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Industry + Camouflage
Net Factory

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WAR RELOCATION AUTHORITY
GILA RIVER PROJECT
RIVERS, ARIZONA

INDUSTRY

Final Report
Historical
by
Hoyt A. Martin

May 1, 1945

During the twenty months I was employed as Superintendent of Industry on this Project, the writer has experienced many pleasant and trying times in the development and operation of the various industrial units. Each of the enterprises was of an unusual nature and was to serve for only a very limited time. The Ship Model Shop was first in order of importance in that it served as a direct contribution to the war effort. The tiny models built by the Japanese-American boys and girls gained nationwide reputation. This shop's contribution to the war effort will never be known as hundreds of the models were used by the Navy for ship identification training purposes--particularly boys in training in the air forces assisting in identification of targets. The idea for establishing the factory comes from Mr. Bennett who visualized the possibilities and talents of these people in this precise and tedious work.

The Ship Model Shop was authorized in the early part of 1943 by the Navy Training Aid Section in Washington who assisted Mr. Bennett in the location and purchase of a WPA Shop in New York. Machinery and tools arrived on the Project in April 1943 under the direction of Mr. Oscar Julius who was employed as Acting Superintendent to direct the production of the models. Mr. Julius (an artist by profession) had also operated the shop in New York.

Mr. Julius continued in the direction of the work until the latter part of June at which time he terminated and returned to New York. The writer was employed as the new Superintendent to take over Industry on September 1, 1943, from which time Industry was expanded to seven different enterprises, namely:

Ship Model Shop
Tofu Manufacturing
Bean Sprouts
Dehydration
Cannery
New Furniture Building
Furniture Repairing

In reviewing the industrial activities over the past twenty months the value of production amounted to approximately \$40,000 which I consider a fair amount considering that the average number of employees amounted to only thirty-six people per month. All of the work of installation of the various operations was done by our own people. Very little assistance in the way of labor was ever required of the Engineering Section. Then, again, considering the difficulty encountered in securing supplies and materials with the small amount of appropriated funds, I consider the job was pretty well done.

I am very proud of the opportunities presented to the young evacuees in the form of vocational training they received in the various occupations. Many of these boys and girls have now relocated and are continuing in the vocation they learned while here. I have many written testimonials of appreciation which is my reward for teaching them something that will be helpful to them throughout the rest of their lives. It was necessary for me to work many hours overtime on training programs--particularly with the Ship Model Shop.

The policies, as handed down by administration, were in my opinion very necessary and worthwhile for the benefit of the Project as a whole. However, industrial programs, as set up by Washington, required so many organizational changes and readjustments that it was difficult to control and set up a program of production. In the Industry Section's relationships with other divisions we lacked a considerable amount of co-operation from Mess and Agriculture--particularly with the Canning and Dehydrating Plants--but were very good in connection with the Ship Model Shop. The assistance and excellent cooperation from Mr. Bennett (Project Director) is worthy of the highest praise. Being an industrial man himself he understood our related problems and supported our activities wherever and whenever he could.

DEVELOPMENT OF EACH ENTERPRISE

SHIP MODEL FACTORY

The original equipment received from New York consisted of table saws, jointers, band saws, planer, lathes, drill presses and various hand tools. They were in very poor condition when received. Mr. Julius immediately set about to order the necessary materials and machine parts by requisition. In the meantime the boys were practicing with scraps of lumber, tin cans, cardboards, or anything they could find to build these models. According to our records Mr. Julius was unable to secure needed materials and machine parts up to the time of his departure in June. The shop continued to operate without a director until my arrival on

September 1. On my first entry into the shop I was received by a small group of very discouraged boys who were none too pleased to welcome their new boss. In a week or so the writer had won their confidence and the shop was undergoing a complete renovation. Unable to secure new machine parts we set about to make new parts ourselves for the machines--some of which were still in use when the shop was closed down in February 1944. Many smaller varieties of models were produced prior to my arrival but due to the type of materials, they encountered some difficulty with the models coming unglued. The models built were to a scale of fifty or sixty feet to one inch, and it was necessary to have them exact in detail to meet the Navy requirements. The system by which the ships were built was very similar to an assembly line. The small parts were cut out in mass production by the machine department and from there, step by step, the models traveled on their course through the shop and on to the Naval Training Section in Washington, D. C.

One of the highlights of the history of the Ship Model Shop was that on a visit of Mrs. Eleanor Roosevelt we presented her with a beautiful model to add to the President's collection.

The shop was recognized not only as a point of interest on the Project, but as a point of interest throughout the entire WRA. Many high officials of government, state, Army and Navy, and many other notable personages, visited our shop and expressed amazement as to the job we were doing. Among the outstanding models constructed was the building of a model of the Battleship South Dakota and a seven-foot model of the heavy cruiser Cleveland, which won such high praise from the Navy Department that they were placed on exhibition in New York and Washington.

In January 1944 the Navy Department notified us that no further models of the types we were building were required but that they would furnish us with orders to build transparent plastic models of ships for training purposes which would be used for training purposes in loading and unloading ship cargo. The writer, having had some experience in plastic work, immediately set up a training program in which the boys and girls worked very hard. Before the classes were completed we received a notice of cancellation of the order from the Navy due principally to the secrecy of the work. They considered it inadvisable to build these models in a Japanese Relocation Center. The Navy informed us that they would furnish us further orders from time to time as the need for models arose. No further orders forthcoming, it was necessary to close the shop in January 1944.

FOOD PROCESSING

In the month of March 1944 instructions from Washington requested that we set up, in addition to the Ship Model Shop, the food processing establishments. The first was the installation of the tofu plant. This was done principally by the boys remaining in the Ship Model Shop. However, some of the boys continued to build some aircraft carriers "Wasp" that month, thereby keeping the Ship Model Shop open.

By the first of April 1944 the tofu plant was completed; also a bean sprout growing section was incorporated in the same building. For these two operations we employed a total of fifteen workers--the men assisting on the installation of the plant.

By the end of April we had produced 13,360 cakes of tofu and 1,300 pounds of bean sprouts. The tofu and bean sprout enterprises continued as an industrial operation until December 1944 and had produced 120,393 cakes of tofu valued at \$7,223.58. The bean sprouts, with only four people employed, produced 98,885 pounds of bean sprouts at a value of \$4,944.25. In January 1945 these enterprises were turned over to the Mess Operations and are still in operation and supplying the entire project with all their requirements of these two Japanese foods.

CANNING FACTORY

It was proposed in Washington that we take over the old dehydration plant that was installed prior to my arrival on the project and convert it into a canning factory at which we could can and preserve many project-grown vegetables and over-ripe fruits for project use. Plans were prepared and the approval of WPS secured for the installation of the plant.

The steam boiler was re-built, retorts that were previously purchased were installed and controlled by two recording thermometers which would automatically register all temperatures and cooking times, a project-made steam scalding, washing tables, preparation tables, and exhauster were built--but it was July before we could get into production.

FURNITURE REPAIRING

During the time we were installing the canning factory we re-designed the Ship Model Shops into a Furniture Repairing enterprise which we continued to operate until November 1944. During this time 232 pieces of furniture were repaired, from total loss by survey, amounting to a conservative value of \$1,160.00.

BUILDING OF NEW FURNITURE

In November 1944 the Engineering Section requested that we take over the building of some badly needed school furniture consisting of teachers' desks, auditorium benches, table arm-desk chairs. These were built and constituted a total value of \$2,990.00.

Seven operations in all were going at one time. The installation of the various plants, the recruiting and training of help was somewhat of a jumble at the time as it appears in this report. Most of the equipment needed was project-built or made over from materials and equipment that we could salvage on the project. Therefore, it is difficult to write a clear picture of our problems as they presented themselves.

CANNING & DEHYDRATING

The first crop of tomatoes, which were not of the canning variety, were received in the early part of July. Twenty people were employed--none of whom had experience in canning factories. However, with the maximum care exercised we produced 186 cans of tomato juice and 742 cans of solid-pack tomatoes in addition to dehydrating about 300 pounds of Armenian cucumbers. In October we produced dehydrated cucumbers and project-grown Japanese tea in the amount of 353 four-pound cans in addition to 790 cans of tomato juice and 1,137 cans of solid-pack tomatoes.

The Canning and Dehydration Plant continued to operate until December 1944, at which time Washington ordered us to close down. During the time the plants were in operation we produced 9,239 pounds of dehydrated foods (which represents approximately seven to ten times this amount in raw products) valued at \$923.00. The canned vegetables amounted to 9,205 No. 2½ cans valued at \$1,385.75.

In October 1944 a great crop of sweet potatoes was available. We solid-packed several thousand cans. They are still being used in the mess halls on the project. During the operation of the canning and dehydration plants, I am pleased to report, we have never had a single can of spoilage.

It is my earnest conviction that had Washington given our canning and dehydration plants sufficient support and had encouraged Agriculture and Mess Operations here to join in with us on our enterprises a considerable amount of money could have been saved the WRA on food costs to the project.

On January 1, 1945, we were ordered to discontinue all industrial activities on the project. My position as Manufacturing Superintendent was automatically abolished. On January 15 all inventories and transfers were completed and the writer prepared to return to Pasadena, California as of January 15.

On January 13, Mr. Sawyer, Superintendent of Education, requested that I continue at the project--make use of the old Ship Model Shop--and take over a vocational training program--which I did. It is now my intention to resign my position at Rivers, as a teacher, and return to my home in California not later than June 1. At that time I expect all the remaining machinery and facilities to be returned to the central warehouse.

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During my stay on this project I have made many friends, both with the appointed personnel and the Japanese people, and it certainly has been a pleasure to be associated and work with Mr. Bennett, the Project Director. However, may I suggest to any future administrators that the next time an Industrial Section is set up within an institution or project similar to this, that the measure of success will depend on the method by which it is set up and programmed by its top administrators.

Respectfully submitted,

Hoyt A. Martin
(Former Manufacturing Supt.)

Attached is data on the Industrial Section.

SHIP MODEL SHOP

July, 1943. Average number employed: 47

<u>Name</u>	<u>Type</u>	<u>Number</u>	<u>Value</u>
Admiral Scheer	heavy cruiser	13	
Koln	light cruiser	30	
Nurnburg	light cruiser	15	
Prinz Eugen	heavy cruiser	42	
Von Terpitz	battle ship	40	
German submarine		40	
			\$5220.00

August, 1943. Average number employed: 45

German Submarine		91	
Admiral Scheer	heavy cruiser	13	
Koln	light cruiser	1	
Nurnburg	light cruiser	15	
Von Terpitz	battle ship	19	
U.S. 80' PT Boat		24	
U.S. P.C. 43	sub chaser	10	
U.S. Destroyer "Sinus"		10	
U.S. Destroyer "Fletcher"		10	
U.S. "St. Louis"	light cruiser	12	
Prinz Eugen (German)	heavy cruiser	18	
			\$3460.00

September, 1943. Average number employed: 34

U.S. Sub. Chaser P.C.		14	
U.S. "St. Louis"	light cruiser	2	
U.S. "Wasp"	aircraft carrier	1	
U.S. PT 80		15	
U.S. Destroyer "Fletcher"		2	
U.S. Destroyer "Sinus"		1	
			\$318.00

October, 1943. Average number employed: 48

Japanese Warship, Navy Id. #1		20	
Japanese Cruiser, Navy Id. #9		20	
(25' equals 1" scale)			\$2400.00

11,398.00

November 1943. Average number employed: 50

11,398.00

Japanese War Ship, Navy Id. #6	20
" " " " #7	20

\$2400.00

December 1943. Average number employed: 50

Japanese War Ship, Navy Id. #2	20
" " " " #4	20

\$2400.00

January 1944. Average number employed: 55

Japanese Warship, Navy Id. #3	20
" " " " #5	20

\$2400.00

February 1944. Average number employed: 45

U.S. "South Dakota"	battleship (9 ft.)	1
Koln (German)	light cruiser	1
U.S. "North Carolina"		1
Prinz Eugen (German)		1
Japanese Warship, Navy Id. #9		1

\$1140.00

March 1944. Average number employed: 18

No production. (Installation of Food Processing this month)

April 1944. Average number employed: 38

Ship Models -- U.S. "Wasp" carrier	12
Tofu -- Japanese Food	13,360 cakes
Bean Sprouts -- Japanese Food	1,389 lbs.

\$ 240.00
668.00
165.60
1073.60

May 1944. Average number employed: 25

(No ship models made)

Tofu -- food processing	18,163 lbs.
Bean Sprouts -- food processing	6,640 "

\$ 908.15
796.80

June 1944. Average number employed: 16

Tofu -- food processing	16,941 lbs.
Bean Sprouts -- food processing	15,125 "

\$ 847.05
1575.00

July 1944. Average number employed: 47

Tofu -- food processing	8,369 lbs.	\$ 502.14
Bean Sprouts -- food processing	14,605 "	1236.82
Tomato Juice	186 cans	18.60
Tomatoes -- Solid-pack	742 "	111.30
Armenian Cucumbers -- dehydrated	30 lbs.	6.00

August 1944. Average number employed: 34

Tofu -- none		
Bean Sprouts	13,540 lbs.	\$1083.20
Kampio (dehydrated cucumbers)	21 lbs.	4.20
Tea (dehydrated)	1,412 lbs.	564.80
Tomato Juice	790 cans	79.00
Tomatoes -- solid-pack	1,137 cans	170.55
Furniture (repaired)	20 pieces	116.00
Washing Machine (repaired)	1 piece	25.00
Pulleys, miscellaneous, rods, etc.	21 pieces	38.00

September 1944. Average number employed: 44

Tofu	3,390 cakes	\$ 203.40
Bean Sprouts	10,205 lbs.	816.40
Tea (dehydrated)	3,232 lbs.	614.08
Furniture (repair)	46 pieces	230.00

October 1944. Average number employed: 43

Tofu	10,500 cakes	\$ 525.00
Bean Sprouts	4,040 lbs.	767.60
Tea (Dehydrated)	484 lbs.	91.96
Sweet Potatoes	956 cans	95.60
Furniture (repaired)	14 pieces	70.00

November 1944. Average number employed: 45

Tofu	11,400 cakes	\$ 570.00
Bean Sprouts	7,205 lbs.	806.00
Sweet Potatoes	3,727 cans	372.75
Furniture (repaired)	51 pieces	205.00
Furniture (new - school)	39 pieces	1180.00

December 1944. Average number employed: 45

Tofu	11,270 cakes	\$ 563.50
Bean Sprouts	8,145 lbs.	364.60
Sweet Potatoes	1,667 cans	166.70
Daikon (dehydrated)	65 cans (5-gal)	33.40
Furniture (repaired)	4 pieces	20.00
Furniture (new--teachers' desks)	60 pieces	1200.00
Furniture (new--benches)	76 pieces	760.00

January 1, 1945 -- Closed all Industry.

GRAND TOTAL VALUE: \$39,410.20

HISTORY OF THE GILA RIVER CAMOUFLAGE NET FACTORY

Many new industries sprang from World War II, but none had a more curious inception than camouflage net manufacturing. Although used to some extent in World War I, camouflaging then did not gain importance as a measure of military defense. It was the development of aviation reconnaissance and accuracy of aerial bombardment in this war that led, not only to a need for masking operational movements, but to a necessity for concealing the immense areas engaged in manufacturing tools of war.

Large scale civilian production of camouflage nets apparently originated at the Santa Anita Reception Center. Who advanced the notion seems to have been mislaid amid the confusion and bewilderment of the period. In any event, there is evidence that certain loyal citizens of Japanese ancestry proposed such a program to the Wartime Civilian Control Authority and Army Engineers. After considerable musing by these agencies the offer was accepted and operations commenced under the Santa Anita Race Track Grandstand which had the height necessary for suspension of the nets while work was in progress.

*Santa
Anita*

From 500 to 1200 evacuees were employed on the project until their removal to regular relocation centers. Although per capita production was not too good, Army Engineers were sufficiently impressed by the performance to proceed with construction of net garnishing plants at the Manzanar, Gila River and Colorado River Relocation Centers.

The Manzanar plant was first to go into production, starting around September 15, 1942. It was soon apparent evacuees were both reluctant and unwilling to work efficiently at the established WRA wage of \$16 per month. They performed, for the most part, at only a fraction of efficiency and were content to measure their efforts in ratio to the wage received.

This impasse led to the advancement of all sorts of arguments to promote production - loyalty to country, favorable public press, self-respect, decreased idleness, etc. Interested evacuees had one stock answer to these mental gymnastics: "We are in these centers because of mob hysteria, California political maneuvering and bad judgement. We are not disloyal and want to assist in the war effort but not at six cents per hour."

WRA, by Congressional Act, could not exceed the \$19 per month ceiling for employment in the center. Consequently, a bear was held by the tail. The Army needed the nets and depended on Relocation Centers to produce them. Permanent structures had been erected at considerable expense and could not now be moved. Raw materials were on hand and supervision provided for.

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The only element absent, and a very important one, was the magic formula to create productive initiative at six cents per hour.

Finally, with WRA's consent, the entire job was let to a private concern, The Southern California Glass Company of Los Angeles. By this arrangement the Congressional limitation on wages was bypassed as workers could then be paid by the contractor.

Details of the Glass Company's contract with the War Department are not available. However, certain basic terms are known. All facilities, utilities and raw materials were furnished by the United States Engineering Department. The contractor agreed to recruit, supervise and pay evacuee laborers. Other than a limited caucasian supervisory staff none but evacuee residents could be employed.

The rate of pay, written into the contract by the United States Engineers, was 48¢ for each 100 square feet of camouflage netting satisfactorily processed and accepted by the War Department. Whether the Army Engineers pulled this rate out of somebody's hat or just took it because it looked like a good figure is not known. However, as will be pointed out later, somebody yanked the wrong lever.

After surveying the field the contractor decided to commence operations at Gila River rather than Manzanar or Poston. The reasons for this are probably twofold: Manzanar was just getting over a "disturbance" and its labor situation was not easily analyzed. Furthermore many of its evacuee labor leaders were known to be agitators of the worst sort who only wanted an opportunity to place their theories in practice. On the other hand buildings and material at Gila River were ready for operation and experienced workers had arrived from the Santa Anita Assembly Center.

The contractor quickly found he had not only bought a job but might have a dead horse on his hands. His head was soon ringing like a Chinese gong as problems such as these bounced around:

1. The manufacture of these nets obviously was a military enterprise. Almost 35 per cent of the center's residents were Japanese citizens and the degree of their resistance was unknown.
2. Most of the available laborers would be the sons and daughters of these Japanese citizens. It was not clear how much pressure the parents would exert on their children.
3. By International agreement only American-born Japanese could work in the industry. The slighting of Japanese nationals who were loyal to the United States required explanation.

4. The possible dislocation of essential industries within the center was a serious point. In view of the high wage going to those working in camouflage, it was feared domestic industries already developed would suffer. Consequently, migration from the farming program, mess operations, hospital or other essential fields would endanger these projects. This feature was always advanced by certain members of the community. Whether their motives were honest or whether it was a safe and painless way to sabotage the camouflage project is not clear. However, the trigger was usually pulled by those suspected of pro-Japanese attitudes.

5. Workers in the camouflage factory would live in the center and be supported in the essential services by those who elected not to work there, or who could not, by international law, be employed in the plant. Therefore how would camouflage workers compensate non-camouflage workers for services in maintaining the camp?

These factors actually boiled down to one question: "Did the Community want to entertain this project"; for it was crystal clear the enterprise could not function satisfactorily without at least majority community approbation.

Contact between the contractor and the center was officially established November 23, 1942 when he met with the combined Councils of Butte and Canal. Both sides were squeamish. The contractor because he was not sure of his reception; the Councils because they did not know what proposals would be made nor what to do with them when received. They were not certain of public opinion and shuddered at the thought of making a decision and then having the Community jerk the rug from under them. Furthermore a minority group on the Councils was vociferous in opposing the program.

After some forensic sparring Mr. H. S. Stancliff, Regional Industrial Director, eased the tension by proposing three pay plans, pointing out of course that the community need not accept any of them.

Plan No. 1. Each worker would receive the fixed WRA wage of \$16 per month plus 1/10 cent per square foot for each foot over 1000 produced daily. These sums would be paid by the contractor directly to the worker. After making other deductions required by law the balance of each worker's earnings would be deposited by the contractor in a Community Trust Fund which would be participated in equally by all workers in the community, including camouflage workers.

Plan No. 2. Each worker would receive the fixed WRA wage of \$16 per month plus 1/10 cent per square foot for all over 1000 produced daily plus a \$10 bonus to each worker averaging 1000 square feet of production daily. Payments would be made the same as Plan No.1.

Plan No. 3. Camouflage workers would retain the entire proceeds of their production less deductions required by law and WRA regulations.

After some hemming and hawing the Councils endorsed Plan No. 2.

Operations commenced December 15, 1942. However, it soon developed that the plan approved by the Councils was not acceptable to the workers. They not only objected to the Councils cutting the largest piece of cake for the Community but they dissented on the grounds the decision was made without their consent. It was sort of taxation without representation.

Recruiting was slow and those who did commence work constantly carped that wages were not in fair proportion to the effort expended; that the work was disagreeable; and that they worked a lot harder than WRA employees who would receive a lion's share of their wages from the trust fund. Furthermore, they could eat, sleep and loaf in the Center without working at all.

These complaints all made pretty good sense and the situation was not helped by disloyal elements in the Community who ridiculed the camouflage workers and referred to them as "suckers". As a result of this dissatisfaction a new plan was proposed by the workers and adopted by the Community January 1, 1943.

The new plan provided that the first \$4.80 earned daily by each worker would be split over a month as follows: \$25 subsistence to WRA; \$16 WRA base wage to each worker; \$10 bonus to the worker if his average production for the month amounted to 1000 square feet per day. The balance would revert to the Community Trust Fund for distribution to all workers including camouflage employees. Actually what it amounted to, figuring a 20 day month, was this: The first \$96 each worker earned would be split \$25 to WRA, \$16 base pay to the worker, \$10 bonus to the worker and \$45 to the trust fund.

All money over \$4.80 earned each day by the worker would be paid directly to him in addition to the sums mentioned above.

Under this plan the average workers contributed between \$40 and \$45 per month to the Community Fund. This amounted to about 20 per cent of his gross earnings.

Once the project got under way per capita production far exceeded the most optimistic estimates. Army Engineers had set 1000 square feet per day as an average. WRA estimates were even lower. However, after one week's training, workers seldom averaged less than 1800 square feet per day while the more skilled went as high as 2500 to 3000.

In this connection it may be interesting to quote from a letter dated October 24, 1942 from the San Francisco Regional Office: "Previous studies by the United States Engineering Department resulted in an estimate of 1000 square feet of garnished nets per person per eight hour day The Industrial Division (WRA) believes that with proper incentive and remuneration the net garnishers could maintain a production of 95 square feet per hour over an eight hour day and deliver an average of 760 square feet."

For the month of March, 1943 daily production went as follows:

<u>Date</u>	<u>Square Feet</u>	<u>No. of Weavers</u>
1	*652,006	432
2	887,912	423
3	866,844	420
5	*491,515	416
8	893,164	416
9	863,338	434
10	917,372	423
11	*490,488	420
12	954,992	427
13	*475,852	410
15	*596,636	409
16	966,076	437
17	976,352	458
18	*414,948	449
19	1,011,104	447
20	*504,964	438
22	826,492	462
23	1,069,492	465
24	1,122,848	466
25	1,103,872	466
26	1,170,146	468
29	923,568	462
30	1,109,456	471
31	1,199,016	470

*High wind. Production always fell on these days and sometimes it was necessary to cease operations as the wind would catch the suspended nets and billow them until work was impossible.

All evacuee workers were compensated on a piece rate basis: 1. The weavers on a square footage processed; 2. The cutters on a burlap cut; 3. The reefers on footage reefed; 4. Warehousemen on footage packed. Foremen were paid in proportion to work completed in their respective sections or divisions.

Average daily wages were extremely high for this type of work as it was unskilled and any job could be mastered in less than eight hours. For example on a good day, March 31, the 470 garnishers produced 1,199,016 square feet. This is a per person average of 2551 square feet. At 48¢ per hundred this averages \$12.24 per person. Other classifications earned in proportion.

Whether somebody miscalculated or whether the whole thing was just sluffed over is a moot question. However there seems to be standing room to believe the ball was fumbled. Army Engineers, who set the piece rate, either did not analyze the production possibilities thoroughly or else they underestimated Japanese productive capacity. Yet the most backward student of eighth grade arithmetic could have rapidly calculated the money making possibilities at the rate established. Furthermore even a casual time study of the operations involved would have shown the scale to be sky-high.

The processing of nets embraced four general operations:

1. Cutting
2. Weaving
3. Reefing
4. Warehousing

Purse-seine nets were suspended length-wise on rigs which could be raised or lowered to convenient heights. A pattern, previously approved by Army Engineers, was hung flush with the net to be garnished. Workmen then interlaced two-inch strips of burlap 60 inches long into the net according to the pattern hanging before them. When the net was completed it was removed from the rig and another hung in its place - the same pattern being used over again. Each rig accommodated from 8 to 16 workers, depending on the size of the net being processed. The following sizes were produced:

<u>Size</u>	<u>Square Footage</u>
12 x 12 feet	144
22 x 22 "	484
30 x 30 "	900
36 x 44 "	1584
20 x 60 "	1200
36 x 60 "	2160

The burlap used in net garnishing came in rolls two inches wide and 300 feet long. These rolls were cut to five foot lengths by winding them onto a motor driven reel 60 inches in circumference and then cutting straight across the reel with a sharp knife which gave strips of the desired length. The number of strips woven into each net depended on its size.

<u>Size</u>	<u>Square Footage</u>	<u>No. of Strips</u>
12 x 12 feet	144	100
22 x 22 "	484	250
30 x 30 "	900	450
36 x 44 "	1584	775
20 x 60 "	1200	560
36 x 60 "	2160	1175

Three blends of nets were produced - Winter, Summer and Desert. Different shades of burlap were, of course, used for each blend. These ratios were in accordance with Army specifications.

Completed nets were spread in the yards and inspected by U.S.E.D. personnel for workmanship and adherence to specifications. Upon acceptance the nets were folded into compact sizes, transported to the warehouse, wrapped in watertight paper, strapped with steel bands, stenciled and shipped to army depots.

The camouflage project employed an average of better than 500 workers from January 1, 1943, until its close May 26, 1943. About 35 per cent were women. On March 31, 1943 the evacuee personnel was divided as follows:

Garnishers	470
Shed Foremen	5
Reefer Foreman	1
Reefers	14
Cutter Foreman	1
Cutters	14
Warehouse Foreman	1
Warehousemen	14
Seamstress	2
Checker	1
Statistician	11
Maintenance	1
Clerks	3
Accountant	1
Timekeeper	1
General Superintendent	1

The contractor maintained two Caucasians on the project - a general manager and an office manager. The job operated eight hours per day, five days per week.

The project was located on the west side of the camp, the grounds measuring 900' x 600'. There were nine cement floored buildings with dimensions as follows:

5 weaving sheds	250' x 264"
1 cutting shed	200' x 264"
1 warehouse	400' x 60'
1 latrine (women)	82' x 228'
1 latrine (men)	60' x 20'

The weaving sheds were 26' high and closed on three sides, being open on the north side. The cutting shed was open on all four sides. The warehouse was completely closed.

There was a feeling among the workers and in the community generally that somebody missed the boat in not publicizing the project. Here was a golden opportunity to present one little dab of unrefutable evidence that all Japanese were not suspicious characters. Instead the project operated on a sort of "hush-hush" basis with few outside official circles aware of its existence. Although giving favorable recognition to Relocation Centers was unpopular at that time, undoubtedly many news agencies would have carried objective stories.

Two persons of national importance visited the project while it was in operation - Mrs. Eleanor Roosevelt and Westbrook Pegler. It is probably unnecessary to add that these visits did not come simultaneously. Mrs. Roosevelt's call was most pleasant and her interest in the work and the workers was greatly appreciated. Mr. Pegler was his usual peptic self but he asked a great many searching questions and his interest appeared genuine.

Two events occurred while the project was in operation with almost fatal consequences.

Army registrations were held during January and February of 1943 with the bumbling questions numbers 27 and 28 which more or less dared evacuees to state where their loyalty rested. About 10 per cent of those employed at the time, 46 of 480, took up the date and answered "no" to both questions. Immediately those who had answered "yes yes" raised a howl at working with the "no no's". The matter was finally settled by segregating the two groups. This worked out very well as it aroused a spirit of competition between the two.

Almost the last straw was the Selective Service classification of 4C given to many workers. Although the workers were citizens and therefore did not fall within the 4C group no one was ever able to make Selective Service see the point. Consequently many quit on the theory that if they were classed as enemy aliens they might as well act the part.

There are a number of mentionable disconnected observations:

1. Generally speaking the evacuees were eminently qualified for this work. Their manual dexterity was extremely good and they were not disturbed by the monotony of the work.
2. Surprisingly enough and somewhat contrary to expectations they were not easily disciplined. Probably environment had a lot to do with it. In addition Japanese foremen refused to take a strong stand in any matter requiring disciplinary action or enforcing project regulations. No doubt this hesitancy stemmed from the fact that unpleasant relations on the job would cause unpopularity in the Center. If it had to be done over again undoubtedly Caucasian supervisory personnel would be used.
3. Evacuees, on the job at least, were not cooperative with one another. They were rugged individualists at all times and let the weak take what was left. Never was a worker or a crew willing to surrender any position or advantage for the benefit of co-workers.
4. They were not labor or union minded. The management attempted on many occasions to establish workers' committees to handle grievances but the idea was never accepted. They presented their cases individually with no attempt to form a united front.
5. Evacuees rejected emphatically any contention their employment was motivated solely on the grounds of loyalty to America. Their position was that the peaceful surrender of heretofore inalienable citizenship rights amply demonstrated loyalty; they worked for the same reason any other citizen worked.
6. Niseis and Kibels did not work well together. As a general rule Niseis were the instigators of dissention. However, the evacuee general superintendent was a Kibel and did a fine job. He is now the maintenance superintendent of the largest machine shop in Cleveland, Ohio.

7. Certainly the trust fund idea did not work to satisfaction. It would have been far better to have given the workers all their earnings and then required them to pay going rates for maintenance.

8. A great many "viewers with alarm" were expecting acts of sabotage on the project. There was never an iota of evidence that this element was ever present.

9. There were no serious fires during the life of the project. On two separate occasions small fires started but both were extinguished without damage. One resulted from the overheating of a 1/4 horsepower motor used to drive the cutting reels. The other undoubtedly came from a carelessly thrown cigarette.

10. Out of some 60,000 man days there were two accidents which resulted in lost time. Both were avoidable and came from violation of safety regulations.

11. The most serious industrial hazard was a rash which some workers developed from the dye in the burlap. Workers who were allergic to this had to be terminated. Although quite a number developed this rash in a minor degree only about five per cent required separation.

This report would be remiss if it did not give credit to the Japanese-American Legion Post in the Center. The Legionnaires, citizens by reason of service in World War I, were an influential and well organized group. They not only assisted in recruiting but they also, as a group, took over the most disagreeable job - cutting burlap strips for the weavers. They were all older men, some in their 50's, and many quite wealthy. These men not only were an inspiration to the younger people but were, because of their age and standing in the community, a steadying influence. From 16 to 20 Legion members were employed.

*American
Legion at
Center*

The project officially closed May 26, 1943 after having produced a little over 80,000,000 square feet of camouflage netting. Payrolls for the period amounted to between \$350,000 and \$400,000 with \$67,000 going to the Community Trust Fund for later distribution.

Its closing was both abrupt and surprising. The workers and Community always felt that in view of its fine production record and potentialities in public relations, the project would be continued. But when the time came it quietly folded its tent and, like an Arab, faded into the night. Camouflage died as it

had lived, unsung, unheard, and, apparently, unregretted. Neither the Army Engineers, who sponsored the project, nor the War Relocation Authority, who fathered it, ever praised its accomplishments or explained its termination.

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