately 350 to 400 meters long and 300 to 350 meters wide.

b) The front of the building had an unspecified number of personnel entrances. The entrance used depended on the propusk number. There were two or three doors also used by plant employees next to the pass office, byuro porpuskov. All doors were wood and approximately two meters high and one or one-and-a-half meters wide The vehicle entrance on Chapayeva ulitsa was iron and approximately three to four meters wide and two-and-a-half to three meters high.

50X1-HUM

c) A normal single gauge spur line from the Saratov railroad station entered the plant to the west approximately 150 to 200 meters from the main entrance. loaded freight cars enter the plant throught this entrance but never airplanes removed from the plant through this entrance. The plant had no other railroad line

50X1-HUM

d) The okhrana was in charge of plant security. A guard was stationed at each of the entrances and gave the passes to the

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50X1-HUM



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workers when they entered and collected them when they left. No guard posts were located within the plant. Workers were not searched when they entered or left the plant. Most plant guards were women. They wore a greenish skirt and shirt which was worn outside the skirt and held in place by a black or brown belt and a beret. The men wore green caps with no insignia. Plant guards were armed with a psitol in a black or brown leather holster. No military personnel served as plant guards.

50X1-HUM

e) All plant workers had a pass. Upon entering the plant it was surrended to the guard at the entry conrol, prokhadnaya. The guard delivered it to the tabelschitsa of the corresponding shop who retruned it at the end of the work day so the worker could return it to the prokhadnaya on leaving the plant. No other pass was necessary to visit the plant. If a worker or technician had to go to a shop he had never entered before, he was accompanied by another person.

f) The only restricted area in the plant was assembly shop No. 5, svorochnyy. Shop workers needed a special pass to enter the shop. Workers from other shops received written authorization from their shop chiefs which stated shop number and reasons for the visit. There was no other restricted shop.

g) The plant airfield was approximately 600 to 700 meters south of the plant. When the city airport was closed because of climatic conditions, which happened infrequently, aircraft not related to the plant landed at the plant airfield. The airfield had only one landing strip running in an east-southwest direction and approximately 800 meters long and 20 to 30 meters wide. The landing strip was made of concrete.

50X1-HUM

the airfield was surrounded by a barbed wire fence and guarded by plant police. A special pass was needed to enter the airfield. The airfield was considered to be shop No. 72 and used almost

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exclusively to test planes manufactured at the plant prior to 50X1-HUM shipment/delivery.

Helicopter Production

4. From 1950 to May 1954, MIL-type helicopters were manufactured. ( See attachment No. 1, sketch of helicopter manufactured at Plant No. 292.) 50X1-HUM All were the same make and type and had a four-bladed propeller on the front part. Each blade was approximately eight meters long and 40 or 50 centimeters wide. A concial tube ran along the blade; it was approximately 80 millimeters in diameter next to the axle and 30 millimeters in diameter at the end of the blade. The blade had ribs approximately 20 millimeters wide, [redacted] one millimeter thick, and 200 or 250 millimeters apart. There was a three-bladed propeller approximately one- and-a- half meters in diameter in the tail. The helicopter was approximately 12 or 14 meters long, three or hour meters high, and three meters 50X1-HUM wide through the cabin which could hold about ten or 15 combat-equipped soldiers. The helicopter had a velocity of about 220 or 300 hp. it had a ceiling of approximately 50X1-HUM two or three kilometers because he was not certain the doors shut hermetically. It had a small cabin for the pilot and another large 50X1-HUM cabin for transporting men and materiel. It was not designed to carry armaments of any kind. A GAZ, number unknown could be transported within the helicopte 50X1-HUM This helicopter was used on scientific expeditions at the North Pole and for the transport of military units and seriously ill persons in unpopulated areas of northern USSR. In 1953 or 1954, this helicopter in the annual aviation parade in Tushino. 50X1-HUM One of the helicopters transported a small anti-tank gun with an approximately two-meter long barrel. Various take-off and landing exercises were performed. The helicopter was assembled and complete finished at the plant. Some components, such as, the engine, navigation instruments, radio, electrical equipment, and tires came from other unknown Soviet plants. Completed helicopters were

transported by trucks with trailers to the palnt airfield where they where tested and then flown to their points of destination

Up to May 1954, the plant manufactured only the afore-mentioned helicopters. No type of aircraft were manufactured, although sauce pans, beds, 35-liter aluminum milk cans, children's sleds, and toy automobiles were. The helicopter engine had about 300 or 400 hp. Approximately 50 helicopters were manufactured monthly; all were of the same type and characteristics. The helicopter could transport approximately two tons. In May 1954, the manufacture of helicopters was totally suspended and the construction of aircraft begun.

Aircraft Production

5. From May 1954 the plant was manufacturing aircraft.

a) YAK- type combat planes were manufactured. The fuselage was approximately 12 to 15 meters long and each of the wings about six or seven meters long. During May 1954 to September 1956, no other type of aircraft was manufactured, although modifications of the YAK were introduced. ( See attachment No. 2, sketch of YAK-type aircraft. ) A cannon approximately 25 or 35 millimeters in diameter was installed on each side of the fuselage; the aircraft had no other armament. The aircraft was manned by a pilot and an observer (sic). It had one engine under each wing. The engines were round in form and approximately one-and-a-half meters long by one meter in diameter Each engine had a thrust of from 1,000 to 1,200 kilograms. The soft (sic) gasoline tank was installed in the lower part of the cockpit. The gasloine tank was rectangular, about two-and-a-hal meters long, one meter high, one meter wide, and made of a dark colored rubber of an unspecified thickness. The tank had a fuel capacity of approximately two tons and a volume of two to two-ar a-half cubic meters.



In addition to this main tank, there was a metal tank under each

 50X1-HUM

wing; this innovation was introduced in late 1954 or early 1955. These tanks were elliptical and slightly flattened on the top and bottom. The tanks were approximately one and two-hundreths meters long and had a diameter of about 800 millimeters. The tanks were made at an unidentified cardboard plant (sic); they were not made in Saratov. Each tank had a fuel capacity of 50X1-HUM approximately 600 or 700 liters. There was a tank between the engine and fuselage and they could be jettisoned when empty. This type of aircraft had a velocity of approximately 1,200 kph and a ceiling of approximately 12,000 to 13,000 meters. The aircraft could fly from five to six hours without refueling;

the aircraft was equipped with radar

The aircraft was not modified to permit equipping it with guided missiles 50X1-HUM or rockets of any kind. The front part of the cockpit cabin had unbreakable white glass about 80 or 90 millimeters thick. A sheet of steel about four millimeters thick and 600 millimeters wide was installed behind the pilot's seat and protected his entire back.

no protective material was installed on 50X1-HUM either side.

In 1955, (small/minor) innovations began to be introduced during the construction process which consisted of increasing or decreasing the number of rivets, changing the position of the openings through which the rudder cables ran, changing the shape of the fuselage in the tail section by adding a duraluminum strip about two meters long, 250 to 300 millimeters wide, and one to one-and-a-half millimeters thick which gave it a shape similar to an inverted pear, and by shortening or lengthing sheets on the fuselage. CONFIDENTIAL

In the middle of 1954, the nose of the XXXX aircraft began to be manufactured from an unknown kind of plastic; meter was not used. The only difference between this nose and the one formerly manufactured was the material, becasue the

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technical characteristics were the same. [redacted] There were no other important innovations.

b) In May 1954, the manufacture of product No. 12, izdelie nomer 12, was begun. Up to September 1956, the following products were manufactured: products Nos. 13. 14, 15, 16, and 17. [redacted] The numbers were changed when innovations however small were introduced in the aircraft. The drawings/plans/designs of certain parts were often identical to those formerly manufactured and the product number was [redacted] different. [redacted]



[redacted] Product numbers were never repeated, but as there was assmebly production it sometimes occurred that the drafting office was preparing drawings of a specific product while the shops were still manufacturing the preceeding product. The products always bore the correlative number each time the number was changed (sic). If other types of YAK aircraft existed, they would differ in the installation of [redacted] controls, velocity, and other machinery because all the parts designed/drawn seemed to be the same. If two aviation plants were simultaneously manufacturing identical products, the product numbers might be different so that there would be no error when modifications were [redacted] introduced or the aircraft was repaired. [redacted] the product numbers were different in two plants manufacturing the same type of aircraft because the product [redacted] number was the number peculiar to each plant so that no confusion would arise with other types of products, expecially when they manufactufed aircraft and helicopters. Two plants might manufacture the same product numbers if they [redacted] manufactured the same type of aircraft because when one of the plants stopped production of this type of aircraft, the [redacted] plans were usually sent to



[redacted] CONFIDENTIAL

ATTACHMENT [redacted] 50X1-HUM

the other or, if both plants continued production, copies of the plans would be made to lessen the work. [redacted]

[redacted]

c) Plans received contained the following data: 50X1-HUM

Product number, always corresponding to the same type of aircraft.

Number of a part of the aircraft, chastsamolyota, which could correspond to one of the wings, the fuselage, the tail, the space occupied by the engine, or to any other of the aircraft parts.

Number of a group of parts of one of the parts of the aircraft ( uzel ) ( nodule, joint ).

Number of the part, nomer detali.

The plans contained no other indications except for the scale and the illegible signatures of the designer or engineer who had checked them.

d) At the aircraft design/construction faculty of the Moscow Aviation Institute i/n Sergo Ordzhonikidze students were taught that in aircraft construction the different parts always bore the same number, as follows:

Right wing [redacted] 50X1-HUM

Left wing, mirror reflection of the right wing ( zerkalnoye otobrazhenie ), had the same number as the right wing and because it always bore the same ~~plan~~ number as the right wing there was no confusion. 50X1-HUM

Front part of fuselage ( perednaya chasfyuzelyazha ), ran from the beginning of the nose to the end of the cockpit. [redacted]

[redacted]

Rear part of fuselage ( zadnyaya chasfyuzelyazha ), ran from the end of the cockpit to the end of the fuselage where the tail bega

[redacted] 50X1-HUM

Cockpit [redacted] 50X1-HUM

[redacted] Space occupied by the engine or motor housing nazelle in the wing [redacted]

[redacted] CONFIDENTIAL [redacted]

50X1-HUM

Horizonatal stabilizer, gorizontalnoye operenie, number 32,000. Persons working on this type of plans called it group 32, gruppa 32. Vertical stabilizer, vertikalnoye operenie, number 33,000 and called group 33 by those working on its plans. 50X1-HUM

Right (auxiliary) wing tank, podversnoy bak

Left wing tank had the same number as the right wing tank, thus there was no confusion as one was the mirror reflection of the other.

Elevator, rulvysoty, bore the number 34,000 and was called group 34 by those working on its plans.

Rudder, rulpovorota, bore the number 35,000 and was known as group 35.

Right wing aileron, number unknown.

Left wing aileron, bore the same number as the right wing aileron and was a mirror reflection.

Flaps, schitki, number unknown.

The aircraft was not divided into any more parts. The remainder of the accessories belonged to the parts in which they were installed.

The specialists handling the plans referred to parts by their group number.

e) The horizontal stabilizer consisted of the following parts:

Forward longeron, bore the number 01.

Rear longeron, bore the number 02.

Ribs, nervyury, were numbered from the center of the horizontal stabilizer towards the outside and bore the following numbers: rib No. 03, 04, 05 ,06, 07, 08, 09, 010, 011, 012, 013, 014, 015, 016, 017, and 018.

Surface, obshivki, The surface components were numbered from the forward part of the horizontal stabilizer towards the rear and bore the following numbers: surface No. 019, 020, 021, 022, 023, ( and 015. 50X1-HUM

Forward longeron, peredmiy lonzheron, bore the number 01.

Rear longeron, zadniy lonzheron, bore the number 02.

Ribs, nervyury, The ribs of the horizonatl stabilizer were numbered from the center towards the outside and bore the numbers: rib No. 03, 04, 05, 06, 07, 08, 09, 010, 011, 012, 013, 014, and 015.

Surface, obshivki, The surface components were numbered from the forward part of the horizontal stabilizer towards the rear and bore the numbers: surface element No. 016, 017, 018, 019, and 020.

50X1-HUM

f) The vertical stabilizer consisted of the following parts:

Forward longeron, bore the number 01.

Rear longeron, bore the number 02.

Ribs were numbered from the lowest to the highest part of the vertical stabilizer and bore the numbers: 03, 04, 05, 06, 07, 08, 09, 010, 011, 012, 013, 014, 015, 016, 017, and 018.

The surface components were numbered from the forward part of the vertical stabilizer towards the rear and bore the numbers: surface element No. 019, 020, 021, 022, 023, 024, and 025.

50X1-HUM

g) The forward longeron of the horizontal stabilizer consisted of the following parts:

Wall, stenka, which bore the number 2.

Upper surface, verkhnyaya polka, which bore the number 2.

Lower surface, nizhnyaya polka, which bore the number 3.

Strut, stoyki, which bore the number 4.

The forward longeron of the horizontal stabilizer had the same number of struts as ribs.

h) The rear longeron of the horizontal stabilizer consisted of the following parts:

Wall, which bore the number 1.

Upper surface, which bore the number 2.

Lower surface, which bore the number 3.

Strut, which bore the number 4.

[redacted]

The rear longeron of the horizontal stabilizer had no more parts. 50X1-HUM

i) Groups of parts which composed the horizontal stabilizer or elevator were as follows:

Longeron which bore number 01.

Ribs Nos. 02, 03, 04, 05, 06, 07, 08, 09, 010, and 011.

Surface elements Nos. 012, 013, and 014.

Longeron No. 01 was composed of the following parts:

Wall, which bore the number 1.

Lower surface which bore the number 2.

Strut which bore the number 4.

The longeron of the horizontal stabilizer had the same number of struts as the stabilizer had ribs. 50X1-HUM

j) [redacted]

k) Parts of the forward longeron of the rudder or vertical stabilizer (rulpovorota).

The rudder was composed of the following groups of parts:

Forward longeron, bore the number 01 and was composed of the following parts (elements):

Wall which bore the number 1.

Upper surface which bore the number 2.

Lower surface which bore the number 3.

Strut which bore the number 4.

The forward longeron of the rudder had the same number of struts as the rudder had ribs. 50X1-HUM

[redacted]

The rear longeron No. 2 had no other part.

The vertical stabilizer had the following additional parts:

Part for hanging the rudder of the horizontal stabilizer. [redacted]



50X1-HUM

50X1-HUM

Rudder control sticks, rychagi uplavleniya.

there were two or three.

There were two surface elements, zalizi, used to give aerodynamic shape to the union of the vertical stabilizer rudder with the fuselage. 50X1-HUM

1) The aircraft consisted of the following structural parts:

Surface, the largest surface elements were installed on the fuselage and measured from approximately two to three meters and the smallest installed as covers on the wing and tail were from .30 to .50 meters long. the width 50X1-HUM of any surface element varied according to where they were installed. The thickness of these elements was from 0.8 millimeters to two and one-half millimeters. In general, all were made of duraluminum, although a few were made of magnesium alloy, magnievyy splavla, which was used in parts whose shape made it difficult to manufacture. The same kind of material was always used.

Ribs, ribs were installed in the vertical stabilizer, horizontal stabilizer, and wings of the aircraft. The sizes varied depending on where they were installed. The ribs were approximately 0.8 millimeters to one-and-a-half millimeters thick. Most of the ribs were perforated, except for the smallest ribs. These 50X1-HUM perforations were made to reduce weight and to reinforce the weakest parts. All ribs were made of duraluminum and other material was used in their manufacture. 50X1-HUM

Longerons were installed in the wings, fuselgae, horizontal stabilizer, and vertical stabilizer and ran the length of all these parts. There were different sizes, the longest was about eight meters and the shortest about two meters. All were 50X1-HUM made of duraluminum in unidentified plants. They were about

five or six millimeters thick.

Joints, uzly naveski, for the different parts of the aircraft were installed at the junction of the wings with the fuselage, at the junction of the two parts of the fuselage, at the junction of the vertical stabilizer and the fuselage, and at the junction of the horizontal stabilizer and the vertical stabilizer. The dimensions of the parts/joints varied depending on where they were installed. The material used was chrome nickel steel, khromo nikelevaya stal, [redacted] it was the brand/mark 50X1-HUM 32-kh.n 3 a, 32 chrome nickel 3 aviation, 32 khromo nikel 3 aviatsionnaya, [redacted] these parts 50X1-HUM were always manufactured with the same materials. The parts were forged and then machine finished. The parts were manufactured at the plant.

Fuselage rings/frames, shpangouty, about 20 or 30 were installed in the fuselage. The rings were composed of one, two, or three parts according to where they were installed. Their diameter depended on their location. The largest had a diameter of 1.55 meters and the smallest [redacted] a diameter of .30 meters. The flanges used to join them to the fuselage surface/cover were from approximately 20 to 30 millimeters wide. These rings were made of duraluminum one to two millimeters thick. [redacted] No other material was used in their manufacture. They were manufactured at the plant. Some of these rings were used as reinforcements where the wheels were installed, where the fuel tank was hung, where the wings were suspended, where the tail was hung, in the cockpit, and at the joints of the different parts of the fuselage.

The horizontal elements (stringers), stringera, of the aircraft skeleton were installed in the fuselage, wings, and tail and were of different sizes. The largest were 25 millimeters wide, 25 millimeters high, and two millimetrs thick. All were made of duraluminum in other unidentified plants of the USSR.

Wheels, stoyki shassi. Neither the tube or the tire were made

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50X1-HUM

at the plant.

There were no other important parts.

The aircraft skeleton had two bulk heads or dividing partitions. The first was installed at the beginning of the metal part when the nose of the aircraft was finished. The second was installed from one to one-and-a-half meters behind the cockpit and divided the front part of the fuselage from the rear part. The bulk heads were made of duraluminum.

50X1-HUM

m) In addition to manufacturing aircraft the plant manufactured sauce pans, 35-liter cans for liquids especially milk, chairs, camping beds, childrens sleds, toy cars, and wash basins. If the construction plan for aircraft was filled and the remainder of the plan was not, the stipulated prize was not awarded. The more the plan was exceeded, the more the workers were paid. In late 1955, preparations were being made to manufacture harvester machines for harvesting green corn and keeping it green all winter (sic).

n) Since before April 1953 until May 1954, approximately 45 helicopters were manufactured monthly. From May 1954 until September 1956, approximately 30 aircraft were manufactured monthly. During all this time, sauce pans, childrens sleds, and cans were manufactured.

o) From April 1953 until September 1956, the plant worked only one shift. Work began at 0800 hours and ended at 1700 hours with one hour to eat. Some unspecified machine shops worked two shifts.

p) The plant employed a total of from 6,000 to 8,000 workers and technicans.

50X1-HUM

50X1-HUM

ATTACHMENT

[redacted]

[redacted]. The plans were filed in the drafting section, vydacha chertezhey, and the section chief, Maraya (lnu), was charged with keeping track/record of who picked up the plans. The plans were drawn to different scales according to the parts. In the lower right hand of the plan appeared the plan number, the name of the part, and the scale. The plans had no stamps. The plans bore the signatures of the persons who had copied them.

50X1-HUM

q) [redacted]

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Legend

Following is the legend to attachment No. 4, [redacted] plant layout. The numbers are keyed to those on the sketch.

1. Block of dwellings No. 1, pervyy zhilischnyy uchastok, consisted of several four and five-story brick buildings inhabited principally by plant workers. [redacted] A few 50X1-HUM
persons not employed at the plant lived there. On an unspecified occasion [redacted] the Soviet government 50X1-HUM
authorized residence in plant dwellings for non-plant employees. [redacted] this was due to the housing shortage. The order was 50X1-HUM
still in effect in June 1960.
2. Plant stadium.
3. Temp cinema on Chapayeva ulitsa, Stalinskiy rayon.
4. Universalnyy magazin, a two-story brick structure on Chapayeva ulitsa, number unknown, selling food products.
5. Beginning of streetcar line No. 15 which ran to the petroleum refinery, kreling zavod.
6. Terminus of streetcar line No. 1 which ran from the city.
7. Plant dining rooms and kitchens in a two-story brick building [redacted] had the following distribution:

The first floor was completely occupied by a [redacted] kitchen and dining room for about 200 or 300 persons.

The second floor was completely occupied by a dining room and kitchen for about 200 or 300 persons.

Anyone, including non-plant workers, could patronize these dining rooms. It was not necessary to present any document. Breakfast was served from 0730 hours to 1000 hours. The first meal was served from 1130 hours to 1430 hours and the second and last meal was served from

1630 hours to 2100 hours approximately.

8. Plant club, a two-story brick building.

The first floor contained a waiting room, snack bar, gymnasium for winter sports, such as, volleyball and boxing, cloakroom, and a lecture/assembly/conference hall with movie screen and a stage. The assembly hall contained orchestra seats and theater boxes and had a capacity of about 600 or 700 persons. The first floor contained nothing else.

The second floor contained only assembly hall theater boxes and a billiard room/hall.

9. Apartment building with an unspecified number of floors under construction in September 1956.

10. Single track standard Soviet gauge plant railroad which joined the city railroad line.

11. Small park.

12. Pass office, byuro propuskov, in a one-story one room building employing two persons.

13. Plant personnel entrance.

14. Plant vehicular entrance. All plant entrances were guarded by plant police.

15. Plant directorate, zavod upravleniye, a two-story brick building with the following distribution: 50X1-HUM

The first floor contained the main accounting section, bugalteriya.

[redacted]

The second floor contained the office of the plant director who was assisted by a secretarial staff.

Chief engineer, glavnyy inzhener, assisted by a secretarial staff. 50X1-HUM

[redacted] All plant engineers and technicians were subordinate to the chief engineer. In case of absence, the director was in charge.

Chief (technologist) [redacted], glavnyy tekhnolog, in charge of all technical matters.

There were ten or 12 technologists, names unknown. CONFIDENTIAL

There was nothing else on the second floor.

50X1-HUM



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16. Plant entrance [redacted] There were eight or ten doors/gates. 50X1-HUM

[redacted]

17. Apprentice school, a tow or three-story brick structure which was subordinate to the directorate of labor reserves, upravleniye trudovikh rezervov, [redacted] Plant apprentices studied at the school. He could offer no further information. 50X1-HUM

18. Plant shop, number unknown, in a structure approximately 50 meters long and 20 or 25 meters wide. [redacted] there was only one shift. [redacted] Rubber profiles/sections and small rubber parts were manufactured there; all elements were made of rubber. [redacted] 50X1-HUM

19. Block of dwellings No. 2, vtoroy zhilischnyy uchastok, with a varying different number of stories. [redacted] 50X1-HUM

[redacted]

20. Iron gate approximately four or five meters wide and three meters high through which the railroad passed. It was guarded.

21. Plant terrain/land/ground.

22. Plant walk.

23. Garden.

24. Plant street.

25. Carpentry shop, a one-story brick structure approximately 15 meters long and 15 meters wide where only molds of parts were made. Approximately 30 persons worked one shift.

[redacted]

50X1-HUM

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26. Scrap, metallalom, depot, a one-story ~~KX~~ wood structute approximately five meters long and five meters wide. From time to time, trucks transported scrap to the an unidentified foundry.

27. Tree covered plant area.

28. Tree covered plant area.

29. Tree covered plant area.

30. Material warehouses, a one-story brick structure approximately 30 meters long and ten meters wide. Material to be distributed to the various shops was stored there.

31. Air compressor, in a one-story brick structure approximately ten meters long and ten meters wide. There were pipes carrying compressed air conducting the various plant shops. It turned out five-atmospheric capacity to the pneumatic instrument shops.

32. a) Material cutting shop, raskroyny tsekh, a two-story brick building approximately 35 meters long and 15 meters wide with the following distribution:

The first floor contained the material cutting shop. There were three or four Soviet-make radial drills, radialno frezernyy stanok, type unknown, and (one) Soviet-make sheers, gilotinnye nozhnitsi, type unknown. Approximately 50 persons worked one shift. Parts, such as, ribs and rings which needed trimming were manufactured there. There was nothing else on the first floor.

The second floor contained shop offices; there was nothing else on the second floor.

b) Shop No. 6 where parts were bent, gibochnyy tsekh nomer 6. It was approximately 20 meters wide and 30 meters long. There were five or six doubling/bending machines, gibochnyy stanki. Parts were also manually bent. Approximately 60 or 70 persons worked one shift. Sheet/Plate surfaces/coverings and horizontal fuselage parts were manufactured there.

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50X1-HUM

c) Press shop, pressovyy tsekh, number unknown, occupying an area approximately 20 meters long and 20 meters wide. There were ten or 11 Soviet make pressing machines. 50X1-HUM about 60 or 80 persons worked one shift. There aircraft ribs and other parts on the outside of the fuselage were given form/formed. 50X1-HUM

d) Paint shop, krasilnyy tsekh, number unknown, where aircraft parts were painted. 50X1-HUM

e) Passage way approximately two-and-a-half to three meters wide which could be used by trucks. Offices of all the shops in the building were located above the passage way.

f) Resistence laboratory for the various aircraft parts, laboratoriya ispytaniya no prochnost, a one-story brick area with average/normal walls and approximately ten to 15 meters long and eight or ten meters wide. Ten or 15 persons, specialists and workers, worked there There was a special press , type unknown, which was used in testing/checking the resistence of the various aircraft parts. Many strips of canvas were glued together on the wing and when dry were pulled, drawn by the press until the part being checked/tested broke; the same test was performed on the various aircraft parts. 50X1-HUM 50X1-HUM

33. a) Shop No. 24, plazovo shablonyy tsekh nomer 24, a one-story brick structure approximately 35 or 40 meters long and ten meters wide. It contained no machinery. When an aircraft part was changed, the first to receive the new plans were those who worked in this shop. 50X1-HUM

b) Pasaage way, approximately two-and-a-half meters wide and three meters long.

c) Accessory assembly shop No. 80, tsekh osnastki nomer 80, occupying an area approximately 15 meters long and 20 meters wide. There were one or two Soviet-make planing machines; there was no other kind of machinery. Approixmately 50 to 70 persons worked one shift.

50X1-HUM

d) Welding shop, svarka, number unknown, occupying an area about 15 to 18 meters long and 20 meters wide. There gas, electric, and electric spot welding was done. there was only one shift.

50X1-HUM

50X1-HUM

50X1-HUM

e) Shop, number and work done there unknown, occupying an area/space approximately ten meters long and ten meters wide. it contained various lathes. It was not a special shop.

50X1-HUM

34. Shop and wood drying/dryer, sushilnyy tsekh, number unknown, occupying an area approximately 20 meters long and 15 meters wide. In addition to the wood dryers, chairs and tables were made. The dryers were wood chambers equipped with heating elements. There was only one shift.

50X1-HUM

35. Section of a housing construction trust. There construction charts/plans were kept. There were also section offices.

50X1-HUM

36. New shop begun in 1955 and finished in September 1956. It was a one-story structure approximately 60 meters long and 30 meters wide. It was rumored that once the structure was completed, shop No. 3 was to be moved there so as to allow more space.

37. Installation for making asphalt. It did not belong to the plant. It occupied an area approximately six meters long, five meters wide, and four meters high.



50X1-HUM

38. Mechanization shop, mekhanicheskiye tsekha, number unknown, occupying an area approximately 50 or 60 meters long and 25 to 30 meters wide. It contained lathes, [redacted] revolving lathes, automatic [redacted] (revolving lathes), and other machinery for machining parts, such as, planing machines and lathes. [redacted]



[redacted] there was only one shift.

a) The second floor contained shop offices. [redacted]

39. a) Passage way about three meters wide.

b) Bending and welding shop, gibochnyy tsekh, [redacted] it was No. 122. It occupied an area approximately 25 meters long and 35 meters wide. Bed tubes/pipes were manufactured there and tubes were also welded there. It contained machines for bending tubes. Welding was done with acetylene/Acetylene welding was done. Approximately 100 persons worked one shift. [redacted]



[redacted]



c) Assembly shop No. 3, svorochnyy tsekh nomer3, occupying an area about 30 meters long and 40 meters wide. [redacted] There the motor housing and rear part of the fuselage were manufactured. [redacted] Approximately 300 persons worked one shift. [redacted]



[redacted]



d) Assembly shop No. 4, occupying an area approximately 30 meters long and 40 meters wide. The only machinery it contained were an unspecified number of riveting machines. The fuselage, cockpit, and cockpit light/searchlight were manufactured there. About 500 persons worked one shift. He did not know whether or not changes had been made.

e) Assembly shop, number unknown, occupying an area approximately 30 meters long and 25 meters wide. It only contained riveting machines. Only wings were manufactured there. Approximately 350 to 400 persons worked one shift. [redacted]

[redacted]

ATTACHMENT [redacted] 50X1-HUM

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f) Paint shop, number unknown, occupying an area approximately 40 meters long and 15 meters wide. [redacted]

[redacted]

In the northern part of the building there was a second floor containing offices of the shops. 50X1-HUM

40. Two-story brick structure with the following distribution:

a) The first floor contained assembly shop No. 5, svorochnyy tsekh nomer 5, occupying an area approximately 90 meters long and 40 or 50 meters wide. [redacted] 50X1-HUM

[redacted] There the final assembly of the aircraft was completed. 50X1-HUM [redacted] There was only one shift. [redacted]

b) An Approximately four-meter wide passage way with a door gate from about 12 to 15 meters wide through which [redacted] (completely assembled) aircraft covered with canvas passed. [redacted]

[redacted] 50X1-HUM

There was nothing else on the first floor.

a) The second floor contained the series construction office, SKO, seriyno konstruktorskoye byuro. It was in the northern part of building and occupied [redacted] one floor approximately 50 meters long and eight or ten meters wide. This office was in charge of distributing plans to the various shops. Approximately 60 to 80 persons worked there. [redacted] 50X1-HUM

[redacted] There was nothing else on the second floor.

41. Spare parts warehouse, completely destroyed by a fire in 1955. It had not been rebuilt. [redacted] 50X1-HUM

42. Second block of plant dwellings, one and two-story brick dwellings for plant workers. [redacted] 50X1-HUM

Visits

6. [redacted] Koslov (fnu), a member of the Presidium, was going to visit the plant as he was coming to Saratov to award the Order of Lenin to Saratovskaya oblast for [redacted] a

50X1-HUM

[redacted]

50X1-HUM

good grain/cereal harvest. [redacted] The oblast received the award, but Koslov did not visit the plant. [redacted]

Awards

7. Prior to 1953 [redacted] the Presidium awarded the plant with the Order of the Red Banner. [redacted] He did not know whether or not the [redacted] plant had recieved other awards.

50X1-HUM

Relations with other plants

8. The motors were recieved from other unknown plants.

Radio apparatuses/instruments, altimeters, voltmeters, and other instruments came from other unknown plants.

Pneumatics, cables, lights, and construction material came from other unknown plants; [redacted]

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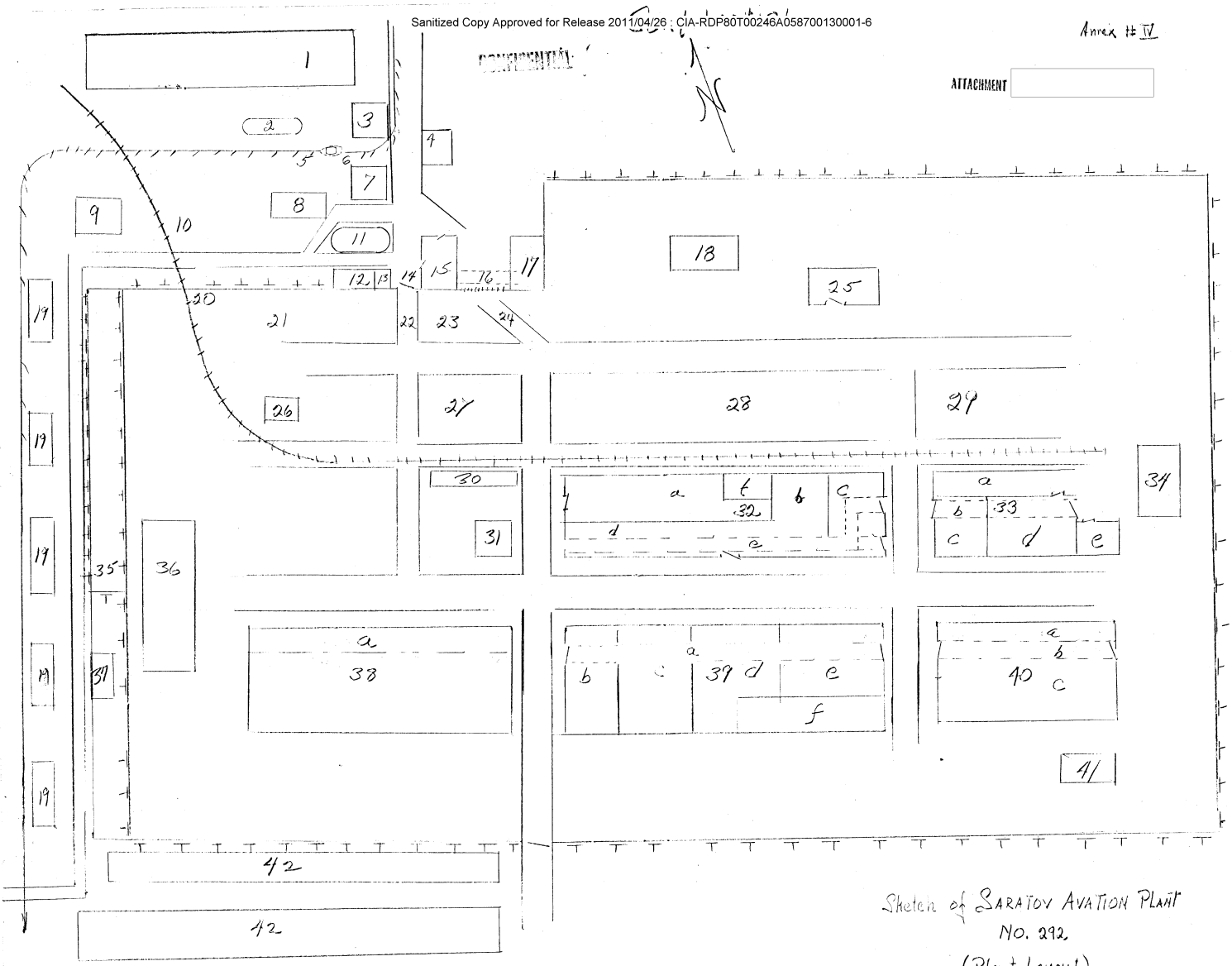
[redacted] the supply section, otdel snabzheniya, was in charge of procuring/buying this material. [redacted]

50X1-HUM

Annex # IV

ATTACHMENT

50X1-HUM




Sketch of Saratov Avation Plant
No. 292
(Plant Layout)

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Confidential

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Horizontal pl... of fuselage

ATTACHMENT

Longeron (wings and tail)

Fuselage longeron

Fuselage rings