Second Year

Category	Item	Spec/ItemNum	Currency	Purchased Price (w/o tax)	Tax only in Pakistan	Exchange rate PKR-JPY	Price(w/otax) JPY	Tax only JPY	Client	Date_Purchase	Date_Acquired	Date_Checked	Storage Site	Condition	Area
Cost for Equipment(Spare Parts)Lot2 Air Station															
	PG250Connection Cable		PKR	1,300.000		1.045	1,358.500	0.000		2010/Jul/07			Pak-EPA	In use	Asia
	PG250Connection Cable		PKR	1,300.000		1.045	1,358.500	0.000		2010/Jul/07			Punjab-EPA	In use	Asia
	PG250Connection Cable		PKR	1,300.000		1.045	1,358.500	0.000		2010/Jul/07			Sindh-EPA	In use	Asia
	PG250Connection Cable		PKR	1,300.000		1.045	1,358.500	0.000		2010/Jul/07			KP-EPA	In use	Asia
	PG250Connection Cable		PKR	1,300.000		1.045	1,358.500	0.000		2010/Jul/07			Balochistan-EPA	In use	Asia
	System Improvement	advance	JPY	10,914,285.714	545,714.286	1.000	10,914,285.714	545,714.286	HORIBA	2010/Nov/16			5件	In use	Asia
	System Improvement	advance	JPY	12,800,000.000	640,000.000	1.000	12,800,000.000	640,000.000	HORIBA	2011/Mar/25			5件	In use	Asia
	UPS	APC Smart UPS SURTD3000XLI	PKR	145,000.000	24,650.000	0.971	140,853.000	23,945.010	CNS	2011/Mar/15			Pak-EPA	In use	Asia
	Battery Bank	Model 3020HP-30 (3KVA)	PKR	69,000.000	11,730.000	0.971	67,026.600	11,394.522	CNS	2011/Mar/15			Pak-EPA	In use	Asia
	UPS	APC Smart UPS SURTD3000XLI	PKR	145,000.000	24,650.000	0.971	140,853.000	23,945.010	CNS	2011/Mar/15			Sindh-EPA	In use	Asia
	Battery Bank	Model 3020HP-30 (3KVA)	PKR	69,000.000	11,730.000	0.971	67,026.600	11,394.522	CNS	2011/Mar/15			Sindh-EPA	In use	Asia
	FLOW SENSOR	20SLPM - BAM 1020	PKR	19,081.197	3,243.803	0.979	18,680.491	3,175.684	MaxTach	2011/Jan/22			KP-EPA	In use	Asia
	REPL. BOARD STACK ASSY		PKR	76,324.786	12,975.214	0.979	74,721.966	12,702.734	MaxTach	2011/Jan/22			Balochistan-EPA	In use	Asia
	RH SENSOR	for BX-827 SMART HEATER	PKR	9,540.598	1,621.902	0.979	9,340.246	1,587.842	MaxTach	2011/Jan/22			Balochistan-EPA	In use	Asia
	Flight cargo		PKR	31,827.436	5,410.664	0.979	31,159.060	5,297.040	MaxTach	2011/Jan/22				Consumed	Asia
	LCD Unit		JPY	58,366.667	2,918.333	1.000	58,366.667	2,918.333	HORIBA	2011/Jan/19			KP-EPA	In use	Asia
	Noise filter		JPY	4,736.190	236.810	1.000	4,736.190	236.810	HORIBA	2011/Jan/19			KP-EPA	In use	Asia
	Noise filter		JPY	4,736.190	236.810	1.000	4,736.190	236.810	HORIBA	2011/Jan/19			Balochistan-EPA	In use	Asia
	Air pollution analyzer		JPY	40,938.095	2,046.905	1.000	40,938.095	2,046.905	HORIBA	2011/Jan/19			Balochistan-EPA	In use	Asia
	Cable, Covers		PKR	1,350.000		0.951	1,283.850	0.000		2010/Nov/10			Sindh-EPA	In use	Asia
	Installation		PKR	2,000.000		0.951	1,902.000	0.000		2010/Nov/10			Sindh-EPA	In use	Asia
	Cable, others		PKR	767.000		0.951	729.417	0.000		2010/Nov/10			Sindh-EPA	In use	Asia
	Cable protector		PKR	570.000		0.951	542.070	0.000		2010/Nov/10			Sindh-EPA	In use	Asia
	Lan Cable		PKR	2,950.000		0.951	2,805.450	0.000		2010/Nov/10			Sindh-EPA	In use	Asia
	Anti Virus Software	for Data PC	PKR	8,461.538	1,438.462	0.951	8,046.923	1,367.977		2010/Nov/11			Pak-EPA	In use	Asia
	Anti Virus Software	for Data PC	PKR	8,461.538	1,438.462	0.951	8,046.923	1,367.977		2010/Nov/11			Punjab-EPA	In use	Asia
	Anti Virus Software	for Data PC	PKR	8,461.538	1,438.462	0.951	8,046.923	1,367.977		2010/Nov/11			Sindh-EPA	In use	Asia
	Anti Virus Software	for Data PC	PKR	8,461.538	1,438.462	0.951	8,046.923	1,367.977		2010/Nov/11			KP-EPA	In use	Asia
	Anti Virus Software	for Data PC	PKR	8,461.538	1,438.462	0.951	8,046.923	1,367.977		2010/Nov/11			Balochistan-EPA	In use	Asia
Cost for Equipment(Spare Parts)Lot3Air Equipment															Asia
	Spectrophotometer	Helios Omega	PKR	566,000.000	96,220.000	0.951	538,266.000	91,505.220	Al-Barkat	2010/Nov/06	2010/Nov/02	2010/Nov/02	KP-EPA	In use	Asia
	Spectrophotometer	Helios Omega	PKR	566,000.000	96,220.000	0.951	538,266.000	91,505.220	Al-Barkat	2010/Nov/06	2010/Nov/02	2010/Nov/02	Balochistan-EPA	In use	Asia
	Quartz Cell	50mm, 2set	PKR	15,250.000	2,592.500	0.951	14,502.750	2,465.468	Al-Barkat	2010/Nov/06	2010/Nov/02	2010/Nov/02	Pak-EPA	In use	Asia
	Quartz Cell	50mm, 2set	PKR	15,250.000	2,592.500	0.951	14,502.750	2,465.468	Al-Barkat	2010/Nov/06	2010/Nov/02	2010/Nov/02	Punjab- & Sindh-EPA	In use	Asia
	Quartz Cell	50mm, 2set	PKR	15,250.000	2,592.500	0.951	14,502.750	2,465.468	Al-Barkat	2010/Nov/06	2010/Nov/02	2010/Nov/02	KP- & Balochistan-EI	In use	Asia
	Hollow Cathode Lamp(antimony)	For Perkin Elmer AAS3300 N305-0370	JPY	85,000.000	4,250.000	1.000	85,000.000	4,250.000	Ito Lab. Equipment Ltd				Sindh-EPA	In use	Asia
	Hollow Cathode Lamp (antimony)	For Perkin Elmer AAS3300 N305-0370	JPY	81,000.000	4,050.000	1.000	81,000.000	4,050.000	Ito Lab. Equipment Ltd				Pak-EPA	In use	Asia
	Hollow Cathode Lamp (antimony)	For Perkin Elmer AAS3300 N305-0370	JPY	81,000.000	4,050.000	1.000	81,000.000	4,050.000	Ito Lab. Equipment Ltd				Pujab-EPA	In use	Asia
	Hollow Cathode Lamp (antimony)	For Perkin Elmer AAS3300 N305-0370	JPY	81,000.000	4,050.000	1.000	81,000.000	4,050.000	Ito Lab. Equipment Ltd				Balochistan-EPA	In use	Asia
	transformer	BS-1000	JPY	9,680.000	484.000	1.000	9,680.000	484.000	Kasuga Musen				Pak-EPA	In use	Asia
	transformer	BS-1000	JPY	9,680.000	484.000	1.000	9,680.000	484.000	Kasuga Musen				Punjab-EPA	In use	Asia
	transformer	BS-1000	JPY	9,680.000	484.000	1.000	9,680.000	484.000	Kasuga Musen				Balochistan-EPA	In use	Asia
Cost for Equipment(Spare Parts)Lot4 Water															Asia
	AS12A 4mm, Consumable Bundled Package (060135)		PKR	325,000.000	55,250.000	0.998	324,480.000	55,161.600	Orion	2011/Mar/29			KP-EPA	In use	Asia
	AS12A 4mm, Consumable Bundled Package (060135)		PKR	325,000.000	55,250.000	0.998	324,480.000	55,161.600	Orion	2011/Mar/29			Balochistan-EPA	In use	Asia
	CS12A 4mm, Consumable Bundled Package (060132)		PKR	299,000.000	50,830.000	0.998	298,521.600	50,748.672	Orion	2011/Mar/29			KP-EPA	In use	Asia
	CS12A 4mm, Consumable Bundled Package (060132)		PKR	299,000.000	50,830.000	0.998	298,521.600	50,748.672	Orion	2011/Mar/29			Balochistan-EPA	In use	Asia
	Rebuild Kit, 6-port valve, usb untis only		PKR	72,800.000	12,376.000	0.998	72,683.520	12,356.198	Orion	2011/Mar/29			KP-EPA	In use	Asia
	Preventative Maintenance Kit		PKR	99,000.000	16,830.000	0.998	98,841.600	16,803.072	Orion	2011/Mar/29			Balochistan-EPA	In use	Asia
	Combined Six Cation Standard		PKR	16,900.000	2,873.000	0.998	16,872.960	2,868.403	Orion	2011/Mar/29			KP- Balochistan-EPA	Consumed	Asia
	Combined Seven Anion Standard		PKR	16,900.000	2,873.000	0.998	16,872.960	2,868.403	Orion	2011/Mar/29			KP- Balochistan-EPA	Consumed	Asia
	Sodium Carbonate Concentrate (0.5M) 500mL for anion		PKR	9,000.000	1,530.000	0.998	8,985.600	1,527.552	Orion	2011/Mar/29			KP- Balochistan-EPA	Consumed	Asia
	Sodium Bicarbonate Concentrate (0.5M) 500mL for anion		PKR	9,000.000	1,530.000	0.998	8,985.600	1,527.552	Orion	2011/Mar/29			KP- Balochistan-EPA	Consumed	Asia
	Methanesulfonic Acid 500mL for cation		PKR	27,450.000	4,666.500	0.998	27,406.080	4,659.034	Orion	2011/Mar/29			KP- Balochistan-EPA	Consumed	Asia
	TBAOH for cation regenerant (100mL, 4 bottle pack)		PKR	37,000.000	6,290.000	0.998	36,940.800	6,279.936	Orion	2011/Mar/29			KP-EPA	Consumed	Asia
	TBAOH for cation regenerant (100mL, 4 bottle pack)		PKR	37,000.000	6,290.000	0.998	36,940.800	6,279.936	Orion	2011/Mar/29			Balochistan-EPA	Consumed	Asia
	GE Digital Energy 10kVA-UPS (model LanPro 10-11, single-phase)	10KVA with Batery pack	PKR	315,000.000		1.032	325,206.000	0.000	CGM	2010/Aug/24			Balochistan-EPA	In use	Asia
	External Battery Bank of One Unit for 10kVA-UPS		PKR	78,000.000		1.032	80,527.200	0.000	CGM	2010/Aug/24			Balochistan-EPA	In use	Asia
	Earth Protector Device		PKR	32,000.000		1.032	33,036.800	0.000	CGM	2010/Aug/24			Balochistan-EPA	In use	Asia
	10kVA-AVR (Servo Motor)		PKR	35,000.000		1.032	36,134.000	0.000	CGM	2010/Aug/24			Balochistan-EPA	In use	Asia
	Power Cable		PKR	10,000.000		1.032	10,324.000	0.000	CGM	2010/Aug/24			Balochistan-EPA	In use	Asia
	AMS Filter	for AAS	PKR	5,130.000	872.100	0.986	5,059.206	860.065	AMS				KP-EPA	In use	Asia
	AMS Filter	for AAS	PKR	5,130.000	872.100	0.986	5,059.206	860.065	AMS				Balochistan-EPA	In use	Asia
	AMS Filter	for GC	PKR	5,130.000	872.100	0.986	5,059.206	860.065	AMS				Balochistan-EPA	In use	Asia
	UPS	5kV	PKR	292,000.000	49,640.000	1.007	294,044.000	49,987.480	CNS	2010/Sep/29			KP-EPA	In use	Asia
	Filtration Assembly		PKR	24,200.000	4,114.000	0.979	23,691.800	4,027.606	Al-Barkat	2011/Jan/08			KP-EPA	In use	Asia
	Filtration Assembly		PKR	24,200.000	4,114.000	0.979	23,691.800	4,027.606	Al-Barkat	2011/Jan/08			Balochistan-EPA	In use	Asia
	Round bottom	300mL, 19/26	PKR	1,250.000	212.500	0.979	1,223.750	208.038	Al-Barkat	2011/Jan/08			KP-EPA	In use	Asia
	Round bottom	300mL, 19/26	PKR	1,250.000	212.500	0.979	1,223.750	208.038	Al-Barkat	2011/Jan/08			KP-EPA	In use	Asia
	Round bottom	300mL, 19/26	PKR	1,250.000	212.500	0.979	1,223.750	208.038	Al-Barkat	2011/Jan/08			KP-EPA	In use	Asia

Category	Item	Spec/ItemNum	Currency	Purchased Price (w/o tax)	Tax only	Exchange rate	Price(w/otax)	Tax only	Client	Date_Purchase	Date_Acquired	Date_Checked	Storage Site	Condition	Area
					Tax in Pakistan	PKR-JPY	JPY	JPY							
	Round bottom	300mL, 19/26	PKR	1,250.000	212.500	0.979	1,223.750	208.038	Al-Barkat	2011/Jan/08			KP-EPA	In use	Asia
	Round bottom	300mL, 19/26	PKR	1,250.000	212.500	0.979	1,223.750	208.038	Al-Barkat	2011/Jan/08			KP-EPA	In use	Asia
	Round bottom	300mL, 19/26	PKR	1,250.000	212.500	0.979	1,223.750	208.038	Al-Barkat	2011/Jan/08			KP-EPA	In use	Asia
	Round bottom	300mL, 19/26	PKR	1,250.000	212.500	0.979	1,223.750	208.038	Al-Barkat	2011/Jan/08			Balochistan-EPA	In use	Asia
	Round bottom	300mL, 19/26	PKR	1,250.000	212.500	0.979	1,223.750	208.038	Al-Barkat	2011/Jan/08			Balochistan-EPA	In use	Asia
	Round bottom	300mL, 19/26	PKR	1,250.000	212.500	0.979	1,223.750	208.038	Al-Barkat	2011/Jan/08			Balochistan-EPA	In use	Asia
	Round bottom	300mL, 19/26	PKR	1,250.000	212.500	0.979	1,223.750	208.038	Al-Barkat	2011/Jan/08			Balochistan-EPA	In use	Asia
	Round bottom	300mL, 19/26	PKR	1,250.000	212.500	0.979	1,223.750	208.038	Al-Barkat	2011/Jan/08			Balochistan-EPA	In use	Asia
	Round bottom	300mL, 19/26	PKR	1,250.000	212.500	0.979	1,223.750	208.038	Al-Barkat	2011/Jan/08			Balochistan-EPA	In use	Asia
	Receibing Flask	1L	PKR	4,800.000	816.000	0.979	4,699.200	798.864	Al-Barkat	2011/Jan/08			Sindh-EPA	In use	Asia
	Repaire of UPS		PKR	115,000.000		0.968	111,274.000	0.000	MAB	2011/Feb/22			Balochistan-EPA	Consumed	Asia
	A&D Analytical Balance	RZ-11100-70	PKR	255,041.000	43,356.970	0.961	245,094.401	41,666.048	Al-Barkat	2011/Mar/04			Pak-EPA	In use	Asia
	REPLACEMENT CHARCOAL FILTER		PKR	54,585.000	9,279.450	0.974	53,176.707	9,040.040	AMS	2011/Mar/15			Balochistan-EPA	In use	Asia
	REPLACEMENT CHARCOAL FILTER		PKR	54,585.000	9,279.450	0.974	53,176.707	9,040.040	AMS	2011/Mar/15			Balochistan-EPA	In use	Asia
	TRAP-MOISTURE 70ML 1/8 FTG		PKR	30,850.000	5,244.500	0.974	30,054.070	5,109.192	AMS	2011/Mar/15			Balochistan-EPA	In use	Asia
	TRAP-INDICATING OXYGEN 1/8 FTG		PKR	30,850.000	5,244.500	0.974	30,054.070	5,109.192	AMS	2011/Mar/15			Balochistan-EPA	In use	Asia
	Bunner head		PKR	132,410.000	22,509.700	0.974	128,993.822	21,928.950	AMS	2011/Mar/15			Balochistan-EPA	In use	Asia
	Surge Arrester	VAL-MS-230	PKR	12,820.000	2,179.400	0.960	12,307.200	2,092.224	Al-Barkat	2011/Feb/26			Pak-EPA	In use	Asia
	Surge Arrester	VAL-MS-230	PKR	12,820.000	2,179.400	0.960	12,307.200	2,092.224	Al-Barkat	2011/Feb/26			Pak-EPA	In use	Asia
	Surge Arrester	VAL-MS-230	PKR	12,820.000	2,179.400	0.960	12,307.200	2,092.224	Al-Barkat	2011/Feb/26			Punjab-EPA	In use	Asia
	Surge Arrester	VAL-MS-230	PKR	12,820.000	2,179.400	0.960	12,307.200	2,092.224	Al-Barkat	2011/Feb/26			Punjab-EPA	In use	Asia
	Surge Arrester	VAL-MS-230	PKR	12,820.000	2,179.400	0.960	12,307.200	2,092.224	Al-Barkat	2011/Feb/26			Punjab-EPA	In use	Asia
	Surge Arrester	VAL-MS-230	PKR	12,820.000	2,179.400	0.960	12,307.200	2,092.224	Al-Barkat	2011/Feb/26			Sindh-EPA	In use	Asia
	Surge Arrester	VAL-MS-230	PKR	12,820.000	2,179.400	0.960	12,307.200	2,092.224	Al-Barkat	2011/Feb/26			Sindh-EPA	In use	Asia
	Surge Arrester	VAL-MS-230	PKR	12,820.000	2,179.400	0.960	12,307.200	2,092.224	Al-Barkat	2011/Feb/26			Sindh-EPA	In use	Asia
	Surge Arrester	VAL-MS-230	PKR	12,820.000	2,179.400	0.960	12,307.200	2,092.224	Al-Barkat	2011/Feb/26			KP-EPA	In use	Asia
	Surge Arrester	VAL-MS-230	PKR	12,820.000	2,179.400	0.960	12,307.200	2,092.224	Al-Barkat	2011/Feb/26			Balochistan-EPA	In use	Asia
Labor(Lot2) Air Station															
	Labor for repair	EMS Staff accommodation	PKR	6,200.000		1.074	6,658.800	0.000		2010/Jun/29			Pak-EPA	Consumed	Asia
	Labor for repair	EMS Staff accommodation	PKR	49,970.000		1.045	52,218.650	0.000		2010/Jul/21			Pak-EPA	Consumed	Asia
	Preliminary Survey	Air Monitoring Station Equipments in KPK-EPA	PKR	21,700.000		0.951	20,636.700	0.000	MaxTech	2010/Nov/12			KP-EPA	Consumed	Asia
	Preliminary Survey	Air Monitoring Station Equipments in Balochistan-EPA	PKR	65,000.000		0.951	61,815.000	0.000	MaxTech	2010/Nov/12			Balochistan-EPA	Consumed	Asia
	UPS Inspection	in Balochistan	PKR	60,000.000		0.960	57,600.000	0.000	MaxTech	2011/Feb/26			Balochistan-EPA	Consumed	Asia
														Consumed	Asia
Labor(Lot4) Water															
	Engineering Work in KPK-EPA		PKR	150,000.000		0.998	149,760.000	0.000	Orion	2011/Mar/29			KP-EPA	Consumed	
	Engineering Work in Balochistan-EPA		PKR	150,000.000		0.998	149,760.000	0.000	Orion	2011/Mar/29			Balochistan-EPA	Consumed	
	Engineering Work in KPK-EPA (second work)		PKR	30,000.000		0.998	29,952.000	0.000	Orion	2011/Mar/29			KP-EPA	Consumed	
	Engineering Work in Balochistan-EPA, Quetta		PKR	15,000.000		1.032	15,486.000	0.000	CGM	2010/Aug/24			Balochistan-EPA	Consumed	
	Engineering Work in KPK-EPA		PKR	20,000.000		0.986	19,724.000	0.000	AMS				KP-EPA	Consumed	
	Engineering Work in Balochistan-EPA		PKR	70,000.000		0.986	69,034.000	0.000	AMS				Balochistan-EPA	Consumed	
	Labor for repair	EMS Staff accommodation	PKR	18,374.000		0.951	17,473.674	0.000		2010/Nov/20			Pak-EPA	Consumed	
	Labor for repair	EMS Staff accommodation	PKR	122,318.000		0.987	120,727.866	0.000		2010/Dec/10			Pak-EPA	Consumed	
	Engineering Work in KPK-EPA	Overhaul works in KP	PKR	50,000.000		0.961	48,050.000	0.000	AMS	2011/Mar/15			KP-EPA	Consumed	
	Engineering Work in Balochistan-EPA	for AAS	PKR	80,000.000		0.974	77,936.000	0.000	AMS	2011/Mar/15			Balochistan-EPA	Consumed	
	Engineering Work in Balochistan-EPA	for GC	PKR	70,000.000		0.974	68,194.000	0.000	AMS	2011/Mar/15			Balochistan-EPA	Consumed	
	Engineering Work in Pak-EPA	for AAS	PKR	15,000.000		0.961	14,415.000	0.000	AMS	2011/Mar/01			Pak-EPA	Consumed	
	Engineering Work in Balochistan-EPA	for Air Monitoring Station	PKR	93,000.000		0.983	91,419.000	0.000	MaxTech	2011/Apr/04			Balochistan-EPA	Consumed	
	Engineering Work in KP-EPA	for Air Monitoring Station	PKR	39,500.000		0.961	37,959.500	0.000	MaxTech	2011/Mar/26			Balochistan-EPA	Consumed	
							¥30,219,560	¥1,943,418							

Must Input

Category	Item	Spec/ItemNum	Currency	Purchased Price (w/o tax)	Tax only 16% in Pakistan	Exchange rate PKR-JPY	Price(w/otax) JPY	Tax only JPY	Client	Date_Purchase	Date_Acquired	Date_Checked	Storage Site	Condition	Area
Consumables(Lot2)Air Station															Asia
	Sodium Tiosulfate Solution	0.1N, 1000mL	PKR	2,799.145	475.855	0.961	2,689.979	457.296	Techno Enter	2011/Mar/24			Pak-EPA	In use	Asia
	N,N-dimethyl-1,4-phenylene-diammoniuum dichloride	25g	PKR	8,418.803	1,431.197	0.961	8,090.470	1,375.380	Techno Enter	2011/Mar/24			Pak-EPA	In use	Asia
	Thiourea	250g	PKR	3,846.154	653.846	0.961	3,696.154	628.346	Techno Enter	2011/Mar/24			Pak-EPA	In use	Asia
	Antimony standard solution	100mL	PKR	2,820.513	479.487	0.961	2,710.513	460.787	Techno Enter	2011/Mar/24			Pak-EPA	In use	Asia
	3,3 dimethylbenzidene dihydrochloride	25g	PKR	8,119.658	1,380.342	0.961	7,802.991	1,326.509	Techno Enter	2011/Mar/24			Pak-EPA	In use	Asia
	Sodium Tiosulfate Solution	0.1N, 1000mL	PKR	2,799.145	475.855	0.961	2,689.979	457.296	Techno Enter	2011/Mar/24			Punjab-EPA	In use	Asia
	N,N-dimethyl-1,4-phenylene-diammonium dichloride	25g	PKR	8,418.803	1,431.197	0.961	8,090.470	1,375.380	Techno Enter	2011/Mar/24			Punjab-EPA	In use	Asia
	Thiourea	250g	PKR	3,846.154	653.846	0.961	3,696.154	628.346	Techno Enter	2011/Mar/24			Punjab-EPA	In use	Asia
	Antimony standard solution	100mL	PKR	2,820.513	479.487	0.961	2,710.513	460.787	Techno Enter	2011/Mar/24			Punjab-EPA	In use	Asia
	3,3 dimethylbenzidene dihydrochloride	25g	PKR	8,119.658	1,380.342	0.961	7,802.991	1,326.509	Techno Enter	2011/Mar/24			Punjab-EPA	In use	Asia
	Sodium Tiosulfate Solution	0.1N, 1000mL	PKR	2,799.145	475.855	0.961	2,689.979	457.296	Techno Enter	2011/Mar/24			Sindh-EPA	In use	Asia
	N,N-dimethyl-1,4-phenylene-diammonium dichloride	25g	PKR	8,418.803	1,431.197	0.961	8,090.470	1,375.380	Techno Enter	2011/Mar/24			Sindh-EPA	In use	Asia
	Thiourea	250g	PKR	3,846.154	653.846	0.961	3,696.154	628.346	Techno Enter	2011/Mar/24			Sindh-EPA	In use	Asia
	Antimony standard solution	100mL	PKR	2,820.513	479.487	0.961	2,710.513	460.787	Techno Enter	2011/Mar/24			Sindh-EPA	In use	Asia
	3,3 dimethylbenzidene dihydrochloride	25g	PKR	8,119.658	1,380.342	0.961	7,802.991	1,326.509	Techno Enter	2011/Mar/24			Sindh-EPA	In use	Asia
	Sodium Tiosulfate Solution	0.1N, 1000mL	PKR	2,799.145	475.855	0.961	2,689.979	457.296	Techno Enter	2011/Mar/24			KP-EPA	In use	Asia
	N,N-dimethyl-1,4-phenylene-diammonium dichloride	25g	PKR	8,418.803	1,431.197	0.961	8,090.470	1,375.380	Techno Enter	2011/Mar/24			KP-EPA	In use	Asia
	Thiourea	250g	PKR	3,846.154	653.846	0.961	3,696.154	628.346	Techno Enter	2011/Mar/24			KP-EPA	In use	Asia
	Antimony standard solution	100mL	PKR	2,820.513	479.487	0.961	2,710.513	460.787	Techno Enter	2011/Mar/24			KP-EPA	In use	Asia
	3,3 dimethylbenzidene dihydrochloride	25g	PKR	8,119.658	1,380.342	0.961	7,802.991	1,326.509	Techno Enter	2011/Mar/24			KP-EPA	In use	Asia
	Sodium Tiosulfate Solution	0.1N, 1000mL	PKR	2,799.145	475.855	0.961	2,689.979	457.296	Techno Enter	2011/Mar/24			Balochistan-E	In use	Asia
	N,N-dimethyl-1,4-phenylene-diammonium dichloride	25g	PKR	8,418.803	1,431.197	0.961	8,090.470	1,375.380	Techno Enter	2011/Mar/24			Balochistan-E	In use	Asia
	Thiourea	250g	PKR	3,846.154	653.846	0.961	3,696.154	628.346	Techno Enter	2011/Mar/24			Balochistan-E	In use	Asia
	Antimony standard solution	100mL	PKR	2,820.513	479.487	0.961	2,710.513	460.787	Techno Enter	2011/Mar/24			Balochistan-E	In use	Asia
	3,3 dimethylbenzidene dihydrochloride	25g	PKR	8,119.658	1,380.342	0.961	7,802.991	1,326.509	Techno Enter	2011/Mar/24			Balochistan-E	In use	Asia
	Charcoal	1kg, Extra pure, 2.5mm	PKR	9,059.829	1,540.171	0.951	8,615.897	1,464.703	Al-Barkat	2010/Nov/08			Pak-EPA	Consumed	Asia
	Charcoal	1kg, Extra pure, 2.5mm	PKR	9,059.829	1,540.171	0.951	8,615.897	1,464.703	Al-Barkat	2010/Nov/08			Pak-EPA	Consumed	Asia
	Charcoal	1kg, Extra pure, 2.5mm	PKR	9,059.829	1,540.171	0.951	8,615.897	1,464.703	Al-Barkat	2010/Nov/08			Punjab-EPA	Consumed	Asia
	Charcoal	1kg, Extra pure, 2.5mm	PKR	9,059.829	1,540.171	0.951	8,615.897	1,464.703	Al-Barkat	2010/Nov/08			Punjab-EPA	Consumed	Asia
	Charcoal	1kg, Extra pure, 2.5mm	PKR	9,059.829	1,540.171	0.951	8,615.897	1,464.703	Al-Barkat	2010/Nov/08			Sindh-EPA	Consumed	Asia
	Charcoal	1kg, Extra pure, 2.5mm	PKR	9,059.829	1,540.171	0.951	8,615.897	1,464.703	Al-Barkat	2010/Nov/08			Training	Consumed	Asia
	Molecular sieve	500g	PKR	7,042.735	1,197.265	0.951	6,697.641	1,138.599	Al-Barkat	2010/Nov/08			Pak-EPA	Consumed	Asia
	Molecular sieve	500g	PKR	7,042.735	1,197.265	0.951	6,697.641	1,138.599	Al-Barkat	2010/Nov/08			Punjab- & KP	Consumed	Asia
	Molecular sieve	500g	PKR	7,042.735	1,197.265	0.951	6,697.641	1,138.599	Al-Barkat	2010/Nov/08			Sindh- & Balo	Consumed	Asia
	Soda lime	1kg	PKR	4,935.897	839.103	0.951	4,694.038	797.987	Al-Barkat	2010/Nov/08			Pak-EPA	Consumed	Asia
	Soda lime	1kg	PKR	4,935.897	839.103	0.951	4,694.038	797.987	Al-Barkat	2010/Nov/08			Punjab- & KP	Consumed	Asia
	Soda lime	1kg	PKR	4,935.897	839.103	0.951	4,694.038	797.987	Al-Barkat	2010/Nov/08			Sindh- & Balo	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	Filter Element	PA-10L 54*0.5T 24Pieces	JPY	6,889.524	344.476	1.000	6,889.524	344.476	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	Air Filter	0.3 Micron (Purge)	JPY	4,266.667	213.333	1.000	4,266.667	213.333	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	Air Filter	0.3 Micron (Purge)	JPY	4,266.667	213.333	1.000	4,266.667	213.333	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	O-Ring	160C12H Drawing Vacuum	JPY	2,290.476	114.524	1.000	2,290.476	114.524	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	O-Ring	160C12H Drawing Vacuum	JPY	2,290.476	114.524	1.000	2,290.476	114.524	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	O-Ring	160C12H Drawing Vacuum	JPY	2,290.476	114.524	1.000	2,290.476	114.524	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	O-Ring	160C12H Drawing Vacuum	JPY	2,290.476	114.524	1.000	2,290.476	114.524	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	O-Ring	160C12H Drawing Vacuum	JPY	2,290.476	114.524	1.000	2,290.476	114.524	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	O-Ring	160C12H Drawing Vacuum	JPY	2,290.476	114.524	1.000	2,290.476	114.524	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	DO Unit	O3 Resolver	JPY	16,944.762	847.238	1.000	16,944.762	847.238	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	DO Unit	O3 Resolver	JPY	16,944.762	847.238	1.000	16,944.762	847.238	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	UV Lamp Unit	Ozonata Unit	JPY	41,046.667	2,052.333	1.000	41,046.667	2,052.333	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	UV Lamp Unit	Ozonata Unit	JPY	41,046.667	2,052.333	1.000	41,046.667	2,052.333	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia

Category	Item	Spec/ItemNum	Currency	Purchased Price (w/o tax)	Tax only 16% in Pakistan	Exchange rate PKR-JPY	Price(w/otax) JPY	Tax only JPY	Client	Date Purchase	Date Acquired	Date Checked	Storage Site	Condition	Area
	UV Lamp Unit	Ozonata Unit	JPY	41,046.667	2,052.333	1.000	41,046.667	2,052.333	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	UV Lamp Unit	Ozonata Unit	JPY	41,046.667	2,052.333	1.000	41,046.667	2,052.333	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	UV Liner	263*145*0.8t(PTFE)	JPY	9,665.714	483.286	1.000	9,665.714	483.286	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	UV Liner	263*145*0.8t(PTFE)	JPY	9,665.714	483.286	1.000	9,665.714	483.286	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	PPD Capillary	HRB-01 APNA-370	JPY	47,195.238	2,359.762	1.000	47,195.238	2,359.762	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	PPD Capillary	HRB-01 APNA-370	JPY	47,195.238	2,359.762	1.000	47,195.238	2,359.762	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	Converter	APNA-350E NOx Converter	JPY	16,072.381	803.619	1.000	16,072.381	803.619	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	Converter	APNA-350E NOx Converter	JPY	16,072.381	803.619	1.000	16,072.381	803.619	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	Scrubber	BAA-050	JPY	17,067.619	853.381	1.000	17,067.619	853.381	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	Scrubber	BAA-050	JPY	17,067.619	853.381	1.000	17,067.619	853.381	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	Convertor Heter unit	GD-6EH-230	JPY	42,979.048	2,148.952	1.000	42,979.048	2,148.952	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	Convertor Heter unit	GD-6EH-230	JPY	42,979.048	2,148.952	1.000	42,979.048	2,148.952	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	Convertor Heter unit	GD-6EH-230	JPY	42,979.048	2,148.952	1.000	42,979.048	2,148.952	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	Catalyzer Assay	HP-10D2	JPY	43,937.143	2,196.857	1.000	43,937.143	2,196.857	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	Catalyzer Assay	HP-10D2	JPY	43,937.143	2,196.857	1.000	43,937.143	2,196.857	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	Scrubber	BAA-050 (Aluminia Activity)	JPY	17,067.619	853.381	1.000	17,067.619	853.381	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	Scrubber	BAA-050 (Aluminia Activity)	JPY	17,067.619	853.381	1.000	17,067.619	853.381	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	Convertor Heter unit	GD-6EH-230	JPY	42,979.048	2,148.952	1.000	42,979.048	2,148.952	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	Convertor Heter unit	GD-6EH-230	JPY	42,979.048	2,148.952	1.000	42,979.048	2,148.952	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	Convertor Heter unit	GD-6EH-230	JPY	42,979.048	2,148.952	1.000	42,979.048	2,148.952	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	DO PIPE	160 C12H Vacuum	JPY	58,115.238	2,905.762	1.000	58,115.238	2,905.762	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	DO PIPE	160 C12H Vacuum	JPY	58,115.238	2,905.762	1.000	58,115.238	2,905.762	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Punjab-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Sindh-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			KP-EPA	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	FITER PAPER		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15			Balochistan-E	Consumed	Asia
	Ion-exchange resin cartridge	Ik-8026-11	JPY	54,685.714	2,734.286	1.000	54,685.714	2,734.286	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	Ion-exchange resin cartridge	Ik-8026-11	JPY	54,685.714	2,734.286	1.000	54,685.714	2,734.286	HORIBA&MA	2010/Dec/15			Pak-EPA	Consumed	Asia
	Flight cargo		JPY	47,619.048	2,380.952	1.000	47,619.048	2,380.952	HORIBA&MA	2010/Dec/15				Consumed	Asia
			JPY		0.000	1.000		0.000	HORIBA&MA	2010/Dec/15					Asia
															Asia
															Asia
															Asia
Consumables(Lot3) Air equipment															Asia
	Sodium Sulfate	100g	PKR	1,800.000	306.000	0.951	1,711.800	291.006	Al-Barkat	2010/Nov/03			Training	Consumed	Asia
	Sodium Sulfate	100g	PKR	1,800.000	306.000	0.951	1,711.800	291.006	Al-Barkat	2010/Nov/03			Training	Consumed	Asia
	Aummonium Sulfate	100g	PKR	160.000	27.200	0.951	152.160	25.867	Al-Barkat	2010/Nov/03			Training	Consumed	Asia
	Aummonium Sulfate	100g	PKR	160.000	27.200	0.951	152.160	25.867	Al-Barkat	2010/Nov/03			Training	Consumed	Asia
	Aummonium Sulfate	100g	PKR	160.000	27.200	0.951	152.160	25.867	Al-Barkat	2010/Nov/03			Training	Consumed	Asia
	Aummonium Sulfate	100g	PKR	160.000	27.200	0.951	152.160	25.867	Al-Barkat	2010/Nov/03			Training	Consumed	Asia
	Aummonium Sulfate	1kg	PKR	1,600.000	272.000	0.979	1,566.400	266.288	Al-Barkat	2011/Jan/19			Training	Consumed	Asia
Consumables(Lot4) Water															
	Selenium standard solution	1000mg-Se/L, 100mL	PKR	2,530.172	430.129	1.024	2,590.897	440.452	Science Cente	2011/Aug/10			Pak-EPA	In use	Asia
	Selenium standard solution	1000mg-Se/L, 100mL	PKR	2,530.172	430.129	1.024	2,590.897	440.452	Science Cente	2011/Aug/10			Punja-EPA	In use	Asia
	Selenium standard solution	1000mg-Se/L, 100mL	PKR	2,530.172	430.129	1.024	2,590.897	440.452	Science Cente	2011/Aug/10			Sindh=EPA	In use	Asia
	Selenium standard solution	1000mg-Se/L, 100mL	PKR	2,530.172	430.129	1.024	2,590.897	440.452	Science Cente	2011/Aug/10			KP-EPA	In use	Asia
	Selenium standard solution	1000mg-Se/L, 100mL	PKR	2,530.172	430.129	1.024	2,590.897	440.452	Science Cente	2011/Aug/10			Balochistan-E	In use	Asia
	Pesticide standard	200ug/ml each	PKR	14,175.000	2,409.750	1.045	14,812.875	2,518.189	AMS	2010/Jul/14			Punjab-EPA	In use	Asia
	Aldrin	pesticide standard	PKR	7,648.000	1,300.160	1.045	7,992.160	1,358.667	AMS	2010/Jul/14			Punjab-EPA	In use	Asia
	α-BHC	pesticide standard	PKR	7,368.000	1,252.560	1.045	7,699.560	1,308.925	AMS	2010/Jul/14			Punjab-EPA	In use	Asia
	β-BHC	pesticide standard	PKR	7,350.000	1,249.500	1.045	7,680.750	1,305.728	AMS	2010/Jul/14			Punjab-EPA	In use	Asia

Category	Item	Spec/ItemNum	Currency	Purchased Price (w/o tax)	Tax only 16% in Pakistan	Exchange rate PKR-JPY	Price(w/otax) JPY	Tax only JPY	Client	Date_Purchase	Date_Acquired	Date_Checked	Storage Site	Condition	Area
	σ-BHC	pesticide standard	PKR	7,368.000	1,252.560	1.045	7,699.560	1,308.925	AMS	2010/Jul/14			Punjab-EPA	In use	Asia
	α-Chlordane	pesticide standard	PKR	5,810.000	987.700	1.045	6,071.450	1,032.147	AMS	2010/Jul/14			Punjab-EPA	In use	Asia
	γ-Chlordane	pesticide standard	PKR	5,810.000	987.700	1.045	6,071.450	1,032.147	AMS	2010/Jul/14			Punjab-EPA	In use	Asia
	4,4-DDE	pesticide standard	PKR	10,693.000	1,817.810	1.045	11,174.185	1,899.611	AMS	2010/Jul/14			Punjab-EPA	In use	Asia
	4,4-DDT	pesticide standard	PKR	10,693.000	1,817.810	1.045	11,174.185	1,899.611	AMS	2010/Jul/14			Punjab-EPA	In use	Asia
	4,4-DDD	pesticide standard	PKR	11,585.000	1,969.450	1.045	12,106.325	2,058.075	AMS	2010/Jul/14			Punjab-EPA	In use	Asia
	Dieldrin	pesticide standard	PKR	7,403.000	1,258.510	1.045	7,736.135	1,315.143	AMS	2010/Jul/14			Punjab-EPA	In use	Asia
	Endrin	pesticide standard	PKR	7,403.000	1,258.510	1.045	7,736.135	1,315.143	AMS	2010/Jul/14			Punjab-EPA	In use	Asia
	Pesticide standard	200ug/ml each	PKR	14,175.000	2,409.750	1.024	14,515.200	2,467.584	AMS	2010/Jul/14			KP-EPA	Consumed	Asia
	Aldrin	pesticide standard	PKR	7,648.000	1,300.160	1.024	7,831.552	1,331.364	AMS	2010/Jul/14			KP-EPA	Consumed	Asia
	α-BHC	pesticide standard	PKR	7,368.000	1,252.560	1.024	7,544.832	1,282.621	AMS	2010/Jul/14			KP-EPA	Consumed	Asia
	β-BHC	pesticide standard	PKR	7,350.000	1,249.500	1.024	7,526.400	1,279.488	AMS	2010/Jul/14			KP-EPA	Consumed	Asia
	σ-BHC	pesticide standard	PKR	7,368.000	1,252.560	1.024	7,544.832	1,282.621	AMS	2010/Jul/14			KP-EPA	Consumed	Asia
	α-Chlordane	pesticide standard	PKR	5,810.000	987.700	1.024	5,949.440	1,011.405	AMS	2010/Jul/14			KP-EPA	Consumed	Asia
	γ-Chlordane	pesticide standard	PKR	5,810.000	987.700	1.024	5,949.440	1,011.405	AMS	2010/Jul/14			KP-EPA	Consumed	Asia
	4,4-DDE	pesticide standard	PKR	10,693.000	1,817.810	1.024	10,949.632	1,861.437	AMS	2010/Jul/14			KP-EPA	Consumed	Asia
	4,4-DDT	pesticide standard	PKR	10,693.000	1,817.810	1.024	10,949.632	1,861.437	AMS	2010/Jul/14			KP-EPA	Consumed	Asia
	4,4-DDD	pesticide standard	PKR	11,585.000	1,969.450	1.024	11,863.040	2,016.717	AMS	2010/Jul/14			KP-EPA	Consumed	Asia
	Dieldrin	pesticide standard	PKR	7,403.000	1,258.510	1.024	7,580.672	1,288.714	AMS	2010/Jul/14			KP-EPA	Consumed	Asia
	Endrin	pesticide standard	PKR	7,403.000	1,258.510	1.024	7,580.672	1,288.714	AMS	2010/Jul/14			KP-EPA	Consumed	Asia
	Pesticide standard	200ug/ml each	PKR	14,175.000	2,409.750	1.024	14,515.200	2,467.584	AMS	2010/Jul/14			Balochistan-E	In use	Asia
	Aldrin	pesticide standard	PKR	7,648.000	1,300.160	1.024	7,831.552	1,331.364	AMS	2010/Jul/14			Balochistan-E	In use	Asia
	α-BHC	pesticide standard	PKR	7,368.000	1,252.560	1.024	7,544.832	1,282.621	AMS	2010/Jul/14			Balochistan-E	In use	Asia
	β-BHC	pesticide standard	PKR	7,350.000	1,249.500	1.024	7,526.400	1,279.488	AMS	2010/Jul/14			Balochistan-E	In use	Asia
	σ-BHC	pesticide standard	PKR	7,368.000	1,252.560	1.024	7,544.832	1,282.621	AMS	2010/Jul/14			Balochistan-E	In use	Asia
	α-Chlordane	pesticide standard	PKR	5,810.000	987.700	1.024	5,949.440	1,011.405	AMS	2010/Jul/14			Balochistan-E	In use	Asia
	γ-Chlordane	pesticide standard	PKR	5,810.000	987.700	1.024	5,949.440	1,011.405	AMS	2010/Jul/14			Balochistan-E	In use	Asia
	4,4-DDE	pesticide standard	PKR	10,693.000	1,817.810	1.024	10,949.632	1,861.437	AMS	2010/Jul/14			Balochistan-E	In use	Asia
	4,4-DDT	pesticide standard	PKR	10,693.000	1,817.810	1.024	10,949.632	1,861.437	AMS	2010/Jul/14			Balochistan-E	In use	Asia
	4,4-DDD	pesticide standard	PKR	11,585.000	1,969.450	1.024	11,863.040	2,016.717	AMS	2010/Jul/14			Balochistan-E	In use	Asia
	Dieldrin	pesticide standard	PKR	7,403.000	1,258.510	1.024	7,580.672	1,288.714	AMS	2010/Jul/14			Balochistan-E	In use	Asia
	Endrin	pesticide standard	PKR	7,403.000	1,258.510	1.024	7,580.672	1,288.714	AMS	2010/Jul/14			Balochistan-E	In use	Asia
	1,5-Diphenyl Carbazide	25g, 1pc	PKR	5,200.000	884.000	0.976	5,075.200	862.784	Shalimar Scie	2010/Oct/15			Training	Consumed	Asia
	Kimwipes	60Boxs/Case	PKR	40,128.000	6,821.760	1.024	41,091.072	6,985.482	AL-Barkat	2011/Jan/11			5州 & Training	Consumed	Asia
	Sodium dihydrogen Phosphate hydrate	500g	PKR	2,500.000	425.000	0.987	2,467.500	419.475	Shalimar Scie	2010/Dec/04			Training	Consumed	Asia
	N2gas		PKR	7,264.957	1235.043	0.976	7,090.598	1,205.402	Pakistan pure	2010/Oct/18			Training	Consumed	Asia
	N2gas		PKR	7,264.957	1235.043	0.976	7,090.598	1,205.402	Pakistan pure	2010/Oct/18			Training	Consumed	Asia
	Separatory funnel	250ML	PKR	2,650.000	450.500	0.960	2,544.000	432.480	AL-Barkat	2011/Feb/21			Pak-EPA	In use	Asia
	Separatory funnel	250ML	PKR	2,650.000	450.500	0.960	2,544.000	432.480	AL-Barkat	2011/Feb/21			Pak-EPA	In use	Asia
	Separatory funnel	250ML	PKR	2,650.000	450.500	0.960	2,544.000	432.480	AL-Barkat	2011/Feb/21			Pak-EPA	In use	Asia
	Separatory funnel	250ML	PKR	2,650.000	450.500	0.960	2,544.000	432.480	AL-Barkat	2011/Feb/21			Pak-EPA	In use	Asia
	Separatory funnel	250ML	PKR	2,650.000	450.500	0.960	2,544.000	432.480	AL-Barkat	2011/Feb/21			Pak-EPA	In use	Asia
	Separatory funnel	500ML	PKR	3,650.000	620.500	0.960	3,504.000	595.680	AL-Barkat	2011/Feb/21			Pak-EPA	In use	Asia
	Separatory funnel	500ML	PKR	3,650.000	620.500	0.960	3,504.000	595.680	AL-Barkat	2011/Feb/21			Pak-EPA	In use	Asia
	Separatory funnel	500ML	PKR	3,650.000	620.500	0.960	3,504.000	595.680	AL-Barkat	2011/Feb/21			Pak-EPA	In use	Asia
	Separatory funnel	1000ML	PKR	4,850.000	824.500	0.960	4,656.000	791.520	AL-Barkat	2011/Feb/21			Pak-EPA	In use	Asia
	Separatory funnel	1000ML	PKR	4,850.000	824.500	0.960	4,656.000	791.520	AL-Barkat	2011/Feb/21			Pak-EPA	In use	Asia
	Standard gas(acethylene)		PKR	21,060.000	3580.200	0.960	20,217.600	3,436.992	Pakistan pure	2011/Feb/09			Pak-EPA	Consumed	Asia
	Standard gas(N2)		PKR	8,775.000	1491.750	0.960	8,424.000	1,432.080	Pakistan pure	2011/Feb/11			Pak-EPA	Consumed	Asia
	Standard gasdelivery		PKR	500.000	85.000	0.960	480.000	81.600	Pakistan pure	2011/Feb/11			Pak-EPA	Consumed	Asia
	Progard-2 Pretreatment Pack long	for Millipore water purification system ELIX 5	PKR	31,890.000	5421.300	0.960	30,614.400	5,204.448	Scientific corp	2011/Feb/26			Pak-EPA	In use	Asia
	Vent Filter for PE Reservoir	For 60-Liter Tank (Cat # TANKMPK01)	PKR	16,300.000	2771.000	0.960	15,648.000	2,660.160	Scientific corp	2011/Feb/26			Pak-EPA	In use	Asia
	Sanitization Chlorine Tablets	45/pk)	PKR	7,890.000	1341.300	0.960	7,574.400	1,287.648	Scientific corp	2011/Feb/26			Pak-EPA	In use	Asia
	SimFilter (Final Filter)		PKR	26,000.000	4420.000	0.960	24,960.000	4,243.200	Scientific corp	2011/Feb/26			Pak-EPA	In use	Asia
	Simplipak 1-Kit		PKR	34,500.000	5865.000	0.960	33,120.000	5,630.400	Scientific corp	2011/Feb/26			Pak-EPA	In use	Asia
	Filter paper	GF3-047	PKR	5,382.000	914.940	0.961	5,172.102	879.257	AL-Barkat	2011/Mar/04			Pak-EPA	In use	Asia
	Filter paper	GF3-047	PKR	5,382.000	914.940	0.961	5,172.102	879.257	AL-Barkat	2011/Mar/04			Pak-EPA	In use	Asia
	Filter paper	GF3-047	PKR	5,382.000	914.940	0.961	5,172.102	879.257	AL-Barkat	2011/Mar/04			Pak-EPA	In use	Asia
	Filter paper	GF3-047	PKR	5,382.000	914.940	0.961	5,172.102	879.257	AL-Barkat	2011/Mar/04			Pak-EPA	In use	Asia
	Filter paper	GF3-047	PKR	5,382.000	914.940	0.961	5,172.102	879.257	AL-Barkat	2011/Mar/04			Pak-EPA	In use	Asia
	Filter paper	GF3-047	PKR	5,382.000	914.940	0.961	5,172.102	879.257	AL-Barkat	2011/Mar/04			Pak-EPA	In use	Asia
	Filter paper	GF3-047	PKR	5,382.000	914.940	0.961	5,172.102	879.257	AL-Barkat	2011/Mar/04			Pak-EPA	In use	Asia
	Filter paper	GF3-047	PKR	5,382.000	914.940	0.961	5,172.102	879.257	AL-Barkat	2011/Mar/04			Pak-EPA	In use	Asia
	Filter paper	GF3-047	PKR	5,382.000	914.940	0.961	5,172.102	879.257	AL-Barkat	2011/Mar/04			Pak-EPA	In use	Asia
	Filter paper	GF3-047	PKR	5,382.000	914.940	0.961	5,172.102	879.257	AL-Barkat	2011/Mar/04			Pak-EPA	In use	Asia
			PKR		0.000			0.000							
			PKR		0.000			0.000							
							3,525,734	¥276,728							

Must Input

Items	Spec/ItemNum	Currency	Purchesed Price (w/o tax)	Tax only 16% in Pakistan 5% in Japan	Exchange rate PkR-JP¥	Purchesed Price JP¥	Tax only JP¥	Client	Date_Purchase	Date_Acquired	Date_Checked	Storage Site	Status In use Out of order /Consumed	Area
SO2 9pppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Pak-EPA	In use	Asia
NO 19ppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Pak-EPA	In use	Asia
N2 99.9999%	Fill pressure11.8Mpa	JPY	26,000.000	1,300.000	1.000	26,000.000	1,300.000	Tomoe Shokai Co.,Ltd.				Pak-EPA	In use	Asia
SO2 90pppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Pak-EPA	In use	Asia
NO 400ppm+N2	Fill pressure14.7Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Pak-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Pak-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Pak-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Pak-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Pak-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Pak-EPA	In use	Asia
SO2 9pppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Punjab-EPA	In use	Asia
NO 19ppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Punjab-EPA	In use	Asia
N2 99.9999%	Fill pressure11.8Mpa	JPY	26,000.000	1,300.000	1.000	26,000.000	1,300.000	Tomoe Shokai Co.,Ltd.				Punjab-EPA	In use	Asia
SO2 90pppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Punjab-EPA	In use	Asia
NO 400ppm+N2	Fill pressure14.7Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Punjab-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Punjab-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Punjab-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Punjab-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Punjab-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Punjab-EPA	In use	Asia
SO2 9pppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Sindh-EPA	In use	Asia
NO 19ppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Sindh-EPA	In use	Asia
N2 99.9999%	Fill pressure11.8Mpa	JPY	26,000.000	1,300.000	1.000	26,000.000	1,300.000	Tomoe Shokai Co.,Ltd.				Sindh-EPA	In use	Asia
SO2 90pppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Sindh-EPA	In use	Asia
NO 400ppm+N2	Fill pressure14.7Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Sindh-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Sindh-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Sindh-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Sindh-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Sindh-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Sindh-EPA	In use	Asia
SO2 9pppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				KP-EPA	In use	Asia
NO 19ppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				KP-EPA	In use	Asia
N2 99.9999%	Fill pressure11.8Mpa	JPY	26,000.000	1,300.000	1.000	26,000.000	1,300.000	Tomoe Shokai Co.,Ltd.				KP-EPA	In use	Asia
SO2 90pppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				KP-EPA	In use	Asia
NO 400ppm+N2	Fill pressure14.7Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				KP-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				KP-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				KP-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				KP-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				KP-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				KP-EPA	In use	Asia
SO2 9pppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Balochistan-EPA	In use	Asia
NO 19ppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Balochistan-EPA	In use	Asia
N2 99.9999%	Fill pressure11.8Mpa	JPY	26,000.000	1,300.000	1.000	26,000.000	1,300.000	Tomoe Shokai Co.,Ltd.				Balochistan-EPA	In use	Asia
SO2 90pppm+N2	Fill pressure11.8Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Balochistan-EPA	In use	Asia
NO 400ppm+N2	Fill pressure14.7Mpa	JPY	28,000.000	1,400.000	1.000	28,000.000	1,400.000	Tomoe Shokai Co.,Ltd.				Balochistan-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Balochistan-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Balochistan-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Balochistan-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Balochistan-EPA	In use	Asia
Manganese vessel	3.4L、Valve JIS W22-14R	JPY	14,000.000	700.000	1.000	14,000.000	700.000	Tomoe Shokai Co.,Ltd.				Balochistan-EPA	In use	Asia
Document Preparation	Customs documents sets	JPY	10,000.000	500.000	1.000	10,000.000	500.000	Tomoe Shokai Co.,Ltd.					Consumed	Asia
Conveying fee	To Narita	JPY	35,000.000	1,750.000	1.000	35,000.000	1,750.000	Tomoe Shokai Co.,Ltd.					Consumed	Asia
Transport cost	From Narita to Pakistan	JPY	611,570.476	30,578.524	1.000	611,570.476	30,578.524	Nishi-Nippon Realroad					Consumed	Asia
						¥1,696,570	¥84,829							

Must Input

Items	Spec/ItemNum	Currency	Purchesed Price (w/o tax)	Tax only 16% in Pakistan 5% in Japan	Exchange rate PkR-JP¥	Purchesed Price JP¥	Tax only JP¥	Client	Date_Purchased	Date_Acquired	Date_Checked	Storage Site	Status In use Out of order /Consumed	Area
Air Conditooner	1.5 tons	PKR	30,341.880	5,158.120	1.045	31,707.265	5,390.235	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Stabilizer	7000Watt	PKR	7,692.308	1,307.692	1.045	8,038.462	1,366.538	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Installation charge		PKR	1,709.402	290.598	1.045	1,786.325	303.675	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Air Conditooner	1.5 tons	PKR	30,341.880	5,158.120	1.045	31,707.265	5,390.235	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Stabilizer	7000Watt	PKR	7,692.308	1,307.692	1.045	8,038.462	1,366.538	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Installation charge		PKR	1,709.402	290.598	1.045	1,786.325	303.675	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Air Conditooner	1.5 tons	PKR	30,341.880	5,158.120	1.045	31,707.265	5,390.235	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Stabilizer	7000Watt	PKR	7,692.308	1,307.692	1.045	8,038.462	1,366.538	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Installation charge		PKR	1,709.402	290.598	1.045	1,786.325	303.675	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Air Conditooner	1.5 tons	PKR	30,341.880	5,158.120	1.045	31,707.265	5,390.235	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Stabilizer	7000Watt	PKR	7,692.308	1,307.692	1.045	8,038.462	1,366.538	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Installation charge		PKR	1,709.402	290.598	1.045	1,786.325	303.675	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Air Conditooner	1.5 tons	PKR	30,341.880	5,158.120	1.045	31,707.265	5,390.235	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Stabilizer	7000Watt	PKR	7,692.308	1,307.692	1.045	8,038.462	1,366.538	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Installation charge		PKR	1,709.402	290.598	1.045	1,786.325	303.675	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Air Conditooner	1.5 tons	PKR	30,341.880	5,158.120	1.045	31,707.265	5,390.235	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Stabilizer	7000Watt	PKR	7,692.308	1,307.692	1.045	8,038.462	1,366.538	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Installation charge		PKR	1,709.402	290.598	1.045	1,786.325	303.675	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Air Conditooner	1.5 tons	PKR	30,341.880	5,158.120	1.045	31,707.265	5,390.235	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Stabilizer	7000Watt	PKR	7,692.308	1,307.692	1.045	8,038.462	1,366.538	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Installation charge		PKR	1,709.402	290.598	1.045	1,786.325	303.675	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Air Conditooner	1.5 tons	PKR	30,341.880	5,158.120	1.045	31,707.265	5,390.235	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Stabilizer	7000Watt	PKR	7,692.308	1,307.692	1.045	8,038.462	1,366.538	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Installation charge		PKR	1,709.402	290.598	1.045	1,786.325	303.675	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Air Conditooner	1.5 tons	PKR	30,341.880	5,158.120	1.045	31,707.265	5,390.235	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Stabilizer	7000Watt	PKR	7,692.308	1,307.692	1.045	8,038.462	1,366.538	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Installation charge		PKR	1,709.402	290.598	1.045	1,786.325	303.675	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Air Conditooner	1.5 tons	PKR	30,341.880	5,158.120	1.045	31,707.265	5,390.235	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Stabilizer	7000Watt	PKR	7,692.308	1,307.692	1.045	8,038.462	1,366.538	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
Installation charge		PKR	1,709.402	290.598	1.045	1,786.325	303.675	RANA SHABHAZ Cooling Center	2010/Jul/22			Sindh-EPA	In use	Asia
			397,435.897	67,564		¥415,321	¥70,604							

Msut Input

Third Year

Category	Item	Spec/ItemNum	Currency	Purchased Price (w/o tax)	Tax only 15% in Pakistan	Exchange rate PKR-JPY	Price(w/otax) JPY	Tax only JPY	Client	Date_Purchase	Date_Acquired	Date_Checked	Storage Site	Condition	Area
Cost for Equipment(Spare Parts)Lot2 Air Station															
Cost for Equipment(Spare Parts)Lot3Air Equipment															Asia
Cost for Equipment(Spare Parts)Lot4 Water															Asia
	Reaction container seal for Perkin Elmer MultiWave3000	2724 Seal for Pressure Vessel M+H+XF	JPY	14,250.000	712.500	1.000	14,250.000	712.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Reaction container seal for Perkin Elmer MultiWave3000	2724 Seal for Pressure Vessel M+H+XF	JPY	14,250.000	712.500	1.000	14,250.000	712.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Reaction container seal for Perkin Elmer MultiWave3000	2724 Seal for Pressure Vessel M+H+XF	JPY	14,250.000	712.500	1.000	14,250.000	712.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Reaction container seal for Perkin Elmer MultiWave3000	2724 Seal for Pressure Vessel M+H+XF	JPY	14,250.000	712.500	1.000	14,250.000	712.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Reaction container seal for Perkin Elmer MultiWave3000	2724 Seal for Pressure Vessel M+H+XF	JPY	14,250.000	712.500	1.000	14,250.000	712.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Reaction container seal for Perkin Elmer MultiWave3000	2724 Seal for Pressure Vessel M+H+XF	JPY	14,250.000	712.500	1.000	14,250.000	712.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Reaction container seal for Perkin Elmer MultiWave3000	2724 Seal for Pressure Vessel M+H+XF	JPY	14,250.000	712.500	1.000	14,250.000	712.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Punjab-EPA	In use	
	Reaction container seal for Perkin Elmer MultiWave3000	2724 Seal for Pressure Vessel M+H+XF	JPY	14,250.000	712.500	1.000	14,250.000	712.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Punjab-EPA	In use	
	Safety Disk for Perkin Elmer MultiWave3000	2720 Safty Disk M&H	JPY	2,470.000	123.500	1.000	2,470.000	123.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Safety Disk for Perkin Elmer MultiWave3000	2720 Safty Disk M&H	JPY	2,470.000	123.500	1.000	2,470.000	123.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Safety Disk for Perkin Elmer MultiWave3000	2720 Safty Disk M&H	JPY	2,470.000	123.500	1.000	2,470.000	123.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Safety Disk for Perkin Elmer MultiWave3000	2720 Safty Disk M&H	JPY	2,470.000	123.500	1.000	2,470.000	123.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Safety Disk for Perkin Elmer MultiWave3000	2720 Safty Disk M&H	JPY	2,470.000	123.500	1.000	2,470.000	123.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Safety Disk for Perkin Elmer MultiWave3000	2720 Safty Disk M&H	JPY	2,470.000	123.500	1.000	2,470.000	123.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Safety Disk for Perkin Elmer MultiWave3000	2720 Safty Disk M&H	JPY	2,470.000	123.500	1.000	2,470.000	123.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Punjab-EPA	In use	
	Safety Disk for Perkin Elmer MultiWave3000	2720 Safty Disk M&H	JPY	2,470.000	123.500	1.000	2,470.000	123.500	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Punjab-EPA	In use	
	Safety Disk Hoder for Perkin Elmer MultiWave3000	2723 Safty Disk holder M&H	JPY	9,020.000	451.000	1.000	9,020.000	451.000	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Safety Disk Hoder for Perkin Elmer MultiWave3000	2723 Safty Disk holder M&H	JPY	9,020.000	451.000	1.000	9,020.000	451.000	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Safety Disk Hoder for Perkin Elmer MultiWave3000	2723 Safty Disk holder M&H	JPY	9,020.000	451.000	1.000	9,020.000	451.000	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Safety Disk Hoder for Perkin Elmer MultiWave3000	2723 Safty Disk holder M&H	JPY	9,020.000	451.000	1.000	9,020.000	451.000	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Safety Disk Hoder for Perkin Elmer MultiWave3000	2723 Safty Disk holder M&H	JPY	9,020.000	451.000	1.000	9,020.000	451.000	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Safety Disk Hoder for Perkin Elmer MultiWave3000	2723 Safty Disk holder M&H	JPY	9,020.000	451.000	1.000	9,020.000	451.000	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Pak-EPA	In use	
	Safety Disk Hoder for Perkin Elmer MultiWave3000	2723 Safty Disk holder M&H	JPY	9,020.000	451.000	1.000	9,020.000	451.000	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Punjab-EPA	In use	
	Safety Disk Hoder for Perkin Elmer MultiWave3000	2723 Safty Disk holder M&H	JPY	9,020.000	451.000	1.000	9,020.000	451.000	Ito Lab. Equipment Ltd		2011/Oct/06	2011/Oct/06	Punjab-EPA	In use	
			JPY		0.000	1.000		0.000							
			JPY		0.000	1.000		0.000							
			JPY		0.000	1.000		0.000							
			JPY		0.000	1.000		0.000							
Labor(Lot2) Air Station															
Labor(Lot4) Water															
							¥205,920	¥10,296							

Must Input

カテゴリー	Item	Spec/ItemNum	Currency	Purchased Price (w/o tax)	Tax only 16% in Pakistan	Exchange rate PKR-JPY	Price(w/otax) JPY	Tax only JPY	Client	Date_Purchase	Date_Acquired	Date_Checked	Storage Site	Condition	Area
Consumables(Lot2) Air Station															Asia
						1.000									
						1.000									
						1.000									
Consumables(Lot2) Air Standard gas						1.000									Asia
						1.000									
						1.000									
						1.000									
Consumables(Lot3) Air equipment						1.000									Asia
	Komagome pipette	Glass pippet 1mL	JPY	200.000	10.000	1.000	200.000	10.000	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Komagome pipette	Glass pippet 1mL	JPY	200.000	10.000	1.000	200.000	10.000	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Komagome pipette	Glass pippet 1mL	JPY	200.000	10.000	1.000	200.000	10.000	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Komagome pipette	Glass pippet 3mL	JPY	270.000	13.500	1.000	270.000	13.500	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Komagome pipette	Glass pippet 3mL	JPY	270.000	13.500	1.000	270.000	13.500	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Komagome pipette	Glass pippet 3mL	JPY	270.000	13.500	1.000	270.000	13.500	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Komagome pipette	Glass pippet 5mL	JPY	370.000	18.500	1.000	370.000	18.500	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Komagome pipette	Glass pippet 5mL	JPY	370.000	18.500	1.000	370.000	18.500	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Komagome pipette	Glass pippet 5mL	JPY	370.000	18.500	1.000	370.000	18.500	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Slicon dropper	1mL	JPY	40.000	2.000	1.000	40.000	2.000	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Slicon dropper	1mL	JPY	40.000	2.000	1.000	40.000	2.000	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Slicon dropper	1mL	JPY	40.000	2.000	1.000	40.000	2.000	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Slicon dropper	3mL	JPY	90.000	4.500	1.000	90.000	4.500	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Slicon dropper	3mL	JPY	90.000	4.500	1.000	90.000	4.500	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Slicon dropper	3mL	JPY	90.000	4.500	1.000	90.000	4.500	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Slicon dropper	5mL	JPY	130.000	6.500	1.000	130.000	6.500	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Slicon dropper	5mL	JPY	130.000	6.500	1.000	130.000	6.500	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Slicon dropper	5mL	JPY	130.000	6.500	1.000	130.000	6.500	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Poly Komagome pipette	LDPE, 1Pakage(10pc)	JPY	310.000	15.500	1.000	310.000	15.500	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Pippe		JPY	1,000.000	50.000	1.000	1,000.000	50.000	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Pippe		JPY	1,000.000	50.000	1.000	1,000.000	50.000	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Plastic pincette	1Pakage(11pc)	JPY	1,000.000	50.000	1.000	1,000.000	50.000	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	L-cysteine	25g	JPY	2,700.000	135.000	1.000	2,700.000	135.000	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Tin chloride	500g	JPY	5,000.000	250.000	1.000	5,000.000	250.000	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
	Sodium borohydride	100g	JPY	7,050.000	352.500	1.000	7,050.000	352.500	Ito Lab. Equipment Ltd		2011/Aug/26	2011/Aug/26	Pak-EPA	In use	Asia
			JPY		0.000	1.000		0.000							
						1.000									
Consumables(Lot4) Water						1.000									
	Luer lock syringe adopter 1/4-28	24305	JPY	3,500.000	175.000	1.000	3,500.000	175.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Luer lock syringe adopter 1/4-28	24305	JPY	3,500.000	175.000	1.000	3,500.000	175.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Luer lock syringe adopter 10-32	46888	JPY	300.000	15.000	1.000	300.000	15.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Luer lock syringe adopter 10-32	46888	JPY	300.000	15.000	1.000	300.000	15.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Union (different)	42806	JPY	1,400.000	70.000	1.000	1,400.000	70.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Union (different)	42806	JPY	1,400.000	70.000	1.000	1,400.000	70.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	PEEK Tube (Oringe)	42855	JPY	2,400.000	120.000	1.000	2,400.000	120.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Ferrules	43276	JPY	300.000	15.000	1.000	300.000	15.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Ferrules	43276	JPY	300.000	15.000	1.000	300.000	15.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Ferrules	43276	JPY	300.000	15.000	1.000	300.000	15.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Ferrules	43276	JPY	300.000	15.000	1.000	300.000	15.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Ferrules	43276	JPY	300.000	15.000	1.000	300.000	15.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Ferrules Splitter	62978	JPY	300.000	15.000	1.000	300.000	15.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Ferrules Splitter	62978	JPY	300.000	15.000	1.000	300.000	15.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Ferrules Splitter	62978	JPY	300.000	15.000	1.000	300.000	15.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Ferrules Splitter	62978	JPY	300.000	15.000	1.000	300.000	15.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Ferrules Splitter	62978	JPY	300.000	15.000	1.000	300.000	15.000	Diotech Tokyo		2011/Nov/08	2011/Nov/08	Pak-EPA	In use	Asia
	Standard gas(acethylene)		PKR	19,140.000		0.888	16,996.320	0.000	Pakistan Pure Gas	2011/Sep/15	2011/Sep/15	2011/Sep/15	2011/Sep/15	In use	Asia
	Standard gas Tranportaion		PKR	560.000		0.888	497.280	0.000	Pakistan Pure Gas	2011/Sep/15	2011/Sep/15	2011/Sep/15	2011/Sep/15	In use	Asia
	Standard gas (Nitrogen)		PKR	8,700.000		0.888	7,725.600	0.000	Pakistan Pure Gas	2011/Sep/16	2011/Sep/16	2011/Sep/16	2011/Sep/16	In use	Asia
	Standard gas Tranportaion		PKR	500.000		0.888	444.000	0.000	Pakistan Pure Gas	2011/Sep/16	2011/Sep/16	2011/Sep/16	2011/Sep/16	In use	Asia
							62,823	¥1,858							

Must Input

Items	Spec/ItemNum	Currency	Price(w/otax) JP¥	Tax only JP¥	Client	Date_Purchased	Date_Acquired	Date_Checked	Storage Site	Status In use Out of order /Consumed	Area
Carrying equipment Transportation	UPS	JPY	180,400.000			2011/Sep/02	2011/Sep/02	2011/Sep/02			
			¥180,400	¥0							

Must Input

Items	Spec/ItemNum	Currency	Purchesed Price (w/o tax)	Tax only	Exchange rate	Purchesed Price	Tax only	Client	Date_Purchased	Date_Acquired	Date_Checked	Storage Site	Status	Area
				16% in Pakistan 5% in Japan	PkR-JPY	JPY	JPY						In use Out of order /Consumed	
Ammonium amidosulfate	highest quality 25g	JPY	1,125.000	56.250	1.000	1,125.000	56.250	Ito Lab. Equipment Ltd			2011/Aug/08	Pak-EPA	In use	
Ammonium amidosulfate	highest quality 25g	JPY	1,125.000	56.250	1.000	1,125.000	56.250	Ito Lab. Equipment Ltd			2011/Aug/08	Pak-EPA	In use	
Chloramine T Trihydrate	highest quality 25g	JPY	975.000	48.750	1.000	975.000	48.750	Ito Lab. Equipment Ltd			2011/Aug/08	Pak-EPA	In use	
Chloramine T Trihydrate	highest quality 25g	JPY	975.000	48.750	1.000	975.000	48.750	Ito Lab. Equipment Ltd			2011/Aug/08	Pak-EPA	In use	
3-Methyl-1-phenyl-5-pyrazolone	highest quality 25g	JPY	2,175.000	108.750	1.000	2,175.000	108.750	Ito Lab. Equipment Ltd			2011/Aug/08	Pak-EPA	In use	
4-dicarboxylic acid	highest quality 25g	JPY	1,800.000	90.000	1.000	1,800.000	90.000	Ito Lab. Equipment Ltd			2011/Aug/08	Pak-EPA	In use	
ACID RED 265	For residual chlorine 5g	JPY	2,250.000	112.500	1.000	2,250.000	112.500	Ito Lab. Equipment Ltd			2011/Aug/08	Pak-EPA	In use	
ACID RED 265	For residual chlorine 5g	JPY	2,250.000	112.500	1.000	2,250.000	112.500	Ito Lab. Equipment Ltd			2011/Aug/08	Pak-EPA	In use	
ACID RED 265	For residual chlorine 5g	JPY	2,250.000	112.500	1.000	2,250.000	112.500	Ito Lab. Equipment Ltd			2011/Aug/08	Pak-EPA	In use	
						¥14,925	¥746							

Must Input

Appendix-3

MINUTES OF MEETING

ON

THE FIRST JOINT COORDINATING COMMITTEE

FOR

TECHNICAL COOPERATION FOR ESTABLISHMENT

OF ENVIRONMENTAL MONOTORING SYSTEM

IN THE ISLAMIC REPUBLIC OF PAKISTAN

Islamabad, April 8, 2009

Mr. Daisaku Kiyota
Team Leader
JICA Expert Team

Mr. Asif Shuja Khan
Director General
Pak-EPA
Islamic Republic of Pakistan

Dr. Bashir Khan
Director General
NWFP-EPA
Islamic Republic of Pakistan

Dr. Shagufta Shahjehan
Director General
Punjab-EPA
Islamic Republic of Pakistan

Engr. Ghulam Rasool Jamali
Director General
Balochistan-EPA
Islamic Republic of Pakistan

Mr. Shakeel A. Hashmi
Director General
Sindh-EPA
Islamic Republic of Pakistan

(Witness)

Mr. Kazuya Suzuki
Team Leader of Advisory Team
Director, Global Environment Department
JICA

This is the minutes of meeting of the first Joint Coordinating Committee (hereafter referred to as "JCC") for the "Technical Cooperation for Establishment of Environmental Monitoring System" (hereafter referred to as "the Project") agreed between the Government of Islamic Republic of Pakistan and the Government of Japan in November 2008. The main objective of the JCC was to explain the Inception Report (hereinafter referred to as "Ic/R"). For this occasion, Japan International Cooperation Agency (hereinafter referred to as "JICA") has dispatched the JICA Expert Team (hereinafter referred to as "JET") and the Advisory Team. The following is the agreement and discussion during the JCC.

(1) Acceptance of the Inception Report

JET submitted and explained to JCC about Ic/R, which describes the general framework of the Project, which was discussed between the counterpart of the Project and JET. JCC accepted and agreed on the contents of the Ic/R. In case some comments or modification are found, Ic/R will be revised. However, if comments or modification is not informed by April 14, 2009, Ic/R, submitted on April 8, 2009, will be considered as the final version of the Ic/R. The counterpart of the Project and JET will cooperate each other to conduct the activities that are mentioned in the Ic/R.

(2) Expense of Project Activities

JCC agreed that the expense of the project activities is responsible as follows:

Pakistani side: Consumable materials such as chemicals, spare parts of in-use equipment and miscellaneous, and expenses of trainees including accommodations.

Japanese side: Expense for initial repairing including necessary parts for equipment procured under Japanese grant aid project terminated in March 2007. The decision will be made after JET assesses the equipment by visiting the laboratory, and the necessity of the equipment is confirmed among Pak-EPA, respective EPAs, and JICA.

(3) Confirmation of Plan of Operation and budget estimate

Plan of Operation (hereafter referred to as "PO") was explained to JCC. In order to schedule the training, JET was requested to prepare PO indicating specific date of the activities. JET agreed to submit the PO by April 15, 2009. The budget estimate for arrangement of activities under the PO by Pakistani side will be informed to each EPA by April 15, 2009. After this, EPAs will undertake necessary procedure for timely securing funds required for continuity of activities under this technical cooperation after completion of EMS project (PC-1) i.e. 30 June

2010.

(4) Comment from each EPA

NWFP and Balochistan-EPAs requested JET to visit Peshawar and Quetta to assess equipments and conduct training. JET answered that JET is not able to visit Peshawar and Quetta. However, C/P of NWFP and Balochistan-EPA can participate the training in Islamabad, Lahore or Karachi. Pak-EPA answered that for assessment of equipment local experts will be hired by Pakistani side, if needed.

Punjab-EPA asked about duration of training, and a number of participants to be trained from each EPA. JET answered that duration of the training will be one - two weeks. The number of participants is considered as one to three persons in each area of training from each EPA including EMS project staffs and EPAs regular staffs.

Pak-EPA requested staffs from AJK-EPA, FATA and Northern Area-EPA to participate the training as observers by Pakistani expenses. JET answered that it is possible to consider their participation if Pak-EPA informs to JET before commencement of the activities.

(5) Others

List of attendance of JCC, list of counterparts, Member list of Project Steering Committee and Member list of JCC have been discussed and agreed JCC. Those lists are presented on Attachment I, II, III, and IV, respectively.

Attachment I

List of Attendance

Pakistan side

Mr. Asif Shuja Khan, Director General, Pak-EPA

Dr. Muhammad Bashir, Director General, NWFP

Dr. Shagufta Shahjahan, Director General, Punjab-EPA

Mr. Zia-ul-Islam, Director, Pak-EPA

Mr. Zulfiqar Ali, Senior Chemist, Pak-EPA

Mr. Amir Farooq, Deputy Director (Lab), Punjab-EPA

S.M.Yahya, Deputy Director, Sindh-EPA

Mr. Muhammad Khan, Assistant Director, Balochistan-EPA

Japan side

Mr. Daisaku Kiyota, Team Leader, JICA Expert Team

Dr. Nobuyuki Sato, JICA Expert Team

Mr. Takashi Onuma, JICA Expert Team

Mr. Kenichi Kuramoto, JICA Expert Team

Mr. Toshiharu Ochi, JICA Expert Team

Dr. Mitsuru Fujimura, JICA Expert Team

Mr. Kazuya Suzuki, Director, Global Environment Department, JICA

Mr. Tomoyuki Uda, Assistant Director, Global Environment Department, JICA

Mr. Shinsaku Fukawaza, JICA Pakistan Office

Mr. Shigeki Nakanishi, Second Secretary, Embassy of Japan

Attachment II

List of Counterparts

No	Project position	Position in EPA	EPA
1	National Project Director	Director General	Pak-EPA
2	Provincial Project Director	Director General	Punjab-EPA
3	Provincial Project Director	Director General	Sindh-EPA
4	Provincial Project Director	Director General	NWFP-EPA
5	Provincial Project Director	Director General	Balochistan-EPA
6	Project Manager	Director	Pak-EPA
7	Chief C/P for environmental monitoring plan in Punjab-EPA	Deputy Director (Lab.)	Punjab-EPA
8	Chief C/P for environmental monitoring plan in Sindh-EPA	Director (Lab.)	Sindh-EPA
9	Chief C/P for environmental monitoring plan in NWFP-EPA	Director	NWFP-EPA
10	Chief C/P for environmental monitoring plan in Balochistan-EPA	Deputy Director (Lab.)	Balochistan-EPA
11	Chief C/P for water monitoring in Pak-EPA	Chemist (Water)	Pak-EPA
12	Chief C/P for air monitoring in Pak-EPA	Chemist (Air)	Pak-EPA
13	Chief C/P for water monitoring in Punjab-EPA	Research Officer	Punjab-EPA
14	Chief C/P for air monitoring in Punjab-EPA	Research Officer	Punjab-EPA
15	Chief C/P for water monitoring in Sindh-EPA	Deputy Director (Lab)	Sindh-EPA
16	Chief C/P for air monitoring in Sindh-EPA	Deputy Director (Lab)	Sindh-EPA
17	Chief C/P for water monitoring in NWFP-EPA	Chief Analyst	NWFP-EPA

18	Chief C/P for air monitoring in NWFP-EPA	Senior Analyst	NWFP-EPA
19	Chief C/P for water monitoring in Balochistan-EPA	Assistant Director (Technical/Lab.)	Balochistan-EPA
20	Chief C/P for air monitoring in Balochistan-EPA	Assistant Director (Technical/Lab.)	Balochistan-EPA

Attachment III

List of Project Steering Committee

Chairperson

Secretary, Ministry of Environment

Committee Members

Director General, Pak-EPA (Secretary)

Director General, NWFP-EPA

Director General, Punjab-EPA

Director General, Balochistan-EPA

Director General, Sindh-EPA

Representative, Economic Affair Division, Ministry of Economic Affair and Statistics

Representative, Planning and Development Division, Ministry of Economic Affair and Statistics

Note: Representatives from other related organizations may be invited with permission of the chairperson.

Observer

Representative, JICA Pakistan Office

Attachment IV

List of Joint Coordinating Committee

Chairperson

Director General, Pak-EPA

Committee Members

1) Pakistani side

Director General, NWFP-EPA

Director General, Punjab-EPA

Director General, Balochistan-EPA

Director General, Sindh-EPA

Director, Pak-EPA

Note: Representatives from other related organizations may be invited with permission of the chairperson.

2) Japan side

JICA Expert Team

Representative, JICA Pakistan Office

Observer

Representative, Embassy of Japan in Pakistan

MINUTES OF MEETING
ON
THE SECOND JOINT COORDINATING COMMITTEE
FOR
TECHNICAL COOPERATION FOR ESTABLISHMENT
OF ENVIRONMENTAL MONITORING SYSTEM
IN THE ISLAMIC REPUBLIC OF PAKISTAN

Islamabad, February 17, 2010

Mr. Daisaku Kiyota
Team Leader
JICA Expert Team

Mr. Asif Shuja Khan
Director General
Pak-EPA
Islamic Republic of Pakistan

Dr. Muhammad Bashir Khan
Director General
NWFP-EPA
Islamic Republic of Pakistan

Dr. Shagufta Shahjahan
Director General
Punjab-EPA
Islamic Republic of Pakistan

Mr. Muhammad Ibrahim Sumalani
Director General
Balochistan-EPA
Islamic Republic of Pakistan

Mr. Naeem Ahmed Mughal
Director General
Sindh-EPA
Islamic Republic of Pakistan

(Witness)

Mr. Tomohiro Kozono
Representative
JICA Pakistan Office

This is the minutes of meeting of the second Joint Coordinating Committee (hereafter referred to as "JCC") for the "Technical Cooperation for Establishment of Environmental Monitoring System" (hereafter referred to as "the Project") agreed between the Government of Islamic Republic of Pakistan and the Government of Japan in November 2008. The main objective of the JCC was to explain the Progress Report (2). Mr. Asif S. Khan, Director General, Pak-EPA chaired the meeting. First of all, he conveyed his thanks to JICA Expert Team (JET) for activities under TCP-EMS and emphasized on the significance sustainability of EMS for Pakistan. The following is the agreement and discussion during the JCC.

(1) Acceptance of the Progress Report (2)

JET submitted and explained to JCC about Progress Report (2), which describes all the activities undertaken by JET related to training and repair of equipment during first year. JCC will submit views and comments on Progress Report (2) within one week. In case some comments or modification are found, Progress Report (2) will be revised. However, if comments or modification is not informed by February 24, 2010, Progress Report (2), submitted on February 17, 2010 will be considered as the final version of the Progress Report (2).

(2) Comments from each EPA

Sindh-EPA conveyed about the progress made regarding monitoring activities in the province. It was informed that there is improvement in ability of concerned staff of Sindh-EPA due to capacity building trainings conducted by JET. It was informed that Sindh-EPA has already prepared monitoring plan for ambient water and monitoring plan for ambient air has been prepared and will be sent shortly. It was conveyed that a Sindh-EPA had a meeting with Finance Department for budget allocation. It was informed that Sindh-EPA wants to retain EMS staff and a summary for regularization of EMS staff will be initiated on the basis of PC-I. He assured that Sindh-EPA is taking steps for self-sustainability and there will be no issue regarding implementation of EMS.

NWFP EPA conveyed that the regularization of EMS staff by the Provincial government is not possible if it is appointed by the Federal Government. It was also conveyed that NWFP-EPA is also running a Provincial EMS project as well. Director General, NWFP-EPA conveyed that NWFP-EPA does not need any more staff in EMS project as the existing staff is enough to undertake the monitoring activities.

Balochistan-EPA conveyed that all the equipment donated under grant aid EMS project is being

utilized for monitoring activities. It was informed that no EMS staff was provided to Balochistan-EPA so there is no issue of regularization. Request was made for visit to Balochistan-EPA, to which JICA Pakistan agreed to plan visit during 19th – 30th February, 2010.

Punjab-EPA informed that about the activities being done utilizing the EMS equipment. It was conveyed that a request for an additional amount of Rs. 10 Million has been forwarded to the Provincial Government for operation and maintenance of the equipment. It was also informed that Punjab-EPA is concerned about EMS staff and plans to retain it either through creating new positions or by appointing them in other projects.

Pak-EPA conveyed that it has already started the process for extension of EMS project. PC-I for extension of the project will be prepared within a month.

(2) Confirmation of Annual Work Plan

It was decided with consensus that a format of annual work plan will be prepared by Pak-EPA in consultation with JICA Expert Team (JET) by 28th February, 2010 and same will be forwarded to Provincial EPAs to prepare the annual work plan. Annual Work Plan will be submitted by all the EPAs to JET by 15th March, 2010.

(5) Others

List of attendance of JCC, list of counterparts, Member list of Project Steering Committee and Member list of JCC have been discussed and agreed JCC. Those lists are presented on Attachment I, II, III, and IV, respectively.

MINUTES OF MEETING
OF
THIRD JOINT COORDINATING COMMITTEE
UNDER
TECHNICAL COOPERATION FOR ESTABLISHMENT
OF ENVIRONMENTAL MONITORING SYSTEM
IN THE ISLAMIC REPUBLIC OF PAKISTAN

Islamabad, July 2, 2010

Mr. Daisaku Kiyota
Team Leader
JICA Expert Team
Government of Japan

Mr. Asif Shuja Khan
Director General
Pak-EPA
Islamic Republic of Pakistan

Dr. Muhammad Bashir Khan
Director General
KPP-EPA
Islamic Republic of Pakistan

for. Dr. Shagufta Shahjehan
Director General
Punjab-EPA
Islamic Republic of Pakistan

Mr. Muhammad Ibrahim Sumalani
Director General
Balochistan-EPA
Islamic Republic of Pakistan

Mr. Naeem Ahmed Mughal
Director General
Sindh-EPA
Islamic Republic of Pakistan

(Witness)

Mr. Kazuya Suzuki
Director,
Environmental Management Division 1,
Global Environment Department
JICA

This is the minutes of meeting of the third Joint Coordinating Committee (hereafter referred to as "JCC") for the "Technical Cooperation for Establishment of Environmental Monitoring System" (hereafter referred to as "the Project") agreed between the Government of Islamic Republic of Pakistan and the Government of Japan in November, 2008. The main objective of the JCC was to explain the result of Mid-term Review of the Project. Mr. Asif S. Khan, Director General, Pak-EPA chaired the meeting. First of all, he conveyed his thanks to all the stakeholders to attend the meeting. The following is the agreement and discussion during the JCC.

He requested Mr. Suzuki to give brief explanation. Mr. Uda explained results of Mid-Term Review then each member was provided with copy of the report.

(1) Mid-term Review Report

The Joint Mid-term Review Team presented the results of the Mid-term Review (attached as Appendix 1) to the JCC members. The JCC members approved its contents in principle. The JCC members will make comments related with facts by 9th of July, 2010.

(2) Revision of Project Design Matrix (PDM)

The JCC members understood the necessity for modification of the PDM (ver. 0) and approved as proposed by the Joint Mid-term Review Team as PDM (ver. 1) shown as Annex 2.1 of Appendix 1. Mr. Kiyota explained the reason of revision of PDM, and the reasons for revision of PDM will be evaluated within the given period of 14th July, 2010.

(3) Extension of PC-1 Period

Mr. Asif S. Khan, Director General, Pak-EPA informed the forum that MoE has principally approved the extension of EMS Project till December, 2011. As we have got the approval of EMS Project, so there will be no problem feared to be caused by the 18th Amendment in the constitution.

(4) Insufficient Manpower and its Arrangement

Director General, Pak-EPA said that the recruitment process could not be completed earlier as Provincial EPAs wanted to appoint EMS staff by themselves instead of Ministry of Environment.

Mr. Asad Ullah Faiz, Director, Pak-EPA conveyed that earlier, the Ministry of Environment had centralized the recruitment process and quota determined by the Federal Government causing

delay the recruitment process. He informed that Pak-EPA has obtained the sanction for recruitment according to the location of posting by respective EPA.

(5) Maintenance Work of the Equipment

Director General, Pak-EPA said that sustainability of EMS is very challenging for GoP and in this regard, consultation with the World Bank is in process for operation and maintenance of air monitoring stations under a technical assistance loan.

Mr. Farooq Alam, Research Officer (Air), Punjab-EPA, said that some issues need to be settled, among which, the most important issue is operation and maintenance of equipment.

(6) Parameters on Monitoring

Issues on revision of NEQS parameter were pointed out by Mr. Kiyota, leader of JET. Pesticide and Total Toxic Metal, do not mention the specified chemical substance so they are unclear as a Parameter. The arrangement and discussion shall be made for selecting the items for treating in the Project later between the JET and Pakistani Side.

(7) Training concerned

Director General, Pak-EPA said that the training component is going very well and it is following up from the very basic activities to the higher level which is quite effective and very satisfactory for all the EPAs.

Some members suggested improvement in communication.

(8) Other comments from each EPA

Director General, Pak-EPA said that EMS project was initiated with the collaboration of Government of Japan. It was first JICA's project in the field of Environment to be executed in Pakistan. Facilities provided by the GoJ are exemplary and EPAs really needed such type of assistance in order to enhance their capacity. He highlighted some issues related to Grant aid EMS project and conveyed that some of the equipment was handed over to EPAs at the end of financial year and commissioning could not be conducted for some of the equipment. He further said that due to some technical problems, all air monitoring stations did not operate simultaneously. He informed that NEQS for ambient air and Pakistan Clean Air Programme (PCAP) developed on the basis of air monitoring data have been approved by Pakistan Environmental Protection Council (PEPC). He requested to provide some more technical input from JICA including elemental analysis of particulate matter in order to identify the pollution sources. Furthermore, he requested support from JET in preparation of inventory for ambient

and industrial air pollution. He also highlighted the issue of transboundary effects of air pollution in Pakistan which need to be catered.

He showed his concern on dissemination of air quality monitoring data. He informed the forum that Pak-EPA has started to report data through its website and to various news channels. He highlighted the significance of functioning of all the monitoring stations simultaneously. It was also conveyed that Pak-EPA is in process of installing display boards at five locations of Islamabad as already done by Punjab-EPA in order to raise mass awareness about environmental issues.

He said that in revised PDM, various outputs, activities and Plan of Operation are clearly mentioned and all the EPAs should work for implementation of PDM.

Mr. Asad Ullah Faiz, Director, Pak-EPA said that he was involved in the Mid-Term Review process and all the issues were discussed with the Federal and Provincial EPAs. He said that the point of concern raised by JICA in Evaluation Report is delay in recruitment process which was due to bureaucratic procedure. He said that EPAs were given specific tasks by JET but these assignments have not been completed in time but EPAs are in process of completing these.

He conveyed that due to financial crunch, Pak-EPA could only get Rs. 76 million against allocation of Rs. 260 million by the Federal Government due to which no funds could be transferred to Provincial EPAs. However, Pak-EPA has been paying for the trainee and repair and maintenance, and consumables on behalf of provincial EPA. The Provincial EPAs have shown their interest to take ownership of EMS project after its completion.

Mr. Asad Ullah Faiz, Director, Pak-EPA said that approval for extension of EMS project has been obtained. He said that EMS project is not complete and still six fixed and one mobile air monitoring stations are yet to be installed. Mr. Suzuki said that objective of the JICA project is to focus to develop capacity to operate EMS at each EPA.

Mr. Asif said that there will be technical problem in getting extension of project as ministry may raise observation that the project cannot be completed before installation of all the stations and after completing the scope of the project. He said that Pak-EPA has to mention the completion of scope of the project before requesting the government for regularization of EMS staff and securing funds for operation and maintenance of EMS.

Mr. Farooq Alam, Research Officer (Air), Punjab-EPA said that the GoP is grateful to GoJ for providing state of art equipment to EPAs as it has enhanced their capacity. He said that the

major obstacle is to obtain funds from the Provincial Government before project completion by the Federal government and handed over to provincial EPAs. He said that regularization of staff is another important issue to be discussed and resolved. He said that the staff is well-trained and Punjab-EPA wants to retain the personnel. But, recruitment rules and regulations are not allowing them to be regularized.

Mr. Naeem Ahmed Mughal, Director General, Sindh-EPA appreciated JET to prepare Mid-Term Review Report and said that it is quite balanced report identifying the weaknesses of implementation of EMS. He also appreciated the capacity building that would help enhance monitoring system in EPAs. Sindh-EPA has achieved capacity and strengthened laboratory through EMS staff, equipment and trainings provided by JET. He conveyed that Sindh-EPA is going to execute environmental monitoring project with the cost of Rs. 200 Million. He informed that Sindh-EPA is expanding setup of Sindh-EPA in all the districts. Furthermore, Sindh-EPA is in process of finalization of TORSs for various studies to be undertaken under World Bank's National Environment Policy Technical Assistance Loan (NEPTAL).
He said that the Mid-Term Review Report concludes that there is delay in output on EPA's part. He said that Sindh-EPA has covered milestone and we are trying to improve its weaknesses despite of issues including recruitment and transfer of equipment. Sindh-EPA looks forward for continued assistance of JICA. He requested assurance from Pak-EPA for timely release of funds including salary to EMS staff and repair and maintenance of equipment provided under grant Aid Ems Project.

Dr. Hussain Ahmed, Director, KPP-EPA suggested to impart training to EPAs in order to build their capacity for environmental monitoring. He informed the forum that due to power fluctuation, equipment gets non-functional. He informed that KPP-EPA executed a Provincial EMS project in order to support the Federal EMS Project in terms of human resource development and utilizing the equipment. Mr. Shams Ur Rehman, Chief analyst, KPP-EPA said that the capacity of KPP-EPA has been enhanced through counterpart trainings conducted by JET. He conveyed that KPP-EPA has issues related to maintenance of equipment due to inadequate funds. He informed that air monitoring stations remained switched off for eight months due to load shedding and not conducting the calibration. He informed that Wastewater treatment apparatus provided under grant aid EMS project has not yet been commissioned. Some other equipment including Draft Chamber, IC, GC is non-functional. He informed that there is little problem in communication between the trainer and trainee. KPP-EPA will try to regularize the EMS staff after project completion.

Engr. Muhammad Khan, Deputy Director (Technical), Balochistan-EPA said that some of SOPs have been developed by Balochistan-EPA and already submitted to JET. He informed that some of the equipment are non-functional. He informed that QA / QC is the main focus of Balochistan-EPA. He said that most of the requirements of QA/QC are being followed at Balochistan-EPA, however, these need to be documented. And Balochistan-EPA is working on it. Monitoring plan was developed. Balochistan-EPA needs staff under EMS project along with the support for operation and maintenance of equipment. He also highlighted the issue of connectivity of monitoring stations. He also informed that Balochistan-EPA has established its regional office at Hub to monitor the pollution caused by HUB Industrial Estate and Gaddani Shipbreaking Industry. Balochistan-EPA is planning to establish five more regional offices and seven district offices.

(9) Others

List of attendance of JCC are presented on Attachment 1.

Attachment 1

List of Attendance

Pakistan Side

Mr. Asif Shuja Khan, Director General, Pak-EPA

Mr. Naeem Ahmed Mughal, Director General, Sindh-EPA

Mr. Asad Ullah Faiz, Director, Pak-EPA

Dr. Hussain Ahmed, Director, KPP-EPA

Mr. S.M.Yahya, Director (Lab.), Sindh-EPA

Mr. Shams Ur Rehman, Chief Analyst, KPP-EPA

Engr. Muhammad Khan, Deputy Director (technical), Balochistan-EPA

Mr. Farooq Alam, Research Officer (Air), Punjab-EPA

Japan Side

JICA Pakistan Office

Mr. Toshiya Sato, Senior Representative

Mr. Tomohiro Kozono, Representative

Ms. Nazia Seher, Senior Programme Officer

JICA Mid-term Evaluation Team

Mr. Kazuya Suzuki, Leader

Mr. Tomoyuki Uda, cooperation planning

JICA Expert Team

Mr. Daisaku Kiyota, Team Leader

Mr. Takashi Onuma, JICA Expert

Mr. Kageyama Kozuyoshi, JICA Expert

Mr. Toshiharu Ochi, JICA Expert

Dr. Mitsuru Fujimura, JICA Expert

Mr. Kenichi Kuramoto, JICA Expert

Mr. Michiaki Hosono, JICA Expert

Ms. Anjum Rasheed, Coordinator, JICA Expert

MINUTES OF MEETING
BETWEEN THE JAPAN INTERNATIONAL COOPERATION AGENCY AND
THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF
THE ISLAMIC REPUBLIC OF PAKISTAN
ON THE 4TH JOINT COORDINATING COMMITTEE ON
THE TECHNICAL COOPERATION FOR
ESTABLISHMENT OF ENVIRONEMTAL MONITORING SYSTEM

Islamabad, 2nd March 2011

Mr. Daisaku Kiyota
Team Leader
JICA Expert Team
Government of Japan

Mr. Asad Ullah Faiz
Director General
Pak-EPA
Islamic Republic of Pakistan

Dr. Muhammad Bashir Khan
Director General
Khyber Pakhtunkhwa-EPA
Islamic Republic of Pakistan

Dr. Shagufta Shahjahan
Director General
Punjab-EPA
Islamic Republic of Pakistan

Mr. Abdullah Jan
Director General
Balochistan-EPA
Islamic Republic of Pakistan

Mr. Naeem Ahmed Mughal
Director General
Sindh-EPA
Islamic Republic of Pakistan

(Witness)

Mr. Toshiya Sato
Senior Representative
JICA Pakistan Office

I. Introduction

This is the Minutes of Meeting of the fourth Joint Coordinating Committee (hereinafter referred to as "JCC") for the "Technical Cooperation for Establishment of Environmental Monitoring System" (hereinafter referred to as "the Project") agreed between the Government of Islamic Republic of Pakistan and the Government of Japan in November 2008. The main objectives of the JCC were; a) to explain the plan of third year activities, b) to explain the progress of the Project, c) to modify the project design and Project Design Matrix (PDM), and d) to share and discuss the issues to be considered for the operation of the Project as well as the future sustainability after the Project. Mr. Asad Ullah Faiz, Acting Director General, Pak-EPA chaired the meeting.

II. Third Year Activities

The leader of the JICA Expert Team (hereinafter referred to as "JET"), Mr. Kiyota explained the third year activities using the Progress Report (4) with its presentation material, and was accepted by JCC members. Main points that were discussed have been summarized and presented below;

1) The objective of the Project is to enhance the capacity of environmental monitoring system of federal and provincial EPAs in anticipation of conduction of appropriated environmental administration by the results of the Project. The Project consists of 5 outputs: namely formulation of environmental monitoring plans, measuring major parameters of NEQS, establishing QA/QC system, evaluating monitoring data and dissemination of data to the public. The main purpose of the first year's activities was to develop basic knowledge and develop fundamental skills. The major activities of the second year were the continuation and revision of activities of Output 1 and 2, with the full-fledged trainings on Output 3 and 4.

2) At 3rd JCC held on 2nd July 2010, PDM version 1 was accepted, however, because of the devastating flood that occurred in July 2010, the financial conditions became more critical while security condition surrounding Pakistan still remains the same which prevents JET to be dispatched to both Khyber Pakhtunkhwa-EPA and Balochistan-EPA in order to conduct direct supervision to the counterparts.

3) After the completion of the grant aid project in 2007, the biggest issue has been frequent load shedding and non availability of budget allocation. The financial impediment contributed to a) continued delay in staff recruitment, b) insufficient budget for operation & maintenance of analytical equipments, c) as result of above situation, little repair operation has been undertaken by Pakistan side, d) there has been insufficient budget required for bearing the training related expenses (e.g., accommodation and travel expense).

4) JICA's Technical Cooperation Scheme relies on self-reliant efforts of its bilateral counterparts including sufficient budget allocation are expected from the recipient country partners. However,, due to the ongoing financial crunch in Pakistan in the post flood period, the necessary sufficient budget could not be provided by Government of Pakistan to Pak EPA in spite of its approved PC-1. In this scenario, it is obvious that if the necessary sufficient budget is not provided by the Government of Pakistan then it will negatively affect third year activities of the Project.

5) Keeping in vie view the above situation, it has become necessary to revise the current PDM.

III. Progress of the Project

Mr. Kiyota explained the achievement of the Project so far explaining activity by activity based on ATTACHMENT 3& 4. JCC members confirmed and accepted the progress of each activity by each province. However, the Representatives of KPK province stated that they will review the revised PDM in detail & give their comments later, if deemed necessary. If the JET does not receive comments from them then it would mean that the revised PDM has been fully accepted by KPK EPA. Main points of discussed were as follows;

1) Basic structure of QA/QC system has been established in each EPA despite some staff changes in Pak-EPA, Punjab-EPA and Sindh EPA.

2) Mr. Hosono of JET will give trainings on processing of acquired data. JET will work for dissemination of monitoring data.

3) So far, JET finished repair work of equipments for 3 EPAs.

4) It was also accepted that the level of attainment of each target is linked with the actual presence & working relationship between JET & its counterparts. Since, due to the security constraints, JET cannot physically visit KPK & Baluchistan, therefore, the level of attainment of each target/activity cannot be ensured in these two provinces.

5) For Air emission, collection of relevant information does not seem to be acquired. No response has been received from any EPA.

6) JET requested each EPA to provide their organization's "Project Implementation & Management Chart" with names, designations and responsibility of each of the person associated with the project. The purpose of this chart is to promote cooperation & coordination between JET & concerned relevant persons in each EPA. In case some persons have been replaced with other persons within EPAs, the chart shall be revised & re-submitted to JET immediately without waiting for the JET to request for it.

Mr. Naeem pointed out that all EPAs did not get staff positions as per approved PC-I, and it should be clarified so that all EPAs should manage by themselves. The mentioning of names with roles and responsibilities will be possible for some of the EPAs. Chairperson concluded that each EPA could go ahead with their staff recruitment under the PC-1 as soon as the budget is released by Ministry of Finance. It was also shared that a request of Rs. 100 Million has been made to the Government of Pakistan under the counter value fund created through another JICA supported commodity loan. Dedicated efforts are underway for the mobilization of this fund & Pak EP is very optimistic on this matter & committed to take all necessary procedure & efforts for making this money available for the project in near future.

Another point of concern regarding the regularization of the staff was that if the recruitment is not done during the project period then it would not be possible to do it through the provincial arrangements.

7) Technical guidelines for developing environmental monitoring plans were already created and will be revised in third year.

8) For the maintenance manual, Mr. Farooq explained that they have already created maintenance sheets.

9) Mr. Naeem highlighted that the Project contains extensive trainings but the missing point is the evaluation of participated staff. JET explained that they have conducted evaluation of each participant and the detailed information is available in the Progress Report (4). Mr. Naeem also suggested that there should be meetings with DGs of JET in which the JET should share their actual evaluation & assessment in respect of each of the participating EPA official. Mr.

Naeem also mentioned that those ex-participants should disseminate the knowledge they learn at trainings, and that sort of information sharing is lacking. Ms. Nazia suggested that each EPA may arrange presentations by the ex-participants so that other officers of EPAs may learn from them.

10) Ms. Farzana raised the point that Punjab-EPA's AAS is not working at the moment. Mr. Onuma explained that the maintenance check sheets are already available but they are not being used by the concerned officers to update the maintenance issues.

IV. Modification of the PDM

Following the intensive and technical discussion held among participants, the revised PDM was fully agreed by both sides as ATTACHMENT 5. Main points that were discussed as follows;

1) Mr. Sato explained that overall goal is what Pakistan side will achieve after 3 to 5 years of the completion of the Project.

2) Mr. Kiyota explained that the major modifications of the PDM are of the indicators considering surrounding conditions and constraints based on the fact of the progress of achievement with those reasons.

3) Mr. Shams updated that 16 districts for ambient water out of 24 have been covered.

4) Ms. Nazia complimented their effort and said that because of limited approach to Balochistan and Khyber Pakhtunkhwa, JET has proposed certain changes in PDM based on the limitation of their assistance.

5) Mr. Naeem explained that they are learning from weaknesses during implementation period and they have been extensive with JET during last week. They recognize constraints identified by JET and JICA side. On behalf of Sindh-EPA, they will improve the system of working and scope of the Project.

6) Mr. Waseem explained that major concern is the fate of the Project and staff. Chairperson asked Mr. Waseem to present the comment at PSC meeting.

7) Mr. Nesaki emphasized that since the revised PDM was approved by this JCC, the input from JICA side will also be limited by the activities, in other words, the input will be different to each EPA based on the target EPAs mentioned in indicators of the revised PDM, and also this PDM will be the one used for the final evaluation.

8) JCC members agreed that the Project Team should work together and put more effort to accomplish the project purpose according to the revised PDM in the remaining period of the Project.

VI. Discussions / Issues and Decisions

The issues, clarifications and consensus on the JCC are outlined as follows:

1. Communications, Coordination & Cooperation

1.1 The issues of poor communication among EPAs were addressed, such as letters, documents are not shared on time among all or some deadlines of tasks are neither set up nor met by EPAs, therefore, JET has to do extra work on behalf of counterparts. And also the issue was shared that few monitoring activities are conducted during the absence of JET. All the participants acknowledged the importance of this issue.

As of 2010, the extension of PC-1 from June 2010 to December 2011 was already approved by Economic Affairs Division (hereinafter referred to as "EAD"), Ministry of Economic Affair and Statistics. But the actual contract of EMS staff recruited by PC-1 has not been extended accordingly. Pak-EPA will facilitate the extension of contract of EMS staff so that they can work till the end of the Project.

4.2 Budget after the dissolution of Ministry of Environment (after June 2011)

Chairperson explained that it has been committed by the Ministry of Environment that the Project will be supported by the finance division. In PSC meeting, this concern will be shared with EAD and Planning Commission.

4.3 Budget after the completion of the Project

(i) Utilization of counter value fund linked with Flood Disaster Emergency Import Support Loan.

Ministry of Environment has negotiated with EAD and Ministry of Finance to utilize above mentioned counter value fund to allocate for the Project. Chairperson asked JICA Pakistan Office to write a support letter about this idea.

(ii) Since the Project is financed by federal umbrella PC-1 only for Pak-EPA, each provincial EPA still can apply PC-1 individually after the Project. Provincial EPA will seek possibility to apply PC-1 and report the result to Pak-EPA and JET by the end of June 2011. Chairperson concluded this issue to be addressed at PSC on 3rd March 2011.

V. Others

1) Mr. Yahya said that all EPAs should recruit staff within next 4 months.

2) Mr. Sato pointed out that all stakeholders have been agreed with the modification to the PDM.. And till the Final Evaluation to be held in July 2011, he requested each EPA to complete the activities specified in the revised PDM. Furthermore, ex-post evaluation will be conducted after the Project, and in this regard, he requested that the equipment should be fully utilized. Chairperson acknowledged the point and concluded the JCC.

ATTACHMENT 1	LIST OF PARTICIPANTS FOR 4TH JCC
ATTACHMENT 2	AGENDA FOR 4TH JOINT COORDINATING COMMITTEE
ATTACHMENT 3	COMPARATIVE SHEET FOR PDM (VER.0) AND PDM (VER.1) ATTAINABILITY OF OUTPUTS
ATTACHMENT 4	COMPARATIVE SHEET FOR PDM (VER.0) AND PDM (VER.1) FEASIBILITY OF EACH ACTIVITIES
ATTACHMENT 5	REVISED PROJECT DESIGN MATRIX (PDM)

MINUTES OF MEETING

ON

THE FIFTH JOINT COORDINATING COMMITTEE

FOR

TECHNICAL COOPERATION FOR ESTABLISHMENT

OF ENVIRONMENTAL MONITORING SYSTEM

IN THE ISLAMIC REPUBLIC OF PAKISTAN

Islamabad, December 14, 2011

Mr. Daisaku Kiyota
Team Leader
JICA Expert Team

Mr. Asif S. Khan
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Pak-EPA
Islamic Republic of Pakistan

Dr. Muhammad Bashir Khan
Director General
Khyber Pakhtunkhwa-EPA
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Mr. Mehr Maqsood Ahmad Lak
Director General
Punjab-EPA
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Mr. Abdullah Jan
Director General
Balochistan-EPA
Islamic Republic of Pakistan

Mr. Muhammad Naseem Nawaz
Director General
Sindh-EPA
Islamic Republic of Pakistan

(Witness)

Mr. Toshiya Sato
Senior Representative
JICA Pakistan Office

These are the agreed Minutes of Meeting (MM) of the 5th Joint Coordinating Committee (JCC) of the "Technical Cooperation for Establishment of Environmental Monitoring System" project (to be referred to as "the Project" in subsequent text) between the Government of Islamic Republic of Pakistan and the Government of Japan. The project, under which this JCC took place, was agreed in November 2008 and is scheduled to complete in February 2012.

The main agenda of the JCC was to share the results of Joint Terminal Evaluation Report of the Project with project counterparts (Federal and 4 provincial EPAs) and other key partners form EAD, Planning Commission and Ministry of Disaster Management (MoDM).

Mr. Asif S. Khan, Director General, Pak-EPA chaired the meeting.

Mr. Asif S. Khan, highlighted the significance of Technical Cooperation Project and its activities. He also provided a brief description of the project and appreciated its flexibility to tailor the training contents to the varied level of technical background of the trainees, which has resulted into the enhanced technical capacities of the project staff including the regular staff of EPAs.

He also touched on the issue of the sustainability of the equipment installed under JICA's Grant Aid Project titled "Establishment of Environmental Monitoring System in Islamic Republic of Pakistan (EMS Grant Aid project) " as there was no provision for spare parts even in the first year after the equipment installation., which is contrary to the general procurement practices. He also underlined the time lag between EMS Grant Aid and TCP EMS on the part of JICA and gap between approved funds and actual funds releases made by government of Pakistan (GOP) as other important factors responsible for continuously challenging the equipment sustainability. The issues of non-cost effective nature of the consumables, continuous war against terrorism, floods, and subsequent PSDP cuts and power shortage were also identified as external factors with direct negative impact on the project sustainability.

He also availed this opportunity to formally request JICA, on behalf of Federal and Provincial EPAs through EAD, for JICA 's future support for: a) strengthening of the ongoing EMS after its closing; and b) for control of vehicle emission causing continuous threat to the air quality in Pakistan.

He conveyed his gratitude to JICA Expert Team (JET) for facilitating EPAs in operation and maintenance of monitoring equipment along with the financial support that was necessary for conducting the trainings under the project.. He also acknowledged with gratitude the support provided by JICA Pakistan office in overcoming the obstacles and challenges that were impeding the implementation of the project.

Mr. Daisaku Kiyota, Leader, JICA Expert Team expressed his gratitude towards all of the participants. Then he briefed the Committee about TCP-EMS. The implementation of the project commenced with dispatch of JET in February, 2009. The equipment at Federal and Provincial EPAs was repaired in 2009 and 2010; Project Design Matrix (PDM) was first modified in June, 2010, however, second modification was made in March, 2011. Furthermore, counterpart trainings were conducted from June, 2009 till November, 2011.

Then he briefed about the outputs, implementation schedule and PDM overview of TCP-EMS. He also shared the project strategy that relied primarily on Pakistani counterparts and trainees for the implementation of project activities with technical guidance and backstopping provided by JICA Expert Team. Therefore, Counterparts (Pak-EPA and Provincial EPA), supported by JICA Expert Team, are considered the driving force of the project..

He also highlighted the obstacles of the project as follows:

- The equipment provided to Federal and Provincial EPAs under the EMS Grant Aid Project was damaged due to load-shedding and lack of maintenances and, therefore, JICA decided to fix the equipment.
- Because of unstable security conditions, GOJ decided not to dispatch JET to Peshawar and Quetta due to which, JET had no opportunity to directly visit these EPAs.

He said that the JICA Expert Team prioritized the project activities considering the conditions of equipment, technical skills of the staff involved and the term for this project. He informed that the activities conducted by JET included:

a) Preparation of Monitoring Plans;
b) Sampling & Analysis under the Plans;
c) QA/QC Activities;

d) Processing and Interpreting and

e) Dissemination

He also explained the improvement plan for data communication. JET upgraded the data communication system at all EPAs in February, 2011. At the time of up-gradation of data communication system, KP-EPA conveyed that it does not require another line of DSL and, therefore, the line provided by JET was disconnected. Later on, KP-EPA requested for provision of DSL line which was provided. However, KP-EPA was informed that in order to perform the data collection from air monitoring station, the router and data logger at fixed station Peshawar have to be reprogrammed and settings of data collection system have to be changed at CLEAN Lab, Islamabad. This up-gradation has not been conducted by KP-EPA till now which has caused failure in central data collection at National Data Surveillance Centre, Pak-EPA.

He also explained in detail the SOPs prepared for air and water analysis and repair work at Federal and Provincial EPAs. He also informed about the outputs of data analysts. Then he flagged the key issues including continuous load shedding, non-availability of funds required for procurement of consumables necessary for running the equipment after the project closing; and the non-availability of funds required for contract extension and regularization of EMS staff.

Mr. Waqar Abbasi, Deputy Secretary (Japan), EAD appreciated the efforts of JICA Expert Team and asked EPAs to convey their plan for sustainability of EMS. He said that EAD is willing to provide the required support to EPAs in order to ensure the sustainability. Mr. Asif said that Terminal Evaluation Team has already collected information from all EPAs regarding their future strategy for sustainability for EMS Project and that the Evaluation Team would be in better position to convey the actual status of progress made by Provincial EPAs. EAD Also appreciated the effective coordination and consistent follow-up on EMS project related issues by JICA Pakistan office.

Mr. Zia Ul Islam, Director (EIA/Mont.) said that he had been out of contact with the project for two years and, therefore, he is concerned about whether all provinces are on-board regarding adoption of SOPs recommended by JET. It was conveyed by Mr. Kiyota that SOPs have been accepted by the provinces, however, in some cases, EPAs are still using the SOPs already in use. He recommended Pak-EPA to notify the SOPs so that all EPAs use uniform

methods for air and water quality analysis.

Mr. S. M. Yahya, Director (Lab.), Sindh-EPA said that the consumables and chemicals are very expensive and it is difficult to purchase the consumables using the available budget. He requested JICA to suggest an alternative and more cost effective source for acquiring the consumables. Mr. Kiyota admitted the fact and said that there is a possibility to get consumables from other sources as practiced by India. Mr. Kiyota suggested EPAs to get information from Indian analytical companies about their process of procuring the spare parts and consumables.

Mr. Muhammad Khan, Deputy Director (Technical) conveyed his thanks to the JICA Expert Team and said that TCP-EMS has enabled all EPAs to implement Environmental Law appropriately. He said that SOPs and uniform methods should be notified by Pakistan Environmental Protection Council (PEPC) for EPAs and certified labs as well.

Mr. Zaheer Gillani appreciated the work done by JET. He said that as Terminal Evaluation has been conducted, it may highlight the grey and weak areas for future running of the project. Mr. Kiyota said that on technical side, EPAs' staff is very weak in mathematical skill. He further said that hiding someone's lack of understanding prevents to gain knowledge and to progress. He requested EPAs to always encourage EMS staff in order to make them confident enough to not to hide their weaknesses.

Mr. Noda gave a briefing on Terminal Evaluation, jointly conducted by JICA, Ministry of Disaster Management, Planning Economic Affairs Division and Planning Commission from Government of Pakistan.

He said that the EMS Grant Aid project started in August, 2005 and was completed in March, 2007. Later on, a Technical Cooperation Project for EMS was initiated in February, 2009 and would be completed in February, 2012. He said that the implementation structure of TCP-EMS was modified in June, 2011 due to the devolution taken place with regards to r Ministry of Environment. Then he mentioned five criteria used for evaluation, the results of which are given below:

Relevance (Basically High):

- Needs to urgently address environmental issues

- In line with the National Policy
- Project design was partly overstrained.

Effectiveness (High):

- Knowledge and skills of technical staff are improved.

Efficiency (High):

- Despite unexpected troubles, inputs were converted into outputs resulting that the project purpose was achieved.

Impact (Variable):

- Monitoring system continues to function in some EPAs.
- Other EPAs are still in process of budget confirmation.

Sustainability (Variable):

- Policy and technical contexts are favorable.
- The issue lies in financial sustainability.

He said that the project can be closed as scheduled as it has achieved the project purpose in a sense that each EPA is now capable to draft environmental monitoring plans, collect samples from monitoring sites, analyze them by using the equipment, compile the data and prepare monitoring reports. He said that one critical concern is financial sustainability after the project. Punjab-EPA and KP-EPA have confirmed the budget under new PC-1 while other EPAs are still in the process of securing the operational budget for environmental monitoring.

Following recommendations have been made under the Joint Terminal Evaluation:

- Securing operational budget and regularization of the technical staff
- Follow-up monitoring
- Assessment of current capacity of each EPA for further improvement in terms of organizational capacity development
- Extension of the existing PC-1
- Data sharing among EPAs
- Promoting organizational culture for sharing technical information within each EPA

He said that it has been learnt through execution of the EMS Grant Aid project and

TCP-EMS that there is a need of developing a practical implementation mechanism in case of umbrella PC-1 and also provision of spare parts and consumables that are not locally available.

He said that the recommendations of evaluation will be monitored as a future follow-up. Terminal Evaluation Team has followed the evaluation guideline of JICA for evaluation. The data has been collected through interviews and documentation review, which was then analyzed for incorporation into the evaluation report. He said that the conclusion of Terminal Evaluation is that the TCP-EMS can be closed as scheduled as it has achieved the project purpose.

Mr. Asif said that extra spare parts and consumables were not provided by JICA at the time of installation of equipment under the EMS Grant Aid project. And that was a flaw in the design of the project that affected the performance of equipment. However, JICA confirmed that several spare parts were given through the EMS Grant Aid project. The list of equipped spare parts provided under Grant Aid was given to Pak EPA.

It was informed by Mr. Kubo that there is a communication gap among the Director Generals and junior staff in EPAs particularly with reference to the matters pertaining to PC-1s and staff retention/regularization. Ms. Nazia explained that since she has been communicating with DGs on matters pertaining to the PC-I approvals and staff retention, therefore, she knows that all DGs have been making a committed effort to address these issues and some DGs have conducted some meetings with their staff to take them onboard regarding the developments. This communication gap identified by the evaluation team could possibly be due to the fact that some staff themselves may not be feeling very confident about approaching their DGs to discuss such matters. Mr. Asif also pointed out that it is important to maintain the management communication chain for smooth function of the official matters, which is an accepted norm and practice within offices all around the world. However, he encourages his staff to represent their case at all important level. He mentioned a recent example in which the most junior EPA staff had a meeting with Planning Commission with the consent of DG to expedite the matter of staff contract extension.

Mr. Kiyota also explained that if some request is forwarded by junior staff to DG through middle management, the request mostly does not reach to the Director Generals.. This

communication gap includes lack of sharing of technical information by senior officers to junior staff in all EPAs. Mr. Kubo said that the system of hierarchy at EPAs lacks persuading the issues. Furthermore, it was also conveyed by Mr. Kiyota that EPAs have been weak in follow-up of requests / issues as experienced through TCP-EMS. Mr. Zaheer Gillani requested EPAs to ensure sharing of information within the institution.

While discussing the number of staff hired for EMS, Mr. Zia Ul Islam said that the Ministry of Environment hired enough staff for Federal EPA and went slow for Provincial EPAs leading to incomplete recruitment. Mr. Kiyota said that some persons have been attending the trainings just once or twice. And so, about 55 persons have been fully trained in keeping with the criteria that requires each of the trainee to attend more than ten trainings to be able to acquire sufficient knowledge and experience necessary for capacity development under the project. Mr. Kubo said that the capacity level varies from EPA to EPA depending upon the available human resource. However, the important fact is that the accumulative staff capacities have been enhanced in all EPAs.

It was mentioned by Mr. Kubo that there is shortage of water supply in laboratory of Sindh-EPA. Mr. Yahya conveyed that this shortage is due to construction work which may be completed by June 2012.

Mr. Waqar Abbasi, Deputy Secretary (Japan), EAD said that the impact of the project can realistically be assessed after the project closing and not so much during the project implementation. Therefore, EAD also agrees to the proposal of follow-up made by Joint Terminal Evaluation Team and would provide all necessary cooperation in this regard. EAD would also be interested in the results of post project evaluation that may be conducted by JICA after 3 to 5 years of project completion.

Dr. Muhammad Bashir, Director General, KP-EPA said that the system of regularization requires to initiate the process in the final year of the project which takes time. He also said that he cannot commit for the absorption of EMS staff in revised Provincial EMS project of KP-EPA due to the rules and regulation prescribed by the provincial recruitment system. . However, it is also understood that the EMS staff has a fair advantage over other applicants once the recruitment process is announced. According to the present scenario KP-EPA has got sanctioned positions, however, appointment of EMS staff at these positions may not be ensured by KP-EPA due to the rules pertaining to the recruitment of regular

staff.

Mr. Zia Ul Islam said that the issues related to devolution and financial crunch were not foreseen at the time of designing the project as these issues were totally unexpected. He informed that originally, the EMS Grant Aid project was designed to be executed in two phases. Mr. Kubo explained that Provincial EPAs were expected to double their budget after the responsibility of O&M cost of the project was transferred from Pak-EPA to the Provincial EPAs.Dr. Bashir said that he would discuss this matter with the Finance Department in Khyber Pakhtunkhwa.

Dr Aurangzeb Khan, Chief Environment Planning Commission opened his statement by acknowledging the JICA's support for EMS. He also appreciated the support provided by JICA Pakistan office which effectively persuaded Planning Commission and other project partners in mobilizing financial support for the project from GOP even under the most challenging scenario (PSDP cuts, financial crunch due to war on terrorism and floods, securing funds releases from limited block allocation etc.).

Dr. Aurangzeb said that after devolution, it is the responsibility of the Provincial EPAs to provide funding to all devolved projects. And after completion of the project, Provincial EPAs could aim for regularization of respective EMS staff. He also said that there is a system for shifting of staff from development to non-development budget, however, the required time varies. He also mentioned that it would have been more appropriate if the staff was hired through Public Service Commission as it would have made the regularization process easier. Mr. Waqar said that a number of personnel have been hired by JET under TCP-EMS and regularization of staff should have been elaborated while designing the project. Mr. Kubo admitted that there were deficiencies in the project design. Mr. Gillani also suggested regularization of all these positions in order to retain the trained EMS staff.

Dr. Bashir informed the forum that presently, sixteen development projects are being executed by KP-EPA which include 'Establishment of Environmental Monitoring System', Provision of Mobile Environmental Monitoring Laboratories for Regional offices of EPA in Khyber Pakhtunkhwa' and 'Monitoring of Soil and Groundwater near Industrial Areas and Suggestions for Various Mitigation Measures'. He informed that under another project 'Installation of Digital Data Display Boards and its Integration with PTV', KP-EPA has installed two digital display boards one each at EPA building and one in the Centre of city in order to

display the air quality data on daily basis. He informed that only three out of twelve positions for KP-EPA were filled by the Federal Government at the time of start of EMS Project. He also informed that KP-EPA has revised its another on-going Provincial EMS Project with an additional cost of Rs. 2.8 Million and more positions in order to absorb EMS staff. After approval of the revised Provincial EMS Project, KP-EPA would try its best to accommodate EMS staff of KP Province only. He also informed that KP-EPA has got sanctioned positions under SNE and would also try to appoint EMS staff against these positions. However, KP EPA does not guarantee that the same staff would be recruited from EMS project as the competition will be open and the positions will be offered to the best suited candidates on merit. It is also possible that the present EMS staff may not apply for the advertised positions at all as they may have already got other jobs. Mr. Kubo requested him to keep JICA Pakistan office updated on the progress regarding the staff induction through open merit system. He also said that the main concern of JICA is the availability of funds and sustainability of EMS after devolution. Therefore, the update from KPK EPA would help JICA to better understand as to how these issues have been addressed at each of the EPA.

Ms. Nazia said that JCC forum should realistically assess whether the staff at all EPAs could be regularized or not. Dr. Aurangzeb was of the view that the ultimate goal of EMS is sustainability and to achieve this goal, we have to make all the efforts. Mr. Kubo said that if the process of regularization takes more time, then EPAs may absorb EMS staff under new PC-1s and meanwhile the process for regularization may go on parallel basis. Dr. Aurangzeb said that PC-Is should be an interim arrangement for sustainability of EMS Project.

Mr. Yahya said that JET has trained EMS staff to a level that they can give training to others. He was of the view that TCP-EMS has increased the capacity of EPAs in the field of air and water quality monitoring. He said that meetings may be held on monthly basis in order to monitor the progress made by all EPAs to work for sustainability of EMS Project. Mr. Noda asked about PC forms of Planning Commission. Dr Aurangzeb Khan informed that PC-III is used for monitoring during a project, however, PC-IV form is used to report progress/ performance at the completion of a project. Mr. Noda said that JICA wants to make sure that the EMS project activities conducted during TCP-EMS in last three years are continued in future as well. Mr. Noda said that JICA would invite views of JET about the most appropriate procedure for follow-up monitoring and it may be decided after consultation.

Mr. Asif proposed formulation of a Post-Project Monitoring Committee to monitor EMS project after completion of TCP-EMS. Mr. Waqar said that M/o NDM should play role in composing the Post-Project Monitoring Committee. However, Post-Project Monitoring would be an appropriate forum for coordination and monitoring the progress made on EMS. Dr. Bashir agreed to it and said that a coordination mechanism at the Federal level would be the best forum for post-project monitoring. Mr. Noda further said that after completion of TCP-EMS, JICA does not have any funds available for Post-Project Monitoring Committee. It is, therefore, necessary to decide about the responsible Agency for bearing the cost of this committee. He thanked all the participants for their valuable comments.

Mr. Kiyota said that the Draft Final Report has been delivered to all JCC members whose comments are invited till 19th December, 2011 which would be incorporated during finalization of the report.

While closing, Mr. Sato thanked all the participants. He said that EMS Project has two components; the EMS Grant Aid project and TCP-EMS, the cost of which was borne by the Japanese tax payers' money. And if the public of Japan see the equipment not utilized, they will be very much disappointed. He said that our main focus should be how to make equipment sustainable.

Others:

List of participants of JCC meeting is presented as Attachment 1.

Attachment 1

List of Participants

Pakistan side

1. Mr. Asif Shuja Khan, Director General, Pak-EPA
2. Dr. Muhammad Bashir Khan, Director General, Khyber Pakhtunkhwa-EPA
3. Dr. Aurangzeb Khan, Chief Environment, Planning Commission
4. Mr. Waqar Hussain Abbasi, Deputy Secretary, Ministry of National Disaster Management
5. Mr. Zia Ul Islam, Director, Pak-EPA
6. Syed Muhammad Yahya, Director (Lab.), Sindh-EPA
7. Engr. Muhammad Khan, Deputy Director (Technical), Balochistan-EPA
8. Mr. Ali Abbas, Deputy Director (Lab.), Punjab-EPA
9. Mr. Zaheer Gillani, National Project Manager, MEA Secretariat, M/o NDM
10. Mr. Zaigham Abbas, Technical Officer (Chemicals), M/o NDM

Japan Side

11. JICA Pakistan Office
12. Mr. Toshiya Sato, Senior Representative
13. Ms. Nazia Sehar, Senior Programme Officer

JICA Headquarter

14. Mr. Hideo Noda, Director, Environmental Management Division
15. Mr. Shun Nesaki, Assistant Director, Environmental Management Division
16. Mr. Hideyuki Kubo, Natural Resources Specialist, Global Link Management Inc.

JICA Expert Team

17. Mr. Daisaku Kiyota, Team Leader
18. Mr. Toshiharu Ochi, Air Monitoring Expert
19. Mr. Kageyama Kozuyoshi, QA/QC Expert
20. Mr. Takashi Onuma, Water Monitoring Expert
21. Mr. Kenichi Kuramoto, Water Monitoring Expert
22. Mr. Michiaki Hosono, Water Monitoring Expert
23. Mr. Takahisa Sato, Air Monitoring Expert
24. Mr. Masato Motoki, Coordinator
25. Ms. Anjum Rasheed, Chief Coordinator

Appendix-4

Minutes of the Meeting

MEETING OF PROJECT STEERING COMMITTEE (PSC) FOR ESTABLISHMENT OF ENVIRONMENT MONITORING SYSTEM (EMS) PROJECT IN PAKISTAN HELD ON 17TH FEBRUARY, 2010

The Project Steering Committee (PSC) meeting on the subject was held on February 17, 2010 under the Chairmanship of Secretary, Ministry of Environment. List of participants is enclosed. The chair welcomed all the participants and opened the forum for discussion. The following discussions were made in detail:

1. Director General, Pak-EPA gave a brief introduction of the grant aid EMS project and Technical Cooperation Project for EMS (TCP-EMS). He informed that PC-I has been implemented partially as out of Rs. 973 Million of foreign exchange component, Rs. 508.96 Million has been provided by the Government of Japan in the form of equipment. He said that there are issues related to capacity development, utilization of equipment, huge cost of operation and maintenance of equipment.

2. Mr. Daisaku Kiyota, Leader, JICA Expert Team explained the scope of TCP-EMS Project and informed about the progress made during first year. He also mentioned the issues being faced for sustainability of EMS project. He showed his concern about the regularization of EMS staff after project completion and securing of funds by all the EPAs from respective Federal and Provincial Governments for sustainability of EMS after project completion.

3. Secretary, Environment & Alternate Energy, Government of Sindh expressed his gratitude for JICA Expert Team for providing support in maintenance of equipment and capacity building of EPAs. He informed that air monitoring stations are not working properly at Sindh-EPA due to non-availability of funds. He requested that before going for further recruitment, the requirement of EMS staff by each EPA should be assessed.

4. Director General, NWFP-EPA conveyed that NWFP-EPA is executing another Provincial EMS project parallel to Grant Aid EMS project. He said that for regularization of EMS staff by the Provincial Governments, Public Service Commission Examination is compulsory.

5. Director General, Balochistan-EPA informed that no staff under EMS project has been deployed in Balochistan, therefore, there is no issue of staff regularization involved interms of Balochistan EPA.

6. Mr. Rizwan Haider, Chemist-EMS Project, Punjab-EPA informed about the progress being made in environmental monitoring with the help of equipment provided under EMS project. It was conveyed that a request for an additional amount of Rs. 10 Million has been forwarded to the Provincial Government for operation and maintenance of the equipment.

7. Director General, Pak-EPA requested the Secretary, Ministry of Environment to include EMS project in its list of prioritized projects to ensure smoother release of funds to the project which is otherwise likely to get affected by the financial cut (53%). Annual Work Plan will be submitted by all EPAs to JET by 15th March, 2010.

8. Dr. Aurangzeb Khan, Chief Environment, Planning Commission informed that the GoP is proposing further cut in release of funds for Project Supervisor Design Process (PSDP) projects due to financial crunch in the country. He said that JICA had provided some of the equipment earlier and Pak-EPA got extension of the project on the basis of understanding that the remaining monitoring stations will also be provided by Government of Japan. This project

should be considered for inclusion in the list of priority projects of the Ministry of Environment to ensure the availability of sufficient funds.

9. Mr. Asad Ullah Faiz, Director, Pak-EPA shared with the forum that the Ministry of Environment has now given consent on recruitment of EMS staff by respective Provincial EPAs. He said that three major issues are being faced while implementing the EMS project: (a) Delay in release of funds (b) Release of insufficient funds c) Non-acceptance of centralized recruitment procedure by Provincial EPAs. However, all Provincial EPAs have given their firm commitment to convert the project to regular side after its termination but keeping in view the crucial phase of the project, its extension for one more year is recommended.

10. Mr. Tomoharu Otake, Chief Representative said that if EMS project is extended till June, 2011, arrangements should be made for July – December, 2011 as TCP-EMS will be completed in December, 2011. JICA Pakistan office informed that there is no formal commitment made by the Government of Japan to complete the PC-I. It was conveyed that JICA had picked up first component and if GoP maintains the existing setup, then more air monitoring stations will be provided. He informed that a mission will be sent to Pakistan for evaluation of EMS project during implementation of TCP-EMS.

Decisions:

1. Secretary, Ministry of Environment directed that the proper procedure of recruitment should be adopted for EMS project and power will be delegated to Provincial EPAs for recruitment under EMS project against their respective quota determined by the Federal Government. One representative each of Pak-EPA and MoE shall be the members of selection committee.

2. All EPAs to follow-up the case for securing funds from their respective governments for operation and maintenance of EMS equipment, regularization of EMS staff and sustainability of EMS.

3. Secretary, MoE shall write a D.O. letter to Chief Secretaries of all the Provinces with the request of regularization of EMS staff after project completion.

4. All EPAs shall provide the annual work plans as per schedule decided in 2nd JCC meeting and also submit the progress update on efforts being made for securing the funds from respective Federal or Provincial Governments.

5. Secretary, MoE principally agreed for extension of EMS project for one more year within the same scope with following observations:

    a. Rs. 973 Million (FEC) as reflected in PC-I must have been based on some sound commitment between Government of Japan and Government of Pakistan. Now, if there is any confusion about this commitment, it shall be resolved within three (3) weeks and a follow-up meeting shall be held to finalize the decision for extension of EMS project for one more year.

    b. JICA shall indicate to the Ministry of Environment its interest/commitment for remaining foreign exchange component.

The meeting ended with the vote of thanks.

List of Participants

1. Mr. Muhammad Javed Malik
   Secretary
   Ministry of Environment

2. Mir Hussain Ali
   Secretary, Environment & Alternate Energy,
   Government of Sindh

3. Mr. Tomoharu Otake
   Chief Representative
   JICA Pakistan

4. Dr. Aurangzeb Khan
   Chief (Environment)
   Planning Commission

5. Mr. Asif Shuja Khan
   Director General
   Pak-EPA

6. Dr. Muhammad Bashir Khan
   Director General
   NWFP-EPA

7. Mr. Naeem Ahmed Mughal
   Director General
   Punjab-EPA

8. Mr. Asad Ullah Faiz
   Director
   Pak-EPA

9. S.M.Yahya
   Deputy Director
   Sindh-EPA

10. Mr. Muhammad Khan
    Deputy Director
    Balochistan-EPA

11. Mr. Shaukat Hayat
    District Officer (Environment)
    Punjab-EPA

12. Mr. Rizwan Haider
    Chemist (Air)

Punjab-EPA,
Lahore.

13. Mr. Tomohiro Kozono
Representative
JICA Pakistan

14 Ms. Nazia Sehar
Senior Programme Officer
JICA Pakistan

15. Mr. Daisaku Kiyota
Team Leader
JICA Expert Team

16. Mr. Takashi Onuma
Water Monitoring Expert
JICA Expert Team

17 Mr. Kageyama Kozuyoshi
QA/QC Expert
JICA Expert Team

18. Mr. Toshiharu Ochi
Air Monitoring Expert
JICA Expert Team

19. Dr. Mitsuru Fujimura
Air Monitoring Expert
JICA Expert Team

20. Ms. Anjum Rasheed
Coordinator
JICA Expert Team

Minutes of the Meeting

FOLLOW-UP MEETING OF PROJECT STEERING COMMITTEE (PSC) FOR ESTABLISHMENT OF ENVIRONMENT MONITORING SYSTEM (EMS) PROJECT IN PAKISTAN.

The follow-up meeting of the Project Steering Committee (PSC) meeting, dated February 17, 2010 was held in the M/o Environment on March 30, 2010. Mr. Kamran Ali Qureshi, Additional Secretary headed the meeting on behalf of Secretary Environment. List of participants is attached.

The meeting started with the welcome note by the Chair and the following issues were discussed in detail:

1 Mr. Asad Ullah Faiz (Project Director EMS) apprised the participants that in last meeting of PSC held on February 17, 2010, the Secretary Environment principally agreed for the extension of EMS project with the following observations:

   a. Rs. 973 million (FEC) as reflected in PC-I must have been based on some commitment between Government of Japan and Government of Pakistan. If there is any confusion about this commitment, it should be resolved within 3 weeks and a follow-up meeting shall be held subsequently to finalize the decision for extension of EMS Project.

   b. JICA shall indicate to M/o Environment its interest / commitment for remaining Foreign Exchange Component for establishment of 6 fixed and 1 mobile monitoring station.

2 The Project Director (EMS) further apprised the committee that so far 7 fixed and 3 mobile monitoring stations have been established whereas 6 fixed and one mobile monitoring system is yet to be established as mentioned in PC-1. It was further informed by the Project Director that Rs. 508.96 million has so far been utilized out of Rs. 973 million FEC.

3. Mr. Tomoharu Otake, Chief Representative JICA Pakistan apprised the meeting that a step by step approach was adopted by JICA for successful implementation of the project. Therefore in first phase 7 fixed and 3 mobile monitoring stations have been established. For the remaining 6 fixed and one mobile monitoring station a request from EAD was made in February 2009 and this proposal will be considered after completion of Technical Cooperation project from 2008 to 2011.

4. Ms. Nazia Sehar, Senior Program Officer, JICA further added that a rigorous follow-up is being undertaken by the Technical Expert Team of Japan to examine and evaluate the capacity and sustainability of the system already in place. Under Technical Cooperation Program (TCP), Training, Maintenance of equipment and laboratories and consumables are being provided. Therefore, it would not be possible for Govt. of Japan to commit for provision of remaining 6+1 monitoring stations at this point of time until TCP is successfully completed by November, 2011. For the same purpose extension of the project period seems essential for

continuation of the project and ownership of the project by EPAs to continue it on long-term sustainable basis and the outcome is quite satisfactory so far.

5. Dr. Aurengzeb, Chief (Environment), Planning & Development Division stated that delayed release of fund is one of the main reasons for partial implementation of the project. As the allocated funds have not been provided and consumed, therefore, the extension of project is justified within the same scope. All participants were of the unanimous view that if TCP and EMS Project don't continue simultaneously, it may result into the total collapse of existing monitoring system.

Decisions:

On the basis of the discussion, the following decisions were taken:

i. EMS Project shall be extended till November, 2011 which is also a completion date of TCP within the same scope.

ii. All pending recruitments of the project shall be done immediately.

iii. JICA shall put up the case for provision of remaining 6+1 Monitoring Station in its review meeting to be held in June, 2010.

iv. The project activities shall be closely monitored and evaluated by JICA and Pak-EPA.

The meeting ended with a vote of thanks by the Chair.

NOTE FOR RECORD

Environmental Monitoring System (EMS)-TCP Project

Purpose:

a) To discuss the possibility of JICA Grant Aid assistance for providing remaining 6 monitoring stations; and

b) Agree on the extension of existing PC-1 up to the TCP closing date, i.e., November 2010

Meeting with:

1. Mr. Kamran Qureshii, Additional Secretary, Ministry of Environment
2. Mr. Asif S. Khan, Director General, Pak EPA
3. Mr. Asad Ullah Faiz, Project Director-EMS Project and Director, Pak EPA
4. Dr. Raja Aurangzeb Khan, Chief-Environment, Planning Commission

Meeting held on/at: March 30, 2010 at Committee Room of Ministry of Environment, Islamabad

Attended fro JICA Pakistan Office:

1. Mr. Tomoharu Otake, Chief Representative, JICA Pakistan Office
2. Mr. Toshiya SATO, Senior Representative, JICA Pakistan Office
3. Mr. Kozono, Representative, JICA Pakistan Office
4. Ms. Nazia Seher, Senior Programme Officer, JICA Pakistan Office

Prepared By: Nazia Seher
Endorsed By: Chief Representative, JICA Pakistan Office
Prepared on: March 30, 2010

1. Background:

This meeting was coordinated by Pak EPA, in consultation with JICA Pakistan Office, to follow-up on the key decision[1] taken at the PSC meeting of the project. The purpose of the meeting was: a) to discuss the possibility of JICA Grant Aid assistance for providing remaining 6 monitoring stations; and b) agree on the extension of existing PC-1 up to the TCP closing date, i.e., November 2011. For this purpose JICA Pakistan Office examined the exsisting project related documents, held internal discussions, and consulted with JICA HDQ. The details of the referred documents and key relevant points, in a chronological order, were summarized in the enclosed Matrix, which was also used for sharing the historical background information regarding grant Aid and Technical Cooperation Project. Similarly, Pak EPA had also examined its records and have had consultations with Ministry of Environment and Planning Commission especially regarding the extension of exsisting PC-1

[1] Decision number 5.3, page 7, Note for Record, Technical Cooperation Project Environmental Monitoring System Project Steering Committee (PSC) Meeting held on 17 February 2010

in line with the TCP closing date, i.e., up to November 2011. A summary of discussion and agreed points is presented in the following section.

Summary of Discussion and Key results:

1. **Possibility of JICA Grant Aid assistance for providing remaining 6 monitoring stations:**

Chief Representative (CR) explained that **it is not possible for JICA to consider "now" the possibility of granting remaining 6 monitoring stations as** per the exsisting PC-1 mainly because:

1.1. prior to opening the dialogue on the expansion of present EMS system it is necessary that the EPAs have sufficient capacity and financial resources to run and sustain the present EMS setup

1.2. Japanese side has already formally informed EAD that there is no intention in 2009 to accept its request for providing remaining monitoring stations (submitted on 16 Feb 2009) because this proposal should be considered after the completion of the on-going TCP.

1.3. It is too early to assess the technical and financial capacity of EPAs at this stage of the project. The earliest possible time for capacity assessment would be August 2011, i.e., three months prior to the project completion when the project will receive a Terminal Evaluation Mission.

At the query and request of Pak EPA, CR also informed that the Mid term evaluation Mission is expected in June 2010, which would also be requested to examine the present level of capacities of EPAs and then follow-up in detail through the Terminal Evaluation Mission.

2. **Agree on the extension of existing PC-1 up to the TCP closing date, i.e., November 2010**

Pak EPA informed the Additional Secretary of Ministry of Environment, with the confirmation of Chief Environment of Planning Commission, that at PSC meeting Secretary, in principle, agreed to one year extension of present PC-1 (From July 2010-June 2011). This proposal was floated to the Secretary as there was one opinion that it may not be possible for Secretary to approve more than one year extension. This issue has been discussed with Planning Commission Chief-Environment, which has confirmed that Secretary of Ministry of Environment has the authority to approve more than one year extension of PC-1 if the scope of PC-1 is not changed/revised and there is valid justification for extension. Keeping in view the necessity of extending the exsisting PC-1 duration up to the TCP closing date the Additional Secretary was requested to extend the duration of exsisting PC-1 for next 18 months, i.e., form July 2010-November/Decmber[2] 2011.

Additional Secretary agreed to the extension of present PC-1 for another 18 months.

Additional Secretary also decided to request JICA to assess the capacities of EPAs during the Mid Term Evaluation in June 2010 and share the results with Government of Pakistan.

[2] According to RD & M/M of TCP EMS project will conclude in November 2010, whereas, according to the JET project will conclude in December 2011. It was for this reason the extension was requested for 18 months but it needs to be verified again with JET & JHQ prior to the submission of revised PC-1 to the Secretary for his approval.

Chief Environment also suggested to Pak EPA that it should also explore the possibility of getting the remaining monitoring stations from some other donor during the extended PC-1 extension.

Pak EPA also stressed the need for continuing the dialogue with JICA for possible further support for the remaining monitoring stations. JICA Chief informed that JICA has much interest in this project and is open at the moment.

END.

MINUTES OF MEETING
BETWEEN THE JAPAN INTERNATIONAL COOPERATION AGENCY AND
THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF
THE ISLAMIC REPUBLIC OF PAKISTAN
ON THE 2nd PROJECT STEERING COMMITTEE ON
THE TECHNICAL COOPERATION FOR
ESTABLISHMENT OF ENVIRONEMTAL MONITORING SYSTEM

Islamabad, March 03, 2011

Mr. Daisaku Kiyota
Team Leader
JICA Expert Team
Government of Japan

Khawaja Muhammad Naeem
Secretary
Ministry of Environment
Islamic Republic of Pakistan

Mir Hussain Ali
Secretary, Environment & Alternate Energy
Government of Sindh
Islamic Republic of Pakistan

Mr. Asad Ullah Faiz
Director General
Pak-EPA
Islamic Republic of Pakistan

For. Hussain Director EPA KP
Dr. Muhammad Bashir Khan
Director General
Khyber Pakhtunkhwa-EPA
Islamic Republic of Pakistan

Dr. Shagufta Shahjahan
Director General
Punjab-EPA
Islamic Republic of Pakistan

Mr. Abdullah Jan
Director General
Balochistan-EPA
Islamic Republic of Pakistan

Mr. Naeem Ahmed Mughal
Director General
Sindh-EPA
Islamic Republic of Pakistan

Dr. Aurangzeb Khan
Chief Environment
Planning Commission
Islamic Republic of Pakistan

Mr. Waqar Hussain Abbasi
Deputy Secretary (Japan)
Economic Affairs Division
Islamic Republic of Pakistan

(Witness)

Mr. Toshiya Sato
Chief Representative
JICA Pakistan Office

I. Introduction

This is the minutes of meeting of the Second Project Steering Committee (hereinafter referred to as "PSC") for the "Technical Cooperation for Establishment of Environmental Monitoring System" (hereinafter referred to as "the Project") agreed between the Government of Islamic Republic of Pakistan and the Government of Japan in November 2008. The main objectives of the PSC were: a) to explain the third year activities, b) to explain the progress of the Project, c) to modify the project design and project design matrix (PDM), and d) to share and discuss the issues to be considered for the operation of the Project as well as the future sustainability of the Project. Khawaja Muhammad Naeem, Secretary, Ministry of Environment chaired the meeting.

II. Third Year Activities

The leader of the JICA Expert Team (hereafter referred to as "JET"), Mr. Kiyota briefly explained the outline of the Project. He said that from the Japanese side, PC-I EMS consists of two parts, one is Grant Aid Project which is the donated part, and the other is TCP-EMS which provides the training by using the donated equipment aiming for enhancing the capacity of conducting environmental monitoring activities with self-sustainability. The Project is aiming at strengthening the capacities of EPAs, in line with five project outputs, i.e., 1) Monitoring Plans, 2) Analytical Results, 3) QA/QC system, 4) Results of processing and interpretation and 5) Report for dissemination. It is essential that all five EPAs demonstrate their enhanced capacity in these areas, as this responsibility falls on the concerned officials of EPAs. He said that in JCC meeting, mainly technical subject and issues were discussed. However, in PSC, focus would be to discuss the issues which are beyond the control of JET for smooth implementation of the Project. And under given issues and constraints, JCC members discussed shrinking the size of the Project by revising the Project Design Matrix (PDM).

Mr. Kiyota explained that mainly due to non-accessibility to both KP-EPA and Balochistan-EPA under given security, the Expert team could not physically visit both of these EPAs and therefore, the outputs generated by both EPAs have less chance to fulfill the level of Final Evaluation which will be conducted in July 2011. Besides, "Shrinking" means the lowering of the indicators of the Project from an ambitious level to a more realistic & achievable level. It does not mean any kind of decrease of the present JET inputs to these two provinces.

Ms. Nazia pointed out that revising PDM does not mean reducing inputs and activities. It means that we are preparing ourselves for final evaluation by modifying some indicators of PDM. Since we have not provided same inputs to two EPAs, evaluating these EPAs by same indicators would be unfair to them.

III. Output from the Pakistan Side

Mr. Kiyota explained that the Expert Team has conducted series of trainings on: i) preparing monitoring plans, ii) Sampling & Analyzing, establishing QA/QC system, iii) and Preparing Reports, iv) & Database. The key of the project is to generate the outputs from Pakistan side (meaning that the EPAs have developed their capacities in these areas & are now capable of preparing their own plans & reports in line with point i-iv). Now at the end of 2nd year, Counterparts are generating results right now. So far, some part of monitoring plans, analytical results, QA/QC system and Reports have been prepared while having difficulties in acquiring full-fledged outputs due to the conditions explained as above. Besides, due to the financial constraints of the Government of Pakistan, the Expert side had to input necessary expenses like O&M cost and expenses of trainings which is obligation of Pak-EPA.

Dr. Hussain Ahmed, Director KP-EPA, mentioned that Khyber Pakhtunkhwa-EPA is grateful to JICA for providing financial assistance in the form of monitoring equipment. He said that KP-EPA has already taken steps to providing display board and electronic for dissemination of information to media. The TCP-EMS project has not only developed human resources but also enhanced their capabilities.

Secretary said that JICA Expert Team should prepare master trainers in Pakistan. Mr. Kiyota conveyed

that JET is working on it.

IV. PC-I Budget & Equipment Damage

Mr. Kiyota continued to give explanation of the status of the Project and mentioned about the problem of equipment damage. He said that it is another constraint of the Project in which continuous failure of the equipment is being occurred due to load shedding and power fluctuation. Ms. Nazia added the issue of non-availability of necessary budget, in spite of the fact that Pak EPA has been requesting for this budget against an approved PC-1, which is continuously & adversely affecting the Project Activities and therefore having negative implications on the project outputs, e.g., equipment cannot be fully utilized &/or maintained; staff cannot be recruited & there are no funds to ensure the participation of EPA staff in to training activities etc.

Ms. Nazia explained that JICA had dispatched the Expert Team to Pakistan in order to provide training to EPA personnel in monitoring and analysis while all the finances for equipment maintenance and repair work had to be contributed from the Govt. of Pakistan. However, so far, EPAs do not have funds to maintain the equipment and thus, instead of EPAs, JICA has been bearing O & M cost of the project which is about Rs. 43 Million till now. (Presently, Pak-EPA requires about Rs 57 million for recruitment and completion of construction of building in addition to the above). Ms. Naiza pointed out that the equipment provided under the Grant Aid is extremely sophisticated & sensitive. It is prone to continuous damage due to the ongoing load-shedding. Secretary suggested to utilize solar energy. However, Mr. Kiyota said that constant supply of electricity is essential and solar system does not fulfill the requirement for all the equipment.

However, Secretary suggested that a grid solar mix may be worked in order to minimize the use of generator. Secretary Sindh said that Sindh-EPA has requested the Sindh Government for approval of an Annual Development Programme (ADP) project of Rs. 200 Million which includes a component for maintenance of Equipment provided under Grant Aid project. He requested that the share of Provincial EPAs as per PC-I should be provided from EMS project. Director General, Punjab-EPA said that the Punjab-EPA requires Rs. 10 million for repair and maintenance of the equipment to which the Secretary, Government of Punjab has principally agreed. She also informed that Punjab-EPA has requested the Government of Punjab to approve a five years ADP project of Rs. 200 million which includes the O & M cost of laboratory equipment along with the provision of new monitoring equipment. Dr. Hussain, Khyber Pakhtunkhwa-EPA said that KP-EPA has also forwarded a request to the Provincial Government for budget. He conveyed that a Provincial EMS project is also being executed at KP-EPA for maintenance of EMS equipment. He also requested for mobile air monitoring station for Khyber Pakhtunkhwa-EPA. Mr. Muhammad Khan, Balochistan EPA requested for mobile air monitoring station and heavy generator. Mr. Faiz said that while allocating PC-I PSDP budget, Government of Pakistan only provided Rs. 18 million in 2010-11 instead of Rs. 100 Million which was approved by the Finance Division.

Secretary, Ministry of Environment asked about yearly requirement of funds for repair and maintenance of monitoring equipment required by all EPAs. He promised to make Rs. 100 Million available for EMS project within very short time. Secretary pointed out that MoE will provide assistance, O & M cost and Human resources till June, 2011 and therefore, Provincial EPAs should get the required funds to be included in non-development budget of Provincial EPAs. Secretary said that we will make a deadline two months before the project completion data and ensure that all activities complete within the project period.

Ms. Nazia mentioned that PSC members should consider the two scenarios before then: first is the fate of the project after June 2011 and second is the provision of Rs. 100 million to be made available for provincial EPAs.

V. Recruitment & Regularization of EMS Staff

Mr. Kiyota conveyed that the recruitment under EMS project has not been undertaken so far. Secretary said that the recruitment will be conducted within 15 days under given conditions and simultaneously we will request Ministry of Foreign Affairs for visit of the team to both EPAs while we will guarantee security. Mr. Kozono conveyed the JICA's point of view that it may not be possible to get the permission.

Ms. Nazia pointed out that after completion of the project, PC-IV should be prepared which is a requirement for regularization of project. She said that Punjab and Sindh EPAs have already initiated the process of regularization and that Balochistan and Khyber Pakhtunkhwa EPAs should also put their efforts to regularize the EMS project. Ms. Nazia requested the Secretary, Ministry of Environment to extend the contract of EMS staff after June 2011. She said that our first priority is to extend the contract of EMS staff and the other is to complete the staff recruitment.

Secretary, Sindh said that only about 20% recruitment has been done and the remaining part should be completed at the earliest possible so that all EMS staff may be regularized by the Provincial Governments. Dr. Hussain Ahmed, Director, Khyber Pakhtunkhwa-EPA pointed out the concern about the sustainability of the project; O&M cost and staff issue. Therefore, he proposed that the Federal Minister for Environment may write to the Provincial Chief Ministers to resolve these issues. Mr. Shams said that the executive order of Provincial Chief Minister is required for regularization of EMS staff without going through Public Service Commission. Secretary said that first KP-EPA and Balochistan-EPA should convey their consent that they will regularize the trained staff, and then Ministry of Environment will support Khyber Pakhtunkhwa-EPA in the process of sustainability of the project. Mr. Faiz said that again Ministry of Environment has centralized the recruitment process whereby Federal Government emphasize on quota system which is not acceptable to Provincial EPAs. Secretary Sindh said that the staff should be from the relevant province.

Secretary said that Ministry of Environment will ensure that Provincial EPAs will have staff of their own province only and that for EMS project Ministry of Environment will not follow quota system. Ministry of Environment will oblige the provinces and in this regard, MoE will coordinate with the Establishmem Division in this regard.

Dr. Shagufta, Punjab-EPA conveyed that in 2009, all remaining recruitment was completed by Punjab-EPA as per the direction of MoE, however, all the process was rejected by the MoE later on. She said that interviews for EMS job should be held at respective Provincial-EPAs. Secretary said that there will be problem of delay if we hold recruitment process at all EPAs and it is, therefore, better to do at federal level.

Secretary said that the Ministry of Environment will ensure the extension of contract of EMS staff. He promised that the Ministry of Environment would write letters to Chief Ministers for regularization of EMS staff trained by the JICA Experts while he pointed out that the planned supply of above funds can be sustained till November, 2011. He further said that we also propose that in Public Service Commission examination, we may mention it a criteria for job that the candidate must have obtained trainings on the air monitoring stations by putting this condition; all the EMS trained staff may be retained.

Ms. Nazia pointed out that for securing EMS staff including new recruitment, the required funds should be reflected in 2011-12 budget of all provinces. She also requested all EPAs for timeline of the targets. Secretary said that all EPAs should get response from respective Provincial governments and convey to MoE within six weeks so that MoE may start the recruitment process.

VI. Issue of Remaining Grant under PC-I

Mr. Faiz, Acting Director General of Pak-EPA, mentioned that as far as foreign component is concerned, water monitoring stations were supposed to be established by the Japanese side but these stations have not been provided in Grant Aid Project. Under the grant Aid project, GOJ did not setup water monitoring stations, but has provided all required water monitoring equipment to all EPAs, upgraded lab at Provincial EPAs and established a Central Laboratory for Environmental Analysis & Networking (CLEAN) lab at Federal EPA in Islamabad.

Secretary Sindh asked that in which manner the remaining grant under Grant Aid EMS Project will be provided to the Government of Pakistan. Mr. Kozono said that the project was conducted on basis of agreement and not on the basis of PC-I so JICA will undertake activities agreed upon by both parties and as reflected in agreements. Secretary, Ministry of Environment asked Mr. Faiz to clarify all issues regarding remaining funds and equipment from the Japanese side. Mr. Faiz said that JICA has provided Rs. 614 Million out of Rs. 973 million. He requested JICA to evaluate remaining water monitoring stations

will be provide by JICA.

Ms. Nazia explained that PC-I has foreign and local components. It does not say that the FC component will be JICA's share under the approved PC-I. She said that EAD, Planning Commission, MoE and all EPAs should work for clarification of this issue. PC-I implementation is not still completed. Then TC-EMS was executed which is different from grant aid project. JICA considered it as a request from the GOP side & then examined the feasibility of its assistance for the implementation of PC-I. For this purpose various studies were undertaken ("Basic Design Study" etc); & extensive bilateral discussions & consultations took place between Government of Japan, EAD, Planning Commission, Ministry of Environment & EPAs etc. This process helped JICA to define the scope of its assistance first through the Grant Aid scheme (Note verbal, RD etc) & now for the TC-EMS (Minutes of Meeting & RD etc) project assistance. For GOP, JICA assistance is covering a certain scope of PC-I & has not committed for the full implementation of the PC-I. All these aspects have been agreed & documented in the relevant bilateral documents.

Secretary said that PC-I should be reviewed by all stakeholders. He said that subsequent efforts should be brought into record and the final shape of agreed PC-I should be confirmed. He said that as Exchange of Notes is the main document so it should be referred to while reviewing the PC-I.

VII. Final Evaluation of the Project

Mr. Nesaki mentioned that regarding final evaluation, team of JICA headquarter will arrive in July 2011. And the Team will evaluate the progress of the project based on the JICA evaluation guideline but for this project especially focusing on two major points. First is the sustainability of this project, and the second is the institutional issue which means the appointment of required EMS staff and their regularization. Also he addressed the issues on the operation of the project. He said that JET is facing the communication problem that is caused by simple management and administration issues at EPAs, such as deadlines are not properly followed due to which JET has to do extra work on behalf of EPAs. Second is that some of the counterparts lack basic science and mathematics knowledge which causes another extra effort on part of JET. Third is the disciplinary issue of staff in daily operation, such as skipping work and absence from job. These issues affect negatively on the smooth implementation of the project.

It was conveyed to Secretary that in JCC meeting, it was agreed that each EPA shall hold bimonthly meetings starting from March 2011 for better communication among EPA in an effort to make the project sustainable. He also confirmed the fact that JCC members all agreed on revised PDM and pointed out that it will be basis of the final evaluation.

Secretary requested Mr. Nesaki to share a document & provide information in terms of: a) what would be the scope of evaluation; b) how would it be conducted; c) what would be the role of EPAs in the evaluation: d) how EPAs would be evaluated (against which parameters); e) tasks that each EPAs must complete before the evaluation; & f) any other important information that may be helpful for the EPAs. The point of consideration should be that all EPAs are fully prepared for the evaluation & have undertaken the necessary activities & the evaluation does not come to them as surprise.

Mr. Sato pointed out that for smooth implementation of the Project, it should be confirmed that the timelines for processing regularization for EMS staff is June 2011 while the completion of additional recruitment of date is also June, 2011 before the start of the 3rd year trainings. Secretary, Ministry of Environment agreed upon these timelines for recruitment and regularization of staff.

Chairperson acknowledged the point and concluded the PSC.

ATTACHMENT 1 LIST OF PARTICIPANTS FOR 2nd PSC
ATTACHMENT 2 AGENDA FOR 2nd PROJECT STEERING COMMITTEE MEETING

ATTACHMENT 1

List of participants in the 2nd Project Steering Committee Meeting on March 3, 2011 at the Committee Room of Ministry of Environment.

Pakistan Side

Ministry of Environment

Khawaja Muhammad Naeem	Secretary
Syed Muhammad Nouman	Deputy Secretary (Admn-II)

Environment & Alternative Energy Department, Government of Sindh

Mir Hussain Ali	Secretary

Planning Commission

Dr. Aurangzeb Khan	Chief Environment

Economic Affairs Division

Mr. Waqar Hussain Abbasi	Deputy Secretary (Japan)

Pakistan Environmental Protection Agency (Pak-EPA)

Mr. Asad Ullah Faiz	Director General
Ms. Farzana Altaf Shah	Deputy Director (Lab.)

Punjab Environmental Protection Agency (Punjab-EPA)

Dr. Shagufta Shahjahan	Director General
Mr. Waseem Ahsan Cheema	Deputy Director (Lab.)

Sindh Environmental Protection Agency (Sindh-EPA)

Mr. S. M. Yahya	Director (Lab.)

Khyber Pakhtunkhwa (KPK) Environmental Protection Agency (KPK-EPA)

Dr. Hussain Ahmed	Director
Mr. Shams-ur-Rehman	Chief Analyst

Balochistan Environmental Protection Agency (Balochistan-EPA)

Mr. Muhammad Khan	Deputy Director (Technical)

Japan Side

Mr. Toshiya Sato	Senior Representative, JICA Pakistan Office
Mr. Tomohiro Kozono	Representative, JICA Pakistan Office
Ms. Nazia Seher	Senior Programme Officer, JICA Pakistan Office
Mr. Shun Nesaki	Assistant Director, Environmental Management Division 1, Global Environment Department, JICA Headquarter
Mr. Daisaku Kiyota	Team Leader / Monitoring Planning, JICA Expert Team
Mr. Takashi Onuma	Water Monitoring, JICA Expert Team
Ms. Anjum Rasheed	Coordinator, JICA Expert Team

ATTACHMENT 2
AGENDA FOR 2nd PROJECT STEERING COMMITTEE MEETING

Date: 3rd March, 2011
Time: 11:00 AM
Venue: Committee Room, Ministry of Environment

Programme:

Time	Discussion Points
11:00 – 11:10	Opening Remarks by Secretary, Ministry of Environment
11:10 – 11:15	Introduction of the participants
11:15 – 11:30	Progress of the project (Achievement) and Modification of Project Design Matrix by Mr. KIYOTA Daisaku, Leader, JICA Expert Team (JET)
11:30 – 11:45	Issues to be discussed for proceeding of the project: • Budget • Perpetuation of EMS staff and contract matters • Sustainability of the Monitoring Activities and related equipment • Others
11:45 – 12:20	Wrap-up Meeting & Discussion
12:20 – 12:30	Remarks by Mr. Nesaki Shun, Assistant Director, Global Environment Department, JICA Head Office
12:30 – 12:40	Closing Remarks by Secretary, Ministry of Environment
	Lunch

MINUTES OF MEETING

ON

THE THIRD PROJECT STEERING COMMITTEE

FOR

TECHNICAL COOPERATION FOR ESTABLISHMENT

OF ENVIRONMENTAL MONITORING SYSTEM

IN THE ISLAMIC REPUBLIC OF PAKISTAN

Islamabad, December 15, 2011

Mr. Daisaku Kiyota
Team Leader
JICA Expert Team
Government of Japan

Mr. Muhammad Ashraf
Joint Secretary
Ministry of National Disaster Management
Islamic Republic of Pakistan

Mir Hussain Ali
Secretary, Environment & Alternate Energy
Government of Sindh
Islamic Republic of Pakistan

Mr. Asif S. Khan
Director General
Pak-EPA
Islamic Republic of Pakistan

Dr. Muhammad Bashir Khan
Director General
Khyber Pakhtunkhwa-EPA
Islamic Republic of Pakistan

Mr. Mehr Maqsood Ahmad Lak
Director General
Punjab-EPA
Islamic Republic of Pakistan

Mr. Abdullah Jan
Secretary/Director General
Balochistan-EPA
Islamic Republic of Pakistan

Mr. Muhammad Naseem Nawaz
Director General
Sindh-EPA
Islamic Republic of Pakistan

Dr. Aurangzeb Khan
Chief Environment
Planning Commission
Islamic Republic of Pakistan

Mr. Waqar Hussain Abbasi
Deputy Secretary (Japan)
Economic Affairs Division
Islamic Republic of Pakistan

(Witness)

Mr. Toshiya Sato
Senior Representative
JICA Pakistan Office

These are Minutes of meeting of the 3rd Project Steering Committee (PSC) of the "Technical Cooperation for Establishment of Environmental Monitoring System" project (to be referred to as "the Project" in subsequent text) agreed between the Government of Islamic Republic of Pakistan and the Government of Japan in November 2008.

The meeting was chaired by Mr. Muhammad Ashraf, Joint Secretary of Ministry of National Disaster Management.

The main objective of the PSC was to share the result of Terminal Evaluation of the Project .and arrive at consensus based recommendations for the follow-up on key issues (PC-1s approvals and staff retention/regularization where applicable) during the post project period.

The Joint Secretary opened the meeting with a positive reference to the Joint Terminal Evaluation Report that shows that the situation is quite encouraging. He also availed this opportunity to take into account the concerns shown in the Joint Terminal Evaluation Report particularly with reference to staff contract extension, retention and availability of funds necessary for sustainability of the project. He requested the provinces to put in their best efforts in managing the EMS project so that the main issues of funds and staff are adequately taken care of.

The brief summary of discussion and agreements made during the PSC meeting are provided in the subsequent text.

Mr. Asif S. Khan, Director General, Pak-EPA welcomed the Joint Secretary in the meeting. While acknowledging, that under the EMS Grant Aid project, water quality monitoring laboratories of Provincial EPAs were upgraded and air quality monitoring fixed stations as well as mobile stations were provided by Government of Japan to Pak EPA as well as provincial EPAs. In addition to this a Central Laboratory was also constructed in Islamabad under the administrative control of Pak EPA. Later on, in the second phase, JICA provided its technical cooperation for capacity development of the staff with a uniquely designed training program. Today's meeting has been scheduled to share the results of the evaluation of the technical cooperation project supported by JICA.

Though the project has contributed significantly in capacity development of the EPA staff,

however, there is a need for further capacity development of the staff as well as to ensure the sustainability of the project. JICA Expert Team has provided counterpart trainings to the EPAs staff including EMS project staff. He thanked the people of Japan and JICA Expert Team for conducting unique trainings starting from fundamentals and then taking them to the advance level in spite of the fact that the trainees academic background, knowledge and experience varied among EPAs. He said that he is greatly pleased to acknowledge JET who have made committed efforts and trained the staff of EPAs with all sincerity.

While briefly touching on the mandate of PSC, i.e., to oversee and resolve issues emerging from the implementation of the project attention was also drawn towards the issue of sustainability of project that lies in the availability of sufficient funds necessary for extending the contracts of the EMS staff and continuous utilization of the equipment after the project closing..

The D.G, Pak EPA also mentioned that the provinces have taken good initiatives to ensure the funds availability and to retain the trained EMS staff. It was mentioned that it was JICA's first project in Environment sector in Pakistan. He said that the terminal evaluation of the project is very important which may lead to future cooperation of JICA. It is for these two reasons alone the importance of ensuring project sustainability by federal and provincial governments of Pakistan after the project closing itself becomes extremely important.

Referring that Pakistan Environmental Protection Council (PEPC) had approved Pakistan Clean Air Programme (PCAP) to tackle the issues related to environmental pollution and EMS activities are a support to initiatives taken by PEPC. He said that later on, EPAs may move to vehicular monitoring system. The D.G, Pak EPA also said that the Terminal Evaluation is based on the agenda; i.e., achievements and the way forward.

The Team leader JET expressed his gratitude towards all of the participants. Then he briefed the Committee about TCP-EMS. The implementation of the project commenced with dispatch of JET in February, 2009. The equipment at Federal and Provincial EPAs was repaired in 2009 and 2010; Project Design Matrix (PDM) was first modified in June, 2010, however, second modification was made in March, 2011. Furthermore, counterpart trainings were conducted from June, 2009 till November, 2011.

Then he briefed about the outputs, implementation schedule and PDM overview of TCP-EMS. Sharing the project strategy, it was mentioned that it relied primarily on Pakistani counterparts and trainees for the implementation of project activities with technical guidance and backstopping provided by JICA Expert Team. Therefore, Counterparts (Pak-EPA and Provincial EPA), supported by JICA Expert Team, are considered the driving force of the project.

He also highlighted the obstacles of the project as follows:

- The equipment provided to Federal and Provincial EPAs under the EMS Grant Aid Project was damaged due to load-shedding and lack of maintenances and, therefore, JICA decided to fix the equipment.
- Because of unstable security conditions, GOJ decided not to dispatch JET to Peshawar and Quetta due to which, JET had no opportunity to directly visit these EPAs.

He said that the JICA Expert Team prioritized the project activities considering the conditions of equipment, technical skills of the staff involved and the term for this project. He informed that the activities conducted by JET included:

a) Preparation of Monitoring Plans;
b) Sampling & Analysis under the Plans;
c) QA/QC Activities;
d) Processing and Interpreting and
e) Dissemination

The improvement plan for data communication was explained. JET upgraded the data communication system at all EPAs in February, 2011. At the time of up-gradation of data communication system, KP-EPA conveyed that it does not require another line of DSL and, therefore, the line provided by JET was disconnected. Later on, KP-EPA requested for provision of DSL line which was provided. However, KP-EPA was informed that in order to perform the data collection from air monitoring station, the router and data logger at fixed station Peshawar have to be reprogrammed and settings of data collection system have to be changed at CLEAN Lab, Islamabad. This up-gradation has not been conducted by KP-EPA till now which has caused failure in central data collection at National Data Surveillance Centre, Pak-EPA.

The SOPs were prepared for air and water analysis and repair work at Federal and Provincial EPAs and data analysts was also undertaken. The key issues were flagged including continuous load shedding, non-availability of funds required for procurement of consumables necessary for running the equipment after the project closing; and the non-availability of funds required for contract extension and regularization of EMS staff.

Joint Secretary thanked Mr. Kiyota for sharing the details on the achievements of the project. He said that the volume of work done by JICA Expert Team is huge. The efforts of JET were appreciated and EPAs were advised to make the project sustainable without any compromise. It was assured that GOP will make this project sustainable and would not let the Japanese tax-payer money go waste. The Director Generals of all EPAs were also advised to put their efforts into it and to provide resources for the future sustainability of the project. It was also felt that the recruitment at Federal level and at respective EPAs should have been undertaken through respective implementing agencies. EPAs should have taken the lead role being the implementing agencies.

Mr. Noda gave a briefing on Terminal Evaluation, jointly conducted by JICA, Ministry of National Disaster Management, Economic Affairs Division and Planning Commission from Government of Pakistan.

It was mentioned that the EMS Grant Aid project started in August, 2005 and was completed in March, 2007. Later on, a Technical Cooperation Project for EMS was initiated in February, 2009 and would be completed in February, 2012. Accordingly the implementation structure of TCP-EMS was modified in June, 2011 due to the devolution taken place with regards to the Ministry of Environment. The five criteria used for evaluation was mentioned, the results of which are given below:

Relevance (Basically High):

- Needs to urgently address environmental issues
- In line with the National Policy
- Project design was partly overstrained.

Effectiveness (High):

- Knowledge and skills of technical staff are improved.

Efficiency (High):

- Despite unexpected troubles, inputs were converted into outputs resulting that the project purpose was achieved

Impact (Variable):

- Monitoring system continues to function in some EPAs.
- Other EPAs are still in process of budget confirmation.

Sustainability (Variable):

- Policy and technical contexts are favorable.
- The issue lies in financial sustainability.

It was stated that the project can be closed as scheduled as it has achieved the project purpose in a sense that each EPA is now capable to draft environmental monitoring plans, collect samples from monitoring sites, analyze them by using the equipment, compile the data and prepare monitoring reports. He said that one critical concern is financial sustainability after the project. Punjab-EPA and KP-EPA have confirmed the budget under new PC-1 while other EPAs are still in the process of securing the operational budget for environmental monitoring.

Following recommendations have been made under the Joint Terminal Evaluation Report:

i. Securing operational budget and regularization of the technical staff
ii. Follow-up monitoring
iii. Assessment of current capacity of each EPA for further improvement in terms of organizational capacity development
iv. Extension of the existing PC-1
v. Data sharing among EPAs
vi. Promoting organizational culture for sharing technical information within each EPA

He said that it has been learnt through execution of the EMS Grant Aid project and TCP-EMS that there is a need of developing a practical implementation mechanism in case of umbrella PC-1 and also provision of spare parts and consumables that are not locally available.

It was stated that the recommendations of evaluation will be monitored as a future

follow-up. He said that Terminal Evaluation Team has followed the evaluation guideline of JICA titled "New JICA Guidelines for Project Evaluation (First Edition)" for evaluation. He said that the data has been collected through interviews and documentation review, which was then analyzed for incorporation into the evaluation report. He said that the conclusion of Terminal Evaluation is that the TCP-EMS can be closed as scheduled as it has achieved the project purpose.

It was initially planned to hire 120 personnel under EMS project, but this number was later on reduced to 100 under revised PC-I. However, when TCP-EMS was initiated, a baseline survey was conducted by JET. Under the information collected through Baseline Survey, working groups were developed at each EPA comprising of personnel working in the field of air and water quality monitoring.

Director General, Punjab-EPA conveyed his thanks to the Japanese people and JET for donating very expensive equipment. It was assured that EMS staff would be absorbed in another project 'Establishment of Air Quality Monitoring System in Punjab' which has been approved by the Government of Punjab.

Dr. Muhammad Bashir Khan, Director General, KP-EPA conveyed his thanks for the support provided by People of Japan. It was pointed out that the efficiency of EPAs has been increased because of EMS project. It was informed that KP-EPA has got sanctioned staff positions on regular side and KP-EPA will try its best to hire the EMS staff for these positions have to be processed according to provincial recruitment procedure. It was informed to the forum that presently, sixteen development projects are being executed by KP-EPA which includes 'Establishment of Environmental Monitoring System', Provision of Mobile Environmental Monitoring Laboratories for Regional offices of EPA in Khyber Pakhtunkhwa' and 'Monitoring of Soil and Groundwater near Industrial Areas and Suggestions for Various Mitigation Measures'. He informed that under another project 'Installation of Digital Data Display Boards and its Integration with PTV', KP-EPA has installed two digital display boards one each at EPA building and one in the centre of city in order to display the air quality data on daily basis.

Mr. S. M. Yahya, Director (Lab.), Sindh-EPA conveyed his thanks to JET for providing technical support to Sindh-EPA enabling to implement the Pakistan Environmental Protection Act, 1997 in its real spirit. The Sindh-EPA is grateful to JET for providing the

trainings to EPAs staff. It was informed that Sindh-EPA has initiated the approval process for PC-I of 3 years duration which has already been submitted to P&D Department, Government of Sindh. Sindh-EPA has got an allocation of Rs. 50 Million for this PC-I in the current financial year. He assured that these initiatives will be continued and staff will be retained in this PC-I following prescribed provincial rules.

Mr. Muhammad Khan, Deputy Director (Technical), Balochistan-EPA thanked all PSC members. It was mentioned that before this project, EPAs were unable to analyze all parameters of NEQS due to non-availability of required equipment. However, under TCP-EMS, uniform methods and guidelines have been developed. However, not a single person was hired for Balochistan-EPA under EMS project. It was conveyed that Balochistan-EPA has requested the provincial government to provide additional annual regular budget of Rs. 2.0 Million for sustainability of EMS.

Mr. Kiyota highlighted the issue that after devolution, EMS staff at provincial EPAs could not get extension of their contracts and, so there is no possibility of getting their salary from 1st July to 30th November, 2011. It was requested to the Ministry of National Disaster Management to put efforts in securing the contracts extension of EMS staff at Provincial EPAs and also their salaries till the completion of the project. The Joint Secretary assured that Ministry will undertake all necessary efforts to ensure the contract extension of the EMS staff.

Dr. Muhammad Bashir Khan, Director General, KP-EPA said that after devolution, Provincial EPAs could not get the funds of EMS project and that is the reason due to which the contracts of EMS staff have not been extended. Furthermore, he pointed out that it is not sure whether these EMS trained staff would be hired by KP-EPA under new PC-I. It was stated that there would be high chances to recruit two EMS personnel but KP-EPA cannot ensure their absorption. He further informed that Mr. Hassan Adnan, Data Analyst at KP-EPA cannot be absorbed by KP-EPA because he has domicile of Punjab which is not acceptable to the Government of Khyber Pakhtunkhwa. On request of Mr. Kiyota, D.G, Pak EPA agreed to consider absorption of Mr. Hassan Adnan at Pak-EPA

Mr. Waqar Hussain Abbasi, Deputy Secretary (Japan), EAD said that Pak-EPA may provide funds to Provincial EPAs for salary of EMS staff. Dr. Aurangzeb Khan, Chief (Environment),

Planning Commission said that Pak-EPA may request to Planning Commission through Ministry of National Disaster Management for provision of salary of EMS staff working with Provincial EPAs utilizing Pak-EPA's allocated funds.

Joint Secretary said that there are two issues related to sustainability: O&M cost and regularization of EMS staff. The provincial EPAs were appreciated for assuring absorption of EMS staff in other projects. It was proposed that a Coordination Committee may be composed to monitor the progress made by all EPAs with respect to sustainability of EMS.

Mr. Narn Otsubo, First Secretary, Embassy of Japan appreciated JET for providing extensive trainings to the EPAs' staff and also for achieving the objectives of the project. It was emphasized that EPAs to put efforts to make EMS sustainable.

Mr. Waqar Abbasi congratulated the JICA Expert Team on successful completion of TC-EMS project. It was mentioned that the level of commitment from JET is much more than Pakistan side which could easily be judged by the number of participants from both sides. Moreover, EAD receives several projects for JICA Grant. Then after consultation and long discussions with the Embassy of Japan and examination of the project proposals, projects are selected for JICA's support.. It usually takes 1-2 years for a project to be accepted by Japanese Government, which is a time consuming and lengthy process. In that sense there is an opportunity cost for each project. Thus there is a need to take advantage from expertise and technical transfer of Japan.

The EAD is grateful to JET for understanding the importance of sustainability of this project which is a matter of mutual concern. Now it is up to the Government of Pakistan and EPAs to make this project sustainable which has been supported for several years by GoJ. The EAD cannot emphasize more than this. Now that the Ministry of NDM has been established, therefore, it may coordinate with the EPAs to ensure positive progress towards the future sustainability of EMS project. The politeness of Japanese was acknowledged who are always giving positive gesture. He said that M/o NDM has a key role towards sustainability and that EAD will provide full support. He also requested Mr. Kiyota to convey to Secretary, M/o NDM the commitment of EAD to continue to cooperate and follow-up on the sustainability of EMS.

Dr. Aurangzeb Khan conveyed his thanks to all the participants of PSC. He also mentioned

that he learnt a lot professionally by dealing with this project. He appreciated the commitment shown by JET throughout the project and the way JET persuaded it especially because of being so much concerned about the people of Pakistan. He said that JET has brought Pakistani side to such a level where commitment from provinces are forthcoming. He said that it is only because of JET that EPAs capacity has been enhanced. He said that it is fortunate to have people like Mr. Asif and Mr. Zia Ul Islam to work on this project. He assured that the issues related to sustainability of EMS would be resolved. The assurance of Planning Commission was reiterated for this project.

Mr. Toshiya Sato, Senior Representative, JICA Pakistan Office showed his concern regarding sustainability of EMS. It was mentioned that the funding for the EMS Grant Aid project and TCP-EMS have been provided using Japanese tax-payers' money. It was conveyed that People of Japan are very much concerned about the sustainability of EMS as otherwise all their money is wasted. Now, it is the responsibility of Government of Pakistan to get benefit from EMS project by maintaining and utilizing the equipment provided under the EMS Grant Aid project and to retain the EMS staff trained by JET under the TCP-EMS. It was requested to the Government of Pakistan to make this project sustainable.

Mr. Nesaki acknowledged Mr. Zia Ul Islam, Director (EIA./Mont.), Pak-EPA for his efforts and cooperation with JET for EMS throughout TCP-EMS.

Recommendation:

- Salary of EMS staff deployed in Provincial EPAs, for the period from 1st July to 30th November, 2011, may be paid from the balance amount available in the approved PC-I of Pak EPA. This is necessary as no funds have been earmarked for this period in the provincial ADPs and/or PC-Is under approval process.

- EPAs should put in their best efforts aiming at the retention as well as regularization of trained EMS staff.as it is necessary for the overall continued institutional development of EPAs and sustainability of EMS. It is also envisioned that EPAs can deliver better with the skills and experiences of the trained human resource than without them.

- Provision of adequate funds to Federal and Provincial EPAs for sustainability of EMS project should be ensured by expediting the approval processes currently under process in EPAs.

- A post project follow-up coordination group shall be constituted to monitor and coordinate the efforts aiming at successful completion of PC-Is approval and subsequent EMS staff retention/regularization.

Other:

List of participants of PSC meeting is presented as Attachment 1.

Attachment 1

List of Participants

Pakistan side

1) Mr. Muhammad Ashraf, Joint Secretary, Ministry of National Disaster Management
2) Dr. Aurangzeb Khan, Chief Environment, Planning Commission
3) Mr. Waqar Hussain Abbasi, Deputy Secretary (Japan), Economic Affairs Division
4) Mr. Asif Shuja Khan, Director General, Pak-EPA
5) Dr. Muhammad Bashir Khan, Director General, KP-EPA
6) Mr. Mehr Maqsoor Ahmad Lak, Director General, Punjab-EPA
7) Mr. Zia Ul Islam, Director (EIA/Mont.), Pak-EPA
8) Syed Muhammad Yahya, Director (Lab.), Sindh-EPA
9) Mr. Muhammad Khan, Deputy Director (Technical), Balochistan-EPA
10) Mr. Ali Abbas, Deputy Director (Lab.), Punjab-EPA
11) Syed Zaheer Gillani, National Project Manager, MEA Secretariat, M/o NDM

Japan Side

12) JICA Pakistan Office
13) Mr. Toshiya Sato, Senior Representative
14) Mr. Kozono Tomohiro, Representative
15) Ms. Nazia Sehar, Senior Programme Officer

JICA Headquarter

16) Mr. Hideo Noda, Director, Environment Management Division1, Global Environment Department
17) Mr. Shun Nesaki, Assistant Director, Environment Management Division1, Global Environment Department

Embassy of Japan

18) Mr. Narn Otsubo, First Secretary, Embassy of Japan

JICA Expert Team

19) Mr. Daisaku Kiyota, Team Leader
20) Mr. Toshiharu Ochi, Air Monitoring Expert
21) Mr. Kageyama Kozuyoshi, QA/QC Expert
22) Mr. Takashi Onuma, Water Monitoring Expert
23) Mr. Kenichi Kuramoto, Water Monitoring Expert
24) Mr. Michiaki Hosono, Water Monitoring Expert
25) Mr. Takahisa Sato, Air Monitoring Expert
26) Mr. Masato Motoki, Coordinator
27) Ms. Anjum Rasheed, Chief Coordinator