Final Report for

Project for Capacity Building of

National Institute of Occupational Safety and Health

November 9th 2005

NIOSH

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Contents

A. List of the Outputs

According to PDM2 (Project Design Matrix, revised version), “Outputs” that should be obtained are as follows;

1. Methods on working environment control are acquired.
2. Preventive measures on occupational and work related diseases are developed.
3. The system for work control from ergonomic viewpoint is improved.
4. Occupational Safety and Health (OSH) training programs are improved.
5. Function of collection and dissemination of information for raising of awareness on safety and health are progressed.
6. Function for providing necessary information for policy development is strengthened.

As the preparation task for the termination of the project, we have already made a book titled as “Data for the Final Evaluation of The Project for “The Capacity Building of National institute of Occupational Safety and health”” dated 15/09/05 (herein after referred as “the book”. The book contains 2 sheets of page 87. Those two pages are duplicated). The 6 items listed above are shown in the book on pages 42 to 99.

Additionally, precise lists of the equipment that was provided for the project are shown on pages 2 to 19.

Industrial Hygiene

2000 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2000-IH-1	Air Sampling Pump	Gillian	Gillian Gir Air3	RM	3,400	15	RM	51,000
2000-IH-2	Air Sampling Pump	Gillian	Gillian LFS 113	RM	2,920	5	RM	14,600
2000-IH-3	Anion Column for Ion Chromatograph	DIONEX	IonPac AS15&AG15	RM	7,400	1	RM	7,400
2000-IH-4	Auto Injection for HPLC	Shimadzu	SIL 10 ADvp	RM	41,000	1	RM	41,000
2000-IH-5	Auto Sampler For GC-MSD	Hewlett Packard/Agilent	HP 7683	RM	38,800	1	RM	38,800
2000-IH-6	Auto Sampler for Ion Chromatograph	DIONEX	AS40 (DX-500)	RM	35,000	1	RM	35,000
2000-IH-7	Bench-Top Centrifuge, refrigerated	Andreas Hettich Gmbh	Universal 32R	RM	13,800	1	RM	13,800
2000-IH-8	Cation Column for Ionn Chromatograph	DIONEX	IonPac CS12A&CG12A	RM	6,200	1	RM	6,200
2000-IH-9	Electronchemical Detector for HPLC	Shimadzu	ECD 6A	RM	25,700	1	RM	25,700
2000-IH-10	Fluorescence Detector for HPLC	Shimadzu	RF 10AXL	RM	40,300	1	RM	40,300
2000-IH-11	Gas Chromatograph Piping	Hewlett Packard/Agilent		RM	19,500	1	RM	19,500
2000-IH-12	Gas Chromatograph System (direct FID&ECD)	Hewlett Packard/Agilent	Agilent 6890 Plus GC System	RM	151,500	1	RM	151,500
2000-IH-13	Gas Chromatograph System (direct FID&NPD)	Hewlett Packard/Agilent	Agilent 6890 Plus GC System	RM	145,400	1	RM	145,400
2000-IH-14	Head Space Gas Chromatograph System	Hewlett Packard/Agilent	Agilent 7694 Head Space	RM	263,200	1	RM	263,200
2000-IH-15	Hydrogen Generator	Hewlett Packard/Agilent	Hydrogen Generator 5182-3480	RM	27,500	1	RM	27,500
2000-IH-16	Nitrogen Generator	J-Tech Medical	Nitrogen Generator 5182-3478	RM	29,200	1	RM	29,200
2000-IH-17	Photo Diodo Array Detector for HPLC	Shimadzu	SPD-M10AVP	RM	71,400	1	RM	71,400
2000-IH-18	Pump Calibrator Kit	Gillian	Gillian Gilbrator 2	RM	3,800	1	RM	3,800
2000-IH-19	Work station for HPLC	Shimadzu	Class VP Cromatography Owrk-station, Class VP 5.0 Multi-station	RM	28,000	1	RM	28,000
2000-IH-20	X-ray Diffracto-meter	RIGAKU	Multiflex 2KWS	RM	421,500	1	RM	421,500
2000-IH-21	Zero Air Generator	Hewlett Packard/Agilent	Zero Air Generator 5182-3478	RM	15,300	1	RM	15,300
							RM	1,450,100

2001 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2001-IH-1	Local Ventilation Model	Koken,Japan	NIOSH special model	Yen	17,963,128	1	Yen	17,963,128
							Yen	17,963,128

2002 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2002-IH-1	Atomic Absorption Spectrometer	Perkin Elmer	SIMAA 6100	RM	400,927.65	1	RM	400,927.65
2002-IH-2	Water Purifier System	MILLPORE	Direct-Q Ultrapure Water Systems	RM	25,350.00	1	RM	30,772.00
							RM	431,699.65

2003 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2003-IH-1	Mask Fitting Tester	SHIBATA	MT-03	RM	42,000.00	1	RM	42,000.00
2003-IH-2	Sound Level meter	Quest Technologies	Model 2900	RM	28,110.00	1	RM	28,110.00
2003-IH-3	Thermal Desorption System	Perkin Elmer	Turbo Matrix	RM	186,000.00	1	RM	186,000.00
2003-IH-4	Ultra Low Temperature Freezer	SANYO Co.,Ltd.Japan	MDF-U3086S	RM	30,100.00	1	RM	30,100.00
2003-IH-5	Ultrasonic Cleaner	BRANSONIC	B8510-DTH	RM	9,902.00	1	RM	9,902.00
							RM	296,112.00

2004 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2004-IH-1	Automated Chemistry Analyzer	Udichem,Italy	ELITE	RM	99,000.00	1	RM	99,000.00
2004-IH-2	Forced Air Circulation Type Column Oven	Shimadzu Ltd.	SHI#228-40002-38, CTO-10Avp Column Oven	RM	23,870.00	1	RM	23,870.00
2004-IH-3	Quantitative Analysis Software	Material Data,Inc.(MDI)	Jade Quantitative Analysis Software Version 6	RM	177,510.00	1	RM	177,510.00
2004-IH-4	Sample Concentrator	Techne,UK	Techne 96,DB-3D and Insert Block	RM	15,780.00	1	RM	15,780.00
							RM	316,160.00

List of Equipment which JICA purchased for Japanese Experts' Technical Transfer (KEIKO)

Industrial Hygien Division

Date	Inventory No.	Expert's Name	Equipment	Model	No.	Total Price (Yen)	Total Price (RM)	Supplier
4 Apr.,2001	KEIKO-2001-IH-1	Tsuyoshi Iwasaki	Climomaster	KANOMAX,6511with Carrying Case	1set	307,490.00		Nippon KANOMAX
5 Sep.,2001	KEIKO-2001-IH-2	Toshio Kawai	Column for Gas Chromkatography	for Gas Chromkatography125-1032	1	88,800.00		Purchased in Japan
5 Sep.,2001	KEIKO-2001-IH-3	Toshio Kawai	Column for Gas Chromkatography	for Gas Chromkatography125-7032	1	82,400.00		Purchased in Japan
5 Sep.,2001	KEIKO-2001-IH-4	Toshio Kawai	Column for HPLC	for HPLC 5020-01601	1	33,300.00		Purchased in Japan
5 Sep.,2001	KEIKO-2001-IH-5	Toshio Kawai	Septum	1000/pkg 000320	1	45,000.00		Purchased in Japan
5 Sep.,2001	KEIKO-2001-IH-6	Toshio Kawai	Micro Pipet	Transferpette 7041-04	1	25,000.00		Purchased in Japan
5 Sep.,2001	KEIKO-2001-IH-7	Toshio Kawai	Digital Refractometer	UG-D	1	88,000.00		Purchased in Japan
5 Sep.,2001	KEIKO-2001-IH-8	Toshio Kawai	Crimper	20mmφ 9301-0720	1	20,500.00		Purchased in Japan
13 Nov..,2001	KEIKO-2001-IH-9	Kenichi Yamada	Permeater	with Stepdown Transformer	1set	452,600.00		Purchased in Japan
27 Mar.,2002	KEIKO-2001-IH-10	Yasushi Shinohara	Dust Regenerator for Sediment Dust	SKY-1,Code No.8020-511	1	250,000.00		Purchased in Japan
30 Apr.,2002	KEIKO-2002-IH-1	Shuichiro Natsumeda	Filter Holder	Code No.8012-012	1	26,500.00		Purchased in Japan
27 Jan.,2003	KEIKO-2002-IH-2	Takayuki Okada	Digital Dust Indicator	Model P-5H	2	598,400.00		Purchased in Japan
27 Jan.,2003	KEIKO-2002-IH-3	Takayuki Okada	Base Set for Tripod	Model 8016-5	1	22,500.00		Purchased in Japan
31Jul.,2003	KEIKO-2003-IH-1	Shingo Saito	Electronic Data Handling System	Optiplex GX260	1		3,800.00	PerkinElmer, 03-7958-1118
13 Apr.,2004	KEIKO-2004-IH-1	Toshiki Hashimoto	Gas Mask	GM-164,Direct Mounting Type	1	23,100.00		Shigematsu Co.,Ltd.
13 Apr.,2004	KEIKO-2004-IH-2	Toshiki Hashimoto	Fan Unit with EBK Hood	FU-07A	1	46,950.00		Shigematsu Co.,Ltd.
13 Apr.,2004	KEIKO-2004-IH-3	Toshiki Hashimoto	Hose Mask W/O a Blower	225T	1	9,440.00		Shigematsu Co.,Ltd.
13 Apr.,2004	KEIKO-2004-IH-4	Toshiki Hashimoto	Electric Blower	HM-12	1	8,495.00		Shigematsu Co.,Ltd.

13 Apr.,2004	KEIKO-2004-IH-5	Toshiki Hashimoto	Cooling Apparatus	Coolet Vt-7KGW	1	3,800.00		Shigematsu Co.,Ltd.
13 Apr.,2004	KEIKO-2004-IH-6	Toshiki Hashimoto	Waist Belt for Airline Mask	AL-2NSB	1	22,670.00		Shigematsu Co.,Ltd.
13 Apr.,2004	KEIKO-2004-IH-7	Toshiki Hashimoto	Pressure Demand Type with automatic pressure changeover device	Z30(CS)	1	25,350.00		Shigematsu Co.,Ltd.
13 Apr.,2004	KEIKO-2004-IH-8	Toshiki Hashimoto	High Pressure Air Cylinders	815 FZ	1	149,400.00		Shigematsu Co.,Ltd.
30 Mar.2005	KEIKO-2004-IH-9	Shingo Saito	Display chiller	2 doors upright type,specific for Elite Reagent Kit storage	1		7,000.00	KPNA Management Services Sdn.Bhd. TEL03-2732-4624/5
30 Mar.2005	KEIKO-2004-IH-10	Shingo Saito	Bubble Generator Cell/Sensor	Gilian,Standard Flow 20cc-6 LPM	1		1,844.00	ASEAN SAINTIFIK SDN.BHD. TEL03-78772797
30 Mar.2005	KEIKO-2004-IH-11	Shingo Saito	Multiparameterw Ventilation meter	Veloci Calc Plus,TSI/8386-M-GB	1		8,650.00	ASEAN SAINTIFIK SDN.BHD. TEL03-78772797
30 Mar.2005	KEIKO-2004-IH-12	Shingo Saito	Pocket Tachometer	PLT-5000	1		1,250.00	ASEAN SAINTIFIK SDN.BHD. TEL03-78772797

List of Equipment which JICA purchases(Genchi)

Industrial Hygien Division

Date	Inventory No.	Expert's Name	Equipment	Model	No.	Total Price (Yen)	Total Price (RM)	Supplier
26 Nov.,2002	GENCHI-2002-IH-1	Natsumeda	Air Sampling Pump	Gilian LFS-113DCS Clock Model S/No.0209594-0209598	5		15,559.00	ASEAN SAINTIFIK
2 Feb.2004	GENCHI-2003-IH-1	Saito	Solid State Stirrer Mantle	500ml	1		1,956.00	Fisher Scientific Sdn.Bhd.
30 June,2005	GENCHI-2005-IH-1	Saito	Laser Range Meter	PD-30,Serial Number:25404191	1		2,283.75	HILTI(M)Sdn.Bhd.TEL:03-5633-8583,FAX03-5633-7100

Occupational Health

2000 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2000-OH-1	Equipment to examine electromyography and evoked potential	Nihon Kohden Corporation, Japan	MEB-5504, Neuropack Sigma - 4channel EP	RM	147,500	1	RM	147,500
2000-OH-2	Reaction time tester	T.K.K Japan	#TKK-1112	RM	19,300	1	RM	19,300
							RM	166,800

2001 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2001-OH-1	Chest X-ray Photograph	Toshiba	KXO-32R	RM	254,598	1	RM	254,598
							RM	254,598

2002 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price	No.	Total Price	
						RM	0.00

2003 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2003-OH-1	Body Composition Monitoring Unit	BODYSTAT	Bodystat 1500	RM	9,200.00	1	RM	9,200.00
2003-OH-2	Electrocardiogram (ECG)	Fukuda Denshi Co.,Ltd.	CARDIOMAX FX-3010	RM	17,000.00	1	RM	17,000.00
2003-OH-3	Medical Ultrasound Scanner	Pie Medical	Falco 100	RM	48,000.00	1	RM	48,000.00
OCCUPATIONAL HEALTH MOBILE CLINICAL SERVICE UNIT				RM	241,317.00	1	RM	241,317.00
2003-OH-4	1) Vehicle	HICOM PERKASA	MTB 150DX			1		
2003-OH-5	2) Audiometer	Grason-Stadler,USA	G.S.I.17			2		
2003-OH-6	3) Calibration kit for audiometric	Quest Technologies	1900-30020AM			1		
2003-OH-7	4) Electrocardiogram (ECG)	Fukuda Denshi Co.,Ltd.	CARDIOMAX FX-3010			1		
2003-OH-8	5) Laser jet printer	Hewlett Packard	HP LASER JET 1300			1		
2003-OH-9	6) Portable laptop computer	Hewlett Packard	HP Compaq nx9010			2		
2003-OH-10	7) Silent booth	CNL Consultancy (M) sdn.Bhd.	NIOSH Model (schedule2,DOSH noise exposure regulation 1988)			2		
2003-OH-11	8) Spirometer	MicroMedical Ltd.UK	SuperSpiro SU6000			2		
							RM	315,517.00

2004 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2004-OH-1	Diagnostic Audiometer with Speech and ABLB Fowler	Amplifon	Model A-177	RM	14,200.00	1	RM	14,200.00
2004-OH-2	Micro Carbon Monoxide Meter	Micro Medical Ltd.,UK	MicroCO	RM	4,690.00	1	RM	4,690.00
							RM	18,890.00

List of Equipment which JICA purchased for Japanese Experts' Technical Transfer (KEIKO)

Occupational Health Division

Date	Inventory No.	Expert's Name	Equipment	Model	No.	Total Price (Yen)	Total Price (RM)	Supplier
28Jan.,2002	KEIKO-2001-OH-1	Mamoru Hirata	Infrared Thermometer	Measuring Range:-50 ー500C ,Mode, IT-550L	1	55,700.00		Purchased in Japan
20 Jun.,2002	KEIKO-2002-OH-1	Hisao Shida	Notebook Computer	Toshiba DYNABOOK V5/410CME,S/N 520377283	1	220,000.00		Purchased in Japan
20 Jun.,2002	KEIKO-2002-OH-2	Hisao Shida	CD-ROM Indispensablity for Industrial Doctor-Pneumoconisis Atlas	Roppo-Shinsha	1	27,000.00		Purchased in Japan
20 Jun.,2002	KEIKO-2002-OH-3	Hisao Shida	Densitometer	Fuji Medical	1	78,400.00		Purchased in Japan
10 Jan.,2003	KEIKO-2002-OH-4	Reiko Kishi	Color Test Panel	Luneau,D-15	2	165,000.00		Purchased in Japan
24 Jan.,2003	KEIKO-2002-OH-5		Lanthony Desaturate	D-15 HUE Test	1	80,500.00		Purchased in Japan
27 Jan.,2003	KEIKO-2002-OH-6	Masaharu Kido	Grid for X-ray High Tension Radiography for the Chest	Micro Fine Film Size 14"x17"	1	134,500.00		Purchased in Japan
25 Jul.,2003	KEIKO-2003-OH-1	Masaharu Kido	Spirometer	SuperSpiro Model SU-6000	1		12,600.00	Utama Associates,03-7877-2797
11 Jul.,2003	KEIKO-2003-OH-2	Kiyotaka Higuchi	Notebook Computer	Toshiba Satelite Pro.	1		9,920.00	IPSH Gasmaster,TEL03-7803-9260
19 Aug.,2003	KEIKO-2003-OH-3	Hideki Igisu	Ophthalmoscope	Opt Navis,NH-0308-11	3	23,200.00		Purchased in Japan
2 Dec.2004	KEIKO-2004-OH-1	Seichi Horie	Sound Insulation Checker	Ear Plug Checker AG-20A	1	583,500.00		Purchased in Japan
2 Dec.2004	KEIKO-2004-OH-2	Seichi Horie	Otoscope	B-type,90-022-00	1	93,500.00		Purchased in Japan
1 Jun.2005	KEIKO-2005-OH-1	Yasunori Momota	Digital Dust Monitor Set	LD-3B,with Battery Charger	1		14,047.00	Yotsubishi Corporation,TEL0081-3-5259-6061

List of Equipment which JICA purchases(Genchi)

Occupational Health Division

Date	Inventory No.	Expert's Name	Equipment	Model	No.	Total Price (Yen)	Total Price (RM)	Supplier
22 Jan.2001	GENCHI-2000-OH-1	All experts	Copy Machine	Canon NP1215 S/NO:PBD69601	1		5,100.00	Teck Heng,No16Jalan RayaTimor,Klang TEL03-33734802
27 Aug.,2003	GENCHI-2003-OH-1	Kido	Notebook Computer	HP Evo nx9000	1		5,900.00	ZETTASOFT,TEL03-8736-6178
31 Mar.,2004	GENCHI-2003-OH-2	Kido	Hunter's Disease of Occupations 9th edition	9th Edition,Baxter	1		1,282.00	NEWIND MARKETING
31 Mar.,2004	GENCHI-2003-OH-3	Kido	Occupational and Environmental Respiratory Diseases 1995	Harber,1995	1		690.00	NEWIND MARKETING
28 Mar.2005	GENCHI-2004-OH-1	Momota	JamarHydraulic Hand Dynamometer	AGT#C5030J1	1		1,450.00	Fisher CW Medical (M) Sdn. Bhd. TEL03-5122-9888
28 Mar.2005	GENCHI-2004-OH-2	Momota	Unilevel Inclinometer	AGR#C7503	1		1,200.00	Fisher CW Medical (M) Sdn. Bhd. TEL03-5122-9888
28 Mar.2005	GENCHI-2004-OH-3	Momota	Goniometer set	AGR#C8060	1		1,281.00	Fisher CW Medical (M) Sdn. Bhd. TEL03-5122-9888
30 Mar.2005	GENCHI-2004-OH-4	Momota	Blood Pressure Set	HEM-907	1		2,100.00	IPSA Industrial Supply Services TEL03-8520-0004/0005

Ergonomics

2000 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2000-ERG-1	Computerized portable hand evaluation	J-Tech Medical	Tracker/ Module QLBDLNSLC	RM	55,000	1	RM	55,000
2000-ERG-2	Digital Photometer	Testo Gmbh	Testo 545	RM	1,700	1	RM	1,700
2000-ERG-3	Electromygraphy Portable Equipment System	Mega Electronic Ltd.	Muscle Tester/ ME3000P8-1-10UK	RM	154,000	1	RM	154,000
2000-ERG-4	Equipment to examine equilibrium function	NuroCom	Blance Master System	RM	183,500	1	RM	183,500
2000-ERG-5	Ergonomic Work-station & VDT Mock-up	OMNICREST	OMNICREST	RM	39,500	1	RM	39,500
2000-ERG-6	Heart rate monitor	Polar	Polar Vantage NV	RM	3,300	2	RM	6,600
							RM	440,300

2001 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2001-ERG-1	Optical Function Examining Equipment for VDT	Topkon,Japan	SCREENSCOPE SS-3	Yen	¥416,000	1	Yen	¥416,000
2001-ERG-2	Optical Function Examining Equipment for VDT	Wakku,JAPAN	DIOPTRIC ACCOMODATOR	Yen	¥692,000	1	Yen	¥692,000
2001-ERG-3	Optical Function Examining Equipment for VDT	Topkon,Japan	AUTO REFRACTOMETER RM-8000B	Yen	¥1,266,000	1	Yen	¥1,266,000
2001-ERG-4	Optical Function Examining Equipment for VDT	Topkon,Japan	COMPUTERIZED LENSMETER CL-100	Yen	¥360,000	1	Yen	¥360,000
2001-ERG-5	Portable system to collect information on body temperature	Gram	LT-8B	Yen	290,000	1	Yen	¥290,000
2001-ERG-6	Treadmill	H-P-Cosmos, Germany	Treadmill/ Mercury	RM	46,000	1	RM	46,000
2001-ERG-7	Perspiration Measure	SKINOS	SKK-2000	Yen	1,230,000	1	Yen	1,230,000
2001-ERG-8	Computer+monitor for Perspiration Measure	DELL	LATITUDE-C610	Yen	290,000	1	Yen	290,000
							Yen	3,024,000
							RM	46,000

2002 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2002-ERG-1	Tactile Vibrometer	University of Southampton, UK	HVL lab TactileVibrometer	RM	63,795.60	1	RM	63,795.60
							RM	63,795.60

2003 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2003-ERG-1	Anthropometer	Takei Kiki Kogyo Ltd.Japan	Martin-Type Anthropometer PM	RM	20,240.00	1	RM	20,240.00
2003-ERG-2	Electromyogram-EMG	Mega Electronic Ltd.	ME6000	RM	124,000.00	1	RM	124,000.00
2003-ERG-3	Vibration meter	Larson Davis	HVM100-L1	RM	62,391.00	1	RM	62,391.00
2003-ERG-4	Wet-bulb Globe Temperature Thermometer－WBGT	Quest Technol	QUESTemp 36	RM	25,000.00	1	RM	25,000.00
							RM	231,631.00

2004 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2004-ERG-1	Heart Rate Monitoring System	Polar Electro,Finland	Polar Team System	RM	20,200.00	1	RM	20,200.00
2004-ERG-2	Digital Force Indicator	Honeywell Sensotec,USA	LCW500KZ	RM	7,000.00	1	RM	7,000.00
							RM	27,200.00

List of Equipment which JICA purchased for Japanese Experts' Technical Transfer (KEIKO)

Ergonomics Division

Date	Inventory No.	Expert's Name	Equipment	Model	No.	Total Price (Yen)	Total Price (RM)	Supplier
24Dec.,2001	KEIKO-2001-ERG-1	Hiroshi Udo	Seat for Car	Purchased in Japan	1	135		n/a
24Dec.,2001	KEIKO-2001-ERG-2	Hiroshi Udo	Work Posture Monitor	Purchased in Japan	1	230		n/a
24Dec.,2001	KEIKO-2001-ERG-3	Hiroshi Udo	Impedance Measurement Equipment	Purchased in Japan	1	52		n/a
25 Jul.,2002	KEIKO-2002-ERG-1	Shinichi Sawada	Temperature Roger	Purchased in Japan	1	245.1		n/a
25 Jul.,2002	KEIKO-2002-ERG-2	Shinichi Sawada	Cool Conditioning Cloth	Purchased in Japan	1	22.6		n/a
25 Jul.,2002	KEIKO-2002-ERG-3	Shinichi Sawada	Heat Stroke Checker	Purchased in Japan	1	38.9		n/a
24 Jan.,2003	KEIKO-2002-ERG-4	Hiroshi Jonai	Luminance Meter	Minolta Model LS-100	1	346		n/a
11 Jun.,2003	KEIKO-2003-ERG-1	Setsuo Maeda	Portable Vibroscope	IMV.Co.,Ltd.Model-VM2001Σ	1	203		n/a
31 July.,2003	KEIKO-2003-ERG-2	Ryiichirou Masuda	Notebook Computer	Compaq EVO N620C	1		11,380.00	Asean Saintific, TEL 03-7877-2797
30 Mar.2005	KEIKO-2004-ERG-1	Kazutaka Kogi	Heart Rate Monitor	Polar,S810i with IR Interface USB	3		4929	United Akrab Tech Sdn. Bhd .TEL 03-7956-6812

List of Equipment which JICA purchased (Genchi)

Ergonomics Division

Date	Inventory No.	Expert's Name	Equipment	Model	No.	Total Price (Yen)	Total Price (RM)	Supplier
10 May,2001	GENCHI-2001-ERG-1	Hisanaga	Desktop Computer for Computerized portable hand evaluation,J-Tech Medical Tracker/Module QLBDLNSLC	Intel Pentium III P733 MHz PC	1		2,750.00	Iwatani International Corporation
10 May,2001	GENCHI-2001-ERG-2	Hisanaga	Desktop Computer for Mega Muscle Tester System,ME3000P8	Intel Pentium III P733 MHz PC、	1		2,800.00	Iwatani International Corporation
10 May,2001	GENCHI-2001-ERG-3	Hisanaga	Monitor for Mega Muscle Tester System,ME3000P8	ATM Tower Casing 15"SVGA Digital Color Monitor	1		1,680.00	Iwatani International Corporation
10 May,2001	GENCHI-2001-ERG-4	Hisanaga	Monitor for Computerized portable hand evaluation,J-Tech Medical Tracker/Module QLBDLNSLC	ATM Tower Casing 15"SVGA Digital Color Monitor	1		1,630.00	Iwatani International Corporation
17 Jan.2005	GENCHI-2004-ERG-1	Momota	Portable Chart Stand	#9880	1		780.00	United Akrab Tech Sdn. Bhd. TEL03-7956-6812
17 Jan.2005	GENCHI-2004-ERG-2	Momota	Spine Disorders and Anatomy Model	CH-5900	1		959.00	United Akrab Tech Sdn. Bhd. TEL03-7956-6812
17 Jan.2005	GENCHI-2004-ERG-3	Momota	Flexible Lumbar Vertebral Column with Herniated Disc	A-76/5	1		780.00	United Akrab Tech Sdn. Bhd. TEL03-7956-6812

Other Divisions

2000 Japanese Fiscal Year (Non)

No.	Equipment	Manufacturer	Model	Unit Price	No.	Total Price	
						RM	0

2001 Japanese Fiscal Year (Common)

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2001-C-1	PAJERO	Mitsubishi	V31V	RM	116,380	1	RM	116,380
							RM	116,380

2002 Japanese Fiscal Year

No.	Equipment	Manufacturer	Model	Unit Price		No.	Total Price	
2002-IT-1	Digital Information Disemination System	CANON	Colour Scanner FS4000 US	RM	2,450.00	1	RM	2,450.00
2002-IT-2	Digital Information Disemination System	CANON	Digital Video System XL-1S	RM	20,880.00	1	RM	20,880.00
2002-IT-3	Digital Information Disemination System	JVC	DVD/CD Library System MC-8600U	RM	169,000.00	1	RM	169,000.00
2002-IT-4	Digital Information Disemination System	Pinnacle	MPEG Converter PRO-ONE	RM	76,000.00	1	RM	76,000.00
							RM	268,330.00

2003 Japanese Fiscal Year (Non)

No.	Equipment	Manufacturer	Model	Unit Price	No.	Total Price	
						RM	0

2004 Japanese Fiscal Year (Non)

No.	Equipment	Manufacturer	Model	Unit Price	No.	Total Price	
						RM	0

List of Equipment which JICA purchased for Japanese Experts' Technical Transfer (KEIKO)

for Japanese Administration Office

Date	Inventory No.	Expert's Name	Equipment	Model	No.	Total Price (Yen)	Total Price (RM)	Supplier
4Jan.,2001	KEIKO-2000-JAO-1	Matsuno	Computer	Desktop type,Fujitsu DESKPOWER5000 with MAG17"Monitor	1		7,600.00	V-System Sdn.Bhd.,TEL03-4270-2962
4Jan.,2001	KEIKO-2000-JAO-2	Matsuno	Colour Printer	HP Deskject 1125C	1		1,400.00	V-System Sdn.Bhd.,TEL03-4270-2962
4Jan.,2001	KEIKO-2000-JAO-3	Natsumeda	Computer	Desktop type,Fujitsu DESKPOWER5000 with MAG17"Monitor	1		7,600.00	V-System Sdn.Bhd.,TEL03-4270-2962
4Jan.,2001	KEIKO-2000-JAO-4	Natsumeda	Laser Printer	Brother HL-140,A-4	1		1,480.00	V-System Sdn.Bhd.,TEL03-4270-2962
4Jan.,2001	KEIKO-2000-JAO-5	Odagiri	Computer	Desktop type,Fujitsu DESKPOWER5000 with MAG17"Monitor	1		7,600.00	V-System Sdn.Bhd.,TEL03-4270-2962
4Jan.,2001	KEIKO-2000-JAO-6	Odagiri	Laser Printer	Brother HL-140,A-4	1		1,480.00	V-System Sdn.Bhd.,TEL03-4270-2962
4Jan.,2001	KEIKO-2000-JAO-7	Odagiri	Computer	Desktop type,iMac 350,64MB Blue	1		3,300.00	V-System Sdn.Bhd.,TEL03-4270-2962
4Jan.,2001	KEIKO-2000-JAO-8	Hisanaga	Computer	Desktop type,Fujitsu DESKPOWER5000 with 15" LCD Color Monitor	1		1,480.00	V-System Sdn.Bhd.,TEL03-4270-2962
4Jan.,2001	KEIKO-2000-JAO-9	Hisanaga	Laser Printer	Brother HL-140,A-4	1		10,600.00	V-System Sdn.Bhd.,TEL03-4270-2962
29 Apr.,2003	KEIKO-2003-JAO-1	all experts	Copy Machine with Finisher/Stapler	Canon iR-2200,with finisher/stapler Model J1	1		19,000.00	Canon Marketing(M)Sdn.Bhd.,TEL03-7844-6000
29 Oct.,2003	KEIKO-2003-JAO-2	Isamu Tanaka	Digital Camera	SONY,DSC-FX77	1	59,800.00		n/a

List of Equipment which JICA purchases (Genchi)

for Japanese Administration Office

Date	Inventory No.	Expert's Name	Equipment	Model	No.	Total Price (Yen)	Total Price (RM)	Supplier
22 Feb.2001	GENCHI-2000-JAO-1	All experts	Digital Camera	Olympus Camedia C-2020	1		2,900.00	Mutiara Shop,G-051 Midvalley Megamall
22 Feb.2001	GENCHI-2000-JAO-2	All experts	Camera	Canon EOS 300	1		1,755.00	Mutiara Shop,G-051 Midvalley Megamall
11 May,2001	GENCHI-2001-JAO-1	All experts	Overhead Projector	EZ-PRO 4V	1		2,050.00	Pacific Office Supplies,TEL03-5636-3389
11 Oct.,2001	GENCHI-2001-JAO-2	All experts	External MO Drive	Fujitsu 640MB S/NO.VQ05001358	1		2,500.00	V System,03-4270-2962
14 Jan.,2002	GENCHI-2001-JAO-3	Hisanaga	Notebook Computer	Toshiba Satellite 1800-A330 S/No.SL1650199 for Ergo.	1		6,599.00	KOMPUTRONIK ENTERPRISE,03-41052242
16 Jan.,2002	GENCHI-2001-JAO-4	All experts	Notebook Computer	HP Omni XE3 S/No.TW20406590	1		6,688.00	V System,03-4270-2962
18 Jan.,2002	GENCHI-2001-JAO-5	All experts	LCD Projector	Panasonic PTL-502 S/No.SL1650199	1		17,500.00	V System,03-4270-2962
7Nov.,2002	GENCHI-2002-JAO-1	All experts	Fax Machine	HP LaserJet-3200 S/No 2202902069	1		2,990.00	V System,03-4270-2962
24 Sep.,2003	GENCHI-2003-JAO-1	All experts	Camera	Olympus mju:-III WIDE100	1		868.00	Best Denki,KLCC
26 Sep.,2003	GENCHI-2003-JAO-2	All experts	Digital Camera	Olympus Camedia C-350 ZOOM	1		1,208.00	Best Denki,Midvalley Megamall

List of Equipment which JICA purchases (Genchi)

NIOSH LIBRARY

Date	Inventory No.	Expert's Name	Equipment	Model	No.	Total Price (Yen)	Total Price (RM)	Supplier
25Mar.,2001	GENCHI-2000-LIB-1	All experts	Documentation of the Threshold Limit Values & Biological Exposure Indices	With '96,'97 and '98 Supplements ISBN0936712961	1		4,228.75	Kinokuniya Book Stores,KLCC
25Mar.,2001	GENCHI-2000-LIB-2	All experts	Ethel Browning's Toxicity and Metabolism of Industrial Solvents:Hydrocarbons 2nd Edition	ISBN0444903917	1		2,002.55	Kinokuniya Book Stores,KLCC
25Mar.,2001	GENCHI-2000-LIB-3	All experts	Ethel Browning's Toxicity and Metabolism of Industrial Solvents:Nitrogen and Phosphorus Solvents	ISBN0444813160	1		2,033.40	Kinokuniya Book Stores,KLCC

B. Plan of Operation

A half year before the starting point of Japanese fiscal year, we have decided what kind of field of OSH should be picked up as the theme in coming year.

We did not face any serious problem to operate the project along with the implementation plan.

Activities shown in PDM \ Japanese Fiscal Year	2000		2001				2002				2003				2004				2005		
	Ⅲ	Ⅳ	Ⅰ	Ⅱ	Ⅲ	Ⅳ	Ⅰ	Ⅱ	Ⅲ	Ⅳ	Ⅰ	Ⅱ	Ⅲ	Ⅳ	Ⅰ	Ⅱ	Ⅲ	Ⅳ	Ⅰ	Ⅱ	Ⅲ
1-1. To study actual conditions of use and handling, etc. of chemical substances and etc. in enterprises and to determine necessary technical method and scope.	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―
1-2. To acquire the method and technical skill on the identification, sampling, measurement, and evaluation of chemical substances and etc.	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―
1-3. To acquire the evaluation method of exposure level to workers in working environment.	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―
1-4. To acquire the method and technology for the improvement of working environment such as local ventilation system.	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―
2-1. To survey and analyse the actual situation of occurrence of the occupational diseases and practical situation of medical examination scheme.	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―
2-2. To acquire the technical method of adequate health hazard evaluation on the identified hazardous factors.	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―
2-3. To acquire methods for measures to be taken on the basis of the result of health hazard	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―
2-4. To acquire technical skills for proper use of Personal Protective Equipment (PPE) including respirators and hearing protectors.						―	―							―	―	―	―	―	―	―	―
3-1. To identify and analyse the problems in working places from ergonomic viewpoint.	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―
3-2. To acquire technical methods of ergonomic evaluation and improvement for the identified hazardous factors.	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―
3-3. To examine the measures for occupational health based on ergonomic consideration.	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―	―
4-1. To review existing OSH training program.	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈
4-2. To grasp the problem of above mentioned programs and training needs.	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈
4-3. To improve existing curricula and develop new curricula.	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈
4-4. To conduct OSH training for staff in occupational health field.	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈
4-5. To conduct training courses and to prepare guidelines on proper use of Personal Protective Equipment (PPE) including respirators and hearing protectors.	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈
4-6. To conduct OSH research and development activities.	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈
4-7. To conduct preliminary survey to determine the profile of occupational diseases in Malaysia for the purpose of planning.											☆	☆	☆	☆	☆	☆		☆	☆		
5-1. To facilitate OSH information dissemination from NIOSH.																					
5-2. To publish "The Project News Letters" of the project activities regularly.	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		☆
5-3. To organize seminars, workshops and exhibitions.				☆		☆	☆	☆		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		
6-1. To learn the OSH measures on small and medium size enterprises and the supporting system in Japan.								☆					☆					☆	☆		
6-2. To give advice on overall policy based on the Japanese experience in the field of OSH.	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈	┈

C. Input

1. Japanese experts

Long- and Short-term experts are shown on pages 104 to 106 of the book. Pages 107 to 110 show the precise information on 37 short term experts.

As far as long-term experts, data are shown bellow.

No.	Name	Field	Duration
1.	Mr. Yutaka Matsuno	Chief Advisor	2000/11/15 2003/03/31
2.	Dr. Naomi Hisanaga	OH, Ergo.	2000/11/15 2002/11/14
3.	Mr. Shuichiro Natsumeda	IH	200/11/15 2003/3/31
4.	Mr. Hisao Odagiri	Coordinator	2000/11/15 2003/04/30
5.	Dr. Masaharu Kido	OH, Ergo.	2003/01/05 2005/01/04
6.	Mr. Shingo Saito	IH	2003/03/24 2005/11/14
7.	Mr. Ryoichiro Masuda	Coordinator	2003/03/24 2005/11/14
8.	Mr. Kiyotaka Higuchi	Chief Advisor	2003/04/30 2005/11/14
9.	Dr. Yasunori Momota	OH, Ergo.	2004/11/14 2005/11/14

2. Counterpart personnel training in Japan.

List of the C/P trainings in Japan is shown on pages 111 and 112 of the book.

3. Equipment.

All of the equipment delivered is shown on pages 2 to 19.

4. Counterpart Personnel.

As pages 126 to 132 of the book

5. Budget.

As page 133 of the book

6. Others.

NIOSH side provided the project with office, utilities, secretary, internet accessibility, site visits to the work places, repair works for installation of LEV system and so on.

D. Implementation Issues

1. Staff is engaged with daily jobs.

   NIOSH is a company therefore its staff has to be engaged with daily jobs to provide services for the customers.

   It was not easy for the staff to save the time and attend all the lectures and practical trainings given by short-term experts.

   We did adjust the itinerary of short-term experts as early as possible. With that tactics, we believe that the staff could adjust his/her schedule to save as much time for the lectures as possible.

   JICA team made enough number of copies of the documents that short-term experts used for the technical transfer and the team gave the copies to the staff who could not attend the class.

2. Resignation of staff.

   We suffered the resignation of staff who have acquired certain kind of technology.

   NIOSH has introduced “Training Bond System” in year 2003. The system worked effectively.

   NIOSH also introduced so-called “Technical Talk” that enable the staff to share the essence of the knowledge that counterpart trainee have got in Japan.

E. Amendment of Project Design Matrix

At the occasion of mid-term evaluation conducted in year 2003, original PDM was amended into PDM2

Main points are as follows:

- Overall Goal

  Statement was changed from number to trend of occupational accidents and diseases
- Project Purpose
  - Number of handbooks and guidelines was expanded to those that ware made under cooperation of NIOSH
  - Item on dust/gas mask test was replaced by training on PPE
  - Item on the joint research and development was added.
- Activities
  - Training on PPE was added.
  - Item on research and development was added
  - Item on monitoring system of occupational diseases was replaced by trial survey
  - The study on SMI measures was amended to learn Japanese experiences.

Original PDM is attached on pages 26 and 27, revised PDM is attached on pages 28 and 29

PDM (Original)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal *The occupational accidents and diseases in manufacturing and construction industries are decreased.*	1. *Decrease of the occupational accidents and diseases* 2. *Decrease of violation ratio for regulations on Occupational Safety and Health*	1. Statistics of SOCSO 2. *Data of NIOSH*	· Malaysian economic situation remains stable. · The enterprises accept Governmental policy on the occupational accidents and diseases.
Project Purpose *The* capacity (technical support, human resources development, collection and dissemination of information) of National Institute of Occupational Safety and Health (NIOSH) *are* upgraded.	1. *Number of handbooks and guidelines for management of Occupational Safety and Health.* 2. Number of health check and measurement on working environment conducted by NIOSH. 3. Results and contents of technical advice about the improvement of working environment and etc. 4. *Number of inspection on dust masks and gas masks by NIOSH.* 5. *Number of employers and employees received educational training.* 6. Improvement of quality of information on the occupational accidents and diseases, and number of access. 7. Evaluation of employers and employees for NIOSH.	1. *Publications and Data of NIOSH.* *2-6. Statistics of SOCSO* 7. *Evaluation survey for the enterprises.*	· Activities of NIOSH are accepted by the enterprises.
Outputs Capacities of technical support 1. Methods on working environment control are acquired.	1) Number of NIOSH staffs who has acquired and degree of their acquirement. 2) Conditions of preparation on standard procedure. 3) Provision of facilities and equipment in NIOSH.	*1. - 4.* *Annual reports of NIOSH*	· *Staff of NIOSH are properly managed.*
2. Preventive measures on occupational and work related diseases are developed.	1) Number of NIOSH staffs who has acquired and degree of their acquirement. 2) Conditions of preparation on standard procedure. 3) Provision of facilities and equipment in NIOSH.		
3. The system for work control from ergonomic viewpoint is improved.	1) Number of NIOSH staffs who has acquired and degree of their acquirement. 2) Conditions of preparation on standard procedure. 3) Provision of facilities and equipment in NIOSH.		
Capacities of human resources 4. Occupational Safety and Health (OSH) training programs are improved.	4-1. Conditions of preparation on curricula. 4-2. Sorts of educational training conducted by NIOSH and number of attendance.		
Capacities of public information 5. Function of collection and dissemination of information for raising of awareness on safety and health are progressed.	5-1. Number of seminars and etc. 5-2. Conditions of preparation on information system and number of access	5. *Publications related to information activities.*	
6. Function for providing necessary information for policy development is strengthened.	6. Number of information offered to MOHR	6. *Annual reports of NIOSH.*	

Activities	Inputs	
1-1. To study actual conditions of usege and handling, etc. of chemical substances and etc. in enterprises and to determine necessary technical 1-2. To acquire the method and technical skill on the identification, sampling, measurement, and evaluation of chemical substances and etc. 1-3. To acquire the evaluation method of exposure level to *employees* in working environment. 1-4. To acquire the method and technology for the improvement of working environment, such as local ventilation system.	1. Malaysian Side (1) Facilities of NIOSH (2) Necessary machinery and equipment (3) Assignment of full-time counterpart personnel (4) Expenses necessary for the implementation of the Project	· Counterpart personnel are not moved
2-1. To survey and analyze the actual situation of occurrence of the occupational diseases and practical situation of medical examination 2-2. To acquire the technical method of adequate health hazard evaluation on the identified hazardous factors. 2-3. To acquire methods for measures to be taken on the basis of the result of health hazard evaluation. 2-4. *To establish monitoring system of the occupational diseses.*	2. Japanese Side (1) Dispatch of Experts Long-term Experts :four(4) a. Team leader :one(1) b. Coordinator :one(1) c. Industrial hygiene :one(1) d. Health control/Ergonomics :one(1) Short-term Experts will be dispatched to ensure smooth implementation of the Project.	Pre-conditions · Necessary budget of NIOSH is appropriately *measured.*
3-1. To identify and analyse the problems in working places from ergonomic 3-2. To acquire technical methods of ergonomic evaluation and improvement for the identified hazardous factors. 3-3. To examine the measures for occupational health based on ergonomic consideration. *3-4. TO acquire technical skills for performance examination of dust masks and gas masks.*	(2) Training of counterpart personnel in Japan Malaysian counterpart personnel will be trained in Japan according to the annual work plan of the Project within the allocated for technical cooperation.	· Appropriate number of counterpart personnel are *allocated.*
4-1. To review existing OSH training program. 4-2. To grasp the problem of the above mentioned programs and training 4-3. To improve existing curricula and develop new curricula. 4-4. To conduct OSH training for staff in occupational health field.		
5-1. *To examine how to publicize NIOSH activities.* 5-2. To publish "The Project News Letters" of the project activities regularly. 5-3. To organize seminars, workshops and exhibitions.	(3) Provision of machinery and equipment Part of the machinery and equipment necessary for the effective implementation of the Project will be provided within the allocated for technical cooperation.	
6-1. *To examine the masures on small and medium size enterprises.* 6-2. To give advice on overall policy based on the Japanese experience in the field of OSH.		

PDM 2

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal *Trend of occupational accidents and diseases in industries is decreased.*	1. Decrease of the occupational accidents*rates* 2. *Decrease of occupational diseases rates*	1. Statistics of SOCSO 2. *Statistics of SOCSO* **SOCSO statistics of occupational diseases is incomplete.*	· Malaysian economic situation remains stable. · The enterprises accept Governmental policy on the occupational accidents and diseases.
Project Purpose Capacity (technical support, human resources development, collection and dissemination of information) of National Institute of Occupational Safety and Health (NIOSH) is upgraded.	1. Number of handbooks and guidelines*on OSH management prepared directly or in cooperation with other organizations.* 2. Number of health check and measurement on working environment conducted by NIOSH. 3. Results and contents of technical advice about the improvement of working environment and etc. 4. *Number of NIOSH training courses and guidelines on proper use of respirator.* 5. Number of employers and employees received educational training*and contents of educational training* 6. Improvement of quality of information on the occupational accidents and diseases, and number of access 7. Evaluation of employers and employees for NIOSH. *8. Number of research and development projects conducted by JICA-NIOSH*	*1. - 6. Data and publications of NIOSH* *7-1. Data of NIOSH services (consultation, training etc.)* *7-2. Tracking survey by Training division* *8. Data of NIOSH*	· Activities of NIOSH are accepted by the enterprises.
Outputs Capacities of technical support 1. Methods on working environment control are acquired.	1) Number of NIOSH staff who has acquired *technical skills* and degree of their 2) Conditions of preparation on standard procedure 3) Provision of facilities and equipment in NIOSH	*1. - 6. Data and publications of NIOSH*	· *Staff of NIOSH are appropriately selected and assigned,*
2. Preventive measures on occupational and work related diseases are developed	1) Number of NIOSH staff who has acquired *technical skills* and degree of their 2) Conditions of preparation on standard procedure 3) Provision of facilities and equipment in NIOSH		
3. The system for work control from ergonomic viewpoint is improved.	1) Number of NIOSH staff who has acquired *technical skills* and degree of their 2) Conditions of preparation on standard procedure 3) Provision of facilities and equipment in NIOSH		
Capacities of human resources 4. Occupational Safety and Health (OSH) training programs are improved.	4-1. Conditions of preparation of curricula. 4-2. Sorts of educational training conducted by NIOSH and number of attendance 4-3. Number of JICA-NIOSH joint research and their reports.		
Capacities of public information 5. Function of collection and dissemination of information for raising of awareness on safety and health are progressed	5-1. Number of seminars and etc. 5-2. Conditions of preparation on information system and number of access		
6. Function for providing necessary information for policy development is strengthened	6. Number of information offered to MHR		

Activities	Inputs	
1-1. To study actual conditions of use and handling, etc. of chemical substances and etc. in enterprises and to determine necessary technical method and scope. 1-2. To acquire the method and technical skill on the identification, sampling, measurement, and evaluation of chemical substances and etc. 1-3. To acquire the evaluation method of exposure level to workers in working environment. 1-4. To acquire the method and technology for the improvement of working environment such as local ventilation system.	1. Malaysian Side (1) Facilities of NIOSH (2) Necessary machinery and equipment (3) Assignment of full-time counterpart personnel (4) Expenses necessary for the implementation of the Project	· Counterpart personnel are not moved
2-1. To survey and analyse the actual situation of occurrence of the occupational diseases and practical situation of medical examination scheme. 2-2. To acquire the technical method of adequate health hazard evaluation on the identified hazardous factors. 2-3. To acquire methods for measures to be taken on the basis of the result of health hazard evaluation. 2-4. *To acquire technical skills for proper use of Personal Protective Equipment (PPE) including respirators and hearing protectors.*	2. Japanese Side (1) Dispatch of Experts Long-term Experts :four(4) a. Team leader :one(1) b. Coordinator :one(1) c. Industrial hygiene :one(1) d. Health control / Ergonomics :one(1) Short-term Experts will be dispatched to ensure smooth implementation of the Project.	Pre-conditions · Necessary budget of NIOSH is appropriately *allocated* · Appropriate number of counterpart personnel are *assigned.*
3-1. To identify and analyse the problems in working places from ergonomic viewpoint. 3-2. To acquire technical methods of ergonomic evaluation and improvement for the identified hazardous factors. 3-3. To examine the measures for occupational health based on ergonomic consideration.		
4-1. To review existing OSH training program. 4-2. To grasp the problem of above mentioned programs and training needs. 4-3. To improve existing curricula and develop new curricula. 4-4. To conduct OSH training for staff in occupational health field. *4-5. To conduct training courses and to prepare guidelines on proper use of Personal Protective Equipment (PPE) including respirators and hearing* *4-6. To conduct OSH research and development activities.* *4-7. To conduct preliminary survey to determine the profile of occupational diseases in Malaysia for the purpose of planning.*	(2) Training of counterpart personnel in Japan Malaysian counterpart personnel will be trained in Japan according to the annual work plan of the Project within the allocated budget for technical cooperation. (3) Provision of machinery and equipment Part of the machinery and equipment necessary for the effective implementation of the Project will be provided within the allocated budget for technical cooperation.	
5-1. *To facilitate OSH information dissemination from NIOSH.* 5-2. To publish "The Project News Letters" of the project activities regularly. 5-3. To organize seminars, workshops and exhibitions.		
6-1. *To learn the OSH measures on small and medium size enterprises and the supporting system in Japan.* 6-2. To give advice on overall policy based on the Japanese experience in the field of OSH.		

F. Joint Coordinating Committee

Former half period of the project, JCC was held around two times a year and such treatment contributed to share the information on what the project was doing among the persons concern.

Latter half period of the project, JCC was held at the special occasion to share the news on the project because members of the committee had already familiarized with the project activities and it was not necessary to hold the meeting so frequently.

No.	Date	Organizations that sent participant	Issues discussed
1	15/12/2000	- DOSH - NIOSH - Embassy of Japan - JICA Malaysia - JICA-NIOSH Team - UNDP Malaysia	• Report of activities in FY2000 • Plan of activities in FY2001 • Training on the theme of SMI • Quantity of the technical cooperation will be discussed in the meetings
2	05/07/2001	- DOSH - NIOSH - Embassy of Japan - JICA Malaysia - JICA-NIOSH Team - UNDP Malaysia	• Report of activities until then • Planed activities in FY 2001 • Recruitment of a medical doctor • Number of staff of NIOSH
3	17/01/2002	- DOSH - NIOSH - Embassy of Japan - JICA Malaysia - JICA-NIOSH Team	• Report of activities until then • Activities within FY2001 • Planed activities in FY 2002 • Number of staff of NIOSH
4	20/08/2002	- DOSH	• Report of activities until then

		- NIOSH - Embassy of Japan - JICA Malaysia - JICA-NIOSH Team - UNDP	• Activities within FY2002
5	11/03/2003	- DOSH - NIOSH - Embassy of Japan - JICA Malaysia - JICA Mid term Evaluation Team - JICA-NIOSH Team	• Report of activities until then • Planed activities in FY 2003 • Report of result of the mid term evaluation • Signing on the minutes on the mid term evaluation.
6	17/05/2005	- DOSH - NIOSH - JICA Malaysia - JICA-NIOSH Team	• Re-recognizing the PDM • Report of activities until then • Planed activities in FY 2005 • Preparation for the final evaluation • Ideas for the future cooperation on OSH
7	14/10/2005	- DOSH - EPU - NIOSH - JICA Malaysia - JICA Final Evaluation Team - JICA-NIOSH Team	• Report of activities for whole term • Report of result of the final evaluation • Signing on the minutes on the final evaluation. • Possibility of further cooperation on OSH