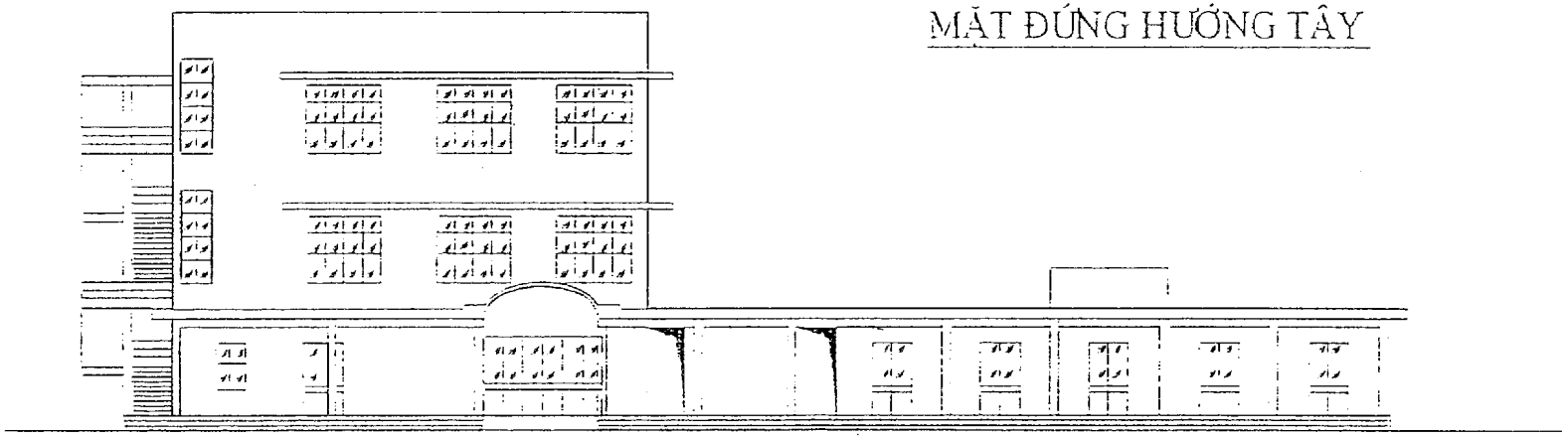
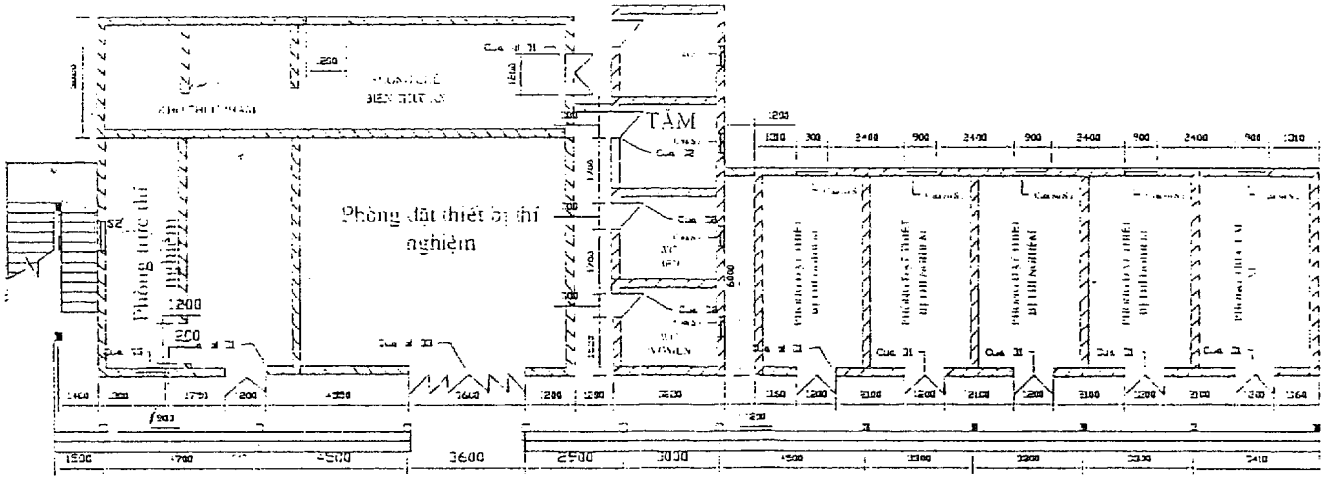
ANNEX 16 Provisional Plan of Local Cost born by the Vietnamese side

YEARS* / ITEMS	2000	2001	2002	2003	2004	2005	TOTAL(USD)
TRANSPORTATION, INSTALLATION, OPERATION OF INSTRUMENTS		21,300	21,300	14,300	7,300	7,300	71,500
MAINTENANCE			15,000	25,000	35,000	49,500	124,500
CONSTRUCT BUILDINGS	142,000						142,000
STAFF CHARGE		20,000	20,000	20,000	20,000	20,000	100,000
UTILITIES		10,000	10,000	10,000	10,000	10,000	50,000
MISCELLANEOUS		2,400	2,400	2,400	2,400	2,400	12,000
				TOTAL			500,000
				TOTAL FROM STATE BUDGET			300,000
				TOTAL FROM COAL INDUSTRY'S BUDGET			200,000

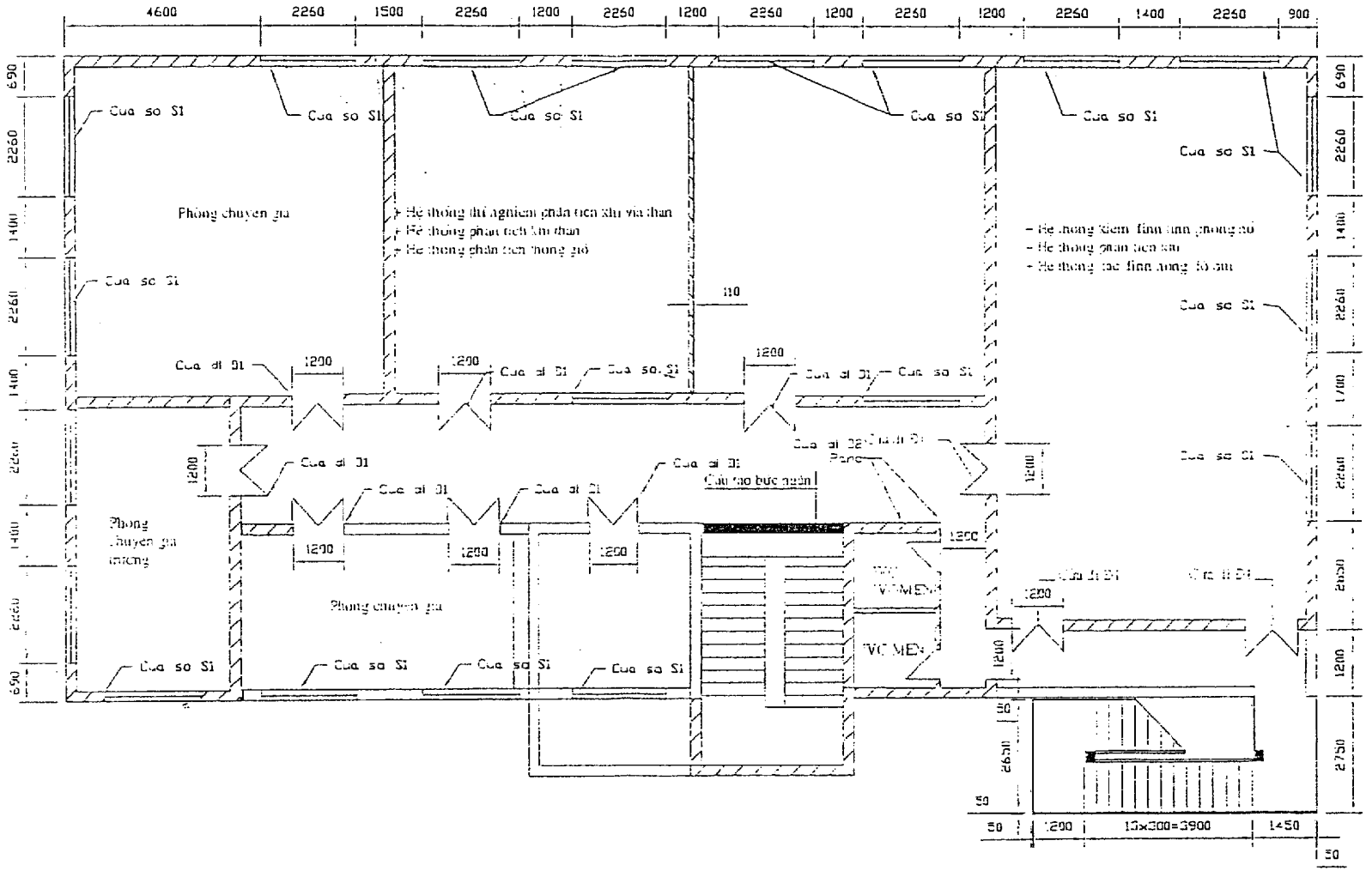
* JAPANESE FISCAL YEAR



MẶT ĐỨNG HƯỚNG TÂY

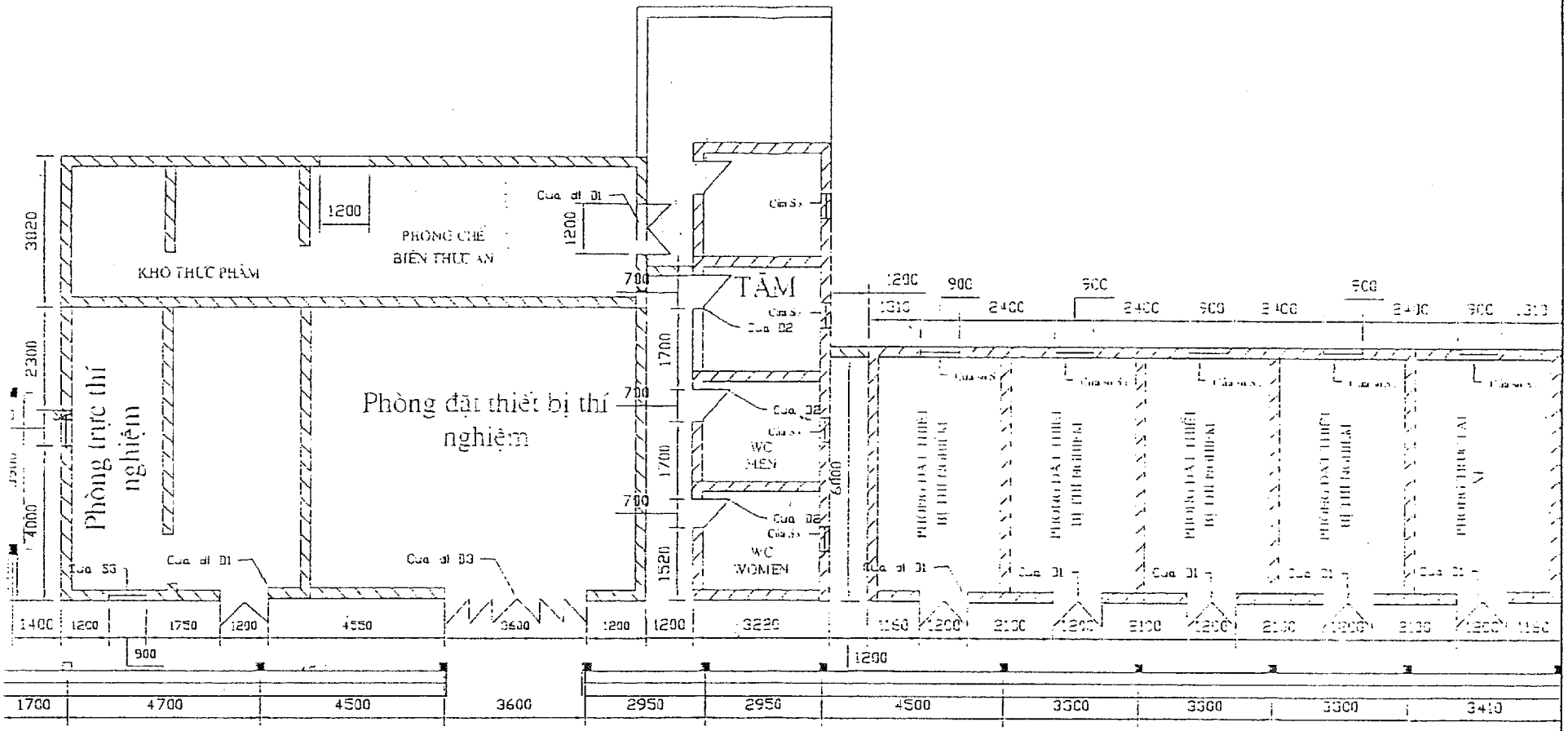


MẶT BẰNG CẢI TẠO TẦNG TRỆT
& NHÀ GIẶT LÀ



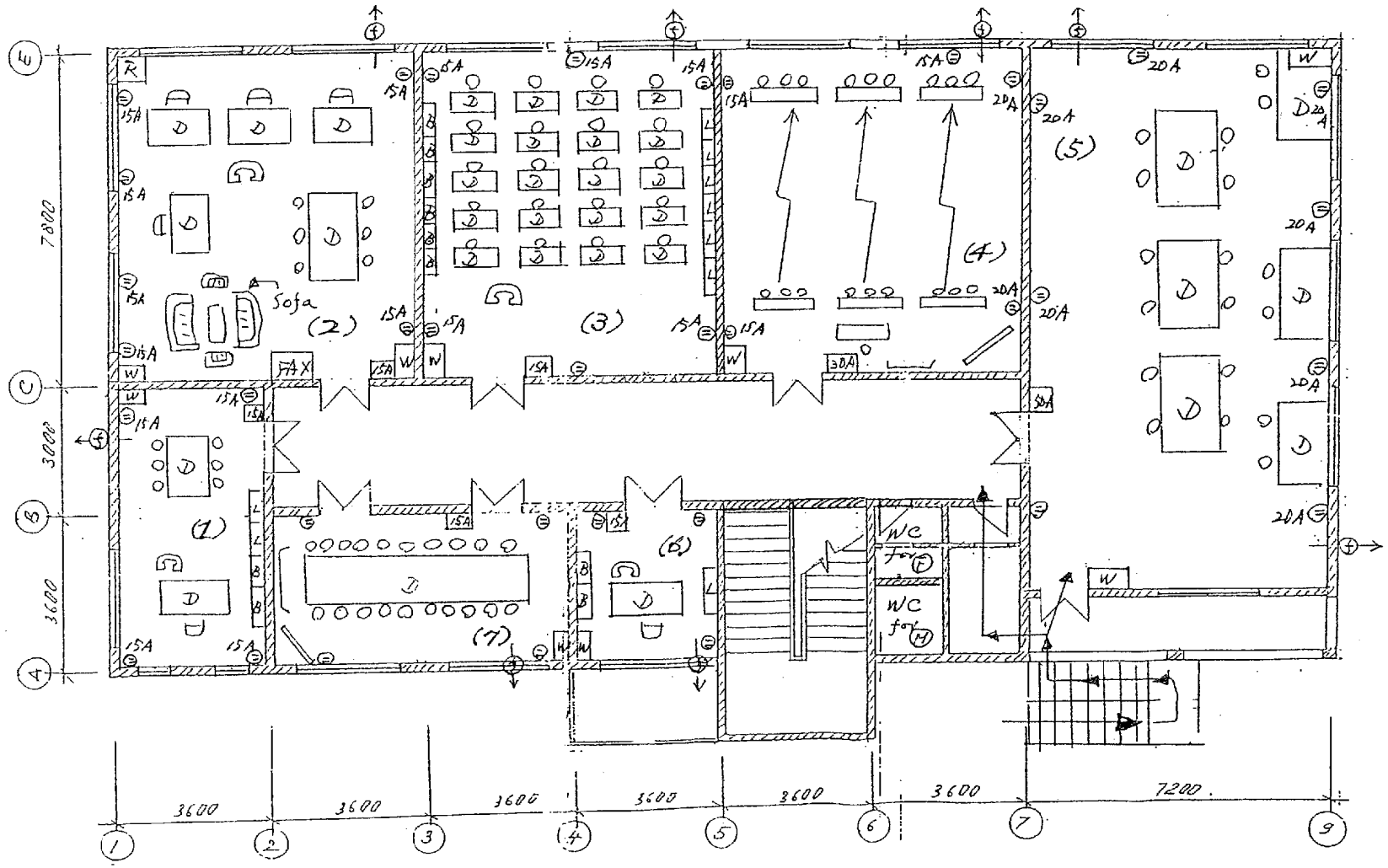
Ghi chú:
- Các gian nhà chuyên gia sử dụng cửa gỗ chấn tường cao 0,8 m có chi tiết riêng.
- Bản vẽ nhà vệ sinh, cửa đi, cửa sổ có chi tiết riêng.
- Tường, trần sơn trong hai hàng sơn với.

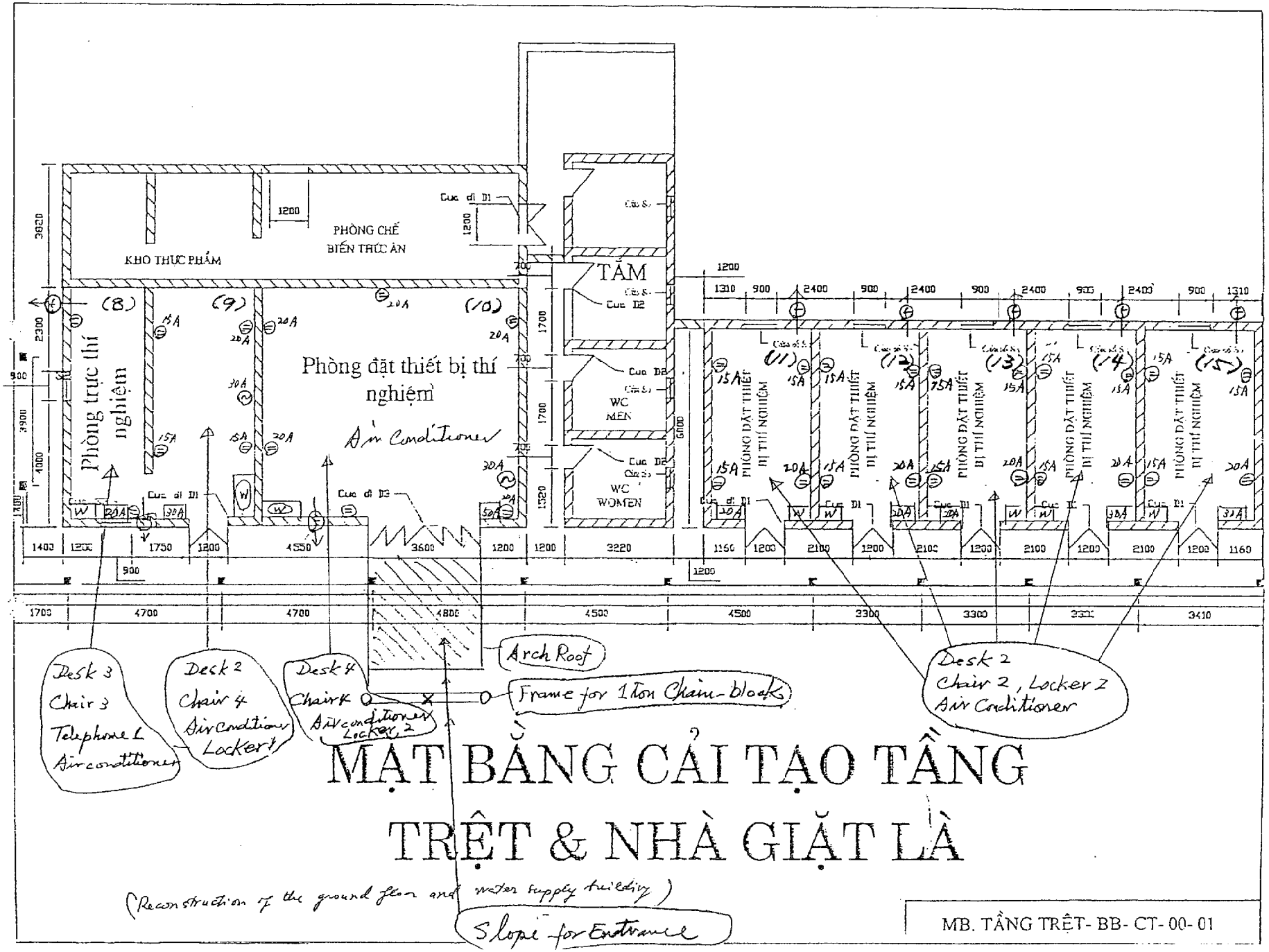
MẶT BẰNG CẢI TẠO TẦNG
II TL 1: 100



MẶT BẰNG CẢI TẠO TẦNG TRỆT & NHÀ GIẶT LÀ

MẶT BẰNG TẦNG II T.L. 1: 100



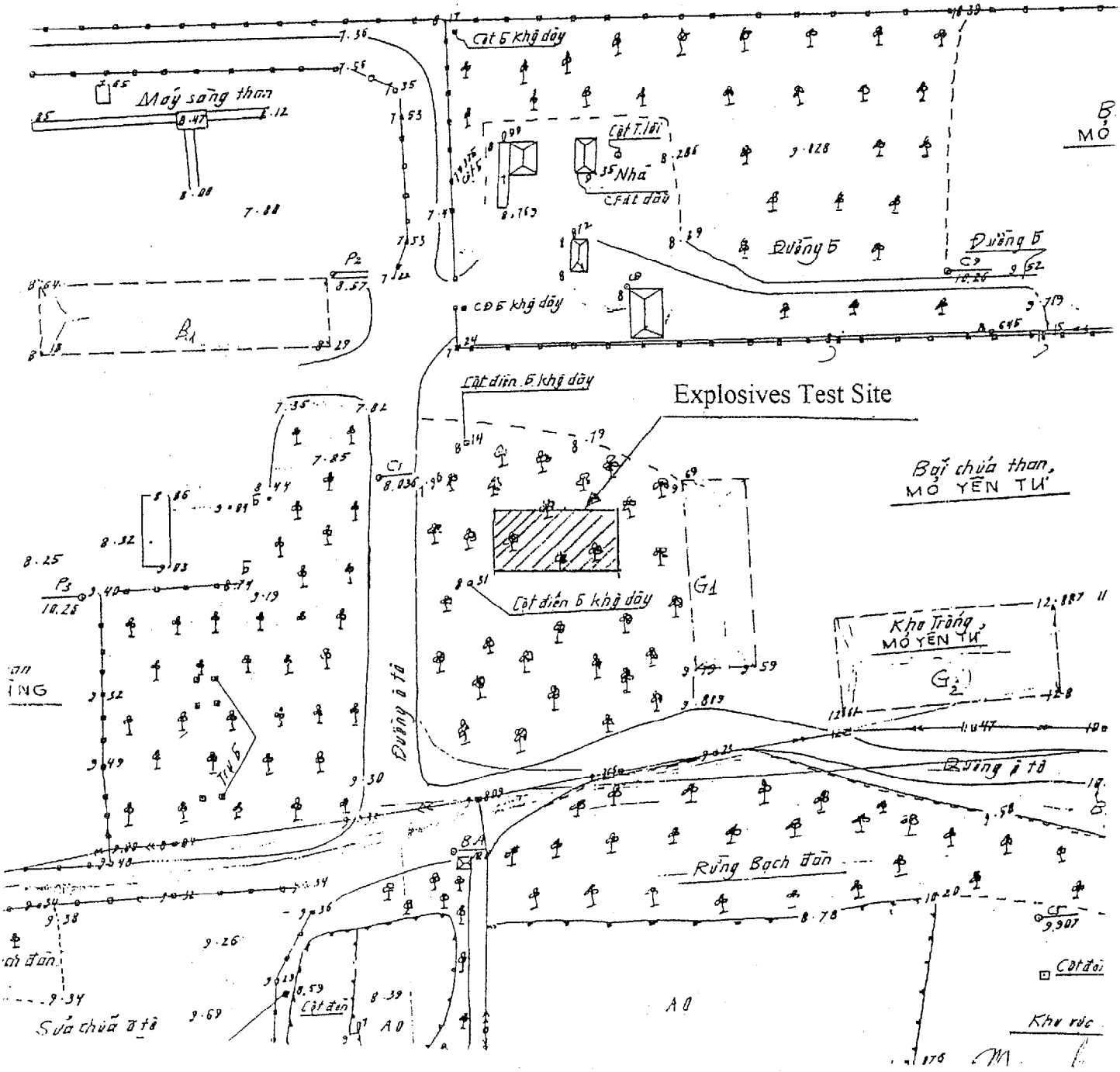


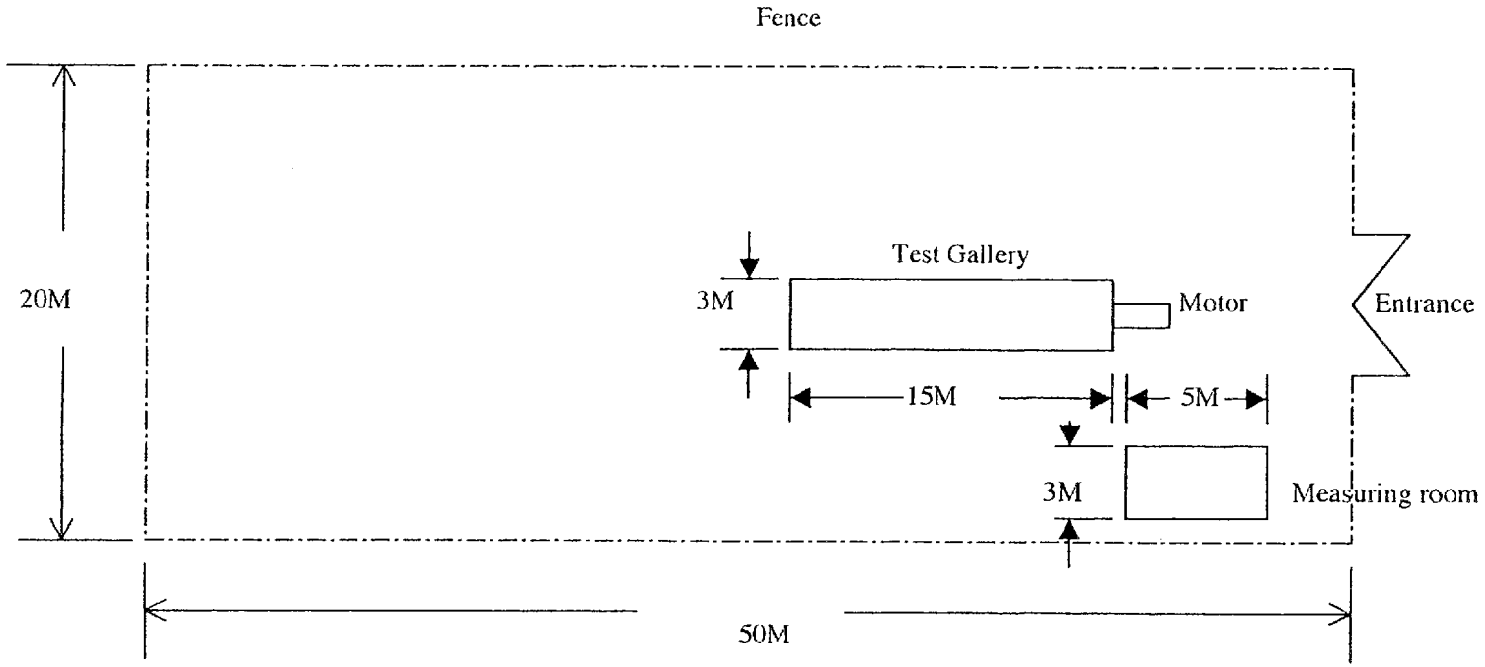
MẶT BẰNG CẢI TẠO TẦNG TRỆT & NHÀ GIẶT LÀ

(Reconstruction of the ground floor and water supply building)

MB. TẦNG TRỆT- BB- CT- 00- 01

6/7


Explosives Test Site
Bãi chứa than,
MỎ YÊN TỬ
Kho Trắng,
MỎ YÊN TỬ
Máy sàng than
Cột điện 6 khỉ dây
Cột T.lối
Nhà
Cột đèn
Đường ô tô
Rừng Bạch đàn
Sửa chữa ô tô
Cột đôi
Khu rác


Fence
20M
Test Gallery
3M
Motor
Entrance
15M
5M
3M
Measuring room
50M

ANNEX 17-2 Schedule of Building Renovation

No	Description	Implementing Schedule				
		August 2000	December 2000	January 2001	February 2001	March 2001
1	Designing, estimating building renovation	completed				
2	Approving the design		———			
3	Conducting building renovation			———	———	———
4	Installing facilities				———	———

ANNEX 17-3 Tentative Preparation Plan for the Project of Mao Khe Coal Mine

Site layout of "Central Monitoring Room in Mao Khe Coal Mine" (Draft)

July 29, 2000

No.	Purpose	Facilities and Refurbish of the Building(Vietnam side)		Instruments(Japanese side)	
		Items	Number, Quality & Remarks	Items	Quality & Remarks
(A)	Room for Central Monitoring System	Desks Chairs Lockers Air conditioner(cooler & heater) Curtain or blind Ventilating fan	3 set, Heavy duty 3 set 2 sets, 180H*180W 1 set 1 set 1 set	Central monitoring system (CPU, etc.)	
(B)	Room for Advisors & C/Ps	Desks & chairs Meeting table White(or black) board Telephone Book stands Lockers Air conditioner(cooler & heater) Curtain or blind Ventilating fan Water supply and drainage	2 sets, Both side drawers & arm chair 1set for 8 peoples 1set 1 set 1 set, 180H*180W 1 set, 180H*180W, 1 set 1 set 1 set 1 set(hand wash type)	Materials for central monitoring system	

Remarks:

1) Ray out image of the center are illustrated in the attached drawings.

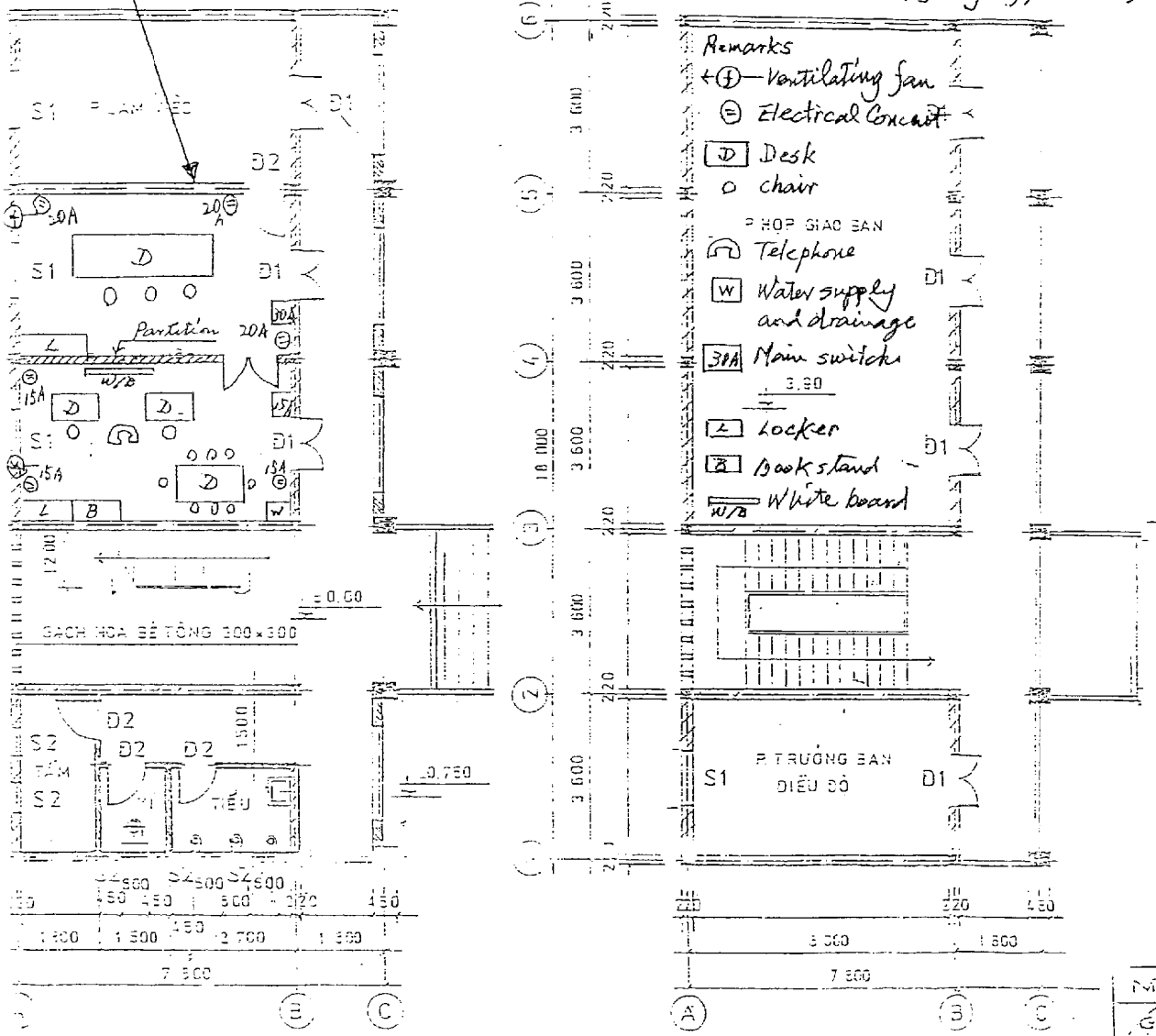
2) The layout may be subjected to change slightly during installation of the facility..

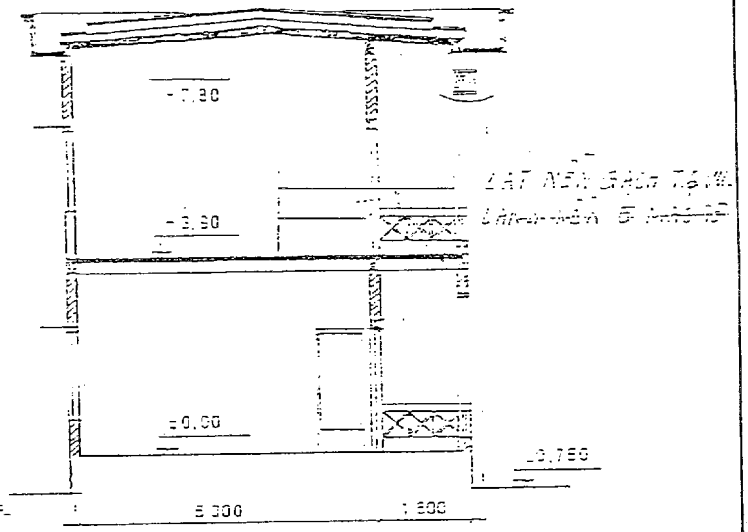
3) The facilities prepared by Japanese side may also be subjected to change due to budgetary allowance of JICA.

4) Room (A) and Room (B) are separated by partition with door.

Lay Out Plan of Central Monitoring Room in Mao Khe Mine

(July 29, 2000)





M.CẮT A_A

HOÀN CÔNG PHẦN XÂY

MẶT BẰNG XÂY T.1

MẶT BẰNG XÂY T.2

MỎ THAN MÃO KHÊ		CHI NHÁNH CTXD SỐ
GIÁM ĐỐC	P.G.T.	GIÁM ĐỐC / K.T.T.G.
Nguyễn Văn Mậu	Vũ Hoàng Nam	Phạm Thanh Tùng

ANNEX 17-4 Schedule of Building Renovation of Monitoring Room at Mao Khe Coal Mine

No	Description	Implementing Schedule		
		January 2002	February 2002	March 2002
1	Designing, estimating building renovation	———		
2	Approving the design	———		
3	Conducting building renovation		———	
4	Installing facilities			———

ANNEX 18 Tentative Allocation Plan of Counterpart Personnel

1. Mr. Doan Van Kien	Director, VINACOAL
2. Mr. Phung Manh Dac	Director, IMSAT
3. Mr. Tran Tu Ba	Manager, Safety Department., IMSAT
4. Mr. Phung Quoc Huy	Mine ventilation engineer, Safety Dept., IMSAT
5. Ms. Tran Thien Huong	Environment engineer, Environment Dept., IMSAT
6. Mr. Le Thanh Phuong	Mine safety engineer, Safety Dept., IMSAT
7. Mr. Le Trung Tuyen	Mine ventilation engineer, Safety Dept., IMSAT
8. Mr. Pham Chan Chinh	Mine ventilation engineer, Safety Dept., IMSAT
9. Mr. Do Van Hoang	Mine ventilation engineer, Safety Dept., IMSAT
10. Mr. Nguyen Anh Tuan	Electric engineer, Electric Dept., IMSAT
11. Mr. Nguyen Dinh Thong	Mine equipment engineer, Underground mining Dept.
12. Mr. Tran Minh	Manager, Electric Dept., IMSAT
13. Mr. Nguyen Duc Son	Director, center for mine electric equipment test, IMSAT
14. Mr. Pham Xuan Thanh	Electric engineer, Director, center for mine electric equipment test, IMSAT
15. Mr. Vu Manh Anh	Electric engineer, Director, center for mine electric equipment test, IMSAT
16. Mr. Nguyen Huy Truc	Chemical engineer, Safety Dept., IMSAT
17. Ms. Le Huong Lain	Chemical engineer, Safety Dept., IMSAT
18. Ms. Tran Thuy Lien	Chemical engineer, Safety Dept., IMSAT
19. Mr. Phung Van Nhat	Mine safety, Underground mining., IMSAT
20. Mr. Dao Dac Tao	Deputy Director, IMSAT
21. Mr. Nguyen Binh	General Manager of International Cooperation, IMSAT
22. Secretary 1	
23. Secretary 2	
24. Driver 1	
25. Driver 2	
26. Technician 1	
27. Technician 2	
28. Technician 3	
29. Technician 4	

ANNEX 19 Functions and Compositions of Joint Coordinating Committee

1 Functions

The Joint Coordinating Committee will be held at least once a year and whenever necessity arises. Its Functions are as follows:

(1) To review Annual Work Plan for the Project.

(2) To review the overall progress of the Technical Cooperation Program as well as the achievement of the Annual Work Plan.

(3) To exchange views on major issues arising from or in connection with the Technical Cooperation Program.

2 Composition

(1) Chairman

President and CEO of VINACOAL

(2) Committee Members

-Vietnamese side-

a Project director, Vietnam National Coal Corporation (VINACOAL)
b Representative(s), from VINACOAL
c Representative(s), from Ministry of Industry (MOI)
d Representative(s), from Ministry of Planning and Investment (MPI)
e Representative(s), from Ministry of Finance (MOF)
f Representative(s), from Ministry of Science, Technology and Environment (MOSTE)
g Representative(s), from Ministry of Labor, Invalid and social affairs (MOLISA)
h Representative(s), from Mao Khe Coal Mine
i Representative(s), from Mine Rescue Center
j Project manager, Institute of Mining Science and Technology (IMSAT)
k Other personnel concerned with the Project decided by the Vietnamese side

-Japanese side-

a Chief Advisor
b Coordinator
c Japanese Experts designated by the Chief Advisor
d Representative(s) of the JICA Vietnam Office
e Other Personnel concerned to be decided and dispatched by JICA, If necessary

Note: The Official(s) of Embassy of Japan in Vietnam may attend the Joint Coordinating Committee as observer (s).

ANNEX 20 Five (5) Basic Evaluation Components

1 Five Basic Evaluation Components

The five basic components defined by JICA as mentioned below are in line with those used for the evaluation works by DAC and other international assistance organization. Introduction of these components has enabled a consistent, well-balanced evaluation, which minimizes evaluator bias. Further, it allows us to share the results, knowledge and lessons with other aid organizations, since we are using common components and can discuss with them from the same viewpoints.

(1) Efficiency

Evaluate the method, procedure, term and cost of the project with a view to productivity.

(2) Effectiveness

Evaluate the results in comparison with the goals (or revised ones) defined at the initial or intermediate stage, and evaluate the attributes (factors and conditions) of the results.

(3) Impact

Evaluate the positive and negative effects of the project, extent of the effect and beneficiaries.

(4) Relevance

Preliminary evaluate whether the needs in the country have been correctly identified, and whether the design is consistent with the national and/or master plan.

(5) Sustainability

Evaluate the autonomy and sustainability of the project after the termination of cooperation, from the perspectives of operation, management, economy, finance and technology.

2 Relation between Five Basic Components and PDM

The five components are used for the evaluation and a selection of a project. These components are directly connected to the elements of PDM as shown in the Figure in the following page.

(1) Efficiency

The component "Efficiency" is a measure to qualitatively and quantitatively compare all resource (input) to the results (output) of the project in order to evaluate the economic efficiency o conversion from input to output.

(2) Effectiveness

The component "Effectiveness" us a measure to evaluate whether the project purpose has been achieved or not, or to evaluate how much the outputs contributed to the achievement of the project purpose, or to evaluate whether or not the characteristics of the outputs were as expected.

(3) Impact

The component "Impact" is a foreseeable or unforeseeable, and a favorable or adverse effect of the project upon society. The evaluate impact, both the overall goal and project purpose should be referred to in the beginning of the evaluation. Evaluation with this components could lead to more than the confirmation as whether or not the overall goal have been obtained. Evaluation with this component requires comprehensive surveys in many cases.

(4) Relevance

The component "Relevance" is to comprehensively evaluate whether or not the project meets the overall goal, politics of both the donor and recipient, local needs and given priority levels, in order to decide whether the project should be continued, reformulated or terminated.

(5) Sustainability

The component "Sustainability" is to comprehensively evaluate how long the favorable effect as a result of the project can continue after the project has been terminated. Evaluation with this component is required to decide how much the local resources should continue to be used for the project, and to evaluate how much the country receiving the assistance has been considering important. According to OECD (1989), "Sustainability" is a component to be used for the final test of the success of a development project.

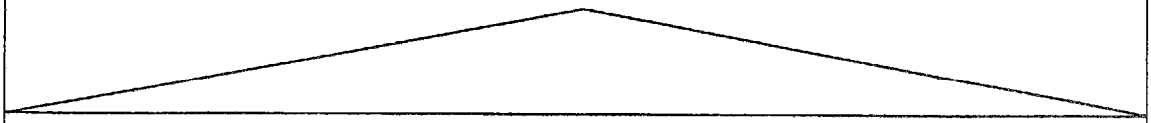
All five components are essential for any of the projects or programs. The five components give necessary information to the decision maker so that he/she can decide how to approach the next step. Since each of the five components build on the intervention strategy, they also lay the foundation for standardization in monitoring and information handling within and among organizations and agencies.

In practice, each of the five components should also contain project-specific information.

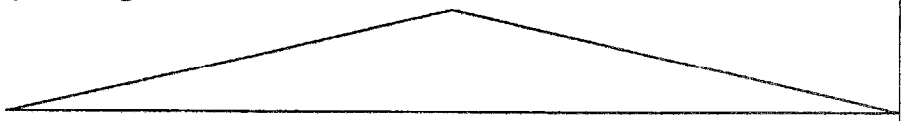
Five Components vs Goal Hierarchy

Evaluation Components

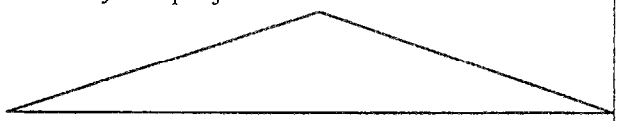
Sustainability:
Evaluate the extent to which the positive effects as a result of the project will still continue after external assistance has been concluded.



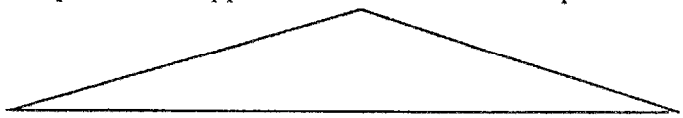
Relevance:
Evaluate the degree to which the project can still be justified in relation to the national and regional priority levels given to the theme.



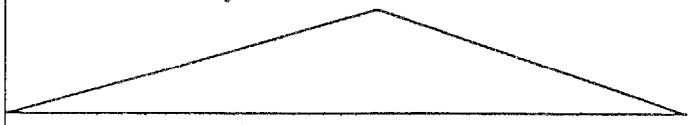
Impact:
Foreseenable or unforeseenable, and favourable or adverse effect of the project upon the target groups and persons possibly affected by the project.



Effectiveness:
Evaluate the extent to which the purpose has been achieved or not, and whether the project purpose can be expected to happen on the basis of the outputs of the project.



Efficiency:
Evaluate how the results stand in relation to the efforts and resources, how economically the resources were converted to the outputs, and whether the same results could have been achieved by other better methods.



Inputs	Outputs	Project Purpose	Overall Goal

Goal Hierarchy

ANNEX 21 Safety-ensuring Countermeasures in connection with the Project

Ⅰ. Underlying concepts

1. Basic principles for entering the underground mine.
   (1) Regarding basic principles for ensuring the safety of persons related to the Project (experts and counterparts), transfer of technologies shall be implemented at the surface of the mine, and actual entering of the underground mine shall be limited to cases that are necessary for the transfer of technologies. The frequency mine entry should also be reduced to a minimum.
   (2) In order to provide for the transfer of technologies underground, a request to ensure the safety of the areas to be visited shall be made in advance, and persons entering the mine must take necessary procedures and appropriate safety measures.

2. Basic principles for handling of flammable gas and explosives.
   If and when flammable gas and/or explosives are to be handled in connection with the transfer of technologies for testing the explosion-proof of equipment, the principal portion of test equipment to be used shall be equal to that found on comparable equipment being used in Japan. Furthermore, test procedures and methods to be employed shall be the same as those being used in Japan.

II. Safety-ensuring countermeasures for entering the mine

1. Safety-ensuring countermeasures to be taken by the Mao Khe Coal Mine at the earliest possible time.
   (1) Prior to groups of persons concerned with the Project entering the mine, the Mao Khe Coal Mine will be requested to implement the following measures:
      1. Cleaning of coal dust that has accumulated on the frames of conveyor belts and electric power cables.
      2. Repair of broken crowns (completed).
      3. Reconstruction of seals to reinforce sealed-off areas where signs of swellings caused by gas being discharged from Layer V5 are present (completed).

4. Maintenance and repair of ill-drained areas.
5. Cleaning of locations where backup fans branch out.
6. Implementation of measures to prevent contact in passages that cut across belt galleries.
7. Control of dust at coal face.

2. Safety-ensuring countermeasures to be taken by the persons in charge of the project.

① Mine-entry procedure

1. Mine-entry application

Japanese experts who are entering the mine shall submit an application to the chief adviser, and Vietnamese counterparts who are entering the mine shall submit an application beforehand to the project manager (including the assistant project manager – this will also apply to the item below) for approval.

2. Approval

After receiving an application, the chief adviser and the project managers shall issue approval after having studied its necessity and the applicant's plan for underground work. According to circumstances, they may instruct that underground work be substituted by above-ground work, that changes be made to the plan, and/or that conditions be added to the approval.

② Safety-ensuring countermeasures to be taken by those who are approved to enter the mine.

1. Persons who enter the mine shall receive an explanation from the Mao Khe Coal Mine's safety manager or person responsible for safety on areas to be visited, notes of danger and precaution, and accouterments to be worn along with their functions and directions for use before entering.
2. At the time of mine entry, the party should form a line in single file consisting of around 10 persons maximum, with the person responsible for safety from the Mao Khe Coal Mine or the on-site safety supervisor in front.

3. Before entering the mine, the functions of the following accouterments should be understood, and the items worn correctly.
   - Dust mask
   - Dust glasses
   - Gas detector
   - Oxygen self rescuer
4. In the event of a shutdown of fans (main fan or local fan), an evacuation from the mine shall be conducted immediately.
5. In principal, actual work in the mine shall not be conducted.
6. While underground, gas (firedamp) concentration measurements shall be conducted by both the Japanese and Vietnamese sides at predetermined locations. If a gas concentration exceeding Vietnam's maximum permissible concentration level is detected, an evacuation from the mine shall be conducted immediately.

③ Other safety measures

1. No entry shall be made on days (such as Monday) immediately following holidays.
2. Work to install centralized supervisory monitoring equipment shall be conducted on mine holidays.
3. Work to be performed underground in the mine, such as a survey to determine the possible amount of gas (CMG reserves) , shall be conducted by on-site staffers of the Mao Khe Coal Mine.
4. Safety training shall be provided through counterparts to Mao Khe Coal Mine personnel who are concerned with technological cooperation.

④ Safety-ensuring committee

A Mine Safety Committee consisting of persons in charge shall be formed, and this committee shall meet regularly with the objective of establishing maximum safety levels for the implementation of the project.

Project side: Japanese side (chief adviser, coordinator, expert

ANNEX 22 List of Attendance of the Discussions

1 Japanese Side

(1) Implementation Study Team

Mr. Norinobu Hayashi	Leader
Mr. Takehiro Isei	Technical Cooperation Planning
Mr. Kouichiro Inami	General Mine Safety Technology
Mr. Satoshi Murakami	Project Cooperation Planning

(2) Embassy of Japan

Mr. Hisayuki Imura	First Secretary
Mr. Takeshi Yasuraoka	Second Secretary

(3) JICA Expert in VINACOAL

Mr. Tsugunori Teramoto	

(4) JICA Vietnam Office

Mr. Morimasa Kanamaru	Resident Representative
Mr. Masato Togawa	Deputy Resident Representative
Mr. Yuichi Sugano	Assistant Resident Representative

2 Vietnamese Side

(1) VINACOAL

Mr. Doan Van Kien	President and CEO
Mr. Vuong Van Doc	Deputy General Manager, Investment and International Cooperation Dept.
Mr. Vu Duong Quan	Expert, Investment and International Cooperation Dept.

(2) IMSAT

Dr. Phung Manh Dac	Director
Dr. Dao Dac Tao	Deputy Director
Dr. Nguyen Binh	Manager General, Department for International Cooperation and Project Development
Eng. Tran Tu Ba	Manager of Underground Mining Dept.

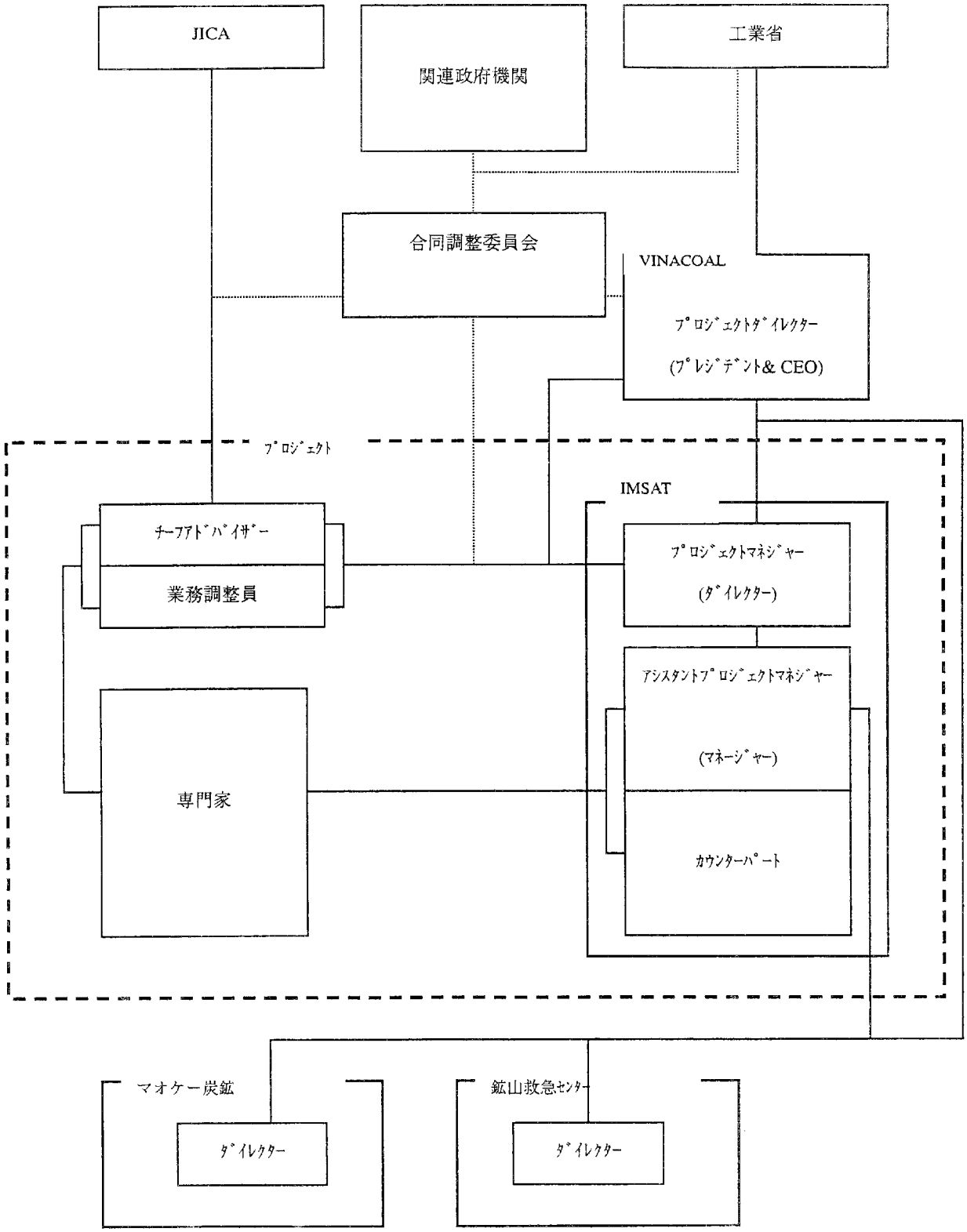
(3) MOI

Dr. Tran Minh Huan	Genaral Director of International Cooperation Dept.
Ms. Nguyen Thi Xuan Hhuy	expert, International Cooperation Department

(4) MPI

Dr. Ho Quang Minh	Deputy Director General, Foreign Economic Relations Dept.

資料３　プロジェクト組織図



ヴィエトナム炭鉱ガス安全管理センタープロジェクトPDM（Ver．2）

日本側実施機関：ＪＩＣＡ　　相手側実施機関：鉱山科学技術研究所（ＩＭＳＡＴ）　　協力期間：２００１年４月１日～２００６年３月３１日（５年間）

ターゲットグループ：鉱山科学技術研究所（ＩＭＳＡＴ）　　プロジェクト対象地域：クォン・ニン省（モデル炭鉱：マオケー炭鉱）

作成方法：日本側作成、相手国側承認　　作成日：平成１２年１２月８日

Narrative Summary(ﾌﾟﾛｼﾞｪｸﾄの要約)	Indicator (指標)	Means of Verification (指標の入手手段)	Assumption (外部条件)
Overall Goal (上位目標) ｳﾞｨｴﾄﾅﾑ石炭産業界における保安技術の向上と普及が図られる	1. 2010 年までにすべての坑内掘炭鉱においてｳﾞｨｴﾄﾅﾑ炭鉱安全規則で規定しているﾒﾀﾝｶﾞｽ管理対策技術と電気機器・爆薬の防爆技術が普及される 2. 2010 年までに機器防爆試験が義務化される 3. 救護活動指導及び鉱山保安研修が定期的に行なわれるようになる	1. VINACOAL の保安日誌 2. VINACOAL または MOI の防爆検定試験義務化に関する通達、法規 3. 炭鉱ｶﾞｽ安全管理ｾﾝﾀｰの左記訓練及び研修の実施状況記録	a. ｳﾞｨｴﾄﾅﾑ国の石炭産業おいて坑内掘炭鉱の比重が下がらない
Project Purpose (ﾌﾟﾛｼﾞｪｸﾄ目標) 炭鉱ｶﾞｽ安全管理ｾﾝﾀｰが炭鉱ｶﾞｽ安全管理に関する技術ｻｰﾋﾞｽを提供できるようになる	1.炭鉱ｶﾞｽ集中監視技術の技術ｻｰﾋﾞｽがﾏｵｹｰ炭鉱以外の炭鉱に提供される 2. 専門家が認めるﾚﾍﾞﾙの炭層ｶﾞｽ包蔵量評価ﾃﾞｰﾀﾍﾞｰｽ及び通気網ﾃﾞｰﾀﾍﾞｰｽが主要な 8 つの坑内掘炭鉱について作成される 3. ｳﾞｨｴﾄﾅﾑの炭鉱坑内で使用される全型式の機器・爆薬について防爆検定試験が実施される 4. 救護活動指導が少なくとも 200 人以上に実施される 5. 鉱山保安研修が少なくとも 300 人以上に実施される	1.　提供した技術ｻｰﾋﾞｽの報告書 2-1. 炭層ｶﾞｽ包蔵量評価ﾃﾞｰﾀﾍﾞｰｽ 2-2. 通気網ﾃﾞｰﾀﾍﾞｰｽ 3.　検定試験結果報告書 4.　指導受講者ﾘｽﾄ 5.　研修受講者ﾘｽﾄ	a. VINACOAL および MOI が炭鉱ｶﾞｽ安全管理に対して積極的な政策を展開する
Outputs (成果) 0. ｾﾝﾀｰの運営管理体制が確立される 1. 炭層ｶﾞｽ包蔵量評価の指導ができるようになる 2. 通気網解析に基づく通気管理の指導ができるようになる 3. 炭鉱ｶﾞｽ集中監視の指導ができるようになる 4. 機器防爆試験を実施できるようになる 5. 救護活動技術が指導できるようになる 6. 鉱山保安に関する教育できるようになる	0-1. 計画通りの人員が配置されている 0-2. 計画通りの予算が割り当てられている 0-3. 計画通りの活動が達成されている 0-4. ﾓﾆﾀﾘﾝｸﾞが定期的 (年２回) に行なわれている 1. ﾏｵｹｰ炭鉱により採取された試料をもとに専門家が認めるﾚﾍﾞﾙのﾏｵｹｰ炭鉱の炭層ｶﾞｽ包蔵量評価ﾃﾞｰﾀﾍﾞｰｽが作成される 2. 専門家が認めるﾚﾍﾞﾙのﾏｵｹｰ炭鉱の通気網ﾃﾞｰﾀﾍﾞｰｽが作成される 3-1. 専門家が認めるﾚﾍﾞﾙの坑内ｶﾞｽﾓﾆﾀﾘﾝｸﾞﾃﾞｰﾀと解析記録が作成される 3-2. ﾏｵｹｰ炭鉱から炭鉱ｶﾞｽ集中監視ｼｽﾃﾑの運用・保守報告書が定期的に提出される 4. 作成した基準に基づいてｳﾞｨｴﾄﾅﾑに導入されている全ての防爆方式の機器防爆試験および全てのｶﾃｺﾞﾘｰの爆薬の爆薬防爆試験が実施される 5. 救護隊訓練が 1 回以上実施される 6. 鉱山保安研修が 1 回以上実施される	0-1. 人員配置一覧表 0-2. 予算計画書及び実績報告書 0-3. 活動計画書及び実績報告書 0-4. ﾓﾆﾀﾘﾝｸﾞ報告書 1-1. 試料採取記録 1-2. 採取試料分析記録 1-3. 炭層ｶﾞｽ包蔵量評価ﾃﾞｰﾀﾍﾞｰｽ 2-1. 通気網解析記録 2-2. 通気網ﾃﾞｰﾀﾍﾞｰｽ 3-1-1. 坑内ｶﾞｽﾓﾆﾀﾘﾝｸﾞﾃﾞｰﾀ 3-1-2. 坑内ｶﾞｽﾓﾆﾀﾘﾝｸﾞ解析記録 3-2. 運用・保守報告書 4-1. 作成した機器・爆薬防爆検定基準 4-2. 機器・爆薬防爆試験実施記録 5-1. 救護隊訓練用ｶﾘｷｭﾗﾑ・ﾃｷｽﾄ 5-2. 救護隊訓練実施記録 6-1. 鉱山保安研修用ｶﾘｷｭﾗﾑ・ﾃｷｽﾄ 6-2. 鉱山保安研修実施記録	a. ｳﾞｨｴﾄﾅﾑ石炭産業界に炭鉱ｶﾞｽ安全管理に関するﾆｰｽﾞが存在する
Activities (活動) 0-1. 要員を計画に従って確保する 0-2. 予算計画を適切に策定・遂行する 0-3. 活動計画を策定する 0-4. 定期的にﾓﾆﾀﾘﾝｸﾞを実施する 1-1. 必要な機材を設置する 1-2. 石炭試料採取技術を修得する 1-3. 採取試料の分析技術を修得する 1-4. 分析結果の評価技術を修得する 1-5. ﾓﾃﾞﾙ炭鉱に修得技術を指導する 1-6 ﾓﾃﾞﾙ炭鉱以外の炭鉱に修得技術を指導する 2-1. 必要な機材を設置する 2-2. 通気測定技術を修得する 2 3. 通気網解析技術を修得する 2-4. 解析結果の評価技術を修得する 2-5. ﾓﾃﾞﾙ炭鉱に修得技術を指導する 2-6. ﾓﾃﾞﾙ炭鉱以外の炭鉱に修得技術を指導する 3-1. 機材計画を策定する 3-2. 必要な機材を設置する 3-3. 炭鉱ｶﾞｽ集中監視ｼｽﾃﾑの保守・管理技術を修得する 3-4. 炭鉱ｶﾞｽ集中監視ｼｽﾃﾑを用いた監視技術を修得する 3-5. ﾓﾃﾞﾙ炭鉱に修得技術を指導する 3-6. 炭鉱ｶﾞｽ集中監視ｼｽﾃﾑにより得られたﾃﾞｰﾀの評価方法を修得する 4-1. 必要な機材を設置する 4 2. 機器・爆薬防爆検定試験の基本方針を検討する 4-3. 機器・爆薬防爆検定試験基準を作成する 4-4. 機器・爆薬防爆検定試験技術を修得する 4-5. 機器・爆薬防爆検定試験を実施する 5-1. 必要な機材を設置する 5-2. 救護技術を修得する 5-3. 鉱山救急ｾﾝﾀｰに修得技術を移転する 6-1. 必要な機材を設置する 6-2. 鉱山保安のｶﾘｷｭﾗﾑ・教育用ﾃｷｽﾄを準備する 6-3. 鉱山保安の教育・訓練を実施する	Inputs (投入) The Japanese Side (日本側) 1　専門家 (1)長期専門家 ﾁｰﾌｱﾄﾞﾊﾞｲｻﾞｰ　60M/M 業務調整員　60M/M ｶﾞｽ管理技術　60M/M 鉱山保安一般技術　60M/M 防爆検定技術　60M/M (2)短期専門家 必要に応じて 2　機材 ｶﾞｽ包蔵量分析ｼｽﾃﾑ ｶﾞｽ分析ｼｽﾃﾑ 石炭分析ｼｽﾃﾑ 通気網解析ｼｽﾃﾑ 集中監視ｼｽﾃﾑ 坑内通信ｼｽﾃﾑ 防爆検定ｼｽﾃﾑ 粉じん測定ｼｽﾃﾑ ｶﾞｽ検定器 鉱山救護ｼｽﾃﾑ 業務用車両 ﾃﾞｰﾀ解析・事務処理 爆薬検定試験坑道 3　研修員受入 １０人以上	The Vietnamese Side (ｳﾞｨｴﾄﾅﾑ側) 1　人材 ﾌﾟﾛｼﾞｪｸﾄﾏﾈｰｼﾞｬｰ　20M/M*1 副ﾌﾟﾛｼﾞｪｸﾄﾏﾈｰｼﾞｬｰ　60M/M*1 炭層ｶﾞｽ包蔵量評価　10M/M(2M*5Y)*2 通気網解析　60M/M*3 炭鉱ｶﾞｽ集中監視　30M/M(2M*5Y)*4 機器防爆試験　60M/M*6 救護活動　10M/M(2M*5Y)*3 鉱山保安教育　60M/M*4 必要に応じ補助要員　20M/M*3 運転手　60M/M*2 秘書　60M/M*2 技術者　60M/M*4 2　施設 ﾌﾟﾛｼﾞｪｸﾄｻｲﾄ ﾏｵｹｰ炭鉱炭鉱ｶﾞｽ集中監視ｼｽﾃﾑ用施設 鉱山救急ｾﾝﾀｰ訓練施設 3　機材 H 本供与機材以外の必要機材 4　ﾛｰｶﾙｺｽﾄ 500,000USD	a. ﾏｵｹｰ炭鉱が炭層ｶﾞｽ包蔵量評価技術、炭鉱ｶﾞｽ集中監視ｼｽﾃﾑおよび通気網解析ｼｽﾃﾑの必要性を認識する Pre-condition (前提条件) a. 坑内での技術移転に際し安全性が確保される

資料5　活動計画表（PO）

△：専門家/調査団員派遣　　▼：機材供与

暦年		2001			2002				2003				2004				2005				2006
四半期		II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I
専門家/調査団員派遣						△					△								△		
機材供与時期			▼				▼				▼				▼						
0	運営管理体制確立																				
0-1	要員を計画に従って確保する																				
0-2	予算計画を適切に策定・遂行する																				
0-3	活動計画を策定する																				
0-4	定期的にモニタリングを実施する																				
1	炭層ガス包蔵量評価技術																				
1-1	必要な機材を設置する																				
1-2	石炭試料採取技術を修得する																				
1-3	採取試料の分析技術を修得する																				
1-4	分析結果の評価技術を修得する																				
1-5	モデル炭鉱に修得技術を指導する																				
1-6	モデル炭鉱以外の炭鉱に修得技術を指導する																				
2	通気網解析技術																				
2-1	必要な機材を設置する																				
2-2	通気測定技術を修得する																				
2-3	通気網解析技術を修得する																				
2-4	解析結果の評価技術を修得する																				
2-5	モデル炭鉱に修得技術を指導する																				
2-6	モデル炭鉱以外の炭鉱に修得技術を指導する																				
3	炭鉱ガス集中監視技術																				
3-1	機材計画を策定する																				
3-2	必要な機材を設置する																				
3-3	炭鉱ガス集中監視システムの保守・管理技術を修得する																				
3-4	炭鉱ガス集中監視システムを用いた監視技術を修得する																				
3-5	モデル炭鉱に修得技術を指導する																				
3-6	炭鉱ガス集中監視システムにより得られたデータの評価方法を修得する																				
4	機器・爆薬防爆検定試験技術																				
4-1	必要な機材を設置する																				
4-2	機器・爆薬防爆検定試験の基本方針を検討する																				
4-3	機器・爆薬防爆検定機関基準を作成する																				
4-4	機器・爆薬防爆検定試験技術を修得する																				
4-5	機器・爆薬防爆試験を実施する																				
5	救護活動技術																				
5-1	必要な機材を設置する																				
5-2	救護技術を修得する																				
5-3	鉱山救急センターに修得技術を移転する																				
6	鉱山保安教育技術																				
6-1	必要な機材を設置する																				
6-2	鉱山保安のカリキュラム・教育用テキストを準備する																				
6-3	鉱山保安の教育・訓練を実施する																				

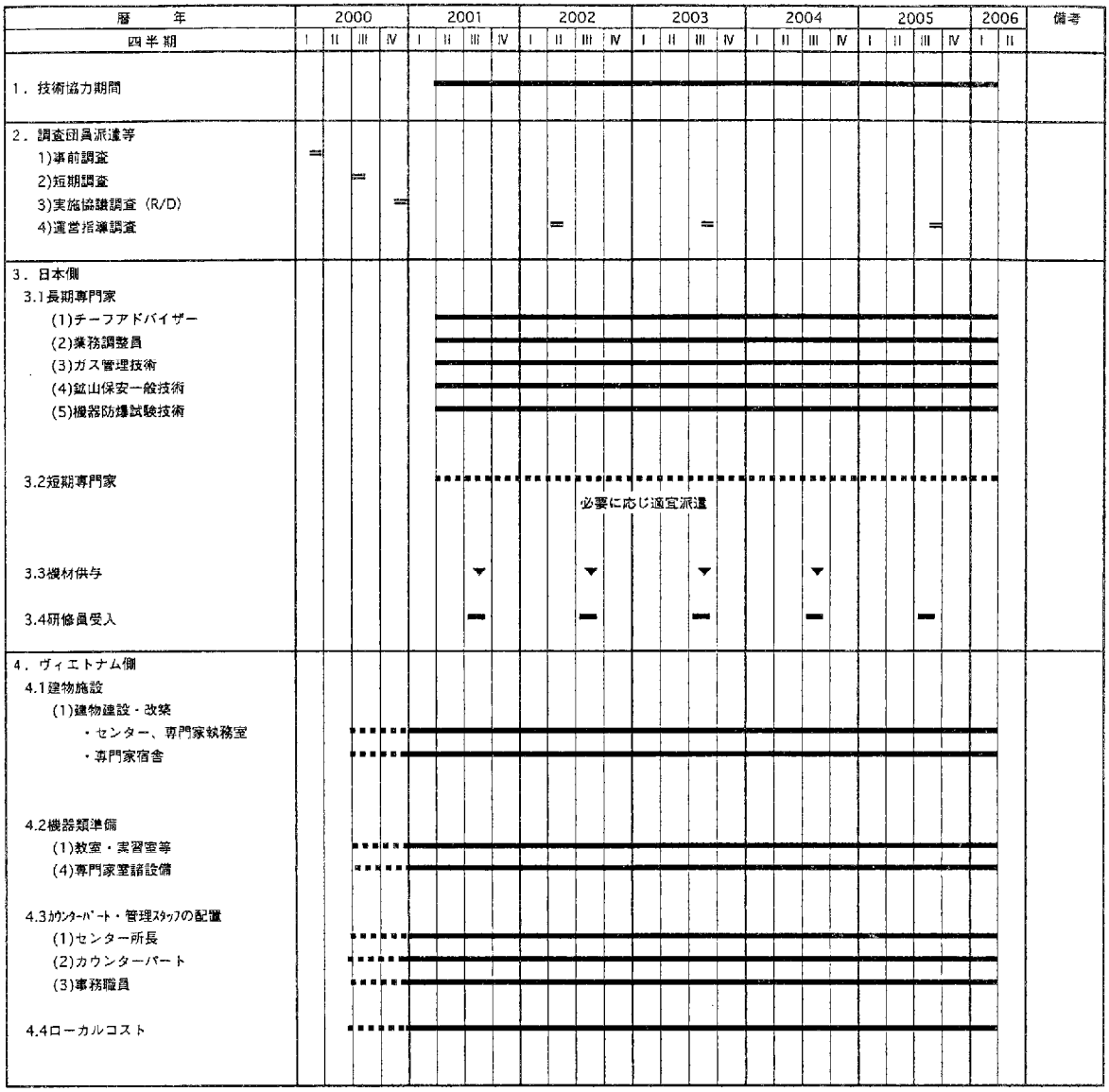
資料6　年間活動計画表（ＡＰＯ）

PM：プロジェクトマネジャー　　CP：カウンターパート CA：チーフアドバイザー　　LE：長期派遣専門家　　SE：短期派遣専門家

(LE:2,業務調整員、3,ガス管理技術、4,鉱山保安一般技術、5,機器防爆試験技術)

年		2001									2002			プロジェクト関係責任者	投入	備考
月（ＪＦＹ）		4	5	6	7	8	9	10	11	12	1	2	3			
専門家/調査団員派遣																
機材供与時期						▼										
0	運営管理体制確立															
0-1	委員を計画に従って確保する													CA、PM	CP、LE:2	
0-2	予算計画を適切に策定・遂行する													CA、PM	CP、LE:2	
0-3	活動計画を策定する													CA、PM	CP、LE:2	
0-4	定期的にモニタリングを実施する													CA、PM	CP、LE:2	
1	炭層ガス包蔵量評価技術															
1-1	必要な機材を設置する													CA、PM	CP、LE:3,4	
1-2	石炭試料採取技術を修得する													CA、PM	CP、LE:3,SE	
1-3	採取試料の分析技術を修得する													CA、PM	CP、LE:4,5,SE	
1-4	分析結果の評価技術を修得する													CA、PM	CP、LE:4,SE	
1-5	モデル炭鉱に修得技術を指導する													CA、PM	CP、LE:3,4,SE	
1-6	モデル炭鉱以外の炭鉱に修得技術を指導する															
2	通気網解析技術															
2-1	必要な機材を設置する													CA、PM	CP、LE:3,4,SE	
2-2	通気測定技術を修得する													CA、PM	CP、LE:3,4,5,SE	
2-3	通気網解析技術を修得する													CA、PM	CP、LE:3,4,SE	
2-4	解析結果の評価技術を修得する													CA、PM	CP、LE:3,4,SE	
2-5	モデル炭鉱に修得技術を指導する													CA、PM	CP、LE:3,4,SE	
2-6	モデル炭鉱以外の炭鉱に修得技術を指導する															
3	坑層ガス集中監視技術															
3-1	機材計画を策定する														CP、LE:3,SE	
3-2	必要な機材を設置する													CA、PM	CP、LE:3,SE	
3-3	炭鉱ガス集中監視システムの保守・管理技術を修得する													CA、PM	CP、LE:3,SE	
3-4	炭鉱ガス集中監視システムを用いた監視技術を修得する													CA、PM	CP、LE:3,SE	
3-5	モデル炭鉱に修得技術を指導する													CA、PM	CP、LE:3,SE	
3-6	集中監視システムにより得られたデータの評価方法を修得する															
4	機器・爆薬防爆試験技術															
4-1	必要な機材を設置する													CA、PM	CP、LE:5,SE	
4-2	機器・爆薬防爆検定試験の基本方針を検討する													CA、PM	CP、LE:5,SE	
4-3	機器・爆薬防爆検定検験基準を作成する													CA、PM	CP、LE:5,SE	
4-4	機器・爆薬防爆検定試験技術を修得する													CA、PM	CP、LE:5,SE	
4-5	機器・爆薬防爆検定試験を実施する													CA、PM	CP、LE:5,SE	
5	救護活動技術															
5-1	必要な機材を設置する													CA、PM	CP、LE:5,SE	
5-2	救護技術を修得する													CA、PM	CP、LE:3,4,5,SE	
5-3	鉱山救急センターに修得技術を移転する													CA、PM	CP、LE:3,4,5,SE	
6	鉱山保安教育技術															
6-1	必要な機材を設置する													CA、PM	CP、LE:2,SE	
6-2	鉱山保安のカリキュラム・教育用テキストを準備する													CA、PM	CP、LE:3,4,5,SE	
6-3	鉱山保安の教育・訓練を実施する													CA、PM	CP、LE:3,4,5,SE	

資料７　暫定実行計画（ＴＳＩ）



資料８　供与機材計画

総活表

No.	分類	小分類	(優先順)	平成13年度調達	平成14年度調達	平成15年度調達	平成16年度調達
1	ガス包蔵量分析システム	ガス包蔵量分析システム	A-4	○			
		先進ボーリング	B-4	○			
2	ガス分析システム		A-3	○			
3	石炭分析システム		B-1		○		
4	通気網解析システム		A-5	○			
5	集中監視システム		A-2		○		
6	坑内通信システム		B-2		○		
7	防爆検定システム		A-1	○			
8	粉じん測定システム		B-5	○			
9	ガス検定器		B-3	○			
10	鉱山救護システム		A-6	○			
11	業務用車輌		A-7	○			
12	データ解析事務処理	視聴覚教育システム	A-8	○			
		データ解析・事務処理		○			
13	爆薬検定試験坑道				○		

詳細計画表

No.	分類	小分類	品目	仕様	個数／式	平成13年度調達	平成14年度調達	平成15年度調達	平成16年度調達
1	ガス包蔵量分析システム	ガス包蔵量分析システム	ガス脱着圧計測装置		1	○			
			小型穿孔機	エア駆動式	1	○			
			ガス回収器具		2	○			
		先進ボーリングシステム	ボーリングマシン	エア駆動式	1	○			
			ポンプ	エア駆動式	1	○			
			ロッド及びツール類	φ40.5×200m	1	○			
2	ガス分析システム		自動ガスクロ	FID/TCD	1	○			
3	石炭分析システム		自動熱量計		1		○		
			電気炉		1		○		
			電気オーブン		1		○		
			サンプルクラッシャー		1		○		
			粉砕用ミル		1		○		
			計測器具		1		○		
4	通気網解析システム		解析ソフト(ベトナム語)	比抵抗/通気網解析	1	○			
			解析用コンピューター(含む)	プロッタ付（含む）	1	○			
			計測機器	測風器等	1	○			
5	集中監視システム		集中監視装置		1		○		
			センサー及びケーブル（測点48点）		1		○		

詳細計画表

No.	分類	小分類	品目	仕様	個数／式	平成13年度調達	平成14年度調達	平成15年度調達	平成16年度調達
			防爆型コミニュケーションシステム		1		○		
6	坑内通信システム								
			ガス混合供給装置		1	○			
			IEC型本質安全点火試験装置		1	○			
			耐圧防爆着火試験装置		1	○			
			水圧式耐圧容器加圧試験装置		1	○			
			環境試験装置		1	○			
			重錘落下試験装置		1	○			
			熱衝撃試験装置		1	○			
			温度測定装置		1	○			
7	防爆検定システム		蒸留水製造装置		1	○			
			引留機能試験機		1	○			
			電気計器類		1	○			
			メタンガス測定器校正装置		1	○			
			風速計校正装置		1	○			
			工具類		1	○			
			消耗品類		1	○			
			質量濃度計	柴田LV-5E	1	○			
			相対濃度計	柴田LD-1E	1	○			
8	粉じん測定システム		計測器具	天秤等	1	○			
			携帯型ガス検定器	CH_4,CO,O_2	1	○			
			携帯型ガス警報器	CH_4	1	○			
9	ガス検定器		携帯型温度測定器		1	○			

詳細計画表

No.	分類	小分類	品目	仕様	個数／式	平成13年度調達	平成14年度調達	平成15年度調達	平成16年度調達
10	鉱山救護システム		呼吸器	マスク付	10	○			
			酸素充填機		1	○			
			酸素呼吸試験装置		1	○			
			予備ボンベ、清浄缶、カーライム他		1	○			
			ガス爆発実験装置		1	○			
			炭じん爆発実験装置		1	○			
			防塵マスク・メガネ		1	○			
11	業務用車輌		4WD		1	○			
			マイクロバス		1	○			
12	事務・視聴覚機器	視聴覚教育システム	コピー機		2	○			
			OHP		1	○			
			ビデオカメラ		1	○			
			スクリーン		2	○			
			ビジュアルプレゼンター		1	○			
			コピーホワイトボード		1	○			
			ビデオデッキ		1	○			
			デジタルカメラ　・スキャナ		1	○			
			モニター		2	○			
			テレビ		3	○			
		データ解析事務処理	卓上型コンピューター		6	○			
			プリンター		3	○			
			ノート型コンピューター		5	○			
			プリンター		2	○			
			ソフト		1	○			
13	爆薬検定試験坑道		坑道建設費、測定装置等		1		○		

資料９　プロジェクトに係る安全確保対策

Ⅰ.基本的考え方

1.入坑に当たっての基本原則

(1)本プロジェクトにおける関係者（専門家及びC／P）の安全を確保する原則として、技術移転をできるだけ坑外において実施することとし、入坑は技術移転の必要性上、やむを得ず坑内で技術移転を行わざるを得ない場合に限るものとする。また、その回数もできるだけ少なくするよう努めるものとする。

(2)やむを得ず坑内にて技術移転を行なう場合に備えて、予め対象炭鉱箇所の安全確保対策を依頼するとともに、入坑者は入坑に当たっての手続き及び入坑に当たっての安全確保対策を十分行なうこととする。

2.可燃性ガス・火薬類の取り扱いに当たっての基本原則

機器防爆試験技術の移転において可燃性ガス・火薬類を取扱う場合は、試験装置の主要部分は我が国で用いている防爆試験装置と同程度のものを用いることとし、その試験手順・方法も我が国で行なっているものと同様の手順・方法により行なうものとする。

Ⅱ．入坑に当たっての安全確保対策

１．マオケ-炭鉱に早期実施を依頼する安全確保対策

(1)プロジェクト関係者が入坑するに先立ち、マオケー鉱山に対し、以下の対策の実施を依頼する。

①ベルトコンベアの架台、動力ケーブルに堆積している炭じんの清掃。
②折損している笠木の修繕（対策済）
③V5番層のガスの張り出しが認められる密閉の再構築（対策済）
④排水不良箇所の整備
⑤予備ファンの分岐点箇所の清掃
⑥ベルト坑道を横切る通路における接触防止措置の実施
⑦採炭切羽での粉じんの抑制

２．プロジェクト関係者が行なう安全確保対策

(1)入坑手続き

①入坑申請

入坑者は事前にチーフアドバイザー及びプロジェクトマネージャー(アシスタントプロジェクトマネージャーを含む。以下、同じ。）宛の申請書を提出し、認可を得る。

②認可

申請を受けたチーフアドバイザー及びプロジェクトマネージャーは、当該入坑作業の必要性及び内容を検討のうえ、認可を行う。場合により、坑外作業での代替、計画の変更、条件の付与なども指示する。

(2)入坑者の取るべき安全確保対策

①入坑者は、入坑に先立ちマオケー炭鉱の保安管理者または保安責任者よ

り入坑場所、危険・注意事項、装着品の機能確認・使用方法等の説明を受けるものとする。

② 入坑に当たっては、必ずマオケー炭鉱の保安または現場責任者の先導で、最小限度（10 人前後）の人数の隊列で行なうものとする。

③入坑に当たっては、以下の装着品の機能を事前に確認のうえ、装着するものとする。

— 防じんマスク
— 防じんメガネ
— ガス検定器
— 酸素発生式自己救命器

④ 扇風機（主扇または局扇）の停止時には、直ちに坑外へ退避するものとする。

⑤ 坑内における実作業は、基本的に行わないものとする。

⑥ 入坑時には、日・ヴィ側双方で所定箇所でのガス濃度測定を行い、ヴィエトナムの基準濃度以上のガス濃度を検知した場合には直ちに坑外へ退避する。

(3)その他の安全確保対策

① 炭鉱休業日の翌日（月曜日等）は、入坑を行わない。
② 集中監視モニタリング装置の敷設は、炭鉱公休日に実施する。
③ ガス包蔵量調査の坑内実作業等はマオケー炭鉱の現場係員が実施する。
④ 技術協力に関連するマオケー炭鉱関係者に対し、C/P 経由で保安教育を行う。

(4)保安委員会

関係者からなる保安委員会(仮称)を設置し、定期的に委員会を開催し、プロジェクト遂行のため最大限の安全性を確立する。

プロジェクト側：日本側（チーフアドバイザー・調整員・保安担当専門家）
越　側（プロジェクトマネージャー・C/P 保安管理責任者）
マオケー炭鉱　：　炭鉱長・保安管理責任者

3．入坑時にマオケ-炭鉱に依頼する安全確保対策

(1)プロジェクト関係者が入坑する場合は、マオケー鉱山に対し、以下の対策の実施を依頼するものとする。

① 保安管理者または保安責任者による入坑者への坑内状況・危険個所等の事前説明
② 保安または現場責任者による入坑者の先導と、隊列最後尾への責任者の配置
③ 入坑先導者によるガス濃度測定の実施
④ 入坑時間帯における入坑関係箇所での発破作業の中止の徹底
⑤ 入坑時間帯における入坑関係箇所での運搬作業の中止の徹底

Ⅲ.可燃性ガス・火薬類の取扱いに当たっての安全確保対策

1.保管上の安全確保対策

可燃性ガスは我が国の高圧ガス保安法の規定に準拠した設備で保管する。火薬類については、防爆試験実習に必要最小限の火薬類をその都度入手することとし、プロジェクト内（専門家及びC／Pの管理に係る施設内）では保管しない。

2.防爆試験装置の安全確保対策

防爆試験装置の主要部分は、我が国の防爆試験装置と同程度の強度性能を有する装置を用いる。

3.防爆試験実施上の安全確保対策

・事前にC／Pに対し、可燃性ガス・火薬に関する教育、火気のないところでの可燃性ガスの取扱い実習や模擬火薬による取扱い実習を十分行うこととし、その結果、専門家が見て防爆試験の実施に十分な基礎知識・技能を有したと認められた段階で防爆試験の実習に移行する。
・防爆試験の実施に当たっては、事前に我が国の防爆試験作業手順書に準拠した作業手順書を作成し、その手順を遵守する。

資料10　プロジェクトサイト現地調査

1. 現地調査内容
   (1) マオケー炭鉱
      1) プロジェクトの安全対策
         ・ 坑内活動時の専門家及び C/P 等の安全確保対策に関する安全評価委員会の提言について、同委員会現地調査時の指摘・評価事項に追加・変更された内容を説明した。
         ・ この説明に対し、「①+30m レベル補助(待機)主扇風機への連絡坑道の片づけ・清掃」については、完了、「②ベルトコンベア坑道の横断の保安措置」については、別途、横断構造を設置済みである、との説明を受けた。
         ・ このほか、安全評価委員会の提言は、尊重する旨の説明を受けた。
      2) 集中監視室の改装
         ・ 集中監視室の機能として、通常の日常監視と緊急時の情報収集機能の両面の重要性について説明した。
         ・ 集中監視室の改装計画が未検討であることを協議し、炭鉱(VINACOAL)側の早急な計画立案と予算措置について、供与機材投入時(2002 年)に間に合うような措置を依頼した。
         ・ この依頼に対し、マオケー炭鉱側から調査団の帰国時までに工程表を作成するとの説明を受けた。(工程表は、調査団帰国時にハノイで受領した。)
      3) 専門家居室。
         ・ 長期専門家などの執務居室として、マオケー炭鉱本社社屋右前方の建物(招待所右側)二階の部屋を提供し、必要な改装を行う旨の表明があった。この部屋で、試料の分析、データ解析なども可能である。
         ・ このほか、プロジェクト機材の保管に必要なスペースの確保について確認した。
   (2) ウオンビ炭鉱
      1) センター改装設計
         ・ これまでの事前調査、短期調査の打ち合わせに基づく、最終設計書の説明を受けた。
         ・ 最終設計図内容を確認の上、合意のサインを行った。
         ・ 最終設計図の写を受領した。
      2) センター改装予算案
         ・ 最終設計内容に基づく、必要経費の説明を受けた。
         ・ 必要経費内訳書の写を受領した。(270 億 VND ≒ 27,000 千円)
         ・ 予算取得について、VINACOAL の承認を得るため、調査団の助力が求められた。
   (3) ハロン市内生活環境・住居調査
      1) サイゴン・ツーリズムホテル
         ・ 複数寝室を擁する一戸建てのホテルを 5 棟保有。

・ 借用可能な建物は保有戸数の内、一戸。プロジェクト発足時合わせて、借用の仮予約を行った。

2) ハロン・プラザホテル

・ 専門家の長期居住可能な部屋は、Suit ルーム 2 室、Junior Suit ルーム 2 室の計 4 室のみ。
・ Junior Suit ルーム 2 室うち、Junior Suit ルーム 1 室は、長期貸出の契約済み。
・ 長期専門家の居住用に、Suit ルーム 1 室、Junior Suit ルーム 1 室の計 2 室を仮予約した。

3) ヘリテージホテル

・ 専門家の長期居住可能な部屋は、Suit ルーム 2 室のみ。
・ 長期専門家の居住用に、Suit ルーム 2 室を仮 9 予約した。

2. 面談者リスト

(1) マオケー炭鉱

Mr. Vu Van Quyet(マオケー炭鉱社長)
Mr. Nguyen Binh(IMSAT)
Mr. Nguen Dac Suu
Mr. Pham Duc Khien
Mr. Tran yen Son

(2) ウオンビ炭鉱

Mr. Dau Quoc Lam(ウオンビ炭鉱社長)
Mr. Nguyen Van Diep(ウオンビ炭鉱社長・当該プロジェクト担当責任者)
Mr. Nguyen Binh(IMSAT)
Mr. Nguyen Van Tung
Mr. Nguyen Quang Huy
Mr. Dang Viet Toan

(3) ハロン市内生活環境・住居調査

1) Saigon-Halong Hotel

Mr. Le Huu Duc, General Manager
Ms. Hoang Thi Kim Anh

2) Halong Plaza Hotel

Mr. Tran Van Thanh, Sale Manager

3) Heritage Halong Hotel

Mr. Trinh Dang Thanh, Vice Director
Ms. Dao Hai Yen, From Office manager
Mr. Dinh Tho Tiep

VINACOAL
Maokhe Coal Mine

THE SOCIALIST REPUBLIC OF VIETNAM
Independence - Freedom - Happiness
Maokhe, 9 December 2000

SCHEDULE OF BUILDING RENOVATION OF WORKING ROOM FOR JAPANESE EXPERTS AT MAOKHE COAL MINE

No	Content	Volume	January 2001			February 2001			March 2001		
			10		20	10		20	10		20
1	Painting coat of building outside and inside	300m²									
2	Installing doors, windows and, glass	25m²									
3	Installing light system	6 sets									
4	Installing air-conditioners	2 units									
5	Installing tables, desks and book-case	5 sets									
6	Renovation toilet	2 rooms									
7	Planting bonsai/ornamental trees in garden of building	50m²									

Designed by Pham Huu Tien

Director of Maokhe Coal Mine
(signed)
Vu Van Quyet

資料11　プレスリリース

PRESS RELEASE

The Signing of the Record of Discussion (R/D)
for the Coal Mine Firedamp Gas Management Center Project
in the Socialist Republic of Vietnam implemented
by the Government of Japan
through JICA (Japan International Cooperation Agency)

The Government of Vietnam and the Government of Japan reached a conclusion to implement the technical cooperation on the Coal Mine Firedamp Gas Management Center Project. On December 8, 2000, Mr. Doan Van Kien, President and CEO, Vietnam National Coal Corporation (VINACOAL) and Mr. Norinobu Hayashi, a team leader of Implementation Study Team of JICA signed the R/D for the Coal Mine Firedamp Gas Management Center Project in Vietnam under Project-type Technical Cooperation.

The R/D was also signed by Mr. Tran Minh Huan, General Director of International Cooperation Department, Ministry of Industry (MOI) and Mr. Nguyen Quang Dung, General Director of Industrial Department, Ministry of Planning and Investment (MPI) as witness.

Representatives from MOI, MPI, the embassy of Japan, JICA, and major public media of Vietnam attended the signing ceremony.

Institute of Mining Science and Technology (IMSAT) will take full responsibility for the implementation of the project under the VINACOAL.

The project has been prepared since early 2000 and is expected to be implemented at Coal Mine Firedamp Gas Management Center which is newly established as an internal organization of IMSAT in Uong Bi town with the duration of five (5) years from April 1, 2001.

The representative from JICA stated that five (5) Japanese long-term experts as the need arises in the process of the implementation. In addition, Japan will provide machinery, equipment and other materials for the project and conduct a training for Vietnamese counterpart personnel in Japan. The total cost of the project is estimated to be approximately 800 million Japanese yen.

The main objective of the project is to enhance the technology for the coal mine safety and widely disseminate into the Vietnamese coal industry. Especially, the project focuses on the coal mine firedamp gas management as the project name and the main technologies to be transferred are (1)Evaluation Technology for In-situ Gas Content in Coal Seams, (2)Underground Mine Ventilation Control Technology, (3)Underground Mine Monitoring Technology, (4)Test Technology for Evaluating the Explosion-proof Performances of Electrical equipment and Explosives, (5)Rescue Activities Technology, (6)Mine Safety Education Technology.

The nature of Project-type Technical Cooperation is human resources development, so the focus of the project is to transfer the above-mentioned technology from Japanese experts to Vietnamese counterpart personnel.

Vietnam News No.3351 dated on Dec 11, 2000

Japan pledges $6m to bolster safety in Việt Nam coal mines

HÀ NỘI — Japan has pledged non-refundable aid of about US$6 million for a project to improve safety at Vietnamese coal mines.

A memorandum of understanding (MoU) was signed last week in Hà Nội between the Việt Nam Coal Corporation (Vinacoal) and the Japan International Co-operation Agency.

The main aim of the project is to strengthen coal mine firedamp gas safety technology, and apply it to the entire country's coal industry.

Under the MoU, the aid project will take place from April 2001 to 2005.

Japan will provide a centre which will teach Vietnamese coal mine managers to evaluate gas deposits on the spot.

They will also teach ventilation network analysis methods that will allow managers to control underground mine ventilation.

Other technology will allow the Vietnamese coal mines to execute explosion-proof performance evaluation, monitor underground mines, improve rescue activities, and boost education and training on mine safety.

In addition, Japan will supply machines, equipment and other materials for the project and send experts to the country to help their Vietnamese partners apply the new technology. Vietnamese mining engineers will also receive training in Japan. — **VNS**

Labor Newspaper No.246/2000 dated on Dec 11, 2000

Thợ mỏ sẽ được làm việc trong môi trường an toàn hơn

Ngày 8.12, Tổng Cty Than VN và Cơ quan Hợp tác Quốc tế Nhật Bản đã ký biên bản thoả thuận về Dự án Trung tâm Quản lý khí mỏ than tại VN. Tổng chi phí dự án là 800 triệu yen, do phía Nhật tài trợ. Như vậy, nếu thực hiện dự án công nhân mỏ sẽ được làm việc trong môi trường an toàn hơn? Ông Đoàn Văn Kiển - Tổng Giám đốc Tổng Cty Than VN - đã trả lời câu hỏi này:

Đây là dự án lớn nhất trong lĩnh vực an toàn công nghiệp của ngành than do nước ngoài tài trợ. Mục đích của dự án là nhằm phát hiện, dự báo và ngăn ngừa khí nổ khi khai thác mỏ. Do khả năng tài chính và do công nghệ lạc hậu, trước đây ngành than VN chưa có khả năng thực hiện được việc này. Các công nghệ chính sẽ chuyển giao qua dự án gồm: Đánh giá hàm lượng khí tại chỗ, kiểm soát thông gió nắm lò, quan trắc mỏ hầm lò, kiểm tra việc đánh giá tính phòng nổ của các thiết bị điện và thuốc nổ, hoạt động cấp cứu, đào tạo an toàn mỏ. Trong 5 năm thực hiện dự án, phía Nhật Bản sẽ đưa 5 chuyên gia làm việc dài hạn tại VN, đồng thời cung cấp thiết bị và vật liệu, đào tạo cán bộ chuyên môn cho VN tại Nhật.

◈ Ông đánh giá như thế nào về lợi ích đối với người lao động và lợi ích kinh tế của dự án?

- Trong quá trình khai thác mỏ, thường xuất hiện khí metal, dẫn đến cháy nổ, gây tai nạn rất khủng khiếp. Có nơi trên thế giới tai nạn xảy ra làm chết hàng trăm người. Tại VN, ngày 11.1.1999, vụ cháy nổ khí metal ở mỏ than Mạo Khê đã làm 19 người chết, 12 người bị thương. Càng khai thác sâu, nguy cơ xuất hiện khí gây cháy nổ càng cao. Dự án này sẽ đem lại hiệu quả về an toàn lao động, giảm thiểu tai nạn, rủi ro cháy nổ đối với công nhân khai thác mỏ. Người lao động có được làm việc trong môi trường an toàn thì ngành than mới phát triển sản xuất, nâng cao hiệu quả kinh tế. Chúng tôi xem Dự án Trung tâm Quản lý khí mỏ than như một phần cơ sở hạ tầng quan trọng giúp cho ngành than phát triển.

- Xin cảm ơn ông.

TRUNG PHƯƠNG *thực hiện*

Labor Newspaper No.246/2000 dated on Dec 11, 2000 (英訳)

MORE SAFE WORKING ENVIRONMENT FOR MINER

Vietnam National Coal Corporation (VINACOAL) and Japan International Cooperation Agency (JICA) have signed Record of Discussion (R/D) for the Coal Mine Firedamp Gas management Center in Vietnam on 8th Dec/2000. The total cost of the project is 800 m Japanese yen from Japanese aid. Therefore, by carrying out the project, if would work miners in more safe environment. Mr. Doan Van Kien, President, VINACOAL answers the question.

There is the biggest project in industrial safety field financed by foreign country. The object of the project is to monitor, forecast and prevent firedamp gas in mining. Because of low ability of finance and backward technology, until now, Vietnam Coal Sector hasn't the ability to do this thing yet. The main technologies to be transferred by the project are evaluation technology for in-situ gas content, underground mine ventilation control technology, underground mine monitoring technology, test technology for evaluating the explosion-proof performances of electrical equipment and explosives, rescue activities and mine safety education technology. In the duration of five years of implementing Japan would dispatch five Japanese long-term experts, provide machinery, equipment and other materials and conduct training for Vietnamese personnel in Japan.

Corespondent: ***What do you assess profit for worker and economic profit from the project as?***

Mr. DVK: Methane gas usually appears in process of mining and results in blast and fire and terrible accident. Somewhere in the world accident had caused hundreds to die. In Vietnam on 11th Jan 1999 methane explosion in Mao Khe Coal Mine had caused 19 died and 12 injured. In deeper mining the danger of firedamp appearance is higher. The project results in labor safety, in decrease in accident and risk in explosion. If miners are working in safe environment, coal sector could develop production and increase in economic efficiency. We consider Coal Mine Firedamp Gas management Center Project as a important part of infrastructure for coal sector to develop.

Vietnam Economic Time No.148 dated on Dec 11, 2000

800 triệu Yên xây dựng Trung tâm an toàn khí mỏ than

Ngày 8/12/2000 tại Hà Nội, ông Đoàn Văn Kiển, TGĐ Tổng công ty than Việt Nam và ông Noinobu Hayashi, Trưởng đoàn nghiên cứu JICA (Nhật Bản) đã ký kết biên bản thoả thuận cho dự án Trung tâm quản lý an toán khí mỏ than tại Việt Nam.

■ Theo thoả thuận, phía Nhật Bản sẽ cung cấp máy móc, thiết bị và các vật liệu, đồng thời tổ chức đào tạo cho các cán bộ công nhân làm việc trong ngành than tại Nhật Bản với tổng chi phí cho dự án này là 800 triệu Yên (tương đương 7,5 triệu USD).

Dự kiến dự án được thực hiện trong vòng 5 năm kể từ ngày 1/4/2001. Trung tâm an toàn khí mỏ sẽ được thành lập như một tổ chức trực thuộc Viện khoa học công nghệ mỏ đóng tại thị xã Uông Bí, tỉnh Quảng Ninh.

V.D

Vietnam Economic Time No.148 dated on Dec 11, 2000 (英訳)

800MJY FOR CONSTRUCTING COAL MINE FIREDAMP GAS MANAGEMENT CENTER

On 8th Dec 2000, in Hanoi Mr. Doan Van Kien, President, Vietnam National Coal Cooperation (VINACOAL) and Mr. Norinobu Hayashi, a team leader of Implementation Study Team of JCA signed the Record of Discussion (R/D) for the Coal Mine Firedamp Gas Management Center Project in Vietnam.

According to the agreement Japanese side would provide machinery, equipment and other materials and conduct training for Vietnamese personnel in Japan with total cost of 800 mJY (≈7.5 mUSD).
The project is planed to implement in 5 years from 1st Apl 2001. Coal Mine Firedamp Gas Management Center is newly established as an internal organization of IMSAT in Uong Bi town, Quang Ninh Province.