

2.7.7 To study the proper operation system in Bangkok Port from safety aspects and environmental protection.

2.7.8 To study the adequate maintenance system for Bangkok Port.

2.7.9 To study the port management organization to cope with the established re-development plan.

2.7.10 To study computerization in port management and operation.

2.7.11 To study the effect on introduction and use of private sectors for a part of re-development plan.

2.7.12 To survey the existing facilities and soil conditions for estimate of the project cost.

2.7.13 To prepare comprehensive summary of the re-development plan with the staged program for implementation of the respective projects.

2.7.14 To prepare and recommend urgent development plan and projects:

3. Implementing/Operating Agency

3.1 Institutional Framework

PAT will be the implementing agency. PAT will be responsible for providing the experts with suitable project office, necessary information and data. PAT will also assist the experts for investigation.

PAT will coordinate the project by inviting the representatives from agencies and authorities concerned whenever required. They are Harbour Department, Ministry of Transport and Communications, Ministry of Finance, Bangkok Metropolitan Administration, Custom Office, Public Works Department, Department of Highway, State Railway of Thailand, National Environmental Board, etc.

3.2 Staff/Personnel participating in Project Implementation

PAT will organize the counterpart team consisting of at least:

- One Director
- Two Coordinators
- One Engineer
- One Financial Analyst

PAT will appropriately select the counterpart team members from Technical Department, Engineering Department, Bangkok Port. PAT may select and appoint other officials from other related departments from time to time as necessary and appropriate.

4. Assistance Requested

4.1 Expert

The development study team shall consist of expatriate consultants. It shall include experts for port planning, system and equipment of cargo and material handling, port operation and management, facility design, civil engineering, environmental protection, cost estimate, economic and financial analyses and project manager which are as follows:

Field of Operation/Activity	Total			1993			1994		
	No.	m/m		No.	m/m		No.	m/m	
		in Thailand	in Japan		in Thailand	in Japan		in Thailand	in Japan
1. Project Manager	1	3.5	4	1	2.5	1.5	(1)	1	2.5
2. Port Planner I	1	7	7	1	5	4.5	(1)	2	2.5
3. Port Planner II	1	6	7.5	1	4	3.5	(1)	2	4
4. Cargo Handling System	1	5.5	6	1	5	4	(1)	0.5	2
5. Cargo Handling Equipment	1	7	8	1	5	4	(1)	2	4
6. Facility Design	1	7	8	1	5	4	(1)	2	4
7. Civil Engineer	1	6	4.5	1	4	2	(1)	2	2.5
8. Port Management/ Operation (incl. Computerization)	1	6	4.5	1	4	2.5	(1)	2	2
9. Demand Forecast/ Economist	1	5	5	1	4	3.5	(1)	1	1.5
10. Construction/ Cost Estimate	1	4.5	5	1	2.5	2	(1)	2	3
11. Financial Analyst	1	4	5	1	2.5	2.5	(1)	1.5	2.5
Total	11	61.5	64.5	11	43.5	34	(11)	18	30.5

Note : See appendix attached.

4.2 Equipment

Following equipment is requested for commencement of the study:

Computer complete with printer and software	2	sets
Electric Typewriter	2	sets
Xerox Machine	1	set
Video recorder camera, deck and monitor T.V.	1	set
Theodolite	2	sets
Walkie - Talkie	4	sets
Calculators for scientific purposes	5	sets
Facsimile machine	2	sets

4.3 Fellowship

A short term study course with one month period in Japan for five (5) PAT officials is requested. The aim of the course is for the officials to gain proper knowledge on advanced port management and operation under various types of authorities and organizations.

The request includes all expenses, i.e., travelling cost including air fare, stipend, accommodation cost and other expenses. The expenses are for their stay in Japan during the study period.

5. Thai Government Counterpart Contribution to the Project

PAT will organize a counterpart team to assist the Development Study team. PAT will also conduct the following:

- to supply all necessary information and data,
- to arrange the meeting with other agencies and authorities,
- to make necessary legal approval (Customs Clearance, Immigration Visas),
- to provide suitable office for the study team,
- to advise the study team for inherent local issues, and
- to join the decision making whenever necessary.

6. Related Project/Activities

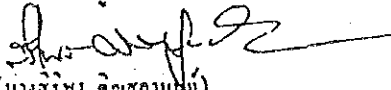
PAT Computer Center Development Project assisted by Government of Japan, Mini-Pro. Tech. Coop. by JICA.

7. Future Work Plan

PAT will take necessary actions for implementation of the recommended staged work program and project. The implementation will include the recommended urgent programs and projects the Development Study will propose.

After the completion of this study, further Development Study will continue to establish the concept of Greater Bangkok Port.

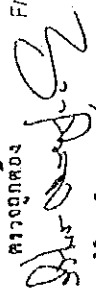
Prepared by: Technical Department
Port Authority of Thailand
Tel. 2490399 ext. 2199
Fax. 2494028

ตรวจถูกต้อง

(นางสาวพิมพ์ ศุภลักษณ์)

PROJECT SCHEDULE

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	ICR	P/R	ITR	ITR	ITR	DFR	DFR	FIR	
Work in Thailand																											
Work in Japan																											
Submission of Report																											

ICR : Inception Report
 P/R : Progress Report
 ITR : Interim Report
 DFR : Draft Final Report
 FIR : Final Report

817000002

 (นางสาว รุ่งอรุณรัตน์)

EXPERT ALLOCATION CHART

	PROJECT MONTH												REQUIRED MAN-MONTH						
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18
MASTER SCHEDULE	←			MASTER PLAN			→					FEASIBILITY STUDY						→	
WORK IN THAILAND																			
WORK IN JAPAN																			
Submission of Report		↑		↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	
EXPERT ALLOCATION																			
1 PROJECT MANAGER																			7.5
2 PORT PLANNER I																			1.4
3 PORT PLANNER II																			12.5
4 CARGO HANDLING SYSTEM																			11.5
5 CARGO HANDLING EQUIPMENT																			15
6 FACILITY DESIGN																			15
7 CIVIL ENGINEER																			10.5
8 PORT MANAGEMENT/OPERATION (incl. Computerization)																			10.5
9 DEMAND FORECAST/ECONOMIST																			10
10 CONSTRUCTION/COST ESTIMATE																			9.5
11 FINANCIAL ANALYST																			9.4
																			9.4

Total 123.45 Man-Months
(including Reserves)

NOTE: PORT PLANNER I: PORT GENERAL PLANNING
 " " II: CONTAINER TERMINAL PLANNING
 PORT MANAGEMENT/OPERATION: INCLUDING COMPUTERIZATION.

附属資料2. 対処方針

タイ王国バンコク港近代化計画調査（事前調査（S/W協議））対処方針案

項目	対処方針	備考
1. 事前調査の目的及び今後の予定		
(1) 目的	<p>次の通り整理し、説明する。</p> <p>①先方政府の要請背景、内容及び意向の確認</p> <p>②本格調査の実施方針及びS/Wの協議</p> <p>③先方受け入れ体制の確認</p> <ul style="list-style-type: none"> ・先方政府の実施すべき事項 ・先方カウンターパート機関 ・調整等を目的とする委員会（Steering Committee）の必要性の有無 ・その他 <p>④本格調査に必要な事項の確認</p>	<p>PAT(タイ港湾公社) と考えられる。 (M/M)</p>
(2) 今後の予定	<p>事前調査終了後すみやかに本格調査実施の準備に着手し、本年度中に本格調査を開始する。</p>	
2. 要請内容及び意向の確認		
(1) 全般	<p>当方の本件調査に関する考え方を説明する。合意事項については、先方と事前調査団とがS/W、ミッツに署名し、確認する。</p>	
(2) 協力の内容及び範囲	<p>1. 調査の目的</p> <p>(1) 2005年におけるバンコク港のマスタープランの策定</p> <p>(2) マスタープランのフレームワークのもとでの1997年における短期整備計画にかかるフィージビリティスタディ（港湾管理・運営に係る提言を含む）の実施</p>	<ul style="list-style-type: none"> ・目標年次については、暫定的な(案)。3(3)に示すとおり、検討を要する。 ・M/Pの目標年次が比較的短期間の場合には、F/Sのみとすることについてもタイ側と協議の上検討する。

項 目	対 処 方 針	備 考
3. 本格調査の実施方針及びS/W内容の協議	<p>2. 日本側は、本調査の期間中、調査に参画するタイ側専門家に対し、現地調査業務を通じ、技術移転を行う。</p> <p>あらかじめ作成したS/W案をもとに説明、協議し、合意の後、双方の代表者が署名する。</p>	<p>・署名者</p> <p>①日本側：調査団長</p> <p>②相手側：PAT副局長 (局長不在のため)</p>
(1) 本格調査の目的	<p>バンコク港を対象として、その再開発のためのマスタープラン（目標年次2005年）を策定するとともに、短期整備計画に係るフィージビリティ調査（目標年次1997年）を行う。</p>	<p>・2(2)参照。</p>
(2) 本格調査の対象地域	<p>タイ国バンコク港</p>	
(3) 目標年次	<p>タイ側と協議の上、各計画毎に以下の年次を目標として設定する。</p> <p>①マスタープラン 2005年</p> <p>②短期整備計画 1997年</p>	<p>・2(2)参照。</p> <p>・経済・社会開発計画等との整合性の確認 (S/W)</p>
(4) 本格調査の内容と項目	<p>1. 現況把握</p> <p>(1) 関連資料・情報の収集・分析</p> <p>(2) バンコク港の現状及び問題点の検討</p> <p>(3) 自然条件調査</p> <p>2. マスタープラン策定</p> <p>(1) 社会経済条件の分析</p> <p>(2) 港湾機能の検討（ラムチャバン港等との機能分担検討）</p> <p>(3) 需要予測（1997年及び2005年）</p> <p>(4) 港湾施設、設備及び関連施設配置計画</p> <p>(5) I E E</p> <p>(6) 予備的概略施設設計</p> <p>(7) 概略事業費算定及び予備的評価</p> <p>(8) 段階的整備計画</p>	<p>・データの有無の確認</p> <p>・環境配慮については、本格調査でI E Eを実施する項目及び程度等について検討する。(M/M)</p>

項 目	対 処 方 針	備 考
	<p>6. 短期整備計画にかかるフィージビリティスタディ</p> <ul style="list-style-type: none"> ・マスタープランのフレームワークのもとでの短期整備計画の策定 (1) 港湾施設、設備及び関連施設配置計画 (2) E I A (3) 概略施設設計 (4) 実施計画の作成 (5) 港湾管理・運営計画 <ul style="list-style-type: none"> ①安全及び環境保全の観点 ②メンテナンスシステム ③港湾管理組織 ④コンピュータ化 ⑤民間セクターの導入と活用 (6) 概算事業費積算 (7) 経済・財務分析 (8) 事業実施方策に係る提言 	<ul style="list-style-type: none"> ・各項目について、調査の具体的内容について M/Mに記載する。
(5) 調査期間	着手から F/R 提出まで 14 ヶ月程度	
(6) 報告書	<ul style="list-style-type: none"> ① インセプションレポート (30 部) <ul style="list-style-type: none"> ・ 本格調査開始時 ・ 調査実施方針、スケジュール等を記載 ② プログレスレポート (30 部) <ul style="list-style-type: none"> ・ 調査開始後 4 ヶ月以内 ・ 現地調査結果概要 ③ インテリムレポート (1) (30 部) <ul style="list-style-type: none"> ・ 調査開始後 7 ヶ月以内 ・ マスタープランの概要 ④ インテリムレポート (2) (30 部) <ul style="list-style-type: none"> ・ 調査開始後 10 ヶ月以内 ・ マスタープラン及び F/S の概要 ⑤ ドラフトファイナルレポート (英文: 30 部) <ul style="list-style-type: none"> ・ 調査開始後 12 ヶ月以内 ・ 全ての結果 	

項目	対処方針	備考
(7) 本格調査に必要な確認事項	<p>⑥ファイナルレポート (英文：50部) ・⑤に対するコメント受領後2ヵ月以内</p> <p>①調査の対象地域、対象施設・範囲（組織等）、精度、計画期間等</p> <p>②計画対象地域の現状と進行中・計画プロジェクトの現状</p> <p>③5か年計画等での予算措置の現状</p> <p>④5か年計画等、国家計画その他関連プロジェクト等の計画との関係</p> <p>⑤本格調査の実施時期、完了時期</p> <p>⑥カウンターパート機関のタイ国における位置付けと権能</p> <p>⑦調査対象地域のスラム地区の扱いとしては、先方政府の要望が強く、住民移転が円滑に行われると考え得る地区については、対象地域に含めることについて検討する。</p>	<p>主として質問表で対応</p> <p>・スラム地区については、住民の移転問題が解決した場合には調査対象地域に含める旨 M/Mに明記する。</p>
4. 先方受け入れ体制の確認		
(1) 先方の実施すべき事項	S/W案をもとに協議する。	
(2) 先方カウンターパート機関	<p>①カウンターパート機関の確認</p> <p>②関連機関の協力体制の確認</p> <p>③調整等を目的とする委員会の設置の有無とその役割の確認 (Steering committee)</p>	(M/M)
(3) 請訓事項	<p>①Undertaking の内容に係る事項については、必要に応じて請訓する。</p> <p>②調査内容については、著しい変更があった場合は必要に応じて請訓する。</p>	

項目	対処方針	備考
5. 議事録等	<p>①C/P研修、セミナーの開催については要請の伝達に留める。(M/M記載は可とする)</p> <p>②S/W及び調査の実施に関する協議内容を議事録としてとりまとめ、双方の代表者が署名し確認する。</p> <p>③事業実施段階における資金調達に関しては、調査団の権限範囲外である旨伝えるが、制度等について可能な範囲で説明する。</p>	

REQUIRED DATA AND QUESTIONNAIRE

FOR

THE STUDY ON

MODERNIZATION OF BANGKOK PORT

IN

THE KINGDOM OF THAILAND

- ◎ mark in the 'Request of Availability' is the Data/Item which the Preparatory Study Team strongly request to get during the stay in Thailand for the smooth conduct of the Study.
- If attached materials are not in English, please write down notes in English on materials for understanding by the mission.
- Please mark ○ for the Data/Item in the 'Availability' which is available.
- Please mark X for the Data/Item in the 'Availability' which is not available.

Oct. 1992

Japan International Cooperation Agency

I. GENERAL INFORMATION

P. 1

data/Item	Request of Availability	Availability	Name of Reports and Files
<p>I. Socio-economic conditions and development plan in Thailand</p> <p>(1) Socio-economic conditions of the last 10 years</p> <ul style="list-style-type: none"> a) GNP by sector and by region b) Population by region c) Industrial and Agricultural products by main sort and by region d) Foreign trade (quantity and value) by main sort <p>(2) Development plans related to this Re-development project of Bangkok Port</p> <ul style="list-style-type: none"> a) Concrete contents and execution-schedule of "Seventh National Economic and Social Development Plan" b) The Development port plan included in the Plan c) Another National/Regional development plans related to this project and their concrete contents d) Development plans of major ports in Thailand (Bangkok, Laem-Chabang, etc.) e) Forecast of socio-economic indicators <p>(3) Annual budget with breakdown of the last 10 years</p> <p>(4) Public investment of the last 10 years by sector</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p>		

II. TECHNICAL INFORMATION

data/Item	Request of Availability	Availability	Agency & Name of Reports
<p>1. Transportation systems (1) Network maps and capacity of national transport system ports, roads, railways, commercial flights (2) Traffic flow data and forecasts of cargo/passengers by each mode (3) Transportation cost of each mode (4) Development /improvement policies and plans for each mode (5) Related studies, if any (national transportation studies, etc)</p>	<p>◎ ◎</p>		
<p>2. Port Authority of Thailand (PAT) (1) Organization chart with jurisdictional responsibilities and brief explanation (2) Legal aspect (3) Personnel aspect (4) Financial condition (5) Another indispensable organizations for this project</p>	<p>◎ ◎ ◎ ◎</p>		
<p>3. Nation-wide Port Activities in Thailand (1) Geographical distribution of ports (2) Function and capacities of ports (3) Future development policies and action plans of ports</p>	<p>◎ ◎ ◎</p>		

data/Item	Request of Availability	Availability	Agency & Name of Reports
<p>(4) Port related budget</p> <ul style="list-style-type: none"> a) Port construction budget b) Port maintenance budget 	<p>☉ ☉</p>		
<p>(5) Technical standards for port facilities Design criteria Material and construction standards</p>			
<p>4. The conditions of major ports in Thailand</p>	<p>☉ ☉</p>		
<ul style="list-style-type: none"> (1) Construction history (2) Expected roles or functions (3) Facilities and equipment (tag, pilot boat etc.) (4) Tariff (5) Development plans 			
<ul style="list-style-type: none"> a) Outline b) Future of handling cargo c) Facilities and equipment plan d) Investment amount 			
<p>(6) Shipping services in major ports for the last 10 years (Shipping company and the network)</p> <ul style="list-style-type: none"> a) Container b) Ro/Ro c) Conventional 			

data/Item	Request of Availability	Availability	Agency & Name of Reports
<p>(7) Port traffic statistics in major ports for the last 10 years</p> <ul style="list-style-type: none"> a) Cargo volume by commodity b) Vessel calls by type <p>(8) Container cargo transportation for the last 10 years</p> <ul style="list-style-type: none"> a) Container traffic b) Transshipment of container cargoes c) Container terminal development plans <p>(9) Ro/Ro cargo transportation for the last 10 years</p> <ul style="list-style-type: none"> a) Ro/Ro traffic b) Transshipment of Ro/Ro cargoes c) Ro/Ro terminal development plans <p>(10) Origin and Destination Data for port cargoes</p> <p>(11) Port Administration and management system</p> <ul style="list-style-type: none"> a) Organization b) Legal aspect c) Personnel aspect d) Privatization <p>(12) Related studies, if any</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p>		

data/Item	Request of Availability	Availability	Agency & Name of Reports
<p>5. Port facilities of Bangkok Port</p> <p>(1) Layout of facilities (on scale of 1/1,000)</p> <p>(2) Inventory of facilities (type, dimension, completion date)</p> <p>Channel and basin</p> <p>Mooring facilities</p> <p>Storage facilities</p> <p>Cargo handling equipment</p> <p>Navigation aids</p> <p>Access roads and railways</p> <p>(3) The year of construction of facilities respectively</p> <p>(4) Structure type and design conditions of facilities respectively</p> <p>(5) The conditions of maintenance, improvement and repair of facilities</p> <p>(6) The present conditions of superannuation of facilities</p> <p>(7) The conditions of utilization of facilities</p>	<p>◎</p> <p>◎</p>		
<p>6. Existing problems of Bangkok Port</p> <p>(1) Bottleneck of cargo flow in the port at present</p> <p>(2) Bottleneck of flow of documents and information in the port at present</p> <p>(3) Urgent obstacle expected to improve in the port management and operation</p>	<p>◎</p> <p>◎</p> <p>◎</p>		
<p>7. Re-development project in Bangkok Port</p> <p>(1) Purposes or goals and expected effects of this project</p>	<p>◎</p>		

data/Item	Request of Availability	Availability	Agency & Name of Reports
<ul style="list-style-type: none"> (2) Expected role or functions of the east and west quay area (3) Urgent necessity of this project (4) Source of revenue of this project (5) Cooperation with private enterprises 	<ul style="list-style-type: none"> ○ ○ ○ ○ 		
<p>8. Land and Coastal Use in and around the area of this project</p> <ul style="list-style-type: none"> (1) The present conditions of Land and Coastal Use in and around the port (2) The future development plan of Land and Coastal Use in and around the port (3) The ownership of land in and around the port (4) The population in and around the port (5) The profession of residents (6) The enterprises or groups existing in the area of this project 	<ul style="list-style-type: none"> ○ ○ ○ ○ ○ ○ 		
<p>9. Traffic facilities related to the project</p> <ul style="list-style-type: none"> (1) The present conditions of traffic facilities related to the project (including capacity, degree of congestion, etc.) (2) The transition of numbers of people utilizing traffic facilities after construction (3) Managing body of traffic facilities and their revenue and expenditure in managing traffic facilities 	<ul style="list-style-type: none"> ○ ○ ○ 		

data/Item	Request of Availability	Availability	Agency & Name of Reports
<p>10. Dangerous objects in Bangkok Port (1) Sorts and volumes of dangerous objects stored in and around the port (2) Possessor or manager of dangerous objects (3) The storage conditions of dangerous objects</p>	<p>☉ ☉ ☉</p>		
<p>11. Natural Conditions of Bangkok Port (1) Meteorological conditions wind data (wind speed, direction), climate (2) Hydrographic conditions wave data, tidal current data tidal level data, siltation data, erosion data water-depth data (3) Topographic conditions topographical map and/or aero-photograph in and around the port (1/1,000~1/2,000 and 1/10,000 ~ 1/50,000) (4) Chart (5) Geological conditions boring data, results of soil tests sounding data, riverbed materials (6) Record of disasters of the last 10 years</p>	<p>☉ ☉ ☉ ☉ ☉ ☉ ☉ ☉ ☉ ☉ ☉</p>		

data/Item	Request of Availability	Availability	Agency & Name of Reports
<p>12. Port management and operation of Bangkok Port</p> <p>(1) Cargo handling system (in vessels, with barge, in wharf, in transit shed, warehouse, storage area)</p> <p>a) Organizations</p> <p>b) Equipments</p> <p>c) Labour</p> <p>d) Handling charge</p> <p>e) Waiting and berthing time of ship by type of vessels</p> <p>(2) Statistics showing the degree of use of cargo handling equipment</p> <p>(3) Container handling system</p> <p>a) Actual utilization of container yard (sojourning of container, flowing of empty container, etc.)</p> <p>b) The night container handling as to amount of container and efficiency compared with daytime operation</p> <p>(4) Cargo flow in the Port (General Cargo, Container)</p> <p>(5) Documents flow and the relation of customs, shipping lines and their agencies</p> <p>(6) The contents of computer system for port management and operation</p>	<p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p> <p>⊙</p>		

data/Item	Request of Availability	Availability	Agency & Name of Reports
<p>13. Administrative systems related to re-development of Bangkok Port</p> <ul style="list-style-type: none"> (1) Examples of re-development project (including the examples in another fields of public works) (2) The contents of the laws and regulations or systems related to re-development (including land-expropriation) (3) Examples of compensation in public works (4) Administrative organization related to re-development (for example, in land-expropriation) 	<p>○ ○ ○ ○ ○</p>		
<p>14. Environmental policy</p> <ul style="list-style-type: none"> (1) Governmental policy for environmental issues (2) Institutional aspects <ul style="list-style-type: none"> a) Law, rule and regulation b) Environmental criteria c) Responsible ministry or agencies d) Procedure for IEE and/or EIA, if any e) Environmental quality standards f) International conventions on environmental conservation (3) Examples of IEE and/or EIA for the similar projects and for Region and/or Sector, if any (4) Relevant NGO's 	<p>○ ○ ○ ○ ○ ○ ○ ○</p>		

data/Item	Request of Availability	Availability	Agency & Name of Reports
(5) Present quality of natural environment quality of air, quality of water, soil contamination, noise and vibration, odor			
15. Consultants and surveyors (1) List of consultants (2) Cost of investigation and survey boring, soil laboratory test, soil field test topographic survey, wave observation, origin-destination survey salary for consultants	<p style="text-align: center;">◎</p> <p style="text-align: center;">◎</p>		
16. Counterpart (1) List of the counterparts of Thailand side	<p style="text-align: center;">◎</p>		

附属資料4. SCOPE OF WORK (DRAFT)

SCOPE OF WORK (DRAFT)

FOR

THE STUDY

ON

MODERNIZATION

OF

BANGKOK PORT

IN

THE KINGDOM OF THAILAND

AGREED UPON BETWEEN

MINISTRY OF TRANSPORT AND COMMUNICATIONS
THE GOVERNMENT OF THE KINGDOM OF THAILAND
AND

JAPAN INTERNATIONAL COOPERATION AGENCY

Bangkok, October 16th, 1992

Mr. YASUMASA SUZUKI
Leader
Preparatory Study Team
JAPAN INTERNATIONAL
COOPERATION AGENCY

I. INTRODUCTION

In response to the request of the Government of the Kingdom of Thailand (hereinafter referred to as "the Government of Thailand"), the Government of Japan decided to conduct the Study on Modernization of Bangkok Port in The Kingdom of Thailand (hereinafter referred to as "the Study") within the general framework of technical cooperation between Japan and Thailand, which is set forth in the Agreement on Technical Cooperation between the Government of Japan and the Government of Thailand, signed on November 5, 1981.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the Government of Japan, will undertake the Study, in close cooperation with the authorities concerned of the Government of Thailand.

The Port Authority of Thailand (hereinafter referred to as "PAT") shall act as counterpart agency to the Japanese study team and also act as coordinating body in relation with other relevant organizations for the smooth implementation of the Study.

The present document sets forth the Scope of Work with regard to the Study.

II. OBJECTIVES OF THE STUDY

The objectives of the Study are:

1. To formulate a master plan for the Modernization of Bangkok Port for the period up to the year 2005.
2. To conduct a feasibility study for the short-term development plan for the Modernization of Bangkok Port including recommendation on port management and operation for the period up to the year 1997 within the framework of the master plan.

III. SCOPE OF THE STUDY

In order to achieve the objectives mentioned above, the Study shall cover the following items:

1. Evaluation of present conditions
 - (1) To collect, review and analyze available data and information, reports and plans relevant to the Study.

- (2) To review and analyze the present conditions and the problems of port facilities, traffic systems, cargo handling system, maintenance system, land utilization in and around the port, relation between the port and hinterland, management and operation system, laws and regulations related to the modernization of Bangkok Port.
- (3) To conduct natural condition surveys such as geological surveys and others, if necessary.

2. Formulation of the master plan

- (1) To analyze socio-economic conditions.
- (2) To identify the expected roles and functions of Bangkok Port considering the Laem Chabang Port and other ports.
- (3) To forecast cargo handling volume and port traffic up to the year 1997 and 2005.
- (4) To formulate a basic plan of berth, other port facilities, land utilization, equipments for cargo handling and storage, and other relevant infrastructures of the Port including traffic systems.
This item shall cover the area allocation plan. It should include suitable arrangement for traffic system, for new container terminal, general cargo and break bulk handling facilities, renovation of existing terminal.
- (5) To conduct initial environmental examination.
- (6) To prepare rough structural design.
- (7) To prepare preliminary cost estimates and preliminary evaluation for the master plan.
- (8) To prepare preliminary staged implementation program.

3. Feasibility study of the short-term development plan

To formulate a short-term development plan of the Bangkok Port within the framework of the master plan described above.

- (1) To formulate a plan of berth, other port facilities, land utilization, equipments for cargo handling and storage, and other relevant infrastructures of the Port including traffic systems.
- (2) To conduct environmental impact study.
- (3) To prepare preliminary structural design.
- (4) To prepare implementation program.
- (5) To prepare recommendation on port management and operation system including following aspects
 - ① safety and environmental aspects
 - ② adequate maintenance system
 - ③ port management organization to cope with the established re-development plan
 - ④ computerization in port operation
 - ⑤ possibility for introduction and use of the private sectors

- (6) To prepare cost estimates.
- (7) To conduct economic and financial analysis.
- (8) To propose recommendation for implementation of the project.

IV. STUDY SCHEDULE

The Study will be conducted in accordance with the attached tentative schedule.

V. REPORTS

JICA shall prepare the following reports and submit them to the Government of the Kingdom of Thailand.

1. Inception Report

Thirty (30) copies in English will be submitted at the commencement of the Study.

2. Progress Report

Thirty (30) copies in English will be submitted within four (4) months after the commencement of the Study.

3. Interim Report (I)

Thirty (30) copies in English will be submitted within seven (7) months after the commencement of the Study.

4. Interim Report (II)

Thirty (30) copies in English will be submitted within ten (10) months after the commencement of the Study.

5. Draft Final Report

Thirty (30) copies in English will be submitted within twelve (12) months after the commencement of the Study.

The written comments on the Draft Final Report from the Government of the Kingdom of Thailand will be delivered to JICA within one (1) month after submission of the report.

6. Final Report

Fifty (50) copies in English within two (2) months after the receipt of the written comments on the Draft Final Report from the Government of the Kingdom of Thailand.

VI. UNDERTAKINGS OF THE GOVERNMENT OF THE KINGDOM OF THAILAND

1. In accordance with the Agreement on Technical Cooperation between the Government of Japan and the Government of Thailand dated November 5, 1981, the Government of Thailand shall accord benefits to the Japanese Study Team as follows:
 - (1) to permit the members of the Japanese study team to enter, leave and sojourn in the Kingdom of Thailand for the duration of their assignment therein, and exempt them from alien registration requirements and consular fees,
 - (2) to exempt the members of the Japanese study team from taxes, duties, fees and any other charges on equipment, machinery and other materials brought into the Kingdom of Thailand for the conduct of the Study,
 - (3) to exempt the members of the Japanese study team from income taxes and other charges of any kind imposed on or in connection with any emoluments or allowance paid to the members of the Japanese study team for their services in connection with the implementation of the Study, and
 - (4) to bear claims, if any arises, against the members of the Japanese study team resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese study team.

2. To facilitate smooth conduct of the Study, PAT shall take necessary measures in cooperation with other relevant organizations:
 - (1) to secure permission for entry into private properties or restricted areas for the conduct of the Study,
 - (2) to secure permission for for the Japanese study team to take all data and documents, including photographs, related to the Study out of Thailand to Japan,
 - (3) to provide the medical services as needed (its expenses will be chargeable on the members of the Japanese study team), and
 - (4) to ensure the safety of the members of the Japanese study team, when and as it is required in the course of the Study.

3. PAT shall at its own expenses, provide the Japanese study team with the followings in cooperation with other relevant organizations:
 - (1) available data and information related to the Study including aerial photographs and maps,
 - (2) counterpart personnel,
 - (3) suitable office space with necessary equipment in Bangkok,

- (4) credentials or identification cards, and
- (5) appropriate number of vehicles with drivers.

VII. UNDERTAKINGS OF JICA

For the implementation of the Study, JICA shall take the following measures:

1. to dispatch, at its own expense, the study team to the Kingdom of Thailand;
2. to pursue technology transfer to the Thai counterpart personnel in the course of the Study.

VIII. CONSULTATION

JICA and PAT shall consult with each other in respect of any matter that may arise from or in connection with the Study.

TENTATIVE SCHEDULE

The Study on Modernization of Bangkok Port in The Kingdom of Thailand

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Work in Thailand	▬					▬			▬			▬		
Work in Japan	▬		▬					▬			▬			▬
Report	△ IC/R			△ PR/R			△ IT/R(I)			△ IT/R(II)		△ DF/R		△ F/R

IC/R : Inception Report

PR/R : Progress Report

IT/R(I) : Interim Report (I)

IT/R(II) : Interim Report (II)

DF/R : Draft Final Report

F/R : Final Report

附属資料5. SCOPE OF WORK

SCOPE OF WORK
FOR
THE STUDY
ON
MODERNIZATION
OF
BANGKOK PORT
IN
THE KINGDOM OF THAILAND

AGREED UPON BETWEEN
PORT AUTHORITY OF THAILAND
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Bangkok, October 16th, 1992

P. Chivamit

Mr. Payongkich CHIVAMIT
Deputy Director General
(Technical and Planning)
PORT AUTHORITY OF THAILAND

Y. Suzuki

Mr. Yasumasa SUZUKI
Leader
Preparatory Study Team
JAPAN INTERNATIONAL
COOPERATION AGENCY

I. INTRODUCTION

In response to the request of the Government of the Kingdom of Thailand (hereinafter referred to as "the Government of Thailand"), the Government of Japan decided to conduct the Study on Modernization of Bangkok Port in The Kingdom of Thailand (hereinafter referred to as "the Study") within the general framework of technical cooperation between Japan and Thailand, which is set forth in the Agreement on Technical Cooperation between the Government of Japan and the Government of Thailand, signed on November 5, 1981.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the Government of Japan, will undertake the Study, in close cooperation with the authorities concerned of the Government of Thailand.

The Port Authority of Thailand (hereinafter referred to as "PAT") shall act as counterpart agency to the Japanese study team and also act as coordinating body in relation with other relevant organizations for the smooth implementation of the Study.

The present document sets forth the Scope of Work with regard to the Study.

II. OBJECTIVES OF THE STUDY

The objectives of the Study are:

1. To formulate a master plan for the Modernization of Bangkok Port for the period up to the year 2005.
2. To conduct a feasibility study for the short-term development plan for the Modernization of Bangkok Port including recommendation on port management and operation for the period up to the year 1997 within the framework of the master plan.

III. SCOPE OF THE STUDY

In order to achieve the objectives mentioned above, the Study shall cover the following items:

1. Evaluation of present conditions

- (1) To collect, review and analyze available data and information, reports and plans relevant to the Study.
- (2) To review and analyze the present conditions and the problems of port facilities, traffic systems, cargo handling system, maintenance system, land utilization in and around the port, relation between the port and hinterland, management and operation system, laws and regulations related to the modernization of Bangkok Port.
- (3) To conduct natural condition surveys such as geological surveys and others, if necessary.

2. Formulation of the master plan

- (1) To analyze socio-economic conditions.
- (2) To identify the expected roles and functions of Bangkok Port considering the Laem Chabang Port and other ports.
- (3) To forecast cargo handling volume and traffic volume in the Port up to the year 1997 and 2005.
- (4) To prepare recommendation on outline of port management and operation for efficient cargo flow.
- (5) To formulate a basic plan of berth, other port facilities, land utilization, equipments for cargo handling and storage, and port traffic network.

This item shall cover the area allocation plan. It should include renovation of existing terminal and suitable arrangement for new container terminal, general cargo and break bulk handling facilities.

- (6) To conduct initial environmental examination.
- (7) To prepare rough structural design.
- (8) To prepare preliminary cost estimates and preliminary evaluation for the master plan.
- (9) To prepare preliminary staged implementation program.

3. Feasibility study of the short-term development plan

To formulate a short-term development plan of the Bangkok Port within the framework of the master plan described above.

- (1) To formulate a plan of berth, other port facilities, land utilization, equipments for cargo handling and storage, and port traffic network.
- (2) To conduct environmental impact study.
- (3) To prepare preliminary structural design.
- (4) To prepare implementation program.
- (5) To prepare recommendation on outline of effective port management and operation system to cope with the established re-development plan.
- (6) To prepare cost estimates.
- (7) To conduct economic and financial analysis.
- (8) To propose recommendation for implementation of the project.

IV. STUDY SCHEDULE

The Study will be conducted in accordance with the attached tentative schedule.

V. REPORTS

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- (3) to exempt the members of the Japanese study team from income taxes and other charges of any kind imposed on or in connection with any emoluments or allowance paid to the members of the Japanese study team for their services in connection with the implementation of the Study, and

- (4) to bear claims, if any arises, against the members of the Japanese study team resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese study team.
2. To facilitate smooth conduct of the Study, PAT shall take necessary measures in cooperation with other relevant organizations:
 - (1) to secure permission for entry into private properties or restricted areas for the conduct of the Study.
 - (2) to secure permission for the Japanese study team to take all data and documents, including photographs, related to the Study out of Thailand to Japan.
 - (3) to provide the medical services as needed (its expenses will be chargeable on the members of the Japanese study team), and
 - (4) to ensure the safety of the members of the Japanese study team, when and as it is required in the course of the Study.
 3. PAT shall at its own expenses, provide the Japanese study team with the followings in cooperation with other relevant organizations:
 - (1) available data and information related to the Study including aerial photographs and maps,
 - (2) counterpart personnel,
 - (3) suitable office space with necessary equipment in Bangkok,
 - (4) credentials or identification cards, and
 - (5) appropriate number of vehicles with drivers.

VII. UNDERTAKINGS OF JICA

For the implementation of the Study, JICA shall take the following measures:

1. to dispatch, at its own expense, the study team to the Kingdom of Thailand;

2. to pursue technology transfer to the Thai counterpart personnel in the course of the Study.

VIII. CONSULTATION

JICA and PAT shall consult with each other in respect of any matter that may arise from or in connection with the Study.

TENTATIVE SCHEDULE

The Study on Modernization of Bangkok Port in The Kingdom of Thailand.

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Work in Thailand	=====						=====			=====		=====			
Work in Japan	=====			=====				=====		=====		=====			=====
Report	△ IC/R			△ PR/R			△ IT/R(I)			△ IT/R(II)			△ DF/R		△ F/R

- IC/R : Inception Report
- PR/R : Progress Report
- IT/R(I) : Interim Report (I)
- IT/R(II) : Interim Report (II)
- DF/R : Draft Final Report
- F/R : Final Report

附属資料 6. MINUTES OF MEETING

MINUTES OF MEETINGS
ON
THE SCOPE OF WORK
FOR
THE STUDY
ON
MODERNIZATION
OF
BANGKOK PORT
IN
THE KINGDOM OF THAILAND

The Japanese Preparatory Study Team (hereinafter referred to as 'the Team') organized by Japan International Cooperation Agency (hereinafter referred to as 'JICA') and headed by Mr. Yasumasa SUZUKI visited Thailand and held a series of meetings with the personnel concerned of Port Authority of Thailand (hereinafter referred to as 'PAT') from 12th to 16th of October, 1992. The attendants of the meetings are shown in ANNEX 1.

Through the meetings, the Scope of Work (hereinafter referred to as 'S/W') has been finalized, and both sides agreed upon the following items for smooth and effective implementation of the Study.

1. STUDY AREA

The study area shall be the existing port activity area. Other areas where become newly available for port activities during the full-scale study will be included in the study area.

2. SUPPLEMENT FOR SCOPE OF THE STUDY

(1) The Five-year Corporate Plan of Bangkok Port shall be considered in "Evaluation of present conditions" (S/W III.1.).

(2) On "Formulation of the master plan" in the Scope of Work, items (1) to (6) shall be studied mainly (S/W III.2.).

(3) "Outline of port management and operation" shall include modification of the framework of computer system, which has been introduced by PAT, in order to cope with changes associated with the established re-development plan by the Study (S/W III.2.(4)).

(4) "Outline of port management and operation for efficient cargo flow" shall include study on possibility of introduction of Multi-Modal System (S/W III.2.(4)).

(5) "Port traffic network" covers road, railway and barge network in the port area, however, the road and barge network shall be studied mainly (S/W III.2.(5)).

(6) "Initial environmental examination" (IEE) and "environmental impact study" (EIA) shall cover natural and social environmental aspects. IEE shall include selection of environmental items to be influenced by the project and rough examination with referring to existing data such as PAT's reports. EIA shall cover further study on items selected by IEE and recommendation for prevention and mitigation (S/W III.2.(6)).

3. STEERING COMMITTEE

For the smooth implementation of the Study, PAT shall coordinate with organizations related to this project. If necessary, it will be considered to form a steering committee consisting of those organizations.

4. COUNTERPART TRAINING IN JAPAN

PAT requested the training in Japan for at least five (5) PAT personnels to realize an effective technology transfer.

The Team promised to convey the request to the Government of Japan.

5. UNDERTAKING

(1) Suitable office space with desks, chairs, air-conditioner and telephone will be offered for the full-scale study team by PAT.

(2) Japanese side requested PAT to issue an invitation letter for entry visa for members of the full-scale study team. PAT accepted the request mentioned above.

Bangkok, October 16th, 1992

P. Chivamit

Mr. Payoongkich CHIVAMIT
Deputy Director General
(Technical and Planning)
PORT AUTHORITY OF THAILAND

Y. Suzuki

Mr. Yasumasa SUZUKI
Leader
Preparatory Study Team
JAPAN INTERNATIONAL
COOPERATION AGENCY

List of Attendants

PAT

- Mr. Payoongkich Chivanit : Deputy Director General, PAT
(Technical and Planning)
- Mr. Wari Punpoka : Assistant Director General, PAT
(Technical and Planning)
- Ms. Kanchana Ubolcholket : Director of Technical Department, PAT
- Mr. Surajit Petyim : Deputy Director of Technical
Department, PAT
- Mr. Sakda Tangpanitansook : Director of Planning and Design Division,
PAT
- Mr. Charat Rungruangsilp : Technical Personnel of Technical
Department, PAT
- Mr. Danai Wattanakorn : Technical Personnel of Technical
Department, PAT
- Mr. Pitak Silprasit : Assistant Chief of Export Cargo 2, PAT
- Mr. Toshiharu Murata : JICA Expert, Technical Department, PAT

JICA

- Mr. Yasumasa Suzuki : Member of the Mission (Leader)
- Mr. Yasutoshi Yoshimoto : Member of the Mission
(Port Planning/Environment Consideration)
- Mr. Noriaki Kawai : Member of the Mission
(Demand Forecast/Port Management)
- Mr. Syuichi Tsuda : Member of the Mission
(Planning of Port Facilities)
- Mr. Hiroshi Sasaki : Member of the Mission (Coordination)
- Dr. Masakazu Takahashi : Member of the Mission
(Natural Condition/Environmental Study)

附属資料 7. 面会者リスト

タイ国バンコク港近代化計画調査(事前調査(S/W協議))面会者リスト

月/日(曜)	日 程	面 会 者	
10/10(土)	11:00 (TG-641) 15:30 東京(成田)→バンコク		
10/11(日)	10:00-12:00 TARAホテル内にて打合せ	村田利治	PAT、JICA 派遣専門家
10/12(月)	9:00-10:00 JICAタイ事務所表敬・ 打合せ	谷川与志雄 西脇英隆	JICA事務所次長 " 所員
	10:00-11:00 在タイ日本大使館表敬・打 合せ	米田 浩 西脇英隆	大使館二等書記官 JICA事務所所員
	11:30-12:00 タイ国首相府技術経済協力 局(DTEC)表敬	Mr. Krisda Piampongsart Mrs. Tipsuda Nopmongcol Mr. Banchong Amornchewin Miss Sutisa Choonharaun- gdej	Director Chief of Japan Sub-Division
	12:00-13:30 同 上	稲垣富一	技術協力調整
	14:30-16:00 タイ港湾公社(PAT) 表敬・	Mr. Payoong- kich Chivamit Mr. Wari Pun- poka Ms. Kanchana Ubolcholket Mr. Surajit Petyim	Deputy Director General (Technical and Planning) Asst. Director General (Technical and Planning) Director of Techhical Department Deputy Director of Technical Department

月/日(曜)	日 程	面 会 者
10/13(火)	10:30-16:30 P A T (バンコク港現地踏査)	Mr. Surajit Petyim Mr. Sakda Tangparitansook Mr. Danai Wattanakorn Mr. Pitak Silprasit Mr. Charat Rungruangsilp Director of Planning and Design Division Technical Personnel of Technical Department Assistant Chief of Export Cargo 2 Technical Personnel of Technical Department
10/14(水)	10:00-12:00 P A T 14:00-15:30 P A T	Mr. Surajit Petyim Mr. Pitak Silprasit Mr. Danai Wattanakorn Mr. Cheevin Limsiri Mr. Payoongkich Chivamit Mr. Surajit Petyim Ms. Kanchana Ubolcholket Mr. Danai Wattanakorn Assistant Director of Design and Planning Division
10/15(木)	11:00-12:00 Laem Chabang Port Office (ラムチャバン港現地踏査)	Mr. Narong Lertsrisunthad B. Sc. (ENV.) Chief, Marketing & Public Relations SEC.
10/16(金)	9:30-10:30 P A T、S/W・M/M署名	Mr. Payoongkich Chivamit Mr. Surajit Petyim Ms. Kanchana Ubolcholket Mr. Danai Wattanakorn
10/16(金)	11:00-11:30 JICA タイ事務所報告 11:30-12:00 在タイ日本 使館報告	谷川与志雄 西脇英隆 米田 浩 JICA 事務所次長 " 所員 大使館二等書記官

附属資料 8. 収集資料リスト

一般情報と技術情報

区分	番号	資料名	発行年	発行機関	内容	オリジナル コピー別
I-1-(2)	1	第7次社会経済開発計画。(3) Water transport	-	-	第7次社会経済開発計画のうち水運に関する項目の英訳	コピー
I-1-(2)	2	CHAPTER 2 SUMMARY OF THE RESULTS OF THE FIFTH PLAN	-	-	第5次5ヶ年計画経済指標	コピー
I-1-(2)	3	タイの主要経済指標の推移と第7次計画の目標	-	-	第7次5ヶ年計画経済指標	コピー
I-1-(2)	4	FUTURE DEVELOPMENT	-	Port Authority of Thailand (入手先)	バンコク港とレムチャパン港の将来開発計画、1992年度	コピー
II-2	5	THE PORT AUTHORITY OF THAILAND, PAST AND PRESENT	-	Port Authority of Thailand (入手先)	PAT概要	コピー
II-2-(2)	6	PORT AUTHORITY OF THAILAND ACTS, MINISTERIAL REGULATIONS AND BYLAW CONCERNING THE SAFETY, PORT SERVICES AND FACILITIES	1970	Port Authority of Thailand	PAT法、政令、および安全、港務サービス、港務規則に関する内規	コピー
II-2-(3)	7	PORT AUTHORITY OF THAILAND, PERSONNEL ASPECT (AS OF AUGUST 1992)	-	Port Authority of Thailand	PATの職員構成と職員数	コピー
II-2-(5)	8	関係機関一覧表	-	Port Authority of Thailand (入手先)	プロジェクトに関係する機関のリスト	コピー
II-3-(3)	9	東埠頭再開発実施計画 - 1	1992	Port Authority of Thailand	バンコク港運営に関する開発委員会の議題、議事録等	コピー
II-3-(3)	10	東埠頭再開発実施計画 - 2	1992	Port Authority of Thailand	バンコク港運営に関する開発委員会の議題、議事録等	コピー
II-3-(3)	11	東埠頭再開発実施計画 - 3	1992	Port Authority of Thailand	バンコク港の開発に関する会議の議事録等	コピー
II-3-(3)	12	東埠頭コンテナターミナルの有効利用と改善計画の研究に関するプロポーザル(案)	-	Port Authority of Thailand	東埠頭コンテナターミナルの有効利用と改善計画	コピー

技術情報

区分	番号	資料名	発行年	発行機関	内容	オリジナル コピー別
II-3(3)	1 3	Port Authority Thailand's Computer Development Plan During Calendar Year 1992-1994	-	Port Authority of Thailand	PATのコンピュータ導入、ソフト開発プラン	コピー
II-4	1 4	THE BANGKOK PORT	-	Port Authority of Thailand (入手先)	バンコク港概要	コピー
II-4	1 5	Laem Chabang Commercial Port	-	Port Authority of Thailand	レムチャバン商業港概要	コピー
II-4(7)	1 6	VOLUME OF IMPORT CARGOES THROUGH THE BANGKOK PORT CLASSIFIED BY HARMONIZED COMMODITY SYSTEM DURING THE FISCAL & CALENDAR YEAR 1990	-	Port Authority of Thailand	バンコク港統計 (品目別輸出入量)	コピー
II-4(7)	1 7	PORT MANAGEMENT INFORMATION SYSTEM (PORTMIS)	-	Port Authority of Thailand	バンコク港統計	コピー
II-4(8)	1 8	Bangkok Port, Post Performance	-	Port Authority of Thailand	バンコク港統計	コピー
II-4(8)	1 9	CARGO TRAFFIC VIA BANGKOK PORT (KLONGTOEY WHARF) DURING THE CALENDAR YEARS 1977-1990	-	Port Authority of Thailand	バンコク港におけるカーゴトラフィック統計	コピー
II-5(1)	2 0	GENERAL LAY-OUT	-	Port Authority of Thailand	バンコク港一般配置図、縮尺 1:4,000	コピー
II-5(1)	2 1	GENERAL LAY-OUT	-	Port Authority of Thailand	バンコク港一般配置図、上図縮小版	コピー
II-5(4)	2 2	QUAY, BANGKOK HARBOUR, REINFORCEMENT IN QUAY SLAB	-	Port Authority of Thailand	西埠頭構造概要図	コピー
II-10(1)	2 3	REPORT FOR DANGEROUS SUBSTANCES	1992	Port Authority of Thailand	バンコク港における危険物量	コピー
II-11	2 4	SILTATION, BANGKOK PORT CHANNEL, VOLUME I	1965	NETHERLANDS ENGINEERING CONSULTANTS	地盤、海象、氣象、シルテーションに関する情報	コピー

技術情報

区分	番号	資料名	発行年	発行機関	内容	オリジナル コピー別
II-11	25	SILTATION, BANGKOK PORT CHANNEL, VOLUME II	1965	NETHERLANDS ENGINEERING CONSULTANTS	地象、地象、気象、シルテーションに関する情報	オリジナル コピー
II-11	26	FEASIBILITY STUDY OF THE BANGKOK BAR CHANNEL IMPROVEMENT, FINAL REPORT, A-TECHNICAL ASPECTS	1990	Port Authority of Thailand	地象、地象、気象、シルテーションに関する情報	オリジナル コピー
II-11-(2)	27	THE CHAO PHRAYA RIVER FROM PILOT STATION TO KRUNG THEP BRIDGE, SCALE 1:80,000	1991	Port Authority of Thailand	深淺図、縮尺 1:80,000	オリジナル
II-11-(2)	28	THE CHAO PHRAYA RIVER FROM PILOT STATION TO KRUNG THEP BRIDGE, SCALE 1:7,500	1991	Port Authority of Thailand	深淺図、縮尺 1:7,500	オリジナル
II-11-(5)	29	CONTRACT DOCUMENTS FOR THE CONSTRUCTION OF THE EAST QUAY OF THE KLONGTOI HARBOUR AT BANGKOK	1969	NETHERLANDS ENGINEERING CONSULTANTS	地盤調査データ (コーン貫入試験)	オリジナル コピー
II-11-(5)	30	SUBSOILS INVESTIGATION FOR PROPOSED WARE HOUSE	1983	Port Authority of Thailand	地盤調査データ (ボーリングと室内土質試験)	オリジナル コピー
II-11-(5)	31	SOIL INVESTIGATION FOR BUILDING FLOOR OF HAZARD STORAGE FACILITY	1992	Port Authority of Thailand	地盤調査データ (ボーリングと室内土質試験)	オリジナル コピー
II-14-(2)	32	ENHANCEMENT AND CONSERVATION OF NATIONAL ENVIRONMENTAL QUALITY ACT, B.E. 2535 (タ1 稿)	1992	-	環境法 (建築物の質の強化と保護に關する法律)	オリジナル
II-14-(2)	33	ENHANCEMENT AND CONSERVATION OF NATIONAL ENVIRONMENTAL QUALITY ACT, B.E. 2535 (CHAPTER III, PART 4)	1992	-	資料 3 2 のうち環境影響評価の部分の英訳	オリジナル コピー
II-14-(2)	34	Proclamation for Types and Sizes of Projects Required Environmental Impact Assessment	1992	Ministry of Science, Technology and Environment	環境影響評価が必要なプロジェクトと規模に關する公布	オリジナル コピー
II-14-(2)	35	Proclamation for Types and Sizes of Projects Required Environmental Impact Assessment (タ1 稿)	1992	Ministry of Science, Technology and Environment	資料 3 4 の補足	オリジナル コピー
II-14-(2)	36	OFFICE OF ENVIRONMENTAL POLICY AND PLANNING, ORGANIZATION CHART	-	Office of Environmental Policy and Planning	環境政策計画局組織図	オリジナル コピー

技術情報

区分	番号	資料名	発行年	発行機関	内容	オリジナル コピー部
II-14-(2)	37	APPROVAL PROCESSES FOR EIA	-	Office of Environmental Policy and Planning	EIAの認可プロセスのフローチャート	コピー
II-14-(2)	38	Laws and Standards on Pollution Control in Thailand, 2nd ed.	1989	National Environment Board	タイにおける汚染規制に関する法律と基準	コピー
II-14-(2)	39	WATER QUALITY STANDARDS IN THAILAND (タイ語)	1991	National Environment Board	タイにおける水質基準	コピー
II-14-(2)	40	AIR AND NOISE POLLUTION IN THAILAND 1989	1989	National Environment Board	タイにおける大気汚染と騒音汚染	コピー
II-14-(2)	41	QUALITY STANDARDS FOR DISPOSAL WATER (タイ語)	1991	National Environment Board	タイにおける排水の水質基準	コピー
II-14-(2)	42	Manual of NEB Guidelines for Preparation of Environmental Impact Evaluations	1979	National Environment Board	環境影響評価書作成のためのガイドライン	コピー
II-14-(3)	43	PATの環境管理計画に関する研究, VOL. 1: PATの環境影響評価 (タイ語, 英文概要)	1990	Port Authority of Thailand	バンコク港の環境影響評価書	コピー
II-14-(3)	44	PATの環境管理計画に関する研究, VOL. 2: PATの環境影響評価 (タイ語, 英文概要)	1990	Port Authority of Thailand	バンコク港の環境影響評価書	コピー
II-14-(3)	45	LAEM CHABANG PORT, ENVIRONMENTAL IMPACT ASSESSMENT, VOLUME 1, FINAL REPORT	1985	Port Authority of Thailand	レムチャバン港環境影響評価書, ただし, 収束は目次と概要のみ。	コピー
II-15-(1)	46	List of Consulting Firms	-	Office of Environmental Policy and Planning	OEP認可の環境コンサルタントリスト	コピー
II-15-(1)	47	Corporate Member of THE CONSULTING ENGINEERS ASSOCIATION OF THAILAND	-	Port Authority of Thailand (入手先)	タイ・コンサルティングエンジニア協会メンバーリスト	コピー
その他	48	PAT puts brake on plans to expand Bangkok Port	1992	BANGKOK POST, MONDAY AUGUST 24, 1992	バンコク港近代化計画を阻む新聞記事	コピー
その他	49	PAT plans uplift for Bangkok Port	1992	THE NATION, MONDAY OCTOBER 19, 1992	バンコク港近代化に関するJICAとの合意を報じる新聞記事	コピー

附属資料9. ローカルコンサルタントリスト

コンサルタントリスト 自然条件調査 (地質調査および測量)

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1. AGGIE CONSULT COMPANY LIMITED
2102/31 Rankamhang Road
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Tel. 3740074, 3744180
Date of Licence : 23/5/88 - 22/5/93

2. CONSULTANTS OF TECHNOLOGY COMPANY LIMITED
38 - 40 Lad - Phrao Road, Soi 130
Bangkapi, Bangkok 10240
Tel. 3770879
Date of Licence : 8/6/88 - 7/6/93

3. TESCO COMPANY LIMITED
21/13 - 14 Sukhumvit 18,
Prakanong, Bangkok 10110
Tel. 2581320
Date of Licence : 29/8/88 - 28/8/93

4. SOUTHEAST ASIA TECHNOLOGY COMPANY LIMITED
123 Sukhumvit 57
Bangkok 10110
Tel. 3922711
Date of Licence : 29/8/88 - 28/8/93

5. CHULALONGKORN UNIVERSITY
Phaya - Thai Road, Pathumwan,
Bangkok 10500
Tel. 2525929, 2514426-7
Date of Licence : 21/9/88 - 20/9/93

6. THORANI TECH COMPANY LIMITED
584/34 Soi U - Charoen
Asoke - Din Daeng Road,
Huay Kwang, Bangkok 10310
Tel. 2456474
Date of Licence : 22/9/88 - 21/9/93

7. TEAM CONSULTING ENGINEERS COMPANY LIMITED
51/301 - 6 Drive - in Complex Soi 2
Lad - Phrao, Bangkok, Bangkok 10240
Tel. 3771770 - 1, 3773480
Date of Licence : 21/9/88 - 20/9/93
8. CHIENGMAT UNIVERSITY
130 Huai - Kaew Road, Muang
CHIENGMAT 50002
Tel. 211484 Ext. 405, 427, 428
Date of Licence : 8/9/88 - 7/9/93
9. MAHIDOL UNIVERSITY
2 Pran - Nok, Siriraj,
Bangkok - noi, Bangkok
Tel. 4115038
Date of Licence : 22/11/88 - 21/11/93
10. S.T.S. ENGINEERING CONSULTANTS COMPANY LIMITED
196/10 - 12 Soi Kingchinda, Pradipat Road,
Bangkok 10400
Tel. 2782355, 2785650
Date of Licence : 6/12/91 - 5/12/96
11. SYSTEM ENGINEERING COMPANY LIMITED
45 Soi Attawimon, Rajprarop Road,
Phaya - Thai, Bangkok 10400
Tel. 2342506, 2463101, 2471353
Date of Licence : 30/1/89 - 29/1/94
12. SONGKHLA UNIVERSITY
P.O.Box 1 Had - Yai
Songkhla
Tel. 244877 Ext. 2180, 2181
Date of Licence : 4/3/89 - 3/3/94

13. S.P.S. CONSULTING SERVICE COMPANY LIMITED
1418/33 Phaholyothin Road,
Lat - Yao, Bangkhen
Bangkok 10900
Tel. 5134221
Date of Licence : 30/3/89 - 29/3/94
14. PAL CONSULTANT COMPANY LIMITED
88/23 - 24 Thetsaban Songkroh Road,
Lat - Yao, Bangkhen
Bangkok 10900
Tel. 5915130 - 3
Date of Licence : 18/7/90 - 17/7/95
15. UNIVERSAL ENGINEERING CONSULTANT COMPANY LIMITED
81 Sukhumvit Soi 2,
Bangkok 10110
Tel. 2528372, 2510040, 2510689
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16. THAILAND INSTITUTE OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH
196 Phaholyothin, Bangkhen
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17. N.S. CONSULTANT COMPANY LIMITED
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Bangkok 10300
Tel. 2436232
Date of Licence : 19/1/91 - 18/1/92

18. THAI - THAI ENGINEERS COMPANY LIMITED
187 - 189 Ramkhamhaeng 53,
Ramkhamhaeng Road, Wang Thonglang,
Bangkapi, Bangkok 10310
Tel. 5304374
Date of Licence : 21/6/91 - 20/6/96
19. KASITSART UNIVERSITY
50 Phaholyothin Road,
Bangkhen, Bangkok 10900
Tel. 5790172
Date of Licence : 28/8/92 - 27/8/97
20. TIPCO CONSULTANTS COMPANY LIMITED
556 Pracharat 2 Road, Bangsue, Dusit,
Bangkok 10800
Tel. 5852393, 3782431
Date of Licence : 1/9/92 - 31/8/97
21. S.G.S. ENVIRONMENTAL SERVICES LIMITED
994 Soi Thonglor (55), Sukhumvit Road,
Bangkok 10110
Tel. 3927431 - 3, 3921066
Date of Licence : 10/7/90 - 9/7/93
22. WATER AND ENVIRONMENT CONSULTANT COMPANY LIMITED
321/27 Nang Linchi Road, T. Chong Nensi,
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Tel. 2868010, 2860110
Date of Licence : 31/10/89 - 30/10/92
23. KHON KAEN UNIVERSITY
123 Mitrapab Road, Muang,
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Tel. (043) 237604
Date of Licence : 19/1/90 - 18/1/95

24. MACRO CONSULTANTS COMPANY LIMITED
Srisuk Building 1420/1 Phaholyothin 26
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Tel. 5137686
Date of Licence : 19/10/90 - 18/10/93
25. ASDICON COOPERATION COMPANY LIMITED
21 Rad - Phrao, Soi 128/1
Khong Chan, Bangkok
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Tel. 3774161, 3786342
Date of Licence : 20/11/90 - 19/11/93
26. INTERNATIONAL TESTING COMPANY LIMITED
22/21 Kaset Villa, Ngamwongwan Road,
Bangkok 10900
Tel. 5796182, 5614524
Date of Licence : 27/8/91 - 26/8/94
27. SIAM DHV CONSULTANCY SERVICES
Phaya Thai Building
31 Phaya - Thai Road,
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Tel. 2463193, 2462998
Date of Licence : 27/11/91 - 26/11/94
28. PRE-DEVELOPMENT CONSULTANT COMPANY LIMITED
50/584 Soi Boonsongseopitt
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29. ENVIRTECH CONSULTANT COMPANY LIMITED

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30. METRIC COMPANY LIMITED

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| 16. THAI ENGINEERING CONSULTANTS CO., LTD.
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