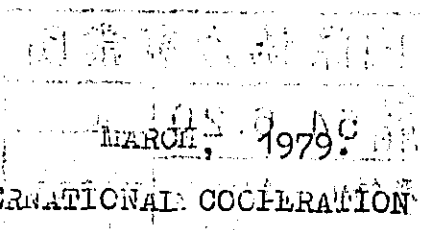


THE SOCIALIST REPUBLIC OF THE UNION OF BURMA
MINISTRY OF TRADE
AGRICULTURAL AND FARM PRODUCE TRADE CORPORATION

FEASIBILITY STUDY ON RICE MILL PROJECTS
IN
THE SOCIALIST REPUBLIC OF THE UNION OF BURMA

INTERIM REPORT

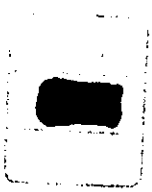


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Date: March 14 1979.

Colonel Kyi Thein
Managing Director
Agricultural and Farm Produce
Trade Corporation
70, Pansadan Street
Rangoon.

Dear Sir,

Re: Submittal of Interim Report.

We have the pleasure of submitting you herewith forty copies of the team's Interim Report of the feasibility study on Rice Mill Projects in the Socialist Republic of the Union of Burma in compliances with the Scope of Works for the said study which was decided by the Japanese Government in response to the request of the Government of the Socialist Republic of the Union of Burma.

The report briefs the team's findings so far made through the team's field observation and discussion with parties concerned and also through study the information and data so far provided from the authorities concerned since the team's arrival in your country on January 31, 1979.

We would like to express our gratitude to you and the counterparts for the co-operation and co-ordination extended to us.

Hoping the report of the study will bear fruitful prospects in the very near future, We remain

Respectfully yours,

Reichi Kuroba

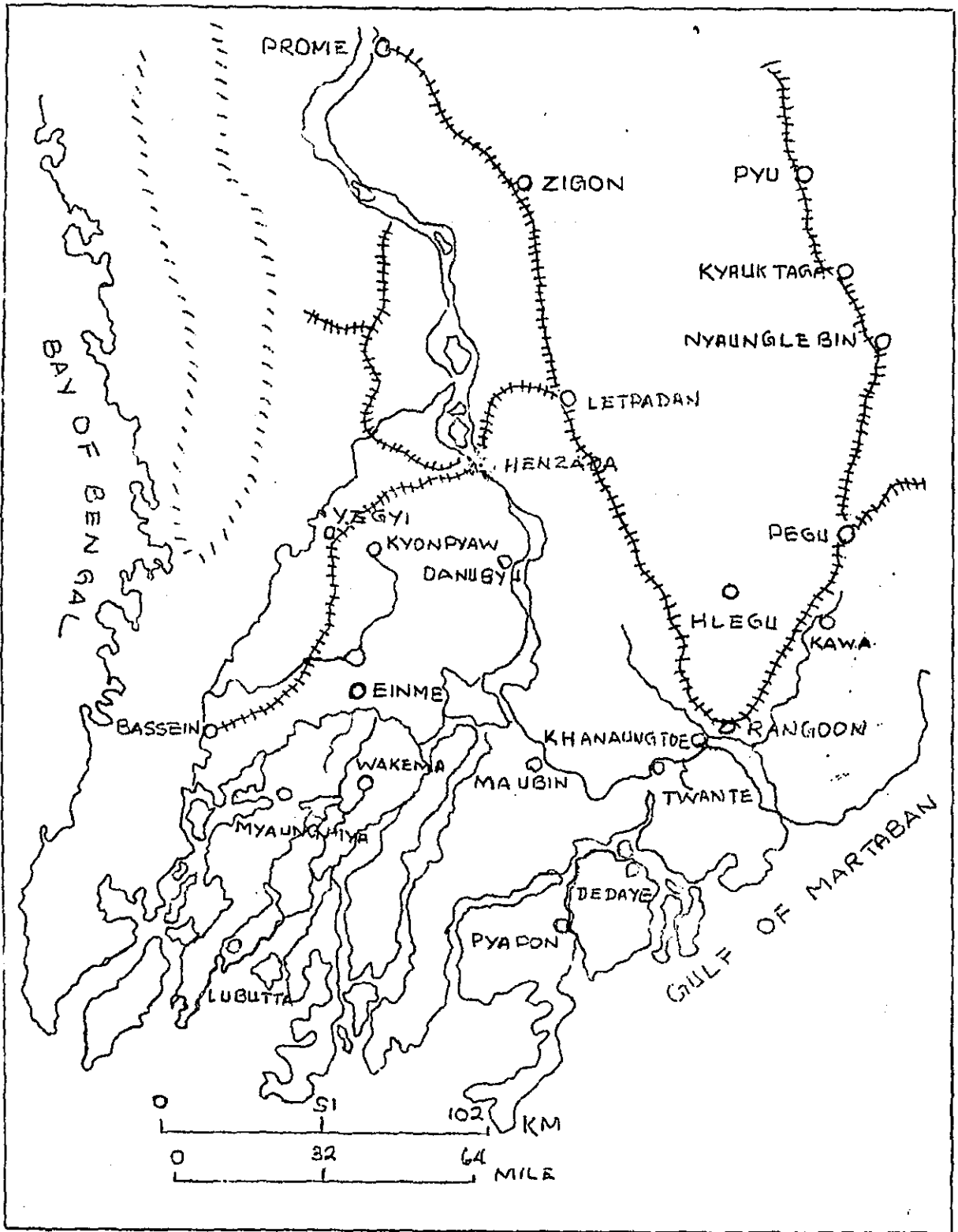
R. Kuroba
Leader

Feasibility Study Team
on Rice Mill Projects.

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C O N T E N T S

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I. Introduction

In response to the request of the Government of the Socialist Republic of the Union of Burma (hereinafter referred to as "the Government"); the Government of Japan has decided to undertake the feasibility study for the Rice Mill Projects (hereinafter referred to as "the Project") as a part of the Government of Japan's technical co-operation programme.

Japan International Co-operation Agency (hereinafter referred to as "JICA") is the executing agency and carries out the study with the co-operation of the Government.

The Agricultural and Farm Produce Trade Corporation (hereinafter referred to as "AFPTC") is the counter-part agency of the Government for the Project.

In order to verify the feasibility of the Project, the study has been divided into two stages.

At the first stage, the study has been performed on the fundamental conditions in the fields of agriculture, production and marketing of rice, rice milling industry/technology, etc. in the areas of the proposed sites for the Project.

At the second stage, the study will be made on general situation in connection with the Project at home office in Japan.

The study team has conducted the field works in Burma and will make home office works in Japan.

II. Work performed

II-1. General

The first main group of seven members in the team arrived in Rangoon on January 31, 1979 at 19:30 Hrs.

The seven members are Mr.R.Kuroba, the leader and Messrs. I.Yanagisawa, T.Horii, Y.Takahashi, the sub-leader, Y.Takata, S.Ueki, and K.Fukuchi. (Annex 1, the list of member).

On the following day, February 1, 1979, after courtesy visits to the Burmese Government (The Ministry of Planning and Finance, the Foreign Economic Relations Department) and Japanese Embassy, the team had a meeting with competent staff of AFPTC at their office. (Annex 2, the minutes of the meeting.)

On February 2, 1979, the meeting was continued. The Scope of work drafted by the team was discussed and accepted by AFPTC. The counterparts were nominated as listed in Annex 3. (Annex 4, the minutes of the meeting.)

On February 3, 1979, the team discussed on the field survey with AFPTC and its itinerary was decided. AFPTC agreed to make all necessary arrangements for the field survey and to cooperate with the team. (Annex 5, the observation trip schedule.)

The second group of three members, Messrs . R. Okada, Y.Koga and T.Ando arrived on February 5, 1979.

Good enough space for the team to work daily has been provided in the AFPTC's building.

The first observation trip was conducted from February 7 to 10, 1979 and the second observation trip was conducted from February 19 to March 1, 1979 in accordance with the schedule.

II-2 Field Survey

The team carried out the field survey in accordance with the Scope of Works of which details are mentioned below. Further deliberation is considered necessary to conclude the final decision.

2-1 The first field observation trip

The team had the first field observation trip from February 7 to 10, 1979 and visited four proposed sites in the Project, located in four townships, i.e. Kyauktaga, Kawa, Hlegu and Dalla (Khanaungtoe).

2-2 The second observation trip

The team had the second observation trip by the river boat arranged by AFPTC from February 19 to March 1, 1979 and visited four proposed sites in the Project, located in four townships, i.e. Danubyu, Einme, Bassein and Dedaye.

Kyauktaga

1. Field Survey

1-1 Date: Feb. 7, 1979

1-2 Project Sites: The undermentioned sites No.1, No.2 and No.3 were surveyed with local officials concerned in accordance with the Scope of Works.

Sites No. 1, No.2, and No.3

Tha-Htay-Gone Village,

Kyauktaga Township.

1-3 Rice Mill :

(1) AFPTC Rice Mill No.73 (Parboiled Rice Mill).

(2) Baw Ga Thein Gee Rice Mill(Private, dealing with AFPTC).

1-4 Buying Depot : Depot near the Tha-Htay-Gone Railway Station.

2. Discussion :

2-1 Date : Feb. 7, 1979

2-2 Place : AFPTC Nyaunglebin Consolidated Township Office.

2-3 Attendants: U Myint Thein,
Consolidated Township Manager,
Nyaunglebin & other Officials
of AFPTC.

2-4 Main Subject :

(1) General background and requirements of the new rice mill project in Kyauktaga.

(2) Parboiled rice production in this area.

(3) Quality of paddy in Kyauktaga.

Kawa

1. Field Survey

1-1 Date: Feb. 8, 1979

1-2 Project Sites:

Sites No.1, No.2 and No.3

Ohn Hne Village, Kawa Township.

2. Discussion

2-1 Date: Feb. 8, 1979

2-2 Place: AFPTC, Pegu Division Office.

2-3 Attendants:

(1) U Toe Kywe, Divisional
Manager and other Officials
of AFPTC.

(2) Engineers of Construction
Corporation.

(3) Engineers of Electric
Power Corporation.

(4) Officials of Agriculture
Corporation.

2-4 Main Subject:

(1) General background and require-
ments of the new rice mill
project in Kawa.

(2) Procurement of paddy, milling
and storage capacity and rice
/paddy flow in Kawa.

(3) Flood in rainy season and
foundation of the proposed
rice mill in this area.

(4) Land transportation of paddy
and rice.

(5) Power supply and its availability
programme in Kyauktaga and Kawa.

Hlegu

1. Field Survey

1-1 Date: Feb. 9, 1979

1-2 Project Sites:

Sites No.1-A, and No.1-B in
Paik Kyee We Village and
No.2 in Indaing Village.

2. Discussion

2-1 Date: Feb. 9, 1979

2-2 Place: Hlegu Township People's Council
Office.

2-3 Attendants:

- (1) Major Thein Tun, Chairman,
Township Party Unit.
- (2) Major Sein Hlaing Tin,
Chairman, Township People's
Council.
- (3) U Kyaw Maung, Consolidated
Township Manager, Taikkyi AFPTC.
- (4) Daw Khin Aye, Hlegu Township
Manager, AFPTC and other
Officials of AFPTC.

2-4 Main Subject:

- (1) General background and require-
ments of the new rice mill
project in Hlegu.
- (2) Paddy and rice production in
this area.
- (3) Existing railway and its exten-
sion programme in this area.
- (4) Possibility of riverine trans-
portation.
- (5) Power supply and its availability
programme in this area.

Khanaungtoe

1. Field Survey

1-1 Date: Feb. 10, 1979

1-2 Project Sites:

Site No.1: Pathoin Village,
No.10 Ward, Dalla
Township.

Site No.2: Pathoin Village,
ABC ward,
Dalla Township.

1-3 Warehouse: Khanaungtoe State Owned Ware-
houses.

1-4 Buying Depot: No.10 Depot at the Warehouse.

2. Discussion

2-1 Date: Feb. 10, 1979

2-2 Place: State Warehouse No.10.

2-3 Attendants: U San Win, Consolidated Township
Manager, Rangoon and other AFPTC
Officials.

2-4 Main Subject:

(1) General background and require-
ments of the new rice mill project
in Khanaungtoe.

(2) Paddy and rice production in this
area.

(3) Electricity supply programme in
this area.

(4) Old rice mills in Khanaungtoe.

Danubyu

Field Survey

1-1 Date: Feb. 20, 1979

1-2 Project Sites:

Sites No.1 and No.3: Ye-Twin Gone
Village, Danubyu Township.
Site No.2: Thabaung Village,
Danubyu Township.

1-3 Rice Mill:

- (1) Lu Du Myitta Rice Mill(Wunza).
- (2) Lin Yaung Oo Rice Mill
(Dealing with AFPTC).

1-4 Warehouse:

- (1) One warehouse is scheduled to be
constructed by ADB Project in
Ye Twin Gone.
- (2) Myoma Godown

1-5 Depot: Field Depot, Ye Twin Gone.

2. Discussion

2-1 Date: Feb. 20, 1979

2-2 Place: Township People's Council Office.

2-3 Attendants:

- (1) Officials of Township People's
Council.
- (2) U Win Tin, Consolidated Township
Manager, Kyonpyaw and other
Officials of AFPTC.
- (3) Engineers of Construction
Corporation.
- (4) Engineers of Irrigation Dept.
- (5) Engineers of Electric Power
Corporation.
- (6) Officials of Agriculture
Corporation.

2-4 Subject:

- (1) General background and requirements of the new rice mill project in Danubyu.
- (2) Significant location of Danubyu in terms of riverine transportation in this area.

Einme

1. Field Survey

1-1 Date: Feb. 22, 1979

1-2 Project Sites:

Site No.1 : Kwin No.50 (A)
Kangyi Myauk.

Site No.2 : Kwin No.50 (A)
Kangyidaung Kwin.

Site No.3 : No.20(A)
Shweyaung Pya Kwin.

1-3 Rice Mill:

(1) Einme AFPTC Rice Mill (ADB Project).

(2) Chit Kyi Ye Rice Mill (Wunza).

(3) Danabala Rice Mill (Dealing with
AFPTC).

1-4 Warehouse: Permanent and temporary warehouses near the site No.1.

2.

Discussion

2-1 Date: Feb. 22, 1979

2-2 Place: Einme Township People's Council
Office.

2-3 Attendants:

- (1) U Mya Than, Chairman, Township
People's Council.
- (2) U Saw Aung, Consolidated Town-
ship Manager, Myaungmya and
other Officials of AFPTC.
- (3) Officials of Agriculture
Corporation.
- (4) Engineers of Electric
Power Corporation.

2-4 Main Subject:

- (1) General background and require-
ments of the new rice mill
project in Einme.
- (2) Warehouse Construction Pro-
gramme.
- (3) Riverine transportation.

Bassein

Field Survey

1-1 Date: Feb. 24, 25 & 26, 1979

1-2 Project Sites:

Site No. 1: Old site of
Taik Swan Rice
Mill, Bassein West
Township.

Site No. 2: Einme Jan-Block(86)
N.C.Marlar Rice
Mill, Bassein West
Township.

1-3 Rice Mill

- (1) Hong Sein & Sons Rice Mill
(Dealing with AFPTC).
- (2) Hla Myitta Rice Mill (Wunza).
- (3) AFPTC 100 ton Rice Mill (MIAG).
- (4) KGA and U Cho Rice Mills (Dealing
with AFPTC).

1-4 Warehouse: AFPTC, Bassein West Warehouses.

1-5 Buying Depot: Depot at the Site No.1.
Depot No.5 Bassein West.

2. Discussion

2-1 Date: Feb. 26, 1979

2-2 Place: Divisional People's Council Office.

2-3 Attendants:

- (1) Lt. Col Aye Khaine, Chairman
of Divisional People's Council.
- (2) U Kyaw Mg, Divisional Manager
and other officials of AFPTC.
- (3) Officials of Agriculture
Corporation.
- (4) Engineers of Construction
Corporation.
- (5) Engineers of Electric Power
Corporation.

2-4 Main Subject:

- (1) General background and requirements of the new rice mill project in Bassein.
- (2) Power supply and its availability programme in Danubyu, Einme and Bassein.
- (3) Parboiled rice production in this area.
- (4) Quality of paddy in this area.

Dedaye

1. 1-1 Date: Feb. 28, 1979
- 1-2 Project Sites:
Sites No.1, No.2, and No.3
Meikban Kwin, Dedaye Township.
- 1-3 Warehouse: Warehouses adjacent to the sites No.1, No.2 and No.3.
- 1-4 Buying Depot: Depot No.(2), No.(4), No.(5).
2. Discussion
- 2-1 Date: Feb. 28, 1979
- 2-2 Place: On board of Boat ML 803.
- 2-3 Attendants:
 - (1)U Kyaw Than, Chairman of Township Party Unit.
 - (2)U Khin Maung Kywe, Consolidated Township Manager, Maubin and other AFPTC Officials.
- 2-4 Main Subject:
 - (1)General background and requirements of the new rice mill project in Dedaye.
 - (2)Paddy and rice production in this area.
 - (3)Flood and land level.
 - (4)Quality of paddy.

III Findings

III-1 Production of Paddy

In Lower Burma, harvesting of paddy is done by manual labour with sickle, usually from November to January. After reaping, farmers dry paddy bundles in the field and thresh them by animal treading. After threshing by buffaloes or bullocks, paddy is roughly cleaned by manual winnowing method.

Planned Production of paddy for the whole country is as follows:

	<u>Year</u>	<u>Matured Acreage</u> (Acre)	<u>Yield per Acre</u> (BKT)	<u>Production</u> (1000 BKT)
(Actual)	1977/78	12,019,221	37.73	453,476
(Provisional)	1978/79	12,343,329	38.55	475,836
(Plan)	1979/80	12,390,742	39.92	494,783
(Plan)	1980/81	12,444,433	41.35	514,602
(Plan)	1981/82	12,536,114	42.54	533,321

BKT = Basket (46 lbs. of paddy)

III-2 Procurement

Under the present regulations, procurement of paddy is controlled by the Government and AFPTC is the sole executing agency in the project area. The delivery quota of paddy is fixed at every crop season by the local authorities and the farmer has to deliver his quota of paddy to AFPTC's buying depot within a certain period.

Considerable amount of red grains were found and observed in Nyaunglein.

The latest procurement of paddy as at March 5, 1979, for the whole country is 178,491,725 basket.

<u>Year</u>	<u>Planned Procurement Target</u> (1,000 BKT)
1977/78	160,700 (Actual: 107,087,614)
1978/79	164,000 (Provi: 178,491,725)
1979/80	170,000 (Plan)
1980/81	180,000 (Plan)
1981/82	194,000 (Plan)

The number of buying depot of the whole country for the year 1978/79 is 898.

Mobile Depot	44
Field Depot	267
Mill Depot	332
Warehouse Depot	255
Total	<u>898</u>

III-3 Storage

Most of the warehouses for paddy and rice storage are owned by AFPTC and number of warehouses by type are shown below:

<u>Type</u>	<u>Nos.</u>	<u>Storage capacity</u> (1,000 BKT)
Permanent	1,171	50,144
Semi-Permanent	684	12,350
Temporary	363	7,112
	<u>-----</u>	<u>-----</u>
AFPTC Total	2,218	69,606
Private	1,941	42,882
	<u>-----</u>	<u>-----</u>
National Total	4,159	112,488

However, number and space of warehouses for paddy and rice are obviously insufficient in many places. As a consequence, a great quantity of procured paddy is piled on the open ground without any shed or cover. This causes heavy damage to paddy in quality as well as in quantity.

III-4 Transportation

In general, farmers carry their paddy to a buying depot by small boat or bullock cart. Riverine transportation is prevailing means for carrying paddy and rice in Lower Burma. AFPTC hires many cargo barges to transport paddy and rice from producing areas to milling centers, consuming cities or exporting ports.

Number of barges hired by AFPTC is about 85 with a total capacity of about 17,000 tons. These barges have to cater not only to the needs of AFPTC for transporting paddy and rice but also for the transportation of general cargo. Thus, this transport capacity greatly falls short of the actual requirement.

III-5 Rice Mill

There are a total of 1877 rice mills in Burma and its classified number is as follows:

State (AFPTC) owned rice mill	44
Private rice mill (dealing with AFPTC)	829
Private rice mill (so called Wunza)	1004
Total:	<u>1877</u>

Most of these mills are more than 25 years old. Some of the facilities are out of date. Primary constraint in milling industry in Burma is age old machines and also short supply of spare parts.

There are 1,198 registered huller units other than the above mentioned rice mills.

III-6 Export of rice and Grading

According to the information given by AFPTC,

kt.

export of rice in these 5 years is as follows:

<u>Year</u>	<u>Quantity</u> (Long Ton)	<u>Value</u> (1,000 Kyats)
1973/74	71,227	132,004
1974/75	165,912	314,191
1975/76	330,702	537,405
1976/77	537,799	660,674
1977/78	562,433	805,741
1978/79 (up to Oct:)	160,900	224,500

Considering the present international rice market, it is necessary for Burma to improve quality of rice so as to compete with other country's rice in foreign market. In this respect, the grading system of rice, staff and equipments are far from satisfaction.

III-7 Points of Study

During the course of discussions at the meeting with the Departments concerned and the field study trips at the project areas, the team has had strong impression that the improvement of rice milling industry is of vital importance to Burma. National economy of Burma relies on rice production and export of rice is the major source of foreign exchange earnings.

Therefore, this Rice Mill Project has a significant attribution to the Government in implementation of the Third Four Year Plan (1978/79 - 81/82) and the Five Year Development Programme (1977/78 - 81/82). With this in mind, the team thoroughly studied in every aspects relating to this Project. The team especially focussed on the following points in conducting of the feasibility study.

1) Taking into account the present situation of international rice market, which is evidently quality market, the new rice mills under this Project should be advanced and integrated rice milling complexes which can produce high quality rice for export.

2) Local conditions such as marketing, transportation, storage, power supply etc. are fundamental in selecting of the project sites.

3) Quality of paddy and improved post-harvest systems are essential to make good quality of rice for export, otherwise modern rice milling machinery alone cannot ameliorate many defects existing in paddy grains. In this connection, a positive and prompt decision need to be taken by the Government to launch systematic schemes for reformation in various phases of works.

As mentioned in the Scope of Works, the team shall study further with respect to the cost estimation and economic justification at the home office and make reports accordingly.

III-8 Technical aspects.

After discussion with the team, AFPTC detailed the technical aspects in formulation of the Project. The team will study further at home with due consideration for those problems discussed with AFPTC.

(Annex: 6)

SCOPE OF WORKS

FOR

FEASIBILITY STUDY

ON

RICE MILL PROJECTS

IN

THE SOCIALIST REPUBLIC OF THE UNION OF BURMA

February 1979.

1. INTRODUCTION

In response to the request of the Government of the Socialist Republic of the Union of Burma (hereinafter referred to as "the Government"), the Government of Japan has decided to undertake the feasibility study for the Rice Mill Projects (hereinafter referred as "the Project") as a part of the Government of Japan's technical cooperation programme. This scope of works for the survey of the Project is prepared describing the items to be surveyed, and services and facilities to be provided by the Government for the smooth execution of the survey. JICA will be the executing agency and carry out the survey with the cooperation of the Government,

The Agricultural and Farm Produce Trade Corporation will be the counterpart agency of the Government for the Project.

2. OBJECTIVES OF THE STUDY

2-1 To verify the feasibility of the Project.

2-2 To undertake on the job training of the counterparts in the course of the survey and study.

3. OUTLINE OF THE STUDY

3-1 PROGRAMME OF THE STUDY

The study will be conducted in two stages.

At the first stage, the study will be made on the fundamental conditions in the fields of agriculture, production and marketing of rice milling industry / technology, etc.

At the second stage, the study will be made on general situation in connection with the Project.

The study team will conduct field works in Burma and make home office-works in Japan.

3-2 FIELD WORKS

The field works will be made on the following items of the works:

- (1) to collect and analyze the necessary data and information including:
 - a. Production and marketing of rice
 - b. Rice milling industry and technology
 - c. Quality and grading systems of rice
 - d. Storage and drying of rice
 - e. Handling and transportation of rice
 - f. Other points to be necessary to formulate the Project
- (2) to carry out reconnaissance survey of the Project sites.
- (3) to select and delineate the Project sites based on the review of data and information and reconnaissance survey, and
- (4) to carry out field works in the Project area including the following items:
 - a. Topography
 - b. Meteorology
 - c. Rice distribution
 - d. Transportation means of paddy
 - e. Milling capacity of each Project site
 - f. Building and structure of rice mills.

- g. A unit cost of materials and supply conditions
- h. Selecting suitable sites and study of land ownership
- i. Optimum scale of rice mill
- j. Others necessary to accomplish the Project

3-3 HOME OFFICE WORKS

Based on the results obtained by the field works, the home office works will be carried out for the study on the following items:

- (1) to formulate the basic plan for the Project together with the preliminary estimation of construction costs and benefits,
- (2) to prepare predesign of the Project,
- (3) to determine a final layout of the Project
- (4) to estimate the costs and benefits of the Project,
- (5) to make economic evaluation, and
- (6) to prepare the implementation schedule of the Project.

4. WORK SCHEDULE

The study team will work in accordance with the schedule attached hereto.

5. REPORT

5-1 INTERIM REPORT

The team will make an interim report in English and submit 40 copies of it to the Government by the end of March, 1979.

5-2 DRAFT REPORT

JICA will make a draft report in English and submit 40 copies of it to the Government at the end of the home office works.

5-3 FINAL REPORT

JICA will make a final report in English and submit 80 copies of it to the Government at the middle of August, 1979.

6. UNDERTAKINGS OF THE GOVERNMENT

To facilitate smooth performance of the field work, the Government is required:

6-1 to provide the necessary data and information for the study and permit to bring them back to Japan for the home office works.

6-2 to arrange for the quick and smooth custom's clearance of the survey equipment and materials which the team members will bring in and back to Japan, and to exempt from any taxes and duties imposed on those survey equipment and materials brought by the team members.

6-3 to request the ministries and other governmental organizations concerned to cooperate with the team in smooth execution of the survey.

6-4 Counterpart personnel in the following fields should be appointed to cooperate and co-ordinate with the team so as to achieve the effective results in the study.

1. Agronomy
2. Agro-Economy
3. Rice Milling

4. Quality Control of rice
5. Storage and Drying
6. Building and structure
7. Electricity

The number of counterpart personnel and their respective assignment periods should be decided in consultation with the team before the commencement of the study.

6-5 to provide the team with accomodation and transportation at the Project area as well as in Rangoon.

6-6 The necessary arrangement should be made to obtain the permission of the authorities concerned for the team to conduct the study in the Project areas.

7. UNDERTAKINGS OF THE GOVERNMENT OF JAPAN

For the purpose of the survey, the Government of Japan will assist to the extent possible;

7-1 to send the Japanese expert team to conduct this survey,

7-2 to transfer the knowledge to the counterparts during the period of the survey and study.

(Than Myint)
Project Director
Agricultural and Farm Produce
Trade Corporation

(Reiichi Kuroba)
Leader,
Feasibility Study Team On
Rice Mill Projects

Appendix-1

RICE MILL PROJECTS
TENTATIVE SCHEDULE

Items	Year	1979							
	Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
1. Preparation of Survey(in Japan)		—							
2. Field Works			—						
3. Home Office Work				—					
4. Preparation of Reports				—				—	—
5. Draft Mission								—	

~~February 1979~~

I T I N E R A R Y

January 1979

FEASIBILITY SURVEY ON RICE MILL PROJECTS

IN

THE SOCIALIST REPUBLIC OF THE UNION OF BURMA

NAME OF MISSION: FEASIBILITY SURVEY TEAM ON RICE MILL
PROJECTS

DURATION : JAN. 30, 1979 - MAR. 16, 1979.

<u>S/No.</u>	<u>Date</u>	<u>Particulars</u>	<u>Lodging</u>
1	Jan. 30 (Tue)	Departure of the Mission (1st Group, 7 experts) Tokyo-Bangkok	Bangkok
2	Jan. 31 (Wen)	Arrival of the Mission (7 experts) Bang-Rangoon	Rangoon
3	Feb. 1 (Thu)	Courtesy Visit to Burmese Government and Japanese Embassy; Discussion	"
4	Feb. 2 (Fri)	Discussion with Burmese Government on Scope Works	"
5	Feb. 3 (Sat)	Preparation for F.S. and Discussion on S.W.	"
6	Feb. 4 (Sun)	Discussion among the Mission Members	"
7	Feb. 5 (Mon)	Opening Session with AFPTC, Arrival of 2nd group, 3 experts	"
8	Feb. 6 (Tue)	Session with AFPTC	"

<u>S/No.</u>	<u>Date</u>	<u>Particulars</u>	<u>Lodging</u>
9	Feb. 7 (Wen)	Initial F.S. and Field Observation Trip will be conducted	Project Area
10	Feb. 8 (Thu)	- do -	"
11	Feb. 9 (Fri)	- do -	"
12	Feb. 10 (Sat)	- do -	"
13	Feb. 11 (Sun)	- do -	"
14	Feb. 12 (Mon)	Union Day. Summing-up of Report & Session with the Authorities and Reporting to Japanese Embassy.	Rangoon
15	Feb. 13 (Tue)	(1) Departure of 3 members; Rangoon to Tokyo (2) Collection of Data	"
16	Feb. 14 (Wen)	Session with the Authorities concerned	"
17	Feb. 15 (Thu)	- do -	"
18	Feb. 16 (Fri)	- do -	"
19	Feb. 17 (Sat)	- do -	"
20	Feb. 18 (Sun)	Summing-up of Report and Data of F.S.	"
21	Feb. 19 (Mon)	2nd F.S. and Field Observation Trip will be conducted	Project Area
22	Feb. 20 (Tue)	- do -	"
23	Feb. 21 (Wen)	- do -	"
24	Feb. 22 (Thu)	- do -	"
25	Feb. 23 (Fri)	- do -	"
26	Feb. 24 (Sat)	- do -	"
27	Feb. 25 (Sun)	- do -	"
28	Feb. 26 (Mon)	- do -	"
29	Feb. 27 (Tue)	- do -	"
30	Feb. 28 (Wen)	- do -	"

<u>S/No.</u>	<u>Date</u>	<u>Particulars</u>	<u>Lodging</u>
31	Mar. 1 (Thu)	Summing-up Report and Data of F.S. 2nd F.S. and Field Observation Trip will be conducted <i>ended</i>	Rangoon
32	Mar. 2 (Fri)	Summing-up of Report and Draft of F.S.	"
33	Mar. 3 (Sat)	- do -	"
34	Mar. 4 (Sun)	- do -	"
35	Mar. 5 (Mon)	- do -	"
36	Mar. 6 (Tue)	- do -	"
37	Mar. 7 (Wen)	(1) Departure of 2 officials; Tokyo-Bangkok (2) Collection of Data	Bangkok Rangoon
38	Mar. 8 (Thu)	(1) Arrival of 2 officials; Bangkok (2) Collection of Data	Rangoon
39	Mar. 9 (Fri)	Summing-up of Report & Data of F.S.	"
40	Mar. 10 (Sat)	- do -	"
41	Mar. 11 (Sun)	Documentation for Interim Report	"
42	Mar. 12 (Mon)	Final Session with the Authorities concerned	"
43	Mar. 13 (Tue)	- do -	"
44	Mar. 14 (Wen)	Reporting to Japanese Embassy	"
45	Mar. 15 (Thu)	Departure of the F.S. Mission, (Rangoon to Bangkok)	Bangkok
46	Mar. 16 (Fri)	Arrival of the F.S. Mission, (Bangkok to Tokyo)	

FEASIBILITY STUDY TEAM
ON RICE MILL PROJECTS
IN
THE SOCIALIST REPUBLIC OF THE UNION OF BURMA

<u>ASSIGNMENT</u>	<u>NAME</u>	<u>PRESENT POSITION</u>
1 Leader	Reiichi KUROBA	Deputy Director, Purchase Division, Operation Department, Food Agency, Ministry of Agriculture, Forestry and Fisheries
2 Rice Milling	Isamu YANAGISAWA	Section Chief Inspection Division, Management Department, Food Agency, Ministry of Agriculture Forestry and Fisheries
3 Coordination	Tsugio HORII	Officer, Technical Affairs Division, Agricultural and Forestry Planning and Survey Department, Japan International Cooperation Agency
4 Sub-Leader Marketing and Quality Control	Yoshio TAKAHASHI	Director, Consultants Department, Overseas Merchandise Inspection Co., Ltd.
5 Economic Evaluation	Ryuichi OKUDA	Advisor, Overseas Merchandise Inspection Co., Ltd.
6 Rice Plant	Yasumasa KOGA	Technical Advisor, Overseas Merchandise Inspection Co., Ltd.
7 Building and Structure	Yoshizo TAKATA	Assistant Manager, Consultants Department, Overseas Merchandise Inspection Co., Ltd.
8 Agriculture	Shunichi UEKI	Assistant Manager, Produce Department, Overseas Merchandise Inspection Co., Ltd.
9 Storage and Drying	Koji FUKUCHI	Assistant Manager, Machinery and Plant Department, Overseas Merchandise Inspection Co., Ltd.
10 Electricity	Takahisa ANDO	Chief Engineer, Machinery and Plant Department, Overseas Merchandise Inspection Co., Ltd.

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

P.O. Box 216, Mitsui Bldg., 1,2-chome, Nishishinjuku, Shinjuku-ku
Tokyo, Japan 160

Notes of Discussion between the Representative of Japanese Mission and Officials of Planning, Statistics and Project Department on 1-2-1979.

P r e s e n t

Japanese Team

1. Mr. R. Kuroba
Leader.
2. Mr. Y. Takahashi
Sub-Leader.
3. Mr. I. Yanagisawa
Member,
4. Mr. T. Horri
Member.
5. Mr. Y. Takada
Member.
6. Mr. S. Ueki
Member.
7. Mr. K. Fukuchi
Member.

Burma Side

1. U Aung Kyi
General Manager,
AFPTC.
2. Colonel Htun Naung
General Manager,
AFPTC.
3. Daw Than Myint
Dy. General Manager,
AFPTC.
4. U Tun Nyunt
Asst: General Manager,
AFPTC.
5. U Chit Thaung
Engineer,
Rice Milling Dept,
AFPTC.
6. U Aye Kyu
Project Manager,
AFPTC.
7. U Myint Thein
Manager,
Planning & Statistics
AFPTC.
8. U Tun Kyi
Manager,
Project Dept.,
AFPTC.
9. Daw Khin Myint
Manager,
AFPTC.

The meeting was held with the General Manager in the chair.

Burma Side distributed booklets on Mill Sites.

The chairman opened the discussion by explaining that the booklets just distributed were the material regarding mill sites. He said that the siting for Hlegu was not included in it, but it would be given in 2 or 3 days. He also expressed the Corporation's need for additional and high quality mill-in capacity for exports. He said that most of private rice-mills had been in a very poor condition as some of them were built before the first World War. Therefore the Corporation was at a disadvantage whenever occasions arose to compete in the World Market.

The Mission Leader replied that they were sent by the Japanese Government with the instruction to do their best. He stated that the Team was aware of the important nature of the project and so promised to make the study and submit the report to the Japanese Government as soon as possible. He explained that the time allotted for home-work might appear unreasonably long, however, since it included the time for going through official procedures in Japan until the Government's approval is obtained, it was, in practical sense, quite reasonable. In any case, continued Mr. Kuroba, it could not be later than end August 1979.

The Chairman mentioned that the booklet included most of the urgent projects in priority areas, Therefore if the Yen Credit did not materialize in time, it might be necessary for the Corporation to permit other sources to come into some of the priority areas. The Chairman further explained that through years of experience the Corporation knew the kind of mills most suitable for Burma and as such the Corporation would give the broad-line specifications of the mills required. He also said that he expected the Japanese manufacturers would offer the most competitive prices and that those prices

were expected at least to be comparable to international prices.

The Japanese Mission agreed to the above in principle and they promised to go and make the studies at the sites soon.

Regarding the Agro-Economist Counterpart requested by the Japanese Mission the Chairman explained that Burma had worked with foreign financing sources like ADB or World Bank without giving such a counterpart. He further said that since such foreign organizations could do without an Agro-Economist counterpart he trusted that Japanese Mission could also do without one.

The Japanese Mission agreed to it.

The Chairman stated that with a view to shorten the time of study the Corporation would be willing to supply all the information supplied to other organizations and their recommendations for new projects, in order that the Yen Credit materialise soon. He said that it would depend on the report of the Term and the manner of their presentation.

The scope of work booklet was distributed by the Japan Mission and the time for discussion on it was fixed at 10:30 the next day (2-2-79).

The discussion ended at 16:00 hours.

(THAN MYINT)
Project Director
Agricultural and Farm Produce
Trade Corporation

(Reichi Kuroba)
Leader,
Feasibility Study Team On
Rice Mill Projects

Counterpart of AFPTC

U Aye Kyu, Project Manager	(Team Leader of counterparts)
U Myint Thein, Manager, Planning & Statistics	(Quality control, data, economic evaluation, etc.)
U Tun Kyi, Deputy Manager, Project Dept.	(Storage, transportation, etc.)
U Chit Thaung Engineer, Rice Milling Dept.	(Rice Mill, Dryer, etc.)

Remarks: The above designation of four counterparts is taken from the "Notes of Discussion" made of AFPTC.

ANNEX - 4

Notes of Discussion between the visiting Japanese Mission and the officials of the Government of the Union of Burma on 2nd February, 1979.

P r e s e n t

Japanese Side

1. Mr. R. Kuroba
Leader.
2. Mr. Y. Takahashi
Sub-Leader
3. Mr. I. Yanagisawa
Member
4. Mr. T. Horii
Member.
5. Mr. Y. Takada
Member
6. Mr. S. Ueki
Member.
7. Mr. K. Fukuchi
Member.

Burmese Side

1. U Aung Kyi
General Manager,
AFPTC.
2. C o l. Htun Naung
General Manager,
AFPTC.
3. U Nyunt Iwin
Assistant Director,
E.E.R.D.
4. U Aung Kyi
Assistant Director,
Directorate of Trade.
5. U Aung Tin
Assistant Manager,
Directorate of Trade.
6. Daw Than Myint
Dy: General Manager,
Project Dept., AFPTC.
7. U Tun Myint Nyo
Asst: General Manager,
Rice Milling Dept.,
AFPTC.
8. U Tun Nyunt
Asst. General Manager,
Planning & Statistic,
AFPTC.
9. U Chit Thaung,
Engineer,
Rice Milling Dept.,
AFPTC.
10. U Tun Kyi,
Manager,
Project Department,
AFPTC.

Burmeso Side

11. U Myint Thein
Manager,
Planning & Statistic,
AFPTC.
12. Daw Khin Myint,
Manager,
Project Department,
AFPTC.

The Project Director opened the discussion stating that Burma side would cooperate to the fullest and supply them with the required data. The draft scope of work submitted by the Japanese Mission previously was discussed and agreed that it could be acceptable in general. Going through each page, field work on Page 2 Para (1) was generally agreed upon. The discussion went on regarding the field work. It was agreed that items regarding topography and meteorology could be arranged when necessary. So also building and structure of rice mills would be discussed with the help of the Construction Corporation. As regards land ownership it should not be complicated the local authorities had been aware of the necessity of modern rice mills in their respective areas and their cooperation could be taken for granted. It was understood that this would be of no difficulty in the feasibility study.

It was agreed that the preparation of the pre-design could be made in consultation with Construction Corporation and Rice Mill Department.

Japanese side explained that the details of the design would be subject to alteration though the cost estimate should be final before their departure.

Burma side agreed to arrange for the field trips according to their itinerary (as attached) and cooperate with the Japanese Mission.

The discussion ended at noon.

(Than Myint)
Project Director
Agricultural and Farm Produce
Trade Corporation.

(Reiichi Kuroba)
Leader,
Feasibility Study Team On
Rice Mill Projects.

OBSERVATION TRIP SCHEDULE FOR FEASIBILITY STUDY TEAM ON RICE MILL PROJECTS

Sr. No.	Date	Station		Time		Particulars	Remarks
		From	To	ETD	ETA		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	7-2-79 Wednesday	Rangoon	Kyauktaga Thuhtaygon	05.00 Hrs	12.00 Hrs	Field Survey	By Car
		Kyauktaga	Nyaungle- bin	17.00 Hrs	18.00 Hrs	Halt	By Car
2.	8-2-79 Thursday	Nyaungle- bin	Kawa(Ohn Ib) (via)Pegu	06.00 Hrs	10.00 Hrs	Discussion at Pegu	By Car
		Kawa(Ohn Ne)	Rangoon	15.00 Hrs	19.00 Hrs	Field Survey	By Car
3.	9-2-79 Friday	Rangoon	Hlegu	06.00 Hrs	07.30 Hrs	Field Survey	By Car
		Hlegu	Rangoon	15.00 Hrs	17.30 Hrs		By Car
4.	10-2-79 Saturday	Rangoon	Kanaungto	07.30 Hrs	08.00 Hrs	Filed Survey	By Boat
		Kanaungto	Rangoon	12.00 Hrs	13.30 Hrs		By Boat

ANNEX - 5

OBSERVATION TRIP SCHEDULE FOR FEASIBILITY STUDY TEAM ON RICE MILL PROJECT

Sr. No.	Date	Station		Time		Particulars	Remarks
		From	To	ETD	ETA		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	19-2-79 Monday	Rangoon	Danubyu	08.00 Hrs	18.00 Hrs	Halt	By Motor Launch
2.	20-2-79 Tuesday	Danubyu				Field Survey	
3.	21-2-79 Wednesday	Danubyu	Einme	08.00 Hrs	18.00 Hrs	Halt	By Motor Launch
4.	22-2-79 Thursday	Einme				Field Survey	
5.	23-2-79 Friday	Einme	Bassein	08.00 Hrs	17.00 Hrs	Halt	By Motor Launch
6.	24-2-79 Saturday	Bassein				Field Survey	
7.	25-2-79 Sunday	Bassein				Field Survey	
8.	26-2-79 Monday		Discussion with Local Authorities				
9.	27-2-79 Tuesday	Bassein	Maubin	08.00 Hrs	20.00 Hrs	Halt	By Motor Launch
10.	28-2-79 Wednesday	Maubin	Dedaye	08.00 Hrs	12.00 Hrs	Field Survey & Halt	
11.	1-3-79 Thursday	Dedaye	Rangoon	13.00 Hrs	18.00 Hrs		

Note of Discussion between the visiting
Japanese Mission and the officials of the Government of
the Union of Burma at AFPTC on 6/3/79.

P r e s e n t

Japanese Side

1. Mr. Y. Takahashi
Sub-Team Leader
2. Mr. R. Okada
Member.
3. Mr. Y. Koga
Member.
4. Mr. Y. Takata
Member.
5. Mr. S. Veki
Member.

Burmese Side

- MAJOR
1. ~~Behnu~~ Than Swe
Dy: General Manager (Acting)
AFPTC.
 2. U Ba Than
Dy: General Manager
AFPTC.
 3. U Htun Kyunt
Asst: General Manager
AFPTC.
 4. U Aung Myint
Engineer
AFPTC.
 5. U Chit Thoung
Engineer
AFPTC.

Japanese Side

6. Mr. K. Fukuchi
Member.

7. Mr. T. Ando
Member.

Burmese Side

6. U Aye Kyu
Project Manager
AFPTC.

7. U Myint Thein
Manager
Planning & Statistics

8. U Tun Kyi
Manager
Project Department
AFPTC.

9. Daw Khin Myint
Manager
Project Department
AFPTC.

The meeting was held with Dy: General Manager
(Acting) in the Chair.

As the Team Leader was on a short trip back to
Japan, the Sub-Team Leader stated that the Japanese Team
wished to discuss the matter relating to the Specification,
design of rice mills and ~~and~~ also economic justification.
He also stated that in the first instance to know the idea
of the Corporation regarding the systems and the design
of the rice mills.

1. AFPTC realised that Japanese milling system using rubber rolls and abrasive milling machines had advantages over conventional milling systems especially for export.

However, AFPTC was afraid to encounter difficulties in future for the continued importation of such parts as rubber rolls and abrasive rolls due to replacement problem as the parts cannot be produced locally at present.

Under such circumstances, AFPTC strongly wanted to have the new rice mills with the Japanese milling system on condition that Japanese side would give Burma financial assistance for the construction of the manufacturing facilities of rubber rolls and abrasive rolls within the frame of this rice mill project, even at the sacrifice of one or two of the proposed rice mills out of eight.

It was understood by both parties that such arrangement would open the way for the overall modernization of Burmese rice mills in future.

2. Considering the fact that husk fired power generation requires high initial investment, AFPTC stated that two Rice Mills Projects in Kanaungtoe and Dedaye could be deferred until local electricity line be available at the sites. AFPTC and the team agreed that this subject should be discussed further with EPC at the meeting which would be held on March 8.
3. AFPTC reconsidered the parboil rice mill project in Bassein in view of its high cost estimated to construct a sophisticated plant. It was understood that reformation of the existing parboiling facilities with some improved machinery and equipments would be more economical and realistic for Burma under present situation.

3. AFPTC requested Japanese Team to propose a plan for a moderate and effective parboiling plant in place of the original plan. The team replied that they would do so but it would take some time to study the new scheme.
4. AFPTC stated that due to shortage of full information on using dryers the paddy dryers may be excluded in this Rice Mill Projects if necessary.
5. The team suggested that the warehouse project by the World Bank financial aid be implemented so as to secure the closet coordination with this Project particularly in respect of site selection. AFPTC agreed to request the authorities concerned to make an effective arrangements to link the new warehouse with the rice milling plant.
6. In reply to the question raised by the team, AFPTC explained the meaning of " turnkey basis " mentioned at the meeting on Feb. 2, 1979. AFPTC stated that the term of turnkey basis did not mean to give full responsibility to the supplier including foundation and installation of every buildings and facilities. AFPTC stated further that in Burma, Construction Corporation (CC) would take responsibility of constructing the building and foundations and AFPTC would fit and install machinery and equipments in accordance with the designs provided by the supplier and under the supervision of supplier's engineers.
7. At the request of AFPTC, the team explained about Central and Local Control Systems in the Rice Milling Plant. AFPTC would inform the team of its decision on the control system later taking into account of its cost and benefit. The team further explained about the nature and necessity of electric power receiving unit with power

condensers and AVR or a transformer with on-load tap charger and also lighting facilities in the plant. AFPTC fully understood these system and agreed to install them in the plant.

8. The team emphasized the significance of quality of paddy in order to make good quality of rice for export in view of the present international rice market.

AFPTC assured to do their utmost to supply good quality of paddy to the new rice mills when test running of the rice mills are carried out.

The discussion ended at 1400 hours.

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