TABLE- IX.21

FINANCIAL CONSTRUCTION COST

IRRIGATION WORKS, QUINALI (A) RIVER BASIN AREA

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	25,022	28,119	53,141
(2) General	2,502	2,812	5,314
(3) Supervision & Miscellaneous	1,651	1,856	3,507
(4) Profit	2,918	3,278	6,196
(5) Contractor's Tax	963	1,082	2,045
Sub total	33,056	37,147	70,203
2. Engineering Cost	-	7,020	7,020
3. Project Management Cost	-	3,510	3,510
4. Contingency			
(1) Physical Contingency	6,611	7,429	14,040
(2) Price Escalation	-	-	-
Total	39,667	55,106	94,773

Remarks: Above amount excludes price escalation.

TABLE-IX.22

FINANCIAL CONSTRUCTION COST

IRRIGATION WORKS, QUINALI (B) RIVER BASIN AREA

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	10,289	11,735	22,024
(2) General	1,029	1,174	2,203
(3) Supervision & Miscellaneous	679	774	1,453
(4) Profit	1,200	1,368	2,568
(5) Contractor's Tax	396	452	848
Sub total	13,593	15,503	29,096
2. Engineering Cost	-	2,910	2,910
3. Project Management Cost	-	1,455	1,455
4. Contingency			
(1) Physical Contingency	2,719	3,101	5,820
(2) Price Escalation	-	-	-
Total	16,312	22,969	39,281

Remarks: Above amount excludes price escalation.

TABLE-IX.23 ESTIMATED CONSTRUCTION COST DISBURSEMENT SCHEDULE

QUINALI (A) RIVER BASIN, SABO WORKS

(Unit: 1,000 Pesos)

Description	2nd Year		3rd Year		4th Year		5th Year		6th Year		7th Year		8th Year		Total	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local
Sabo Works																
1. Contract Cost																
(1) Direct Cost	762	1,378	2,674	4,841	2,519	4,562	2,608	4,723	3,617	6,549	4,685	8,482	2,911	5,271	19,776	35,806
(2) General	76	138	268	484	252	456	261	473	362	655	468	848	291	527	1,978	3,581
(3) Supervision & Miscellaneous	51	91	176	319	166	301	172	312	239	432	309	560	192	348	1,305	2,363
(4) Profit	89	161	312	564	294	532	304	551	422	764	546	989	339	614	2,306	4,175
(5) Contractor's Tax	30	53	103	186	97	176	100	182	139	252	180	326	112	203	761	1,378
Sub total	1,008	1,821	3,533	6,394	3,328	6,027	3,445	6,241	4,779	8,652	6,188	11,205	3,845	6,963	26,126	47,303
2. Right of Way/ Land Acquisition	-	1	-	3	-	2	-	3	-	4	-	4	-	3	-	20
3. Resettlement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Engineering Cost	-	282	-	993	-	935	-	969	-	1,343	-	1,740	-	1,081	-	7,343
5. Project Management Cost	-	142	-	496	-	468	-	484	-	671	-	870	-	540	-	3,671
6. Contingency																
(1) Physical Contingency	151	273	530	959	499	904	517	936	717	1,298	928	1,681	577	1,044	3,919	7,095
(2) Price Escalation	146	622	795	3,492	1,034	4,686	1,387	6,484	2,393	11,545	3,748	18,691	2,761	14,241	12,264	59,761
Total	1,305	3,141	4,858	12,337	4,861	13,022	5,349	15,117	7,889	23,513	10,864	34,191	7,183	23,872	42,309	125,193

TABLE- IX.24 ESTIMATED CONSTRUCTION COST DISBURSEMENT SCHEDULE

QUINALI (A) RIVER BASIN, RIVER IMPROVEMENT WORKS

(Unit: 1,000 Pesos)

Description	1st Year		2nd Year		3rd Year		4th Year		5th Year		6th Year		7th Year		8th Year		9th Year		10th Year		Total	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local
River Improvement Works																						
1. Contract Cost																						
(1) Direct Cost	13,329	12,338	13,329	12,338	21,580	19,822	30,890	28,722	29,832	27,508	29,832	26,497	28,562	22,856	18,618	24,070	12,483	15,979	13,118	12,135	211,573	202,265
(2) General	1,333	1,234	1,333	1,234	2,158	1,982	3,089	2,872	2,983	2,751	2,983	2,650	2,856	2,286	1,862	2,407	1,248	1,598	1,312	1,213	21,157	20,227
(3) Supervision & Miscellaneous	880	814	880	814	1,424	1,308	2,039	1,896	1,969	1,816	1,969	1,749	1,885	1,508	1,229	1,589	824	1,055	865	800	13,964	13,349
(4) Profit	1,554	1,439	1,554	1,439	2,516	2,311	3,602	3,349	3,478	3,207	3,478	3,090	3,330	2,665	2,171	2,807	1,456	1,863	1,530	1,414	24,669	23,584
(5) Contractor's Tax	513	475	513	475	830	763	1,188	1,105	1,148	1,058	1,148	1,020	1,099	879	716	926	480	615	506	467	8,141	7,783
Sub total	17,609	16,300	17,609	16,300	28,508	26,186	40,808	37,944	39,410	36,340	39,410	35,006	37,732	30,194	24,596	31,799	16,491	21,110	17,331	16,029	279,504	267,208
2. Right of Way/ Land Acquisition	-	1,078	-	1,078	-	1,731	-	2,509	-	2,403	-	2,315	-	1,996	-	2,102	-	1,396	-	1,060	-	17,668
3. Resettlement	-	1,482	-	1,482	-	2,381	-	3,450	-	3,304	-	3,182	-	2,745	-	2,891	-	1,919	-	1,457	-	24,293
4. Engineering Cost	1,761	1,630	1,761	1,630	2,851	2,619	4,081	3,794	3,941	3,634	3,941	3,501	3,773	3,019	2,459	3,180	1,649	2,111	1,733	1,603	27,950	26,721
5. Project Management Cost	-	1,695	-	1,695	-	2,735	-	3,938	-	3,788	-	3,721	-	3,396	-	2,820	-	1,880	-	1,667	-	27,335
6. Contingency																						
(1) Physical Contingency	3,522	3,260	3,522	3,260	5,702	5,237	8,162	7,589	7,882	7,268	7,882	7,001	7,546	6,039	4,919	6,360	3,298	4,222	3,466	3,206	55,901	53,442
(2) Price Escalation	1,356	2,884	2,807	6,143	7,056	15,790	13,951	32,556	17,453	41,673	21,706	51,638	25,144	55,930	19,431	70,966	15,210	55,946	18,439	55,240	142,553	388,766
Total	24,248	28,329	25,699	31,588	44,117	56,679	67,002	91,780	68,686	98,410	72,939	106,364	74,195	103,319	51,405	120,118	36,648	88,584	40,969	80,262	505,908	805,433

TABLE- IX.25 ESTIMATED CONSTRUCTION COST DISBURSEMENT SCHEDULE

QUINALI (A) RIVER BASIN, IRRIGATION WORKS

(Unit: 1,000 Pesos)

Description	1st Year		2nd Year		3rd Year		4th Year		Total	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local
Irrigation Works										
1. Contract Cost										
(1) Direct Cost	3,554	3,993	7,156	8,042	7,156	8,042	7,156	8,042	25,022	28,119
(2) General	355	399	716	805	716	804	715	804	2,502	2,812
(3) Supervision & Miscellaneous	235	263	472	531	472	531	472	531	1,651	1,856
(4) Profit	416	465	834	938	834	938	834	938	2,918	3,278
(5) Contractor's Tax	138	154	275	309	275	309	275	309	963	1,082
Sub total	4,698	5,274	9,453	10,625	9,453	10,624	9,452	10,624	33,056	37,147
2. Right of Way/ Land Acquisition	-	-	-	-	-	-	-	-	-	-
3. Resettlement	-	-	-	-	-	-	-	-	-	-
4. Engineering Cost	-	996	-	2,008	-	2,008	-	2,008	-	7,020
5. Project Management Cost	-	498	-	1,004	-	1,004	-	1,004	-	3,510
6. Contingency										
(1) Physical Contingency	940	1,054	1,891	2,125	1,890	2,125	1,890	2,125	6,611	7,429
(2) Price Escalation	329	880	1,370	3,776	2,127	6,039	2,938	8,597	6,764	19,292
Total	5,967	8,702	12,714	19,538	13,470	21,800	14,280	24,358	46,431	74,398

TABLE-IX.26 ESTIMATED CONSTRUCTION COST DISBURSEMENT SCHEDULE

YAWA RIVER BASIN, SABO WORKS

(Unit: 1,000 Pesos)

Description	1st Year		2nd Year		3rd Year		4th Year		5th Year		6th Year		7th Year		Total	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local
Sabo Works																
1. Contract Cost																
(1) Direct Cost	2,848	5,376	3,418	6,451	2,359	4,452	2,700	5,095	3,734	7,048	2,808	5,300	1,186	2,236	19,053	35,958
(2) General	285	538	342	645	236	445	270	509	373	705	281	530	118	224	1,905	3,596
(3) Supervision & Miscellaneous	188	355	225	426	156	294	178	336	246	465	186	350	78	147	1,257	2,373
(4) Profit	332	627	398	752	275	519	315	594	435	822	328	618	138	261	2,221	4,193
(5) Contractor's Tax	110	207	132	248	91	171	104	196	143	271	108	205	45	86	733	1,384
Sub total	3,763	7,103	4,515	8,522	3,117	5,881	3,567	6,730	4,931	9,311	3,711	7,003	1,565	2,954	25,169	47,504
2. Right of Way/ Land Acquisition	-	3	-	4	-	2	-	3	-	4	-	3	-	1	-	20
3. Resettlement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Engineering Cost	-	1,086	-	1,304	-	900	-	1,030	-	1,424	-	1,071	-	452	-	7,267
5. Project Management Cost	-	543	-	652	-	450	-	515	-	712	-	536	-	226	-	3,634
6. Contingency																
(1) Physical Contingency	564	1,065	677	1,278	468	882	535	1,010	740	1,397	557	1,051	234	443	3,775	7,126
(2) Price Escalation	263	1,136	654	2,902	701	3,203	1,109	5,219	1,985	9,646	1,858	9,319	948	4,914	7,518	36,339
Total	4,590	10,936	5,846	14,662	4,286	11,318	5,211	14,507	7,656	22,494	6,126	18,983	2,747	8,990	36,462	101,890

TABLE-IX.27 ESTIMATED CONSTRUCTION COST DISBURSEMENT SCHEDULE

YAWA RIVER BASIN, RIVER IMPROVEMENT WORKS

(Unit: 1,000 Pesos)

Description	2nd Year		3rd Year		4th Year		5th Year		Total	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local
River Improvement Works										
1. Contract Cost										
(1) Direct Cost	2,316	3,336	2,317	3,337	2,317	3,337	2,316	3,336	9,266	13,346
(2) General	232	334	232	334	232	334	231	333	927	1,335
(3) Supervision & Miscellaneous	153	220	153	221	153	220	152	220	611	881
(4) Profit	270	389	270	389	270	389	270	389	1,080	1,556
(5) Contractor's Tax	89	128	90	129	89	129	89	128	357	514
Sub total	3,060	4,407	3,062	4,410	3,061	4,409	3,058	4,406	12,241	17,632
2. Right of Way/ Land Acquisition	-	97	-	98	-	98	-	97	-	390
3. Resettlement	-	283	-	284	-	284	-	283	-	1,134
4. Engineering Cost	306	441	306	441	306	441	306	440	1,224	1,763
5. Project Management Cost	-	373	-	374	-	374	-	373	-	1,494
6. Contingency										
(1) Physical Contingency	612	881	612	882	612	882	612	881	2,448	3,526
(2) Price Escalation	488	1,551	758	2,483	1,046	3,535	1,354	4,717	3,646	12,286
Total	4,466	8,033	4,738	8,972	5,025	10,023	5,330	11,197	19,559	38,225

TABLE- IX.28 ESTIMATED CONSTRUCTION COST DISBURSEMENT SCHEDULE

QUINALI (B) RIVER BASIN, SABO WORKS

(Unit: 1,000 Pesos)

Description	8th Year		Total	
	Foreign	Local	Foreign	Local
Sabo Works				
1. Contract Cost				
(1) Direct Cost	1,138	1,922	1,138	1,922
(2) Direct Cost	114	192	114	192
(3) Supervision & Miscellaneous	75	127	75	127
(4) Profit	133	224	133	224
(5) Contractor's Tax	44	74	44	74
Sub total	1,504	2,539	1,504	2,539
2. Right of Way/Land Acquisition	-	1	-	1
3. Resettlement	-	-	-	-
4. Engineering Cost	-	404	-	404
5. Project Management Cost	-	202	-	202
6. Contingency				
(1) Physical Contingency	226	381	226	381
(2) Price Escalation	1,080	5,217	1,080	5,217
Total	2,810	8,744	2,810	8,744

TABLE- IX.29 ESTIMATED CONSTRUCTION COST DISBURSEMENT SCHEDULE

QUINALI (B) RIVER BASIN, RIVER IMPROVEMENT WORKS

(Unit: 1,000 Pesos)

Description	1st Year		2nd Year		3rd Year		4th Year		5th Year		6th Year		7th Year		8th Year		Total	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local
River Improvement Works																		
1. Contract Cost																		
(1) Direct Cost	8,028	7,218	8,028	7,218	12,041	10,826	12,041	10,826	12,041	10,826	12,041	10,826	8,028	7,218	8,027	7,218	80,275	72,176
(2) General	803	722	803	722	1,204	1,083	1,204	1,083	1,204	1,083	1,204	1,083	803	721	803	721	8,028	7,218
(3) Supervision & Miscellaneous	530	476	530	476	795	715	795	715	795	715	795	715	529	476	529	475	5,298	4,763
(4) Profit	936	842	936	842	1,404	1,262	1,404	1,262	1,404	1,262	1,404	1,262	936	842	936	842	9,360	8,416
(5) Contractor's Tax	309	277	309	278	463	417	463	417	463	417	463	417	310	277	309	277	3,089	2,777
Sub total	10,606	9,535	10,606	9,536	15,907	14,303	15,907	14,303	15,907	14,303	15,907	14,303	10,606	9,534	10,604	9,533	106,050	95,350
2. Right of Way/ Land Acquisition	-	360	-	361	-	541	-	541	-	541	-	541	-	360	-	360	-	3,605
3. Resettlement	-	87	-	88	-	132	-	132	-	132	-	132	-	88	-	87	-	878
4. Engineering Cost	1,061	954	1,061	954	1,591	1,430	1,591	1,430	1,591	1,430	1,590	1,430	1,060	954	1,060	953	10,605	9,535
5. Project Management Cost	-	1,007	-	1,007	-	1,511	-	1,511	-	1,510	-	1,510	-	1,007	-	1,007	-	10,070
6. Contingency																		
(1) Physical Contingency	2,121	1,906	2,121	1,907	3,182	2,861	3,182	2,861	3,181	2,861	3,181	2,861	2,121	1,907	2,121	1,906	21,210	19,070
(2) Price Escalation	817	1,553	1,691	3,308	3,937	7,935	5,438	11,297	7,045	15,092	8,761	19,385	7,067	16,154	8,377	19,801	43,133	94,525
Total	14,605	15,402	15,479	17,161	24,617	28,713	26,118	32,075	27,724	35,869	29,439	40,162	20,854	30,004	22,162	33,647	180,998	233,033

TABLE-IX.30 ESTIMATED CONSTRUCTION COST DISBURSEMENT SCHEDULE

QUINALI (B) RIVER BASIN, IRRIGATION WORKS

(Unit: 1,000 Pesos)

Description	2nd Year		3rd Year		4th Year		Total	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local
Irrigation Works								
1. Contract Cost								
(1) Direct Cost	3,429	3,911	3,430	3,912	3,430	3,912	10,289	11,735
(2) General	343	391	343	392	343	391	1,029	1,174
(3) Supervision & Miscellaneous	227	258	226	258	226	258	679	774
(4) Profit	400	456	400	456	400	456	1,200	1,368
(5) Contractor's Tax	132	150	132	151	132	151	396	452
Sub total	4,531	5,166	4,531	5,169	4,531	5,168	13,593	15,503
2. Right of Way/ Land Acquisition	-	-	-	-	-	-	-	-
3. Resettlement	-	-	-	-	-	-	-	-
4. Engineering Cost	-	970	-	970	-	970	-	2,910
5. Project Management Cost	-	485	-	485	-	485	-	1,455
6. Contingency								
(1) Physical Contingency	906	1,033	907	1,034	906	1,034	2,719	3,101
(2) Price Escalation	656	1,833	1,019	2,934	1,408	4,176	3,083	8,943
Total	6,093	9,487	6,457	10,592	6,845	11,833	19,395	31,912

TABLE-IX.31 ECONOMIC COST FOR QUINALI(A) RIVER BASIN

(Unit: 1,000 Pesos)

Description	Sabo Works		River Improvement Works		Irrigation Works		Total		Grand Total
	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion	
1. Contract Cost									
(1) Direct Cost	19,776	30,585	211,573	149,213	25,022	21,773	256,371	201,571	457,942
(2) General	1,978	3,058	21,157	14,921	2,502	2,177	25,637	20,156	45,793
(3) Supervision & Miscellaneous	1,305	2,019	13,964	9,848	1,651	1,437	16,920	13,304	30,224
(4) Profit	-	-	-	-	-	-	-	-	-
(5) Contractor's Tax	-	-	-	-	-	-	-	-	-
Sub total	23,059	35,662	246,694	173,982	29,175	25,387	298,928	235,031	533,959
2. Right of Way/Site Acquisition	-	-	-	-	-	-	-	-	-
3. Resettlement	-	-	-	24,293	-	-	-	24,293	24,293
4. Engineering Cost	-	5,872	24,669	17,398	-	5,456	24,669	28,726	53,395
5. Project Management Cost	-	2,936	-	21,034	-	2,728	-	26,698	26,698
6. Contingency									
(1) Physical Contingency	3,459	5,349	49,339	34,797	5,835	5,077	58,633	45,223	103,856
(2) Price Escalation	-	-	-	-	-	-	-	-	-
Total	26,518	49,819	320,702	271,504	35,010	38,648	382,230	359,971	742,201

TABLE-IX.32 ECONOMIC COST FOR YAWA RIVER BASIN

(Unit: 1,000 Pesos)

Description	Sabo Works		River Improvement Works		Irrigation Works		Total		Grand Total
	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion	
1. Contract Cost									
(1) Direct Cost	19,053	30,948	9,266	10,865	-	-	28,319	41,813	70,132
(2) General	1,905	3,095	927	1,087	-	-	2,832	4,182	7,014
(3) Supervision & Miscellaneous	1,257	2,043	611	717	-	-	1,868	2,760	4,628
(4) Profit	-	-	-	-	-	-	-	-	-
(5) Contractor's Tax	-	-	-	-	-	-	-	-	-
Sub total	22,215	36,086	10,804	12,669	-	-	33,019	48,755	81,774
2. Right of Way/S te Acquisition	-	-	-	-	-	-	-	-	-
3. Resettlement	-	-	-	1,134	-	-	-	1,134	1,134
4. Engineering Cost	-	5,830	1,080	1,267	-	-	1,080	7,097	8,177
5. Project Management Cost	-	2,915	-	1,173	-	-	-	4,088	4,088
6. Contingency									
(1) Physical Contingency	3,332	5,413	2,161	2,534	-	-	5,493	7,947	13,440
(2) Price Escalation	-	-	-	-	-	-	-	-	-
Total	25,547	50,244	14,045	18,777	-	-	39,592	69,021	108,613

TABLE-IX.33 ECONOMIC COST FOR QUINALI(B) RIVER BASIN

(Unit: 1,000 Pesos)

Description	Sabo Works		River Improvement Works		Irrigation Works		Total		Grand Total
	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion	
1. Contract Cost									
(1) Direct Cost	1,138	1,636	80,275	52,360	10,289	9,145	91,702	63,141	154,843
(2) General	114	164	8,028	5,236	1,029	915	9,171	6,315	15,486
(3) Supervision & Miscellaneous	75	108	5,298	3,456	679	603	6,052	4,167	10,219
(4) Profit	-	-	-	-	-	-	-	-	-
(5) Contractor's Tax	-	-	-	-	-	-	-	-	-
Sub total	1,327	1,908	93,601	61,052	11,997	10,663	106,925	73,623	180,548
2. Right of Way/Site Acquisition	-	-	-	-	-	-	-	-	-
3. Resettlement	-	-	-	878	-	-	-	878	878
4. Engineering Cost	-	324	9,360	6,105	-	2,266	19,360	8,695	18,055
5. Project Management Cost	-	162	-	7,733	-	1,133	-	9,028	9,028
6. Contingency									
(1) Physical Contingency	199	286	18,720	12,210	2,399	2,133	21,318	14,629	35,947
(2) Price Escalation	-	-	-	-	-	-	-	-	-
Total	1,526	2,680	121,681	87,978	14,396	16,195	137,603	106,853	244,456

TABLE-IX.34
ECONOMIC COST, SABO PROJECT

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost			
(a) Quirangay River	4,054	7,109	11,163
(b) Tumpa River	49	37	86
(c) Maninila River	403	667	1,070
(d) Masarawag River	3,928	5,920	9,848
(e) Ogsong River	3,205	5,885	9,090
(f) Nasisi River	8,137	10,967	19,104
(g) Anuling River	7,616	12,391	20,007
(h) Budiao River	4,402	7,201	11,603
(i) Pawa-Burabod River	7,035	11,356	18,391
Sub total (1)	38,829	61,533	100,362
(2) General	3,883	6,153	10,036
(3) Supervision & Miscellaneous	2,563	4,061	6,624
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	45,275	71,747	117,022
2. Right of Way/Site Acquisition	-	-	-
3. Engineering Cost	-	11,702	11,702
4. Project Management Cost	-	5,851	5,851
5. Contingency			
(1) Physical Contingency	6,791	10,762	17,553
(2) Price Escalation	-	-	-
Total	52,066	100,062	152,128

TABLE-IX.35
ECONOMIC CONSTRUCTION COST
SABO WORKS, QUINALI(A) RIVER BASIN

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost			
(a) Quirangay River	4,054	7,109	11,163
(b) Tumpa River	49	37	86
(c) Maninila River	403	667	1,070
(d) Masarawag River	3,928	5,920	9,848
(e) Ogsong River	3,205	5,885	9,090
(f) Nasisi River	8,137	10,967	19,104
Sub total (1)	19,776	30,585	50,361
(2) General	1,978	3,058	5,036
(3) Supervision & Miscellaneous	1,305	2,019	3,324
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	23,059	35,662	58,721
2. Engineering Cost	-	5,872	5,872
3. Project Management Cost	-	2,936	2,936
4. Contingency			
(1) Physical Contingency	3,459	5,349	8,808
(2) Price Escalation	-	-	-
Total	26,518	49,819	76,337

TABLE-IX.36
ECONOMIC CONSTRUCTION COST
SABO WORKS, YAWA RIVER BASIN

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost			
(a) Anuling River	7,616	12,391	20,007
(b) Budiao River	4,402	7,201	11,603
(c) Pawa-Burabod River	7,035	11,356	18,391
Sub total (1)	19,053	30,948	50,001
(2) General	1,905	3,095	5,000
(3) Supervision & Miscellaneous	1,257	2,043	3,300
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	22,215	36,086	58,301
2. Engineering Cost	-	5,830	5,830
3. Project Management Cost	-	2,915	2,915
4. Contingency			
(1) Physical Contingency	3,332	5,413	8,745
(2) Price Escalation	-	-	-
Total	25,547	50,244	75,791

TABLE-IX.37
ECONOMIC CONSTRUCTION COST
SABO WORKS, QUINALI(B) RIVER

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost (Buang River)	1,138	1,636	2,774
(2) General	114	164	278
(3) Supervision & Miscellaneous	75	108	183
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	1,327	1,908	3,235
2. Engineering Cost	-	324	324
3. Project Management Cost	-	162	162
4. Contingency			
(1) Physical Contingency	199	286	485
(2) Price Escalation	-	-	-
Total	1,526	2,680	4,206

TABLE-IX.38
ECONOMIC CONSTRUCTION COST
SABO WORKS, QUIRANGAY RIVER

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	4,054	7,109	11,163
(2) General	405	711	1,116
(3) Supervision & Miscellaneous	268	469	737
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	4,727	8,289	13,016
2. Engineering Cost	-	1,302	1,302
3. Project Management Cost	-	651	651
4. Contingency			
(1) Physical Contingency	709	1,243	1,952
(2) Price Escalation	-	-	-
Total	5,436	11,485	16,921

TABLE-IX.39
ECONOMIC CONSTRUCTION COST
SABO WORKS, TUMPA RIVER

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	49	37	86
(2) General	5	4	9
(3) Supervision & Miscellaneous	3	2	5
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	57	43	100
2. Engineering Cost	-	10	10
3. Project Management Cost	-	5	5
4. Contingency			
(1) Physical Contingency	9	6	15
(2) Price Escalation	-	-	-
Total	56	64	130

TABLE-IX.40
ECONOMIC CONSTRUCTION COST
SABO WORKS, MANINILA RIVER

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	403	667	1,070
(2) General	40	68	108
(3) Supervision & Miscellaneous	27	44	71
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	470	779	1,249
2. Engineering Cost	-	125	125
3. Project Management Cost	-	62	62
4. Contingency			
(1) Physical Contingency	70	117	187
(2) Price Escalation	-	-	-
Total	540	1,083	1,623

TABLE-IX.41
ECONOMIC CONSTRUCTION COST
SABO WORKS, MASARAWAG RIVER

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	3,928	5,920	9,848
(2) General	393	592	985
(3) Supervision & Miscellaneous	259	391	650
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	4,580	6,903	11,483
2. Engineering Cost	-	1,148	1,148
3. Project Management Cost	-	574	574
4. Contingency			
(1) Physical Contingency	687	1,035	1,722
(2) Price Escalation	-	-	-
Total	5,267	9,660	14,927

TABLE-IX.42
ECONOMIC CONSTRUCTION COST
SABO WORKS, OGSONG RIVER
(NABONTON CREEK)

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	3,205	5,885	9,090
(2) General	321	589	910
(3) Supervision & Miscellaneous	212	388	600
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	3,738	6,862	10,600
2. Engineering Cost	-	1,060	1,060
3. Project Management Cost	-	530	530
4. Contingency			
(1) Physical Contingency	560	1,029	1,589
(2) Price Escalation	-	-	-
Total	4,298	9,481	13,779

TABLE-IX.43
ECONOMIC CONSTRUCTION COST
SABO WORKS, NASISI RIVER

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	8,137	10,967	19,104
(2) General	814	1,097	1,911
(3) Supervision & Miscellaneous	537	723	1,260
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	9,488	12,787	22,275
2. Engineering Cost	-	2,227	2,227
3. Project Management Cost	-	1,114	1,114
4. Contingency			
(1) Physical Contingency	1,423	1,918	3,341
(2) Price Escalation	-	-	-
Total	10,911	18,046	28,957

TABLE-IX.44
ECONOMIC CONSTRUCTION COST
SABO WORKS, ANULING RIVER

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	7,616	12,391	20,007
(2) General	762	1,239	2,001
(3) Supervision & Miscellaneous	503	818	1,321
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	8,881	14,448	23,329
2. Engineering Cost	-	2,333	2,333
3. Project Management Cost	-	1,166	1,166
4. Contingency			
(1) Physical Contingency	1,332	2,167	3,499
(2) Price Escalation	-	-	-
Total	10,213	20,114	30,327

TABLE-IX.45
ECONOMIC CONSTRUCTION COST
SABO WORKS, BUDIAO RIVER

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	4,402	7,201	11,603
(2) General	440	720	1,160
(3) Supervision & Miscellaneous	291	475	766
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	5,133	8,396	13,529
2. Engineering Cost	-	1,353	1,353
3. Project Management Cost	-	676	676
4. Contingency			
(1) Physical Contingency	770	1,259	2,029
(2) Price Escalation	-	-	-
Total	5,903	11,684	17,587

TABLE-IX.46
ECONOMIC CONSTRUCTION COST
SABO WORKS, PAWA-BURABOD RIVER

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	7,035	11,356	18,391
(2) General	704	1,136	1,840
(3) Supervision & Miscellaneous	464	749	1,213
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	8,203	13,241	21,444
2. Engineering Cost	-	2,144	2,144
3. Project Management Cost	-	1,072	1,072
4. Contingency			
(1) Physical Contingency	1,231	1,986	3,217
(2) Price Escalation	-	-	-
Total	9,434	18,443	27,877

TABLE- IX.47

ECONOMIC CONSTRUCTION COST

RIVER IMPROVEMENT WORKS, QUINALI (A) RIVER

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	211,573	149,213	360,786
(2) General	21,157	14,921	36,078
(3) Supervision & Miscellaneous	13,964	9,848	23,812
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	246,694	173,982	420,676
2. Right of Way/Site Acquisition	-	-	-
3. Resettlement	-	24,293	24,293
4. Engineering Cost	24,669	17,398	42,067
5. Project Management Cost	-	21,034	21,034
6. Contingency			
(1) Physical Contingency	49,339	34,797	84,136
(2) Price Escalation	-	-	-
Total	320,702	271,504	592,206

TABLE-IX.48

ECONOMIC CONSTRUCTION COST

RIVER IMPROVEMENT WORKS, QUINALI (A) RIVER

DIVERSION TO TALISAY RIVER

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	314,588	158,743	474,331
(2) General	31,459	15,874	47,333
(3) Supervision & Miscellaneous	20,763	10,477	31,240
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	366,810	185,094	551,904
2. Right of Way/Site Acquisition	-	-	-
3. Resettlement	-	13,604	13,604
4. Engineering Cost	36,681	18,509	55,190
5. Project Management Cost	-	27,595	27,595
6. Contingency			
(1) Physical Contingency	73,362	37,019	110,381
(2) Price Escalation	-	-	-
Total	476,853	281,821	758,674

TABLE-IX.49

ECONOMIC CONSTRUCTION COST

RIVER IMPROVEMENT WORKS, YAWA RIVER

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	9,266	10,865	20,131
(2) General	927	1,087	2,014
(3) Supervision & Miscellaneous	611	717	1,328
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	10,804	12,669	23,473
2. Right of Way/Site Acquisition	-	-	-
3. Resettlement	-	1,134	1,134
4. Engineering Cost	1,080	1,267	2,347
5. Project Management Cost	-	1,173	1,173
6. Contingency			
(1) Physical Contingency	2,161	2,534	4,695
(2) Price Escalation	-	-	-
Total	14,045	18,777	32,822

TABLE-IX.50

ECONOMIC CONSTRUCTION COST

RIVER IMPROVEMENT WORKS, QUINALI (B) RIVER

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	80,275	52,360	132,635
(2) General	8,028	5,236	13,264
(3) Supervision & Miscellaneous	5,298	3,456	8,754
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	93,601	61,052	154,653
2. Right of Way/Site Acquisition	-	-	-
3. Resettlement	-	878	878
4. Engineering Cost	9,360	6,105	15,465
5. Project Management Cost	-	7,733	7,733
6. Contingency			
(1) Physical Contingency	18,720	12,210	30,930
(2) Price Escalation	-	-	-
Total	121,681	87,978	209,659

TABLE-IX.51

ECONOMIC CONSTRUCTION COST

IRRIGATION WORKS, QUINALI (A) RIVER BASIN AREA

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	25,022	21,773	46,795
(2) General	2,502	2,177	4,679
(3) Supervision & Miscellaneous	1,651	1,437	4,088
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	29,175	25,387	54,562
2. Right of Way/Site Acquisition	-	-	-
3. Resettlement	-	-	-
4. Engineering Cost	-	5,456	5,456
5. Project Management Cost	-	2,728	2,728
6. Contingency			
(1) Physical Contingency	5,835	5,077	10,912
(2) Price Escalation	-	-	-
Total	35,010	38,648	73,658

TABLE-IX.52

ECONOMIC CONSTRUCTION COST

IRRIGATION WORKS, QUINALI (B) RIVER BASIN AREA

(Unit: 1,000 Pesos)

Description	Foreign Currency Portion	Local Currency Portion	Total
1. Contract Cost			
(1) Direct Cost	10,289	9,145	19,434
(2) General	1,029	915	1,944
(3) Supervision & Miscellaneous	679	603	1,282
(4) Profit	-	-	-
(5) Contractor's Tax	-	-	-
Sub total	11,997	10,663	22,660
2. Right of Way/Site Acquisition	-	-	-
3. Resettlement	-	-	-
4. Engineering Cost	-	2,266	2,266
5. Project Management Cost	-	1,133	1,133
6. Contingency			
(1) Physical Contingency	2,399	2,133	4,532
(2) Price Escalation	-	-	-
Total	14,396	16,195	30,591

TABLE-IX.53 ECONOMIC COST DISBURSEMENT SCHEDULE

QUINALI (A) RIVER BASIN, SABO WORKS

(Unit: 1,000 Pesos)

Description	2nd Year		3rd Year		4th Year		5th Year		6th Year		7th Year		8th Year		Total	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local
Sabo Works																
1. Contract Cost																
(1) Direct Cost	762	1,178	2,674	4,135	2,519	3,897	2,608	4,034	3,617	5,594	4,685	7,246	2,911	4,501	19,776	30,585
(2) General	76	118	267	414	252	390	261	403	362	559	469	724	291	450	1,978	3,058
(3) Supervision & Miscellaneous	51	78	176	274	166	257	172	266	239	369	309	478	192	297	1,305	2,019
(4) Profit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(5) Contractor's Tax	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub total	889	1,374	3,117	4,823	2,937	4,544	3,041	4,703	4,218	6,522	5,463	8,448	3,394	5,248	23,059	35,662
2. Right of Way/ Land Acquisition	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Resettlement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Engineering Cost	-	226	-	794	-	748	-	775	-	1,074	-	1,391	-	864	-	5,872
5. Project Management Cost	-	113	-	397	-	374	-	387	-	537	-	696	-	432	-	2,936
6. Contingency																
(1) Physical Contingency	133	206	468	724	441	681	456	706	633	978	819	1,267	509	787	3,459	5,349
(2) Price Escalation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1,022	1,919	3,585	6,738	3,378	6,347	3,497	6,571	4,851	9,111	6,282	11,802	3,903	7,331	26,518	49,819

TABLE-IX.54 ECONOMIC COST DISBURSEMENT SCHEDULE

QUINALI (A) RIVER BASIN, RIVER IMPROVEMENT WORKS

(Unit: 1,000 Pesos)

Description	1st Year		2nd Year		3rd Year		4th Year		5th Year		6th Year		7th Year		8th Year		9th Year		10th Year		Total	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local
River Improvement Works																						
1. Contract Cost																						
(1) Direct Cost	13,329	9,102	13,329	9,102	21,580	14,623	30,890	21,188	29,832	20,293	29,832	19,547	28,562	16,861	18,618	17,756	12,483	11,788	13,118	8,953	211,573	149,213
(2) General	1,333	910	1,333	910	2,158	1,462	3,089	2,119	2,983	2,029	2,983	1,955	2,856	1,686	1,862	1,776	1,248	1,179	1,312	895	21,157	14,921
(3) Supervision & Miscellaneous	880	601	880	601	1,424	965	2,039	1,398	1,969	1,339	1,969	1,290	1,885	1,113	1,229	1,172	824	778	865	591	13,964	9,848
(4) Profit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(5) Contractor's Tax	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub total	15,542	10,613	15,542	10,613	25,162	17,050	36,018	24,705	34,784	23,661	34,784	22,792	33,303	19,660	21,709	20,704	14,555	13,745	15,295	10,439	246,694	173,982
2. Right of Way/ Land Acquisition	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Resettlement	-	1,482	-	1,482	-	2,381	-	3,450	-	3,304	-	3,182	-	2,745	-	2,891	-	1,919	-	1,457	-	24,293
4. Engineering Cost	1,554	1,061	1,554	1,061	2,516	1,705	3,602	2,471	3,478	2,366	3,478	2,279	3,330	1,966	2,171	2,070	1,456	1,375	1,530	1,044	24,669	17,398
5. Project Management Cost	-	1,308	-	1,308	-	2,111	-	3,036	-	2,922	-	2,879	-	2,648	-	2,121	-	1,415	-	1,286	-	21,034
6. Contingency																						
(1) Physical Contingency	3,108	2,123	3,108	2,123	5,032	3,410	7,204	4,941	6,957	4,732	6,957	4,558	6,661	3,932	4,342	4,141	2,911	2,749	3,059	2,088	49,339	34,797
(2) Price Escalation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	20,204	16,587	20,204	16,587	32,710	26,657	46,824	38,603	45,219	36,985	45,219	35,690	43,294	30,951	28,222	31,927	18,922	21,203	19,884	16,314	320,702	271,504

TABLE-IX.55 ECONOMIC COST DISBURSEMENT SCHEDULE

QUINALI (A) RIVER BASIN, IRRIGATION WORKS

(Unit: 1,000 Pesos)

Description	1st Year		2nd Year		3rd Year		4th Year		Total	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local
Irrigation Works										
1. Contract Cost										
(1) Direct Cost	3,554	3,092	7,156	6,227	7,156	6,227	7,156	6,227	25,022	21,773
(2) General	355	309	716	623	716	623	715	622	2,502	2,177
(3) Supervision & Miscellaneous	235	204	472	411	472	411	472	411	1,651	1,437
(4) Profit	-	-	-	-	-	-	-	-	-	-
(5) Contractor's Tax	-	-	-	-	-	-	-	-	-	-
Sub total	4,144	3,605	8,344	7,261	8,344	7,261	8,343	7,260	29,175	25,387
2. Right of Way/ Land Acquisition	-	-	-	-	-	-	-	-	-	-
3. Resettlement	-	-	-	-	-	-	-	-	-	-
4. Engineering Cost	-	775	-	1,560	-	1,561	-	1,560	-	5,456
5. Project Management Cost	-	387	-	781	-	780	-	780	-	2,728
6. Contingency										
(1) Physical Contingency	829	721	1,669	1,452	1,669	1,452	1,668	1,452	5,835	5,077
(2) Price Escalation	-	-	-	-	-	-	-	-	-	-
Total	4,973	5,488	10,013	11,054	10,013	11,054	10,011	11,052	35,010	38,648

TABLE-IX.56 ECONOMIC COST DISBURSEMENT SCHEDULE

YAWA RIVER BASIN, SABO WORKS

(Unit: 1,000 Pesos)

Description	1st Year		2nd Year		3rd Year		4th Year		5th Year		6th Year		7th Year		Total	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreicn	Local
Sabo Works																
1. Contract Cost																
(1) Direct Cost	2,848	4,627	3,418	5,552	2,359	3,831	2,700	4,385	3,734	6,066	2,808	4,562	1,186	1,925	19,053	30,948
(2) General	285	463	342	555	236	383	270	438	373	607	281	456	118	193	1,905	3,095
(3) Supervision & Miscellaneous	188	305	225	367	156	253	178	290	246	400	186	301	78	127	1,257	2,043
(4) Profit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(5) Contractor's Tax	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub total	3,321	5,395	3,985	6,474	2,751	4,467	3,148	5,113	4,353	7,073	3,275	5,319	1,382	2,245	22,215	36,086
2. Right of Way/ Land Acquisition	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Resettlement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Engineering Cost	-	872	-	1,046	-	722	-	826	-	1,143	-	858	-	363	-	5,830
5. Project Management Cost	-	436	-	523	-	361	-	413	-	571	-	430	-	181	-	2,915
6. Contingency																
(1) Physical Contingency	498	809	598	971	413	670	472	767	653	1,061	491	798	207	337	3,332	5,413
(2) Price Escalation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	3,819	7,512	4,583	9,014	3,164	6,220	3,620	7,119	5,006	9,848	3,766	7,405	1,589	3,126	25,547	50,244

TABLE-IX.57 ECONOMIC COST DISBURSEMENT SCHEDULE

YAWA RIVER BASIN, RIVER IMPROVEMENT WORKS

(Unit: 1,000 Pesos)

Description	2nd Year		3rd Year		4th Year		5th Year		Total	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local
River Improvement Works										
1. Contract Cost										
(1) Direct Cost	2,316	2,716	2,317	2,717	2,317	2,716	2,316	2,716	9,266	10,865
(2) General	232	272	232	272	232	272	231	271	927	1,087
(3) Supervision & Miscellaneous	153	179	153	180	153	179	152	179	611	717
(4) Profit	-	-	-	-	-	-	-	-	-	-
(5) Contractor's Tax	-	-	-	-	-	-	-	-	-	-
Sub total	2,701	3,167	2,702	3,169	2,702	3,167	2,699	3,166	10,804	12,669
2. Right of Way/ Land Acquisition	-	-	-	-	-	-	-	-	-	-
3. Resettlement	-	283	-	284	-	284	-	283	-	1,134
4. Engineering Cost	270	316	270	317	270	317	270	317	1,080	1,267
5. Project Management Cost	-	293	-	294	-	293	-	293	-	1,173
6. Contingency										
(1) Physical Contingency	540	633	541	634	540	634	540	633	2,161	2,534
(2) Price Escalation	-	-	-	-	-	-	-	-	-	-
Total	3,511	4,692	3,513	4,698	3,512	4,695	3,509	4,692	14,045	18,777

TABLE-IX.58 ECONOMIC COST DISBURSEMENT SCHEDULE

QUINALI (B) RIVER BASIN, SABO WORKS

(Unit: 1,000 Pesos)

Description	8th Year		Total	
	Foreign	Local	Foreign	Local
Sabo Works				
1. Contract Cost				
(1) Direct Cost	1,138	1,636	1,138	1,636
(2) General	114	164	114	164
(3) Supervision & Miscellaneous	75	108	75	108
(4) Profit	-	-	-	-
(5) Contractor's Tax	-	-	-	-
Sub total	1,327	1,908	1,327	1,908
2. Right of Way/Land Acquisition	-	-	-	-
3. Resettlement	-	-	-	-
4. Engineering Cost2	-	324	-	324
5. Project Management Cost	-	162	-	162
6. Contingency				
(1) Physical Contingency	199	286	199	286
(2) Price Escalation	-	-	-	-
Total	1,526	2,680	1,526	2,680

TABLE-IX.59 ECONOMIC COST DISBURSEMENT SCHEDULE

QUINALI (B) RIVER BASIN, RIVER IMPROVEMENT WORKS

(Unit: 1,000 Pesos)

Description	1st Year		2nd Year		3rd Year		4th Year		5th Year		6th Year		7th Year		8th Year		Total	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local
River Improvement Works																		
1. Contract Cost																		
(1) Direct Cost	8,028	5,236	8,028	5,236	12,041	7,854	12,041	7,854	12,041	7,854	12,041	7,854	8,028	5,236	8,027	5,236	80,275	52,360
(2) General	803	524	803	524	1,204	785	1,204	785	1,204	785	1,204	785	803	524	803	524	8,028	5,236
(3) Supervision & Miscellaneous	530	346	530	346	795	518	795	518	795	518	795	518	529	346	529	346	5,298	3,456
(4) Profit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(5) Contractor's Tax	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub total	9,361	6,106	9,361	6,106	14,040	9,157	14,040	9,157	14,040	9,157	14,040	9,157	9,360	6,106	9,359	6,106	93,601	61,052
2. Right of Way/ Land Acquisition	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Resettlement	-	87	-	88	-	132	-	132	-	132	-	132	-	88	-	87	-	878
4. Engineering Cost	936	610	936	611	1,404	916	1,404	916	1,404	916	1,404	916	936	610	936	610	9,360	6,105
5. Project Management Cost	-	773	-	774	-	1,160	-	1,160	-	1,160	-	1,160	-	773	-	773	-	7,733
6. Contingency																		
(1) Physical Contingency	1,872	1,221	1,872	1,221	2,808	1,832	2,808	1,832	2,808	1,831	2,808	1,831	1,872	1,221	1,872	1,221	18,720	12,210
(2) Price Escalation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	12,169	8,797	12,169	8,800	18,252	13,197	18,252	13,197	18,252	13,196	18,252	13,196	12,168	8,798	12,167	8,797	121,681	87,978

TABLE-IX.60 ECONOMIC COST DISBURSEMENT SCHEDULE

QUINALI (B) RIVER BASIN, IRRIGATION WORKS

(Unit: 1,000 Pesos)

Description	2nd Year		3rd Year		4th Year		Total	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local
Irrigation Works								
1. Contract Cost								
(1) Direct Cost	3,429	3,048	3,430	3,049	3,430	3,048	10,289	9,145
(2) General	343	305	343	305	343	305	1,029	915
(3) Supervision & Miscellaneous	227	201	226	201	226	201	679	603
(4) Profit	-	-	-	-	-	-	-	-
(5) Contractor's Tax	-	-	-	-	-	-	-	-
Sub total	3,999	3,554	3,999	3,555	3,999	3,554	11,997	10,663
2. Right of Way/ Land Acquisition	-	-	-	-	-	-	-	-
3. Resettlement	-	-	-	-	-	-	-	-
4. Engineering Cost	-	755	-	756	-	755	-	2,266
5. Project Management Cost	-	377	-	378	-	378	-	1,133
6. Contingency								
(1) Physical Contingency	800	711	800	711	799	711	2,399	2,133
(2) Price Escalation	-	-	-	-	-	-	-	-
Total	4,799	5,397	4,799	5,400	4,798	5,398	14,396	16,195

TABLE-X.1 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 1/7)

Item No.	Item \ Radio Hop	Legaspi Yawa Bridge	Legaspi Quirangay	Legaspi Culiat
1	Radio freq. (MHz)	150	150	150
2	Transmission capacity (Ch)	1	1	1
3	Hop distance (km)	2.2	9.5	2.9
4	Antenna size	Sleeve/Sleeve	Sleeve/Sleeve	Sleeve/Sleeve
5	Feeder length (m)	20/30	20/30	20/30
6	Propagation loss (dB)	82.8	103.1	85.2
7	Feeder loss (dB) (8D-2V Cox)	4.0	4.0	4.0
8	Filter loss (dB)	-	-	-
9	Antenna gain (dB)	2.15/2.15	2.15/2.15	2.15/2.15
10	TX output (dBm)	40.0	40.0	40.0
11	RX input (dBm)	-42.5	-62.8	-44.9
12	Threshold level (dBm)	-103.5	-103.5	-103.5
13	Threshold margin (dB)	61.0	40.7	58.6
14	Rx input level for S/N 40dB (dBm)	-83	-83	-83
15	Margin for S/N 40 dB (dB)	40.5	20.2	38.1

Note: Threshold level is nearly equal to 20dB quieting signal level.
Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE-X.2 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 2/7)

Item No.	Item \ Radio Hop	Ligao Guinobatan	Ligao OAS	Ligao Libon
1	Radio freq. (MHz)	150	150	150
2	Transmission capacity (Ch)	1	1	1
3	Hop distance (km)	5.3	10.3	15.5
4	Antenna size	Sleeve/Sleeve	Sleeve/Sleeve	Sleeve/3-Yagi
5	Feeder length (m)	30/30	30/30	30/30
6	Propagation loss (dB)	95.4	96.2	101.2
7	Feeder loss (dB) (8D-2V Cox)	4.8	4.8	4.8
8	Filter loss (dB)	-	-	-
9	Antenna gain (dB)	2.15/2.15	2.15/2.15	2.15/8.15
10	TX output (dBm)	40.0	40.0	40.0
11	RX input (dBm)	-55.9	-56.7	-55.7
12	Threshold level (dBm)	-103.5	-103.5	-103.5
13	Threshold margin (dB)	47.6	46.8	47.8
14	Rx input level for S/N 40dB (dBm)	-83	-83	-83
15	Margin for S/N 40 dB (dB)	27.1	26.3	27.3

Note: Threshold level is nearly equal to 20dB quieting signal level.
Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE X.3 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 3/7)

Item No.	Item \ Radio Hop	Ligao Bato	Ligao Ligao	Ligao Polangui
1	Radio freq. (MHz)	150	150	150
2	Transmission capacity (Ch)	1	1	1
3	Hop distance (km)	25.1	3.1	15.8
4	Antenna size	Sleeve/3-Yagi	Sleeve/Sleeve	Sleeve/3-Yagi
5	Feeder length (m)	30/20	30/20	30/30
6	Propagation loss (dB)	105.7	85.8	101.3
7	Feeder loss (dB) (8D-2V Cox)	4.0	4.0	4.8
8	Filter loss (dB)	-	-	-
9	Antenna gain (dB)	2.15/8.15	2.15/8.15	2.15/8.15
10	TX output (dBm)	40.0	40.0	40.0
11	RX input (dBm)	-59.4	-45.5	-55.8
12	Threshold level (dBm)	-103.5	-103.5	-103.5
13	Threshold margin (dB)	44.1	58.0	47.7
14	Rx input level for S/N 40dB (dBm)	-83	-83	-83
15	Margin for S/N 40 dB (dB)	23.6	37.5	27.2

Note: Threshold level is nearly equal to 20dB quieting signal level.
Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE X.4 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 4/7)

Item No.	Item \ Radio Hop	Ligao Nasisi	Mayon Bantayan	Mayon Balza Bridge
1	Radio freq. (MHz)	150	150	150
2	Transmission capacity (Ch)	1	1	1
3	Hop distance (km)	3.7	6.2	13.6
4	Antenna size	Sleeve/Sleeve	Sleeve/Sleeve	Sleeve/3-Yagi
5	Feeder length (m)	30/30	30/30	30/30
6	Propagation loss (dB)	87.4	93.4	98.7
7	Feeder loss (dB) (8D-2V Cox)	4.8	4.8	4.8
8	Filter loss (dB)	-	-	-
9	Antenna gain (dB)	2.15/2.15	2.15/2.15	2.15/8.15
10	TX output (dBm)	40.0	40.0	40.0
11	RX input (dBm)	-47.7	-53.9	-53.2
12	Threshold level (dBm)	-103.5	-103.5	-103.5
13	Threshold margin (dB)	55.8	49.6	50.3
14	Rx input level for S/N 40dB (dBm)	-83	-83	-83
15	Margin for S/N 40 dB (dB)	35.3	29.1	29.8

Note: Threshold level is nearly equal to 20dB quieting signal level.
Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE X.5 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 5/7)

Item No.	Item \ Radio Hop	Mayon Tabaco	Legaspi Mabinit
1	Radio freq. (MHz)	150	150
2	Transmission capacity (Ch)	1	1
3	Hop distance (km)	4.8	6.9
4	Antenna size	Sleeve/Sleeve	Sleeve/Sleeve
5	Feeder length (m)	30/30	30/30
6	Propagation loss (dB)	89.6	92.8
7	Feeder loss (dB) (8D-2V Cox)	4.8	4.8
8	Filter loss (dB)	-	-
9	Antenna gain (dB)	2.15/2.15	2.15/2.15
10	TX output (dBm)	40.0	40.0
11	RX input (dBm)	-50.1	-53.3
12	Threshold level (dBm)	-103.5	-103.5
13	Threshold margin (dB)	53.4	50.2
14	Rx input level for S/N 40dB (dBm)	-83	-83
15	Margin for S/N 40 dB (dB)	32.9	29.7

Note: Threshold level is nearly equal to 20dB quieting signal level.
Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE X.6 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 6/7)

Item No.	Item \ Radio Hop	Legazpi Legazpi Golf	Legazpi Micercordia	Legazpi San Roque
1	Radio freq. (MHz)	150	150	150
2	Transmission capacity (Ch)	1	1	1
3	Hop distance (km)	6.6	11.3	14.1
4	Antenna size	Sleeve/3 ele. Yagi	Sleeve/3 ele. Yagi	Sleeve/3 ele. Yagi
5	Feeder length (m)	20/30	20/30	20/30
6	Propagation loss (dB)	92.4	98.2	118.7
7	Feeder loss (dB) (8D-2V Cox)	4.0	4.0	4.0
8	Filter loss (dB)	-	-	-
9	Antenna gain (dB)	2.15/8.15	2.15/8.15	2.15/8.15
10	TX output (dBm)	40	40	40
11	RX input (dBm)	-46.1	-51.9	-72.4
12	Threshold level (dBm)	-103.5	-103.5	-103.5
13	Threshold margin (dB)	57.4	51.6	31.1
14	Rx input level for S/N 40dB (dBm)	-83	-83	-83
15	Margin for S/N 40 dB (dB)	36.9	31.1	10.6

Note: Threshold level is nearly equal to 20dB quieting signal level. Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE X.7 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 7/7)

Item No.	Item \ Radio Hop	Ligao Balaigarg	Ligao Masarawag	Mayon San Roque
1	Radio freq. (MHz)	150	150	150
2	Transmission capacity (Ch)	1	1	1
3	Hop distance (km)	9.4	6.2	7.7
4	Antenna size	Sleeve/3 ele. Yagi	Sleeve/3 ele. Yagi	Sleeve/3 ele. Yagi
5	Feeder length (m)	30/30	30/30	30/30
6	Propagation loss (dB)	95.4	99.1	116.6
7	Feeder loss (dB) (8D-2V Cox)	4.8	4.8	4.8
8	Filter loss (dB)	-	-	-
9	Antenna gain (dB)	2.15/8.15	2.15/8.15	2.15/8.15
10	TX output (dBm)	40	40	40
11	RX input (dBm)	-49.9	-53.6	-71.1
12	Threshold level (dBm)	-103.5	-103.5	-103.5
13	Threshold margin (dB)	53.6	49.9	32.4
14	Rx input level for S/N 40dB (dBm)	-83	-83	-83
15	Margin for S/N 40 dB (dB)	33.1	29.4	11.9

Note: Threshold level is nearly equal to 20dB quieting signal level. Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE-X.8 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 1/8)

Item No.	Item \ Radio Hop	Legaspi St.Domingo	Legaspi Misericordia
1	Radio freq. (MHz)	400	400
2	Transmission capacity (Ch)	1	1
3	Hop distance (km)	9.8	10.8
4	Antenna size	2-Colinear/3-Yagi	2-Colinear/3-Yagi
5	Feeder length (m)	20/30	20/30
6	Propagation loss (dB)	104.3	108.8
7	Feeder loss (dB) (AFZES50-4 Cox)	3.0	3.0
8	Filter loss (dB)	3.5	3.5
9	Antenna gain (dB)	5.15/8.15	5.15/8.15
10	TX output (dBm)	37.0	37.0
11	RX input (dBm)	-64.0	-68.5
12	Threshold level (dBm)	-103.5	-103.5
13	Threshold margin (dB)	39.5	35.0
14	Rx input level for S/N 40dB (dBm)	-83	-83
15	Margin for S/N 40 dB (dB)	19.0	14.5

Note: Threshold level is nearly equal to 20dB quieting signal level.
Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE-X.9 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 2/8)

Item No.	Item \ Radio Hop	Legaspi Matanag	Legaspi Bonga	Legaspi Mi-Isi
1	Radio freq. (MHz)	400	400	400
2	Transmission capacity (Ch)	1	1	1
3	Hop distance (km)	3.7	3.0	6.3
4	Antenna size	2-Colinear/3-Yagi	2-Colinear/3-Yagi	2-Colinear/3-Yagi
5	Feeder length (m)	20/30	20/30	20/30
6	Propagation loss (dB)	95.9	94.0	100.4
7	Feeder loss (dB) (AFZES50-4 Cox)	3.0	3.0	3.0
8	Filter loss (dB)	3.5	3.5	3.5
9	Antenna gain (dB)	5.15/8.15	5.15/8.15	5.15/8.15
10	TX output (dBm)	37.0	37.0	37.0
11	RX input (dBm)	-52.1	-50.2	-56.6
12	Threshold level (dBm)	-103.5	-103.5	-103.5
13	Threshold margin (dB)	51.4	53.3	46.9
14	Rx input level for S/N 40dB (dBm)	-83	-83	-83
15	Margin for S/N 40 dB (dB)	19.7	28.3	5.8

Note: Threshold level is nearly equal to 20dB quieting signal level.
Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE-X.10 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 3/8)

Item No.	Item \ Radio Hop	Legaspi Budio	Legaspi Quirangay	Legaspi Malabog
1	Radio freq. (MHz)	400	400	400
2	Transmission capacity (Ch)	1	1	1
3	Hop distance (km)	4.2	9.2	5.0
4	Antenna size	2-Colinear/3-Yagi	2-Colinear/3-Yagi	2-Colinear/3-Yagi
5	Feeder length (m)	20/30	20/30	20/30
6	Propagation loss (dB)	97.0	107.1	98.5
7	Feeder loss (dB) (AFZES50-4 Cox)	3.0	3.0	3.0
8	Filter loss (dB)	3.5	3.5	3.5
9	Antenna gain (dB)	5.15/8.15	5.15/8.15	5.15/8.15
10	TX output (dBm)	37.0	37.0	37.0
11	RX input (dBm)	-53.2	-63.3	-54.7
12	Threshold level (dBm)	-103.5	-103.5	-103.5
13	Threshold margin (dB)	50.3	40.2	48.8
14	Rx input level for S/N 40dB (dBm)	-83	-83	-83
15	Margin for S/N 40 dB (dB)	26.6	19.7	28.3

Note: Threshold level is nearly equal to 20dB quieting signal level.
Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE-X.11 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 4/8)

Item No.	Item \ Radio Hop	Legaspi Camalig	Legaspi Daraga	Ligao Guinobatan
1	Radio freq. (MHz)	400	400	400
2	Transmission capacity (Ch)	1	1	1
3	Hop distance (km)	8.5	2.3	5.8
4	Antenna size	2-Colinear/3-Yagi	2-Colinear/3-Yagi	2-Colinear/3-Yagi
5	Feeder length (m)	20/30	20/30	30/30
6	Propagation loss (dB)	119.8	98.4	101.2
7	Feeder loss (dB) (AFZES50-4 Cox)	4.2	3.0	3.6
8	Filter loss (dB)	3.5	3.5	3.5
9	Antenna gain (dB)	5.15/8.15	5.15/8.15	5.15/8.15
10	TX output (dBm)	37.0	37.0	37.0
11	RX input (dBm)	-72.2	-54.6	-58.0
12	Threshold level (dBm)	-103.5	-103.5	-103.5
13	Threshold margin (dB)	31.3	48.9	45.5
14	Rx input level for S/N 40dB (dBm)	-83	-83	-83
15	Margin for S/N 40 dB (dB)	10.8	26.5	25.0

Note: Threshold level is nearly equal to 20dB quieting signal level.
Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE X.12 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 5/8)

Item No.	Item \ Radio Hop	Ligao OAS	Ligao Libon	Ligao Ligao (MO)
1	Radio freq. (MHz)	400	400	400
2	Transmission capacity (Ch)	1	1	1
3	Hop distance (km)	7.8	15.5	3.1
4	Antenna size	2-Colinear/3-Yagi	2-Colinear/3-Yagi	2-Colinear/3-Yagi
5	Feeder length (m)	30/30	30/30	30/30
6	Propagation loss (dB)	102.3	108.3	94.3
7	Feeder loss (dB) (AFZES50-4 Cox)	3.6	3.6	3.6
8	Filter loss (dB)	3.5	3.5	3.5
9	Antenna gain (dB)	5.15/8.15	5.15/8.15	5.15/8.15
10	TX output (dBm)	37.0	37.0	37.0
11	RX input (dBm)	-59.2	-65.1	-51.1
12	Threshold level (dBm)	-103.5	-103.5	-103.5
13	Threshold margin (dB)	44.4	38.4	52.4
14	Rx input level for S/N 40dB (dBm)	-83	-83	-83
15	Margin for S/N 40 dB (dB)	23.8	17.9	31.9

Note: Threshold level is nearly equal to 20dB quieting signal level.
Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE X.13 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 6/8)

Item No.	Item \ Radio Hop	Ligao San Agustin	Ligao Polangui	Ligao Nasisi
1	Radio freq. (MHz)	400	400	400
2	Transmission capacity (Ch)	1	1	1
3	Hop distance (km)	17.5	11.0	4.2
4	Antenna size	2-Colinear/3-Yagi	2-Colinear/3-Yagi	2-Colinear/3-Yagi
5	Feeder length (m)	30/30	30/30	30/30
6	Propagation loss (dB)	109.4	105.3	97.0
7	Feeder loss (dB) (AFZES50-4 Cox)	3.6	3.6	3.6
8	Filter loss (dB)	3.5	3.5	3.5
9	Antenna gain (dB)	5.15/8.15	5.15/8.15	5.15/8.15
10	TX output (dBm)	37.0	37.0	37.0
11	RX input (dBm)	-66.2	-62.1	-53.8
12	Threshold level (dBm)	-103.5	-103.5	-103.5
13	Threshold margin (dB)	37.3	41.4	49.7
14	Rx input level for S/N 40dB (dBm)	-83	-83	-83
15	Margin for S/N 40 dB (dB)	16.8	20.9	29.4

Note: Threshold level is nearly equal to 20dB quieting signal level.
Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE X.14 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 7/8)

Item No.	Item \ Radio Hop	Ligao Masarawag	Mayon Malinao	Mayon Oson
1	Radio freq. (MHz)	400	400	400
2	Transmission capacity (Ch)	1	1	1
3	Hop distance (km)	6.3	13.2	4.5
4	Antenna size	2-Colinear/3-Yagi	2-Colinear/3-Yagi	2-Colinear/3-Yagi
5	Feeder length (m)	30/30	30/30	30/30
6	Propagation loss (dB)	105.8	106.9	97.6
7	Feeder loss (dB) (AFZES50-4 Cox)	3.6	3.6	3.6
8	Filter loss (dB)	3.5	3.5	3.5
9	Antenna gain (dB)	5.15/8.15	5.15/8.15	5.15/8.15
10	TX output (dBm)	37.0	37.0	37.0
11	RX input (dBm)	-62.6	-67.0	-57.9
12	Threshold level (dBm)	-103.5	-103.5	-103.5
13	Threshold margin (dB)	40.9	36.5	45.6
14	Rx input level for S/N 40dB (dBm)	-83	-83	-83
15	Margin for S/N 40 dB (dB)	20.4	16.0	25.1

Note: Threshold level is nearly equal to 20dB quieting signal level.
Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE X.15 NOISE PERFORMANCE IN EACH RADIO HOP (TELEMETER 8/8)

Item No.	Item \ Radio Hop	Legaspi – Tabaco – –
1	Radio freq. (MHz)	400
2	Transmission capacity (Ch)	1
3	Hop distance (km)	10.7
4	Antenna size	2-Colinear/3-Yagi
5	Feeder length (m)	30/30
6	Propagation loss (dB)	105.1
7	Feeder loss (dB) (AFZES50-4 Cox)	3.6
8	Filter loss (dB)	3.5
9	Antenna gain (dB)	5.15/8.15
10	TX output (dBm)	37.0
11	RX input (dBm)	-65.4
12	Threshold level (dBm)	-103.5
13	Threshold margin (dB)	38.1
14	Rx input level for S/N 40dB (dBm)	-83
15	Margin for S/N 40 dB (dB)	17.6

Note: Threshold level is nearly equal to 20dB quieting signal level.
Rx input level for S/N = 40dB at 70% modulation is assumed as 30 dBuV

TABLE-X.16 NOISE PERFORMANCE IN EACH RADIO HOP

Item No.	Item \ Radio Hop	Legaspi OCD office	Legaspi Ligao	Ligao M. Rest House
1	Radio freq. (MHz)	800	800	800
2	Transmission capacity (Ch)	24	24	6
3	Hop distance (km)	2.2	19.6	13.3
4	Antenna size (mφ)	8-el/8-el	1.8/1.8	1.8/8-el
5	Feeder length (m)	20/30	20/30	30/30
6	Propagation loss (dB)	98.7	116.4	113.0
7	Feeder loss (dB) (8D-2V Cox)	3.0	3.0	3.6
8	Filter loss (dB)	8.0	8.0	8.0
9	Antenna gain (dB)	12.5/12.5	20.0/20.0	20.0/12.5
10	TX output (dBm)	37.0	37.0	37.0
11	RX input (dBm)	-47.7	-50.4	-55.1
12	Threshold level (dBm)	-101.0	-101.0	-101.0
13	Threshold margin (dB)	53.3	50.6	45.9
14	Thermal noisel (pWp)	27.5	51.3	9.3
15	Residual noise (pWp)	700	700	700
16	Interference noise (pWp)	50	50	50
17	Total noise power (pWp)	777.5	801.3	759.3
18	S/N (50% value) (dB)	61.1	61.0	61.2
19	Fading depth (dB)	2.5	12.0	10.3
20	S/N (99.9% value) (dB)	61.0	58.1	60.7

TABLE-X.17 PROJECT COST FOR STAGE-I

		Foreign Currency (Japanese Yen)	Local Currency (Peso)
1.	Telemetry System by 150 MHz Radio System	156,802,000	-
2.	Warning System by Multi-Access Radio System	300,083,000	-
3.	Multiplex Radio Communication System	249,348,000	-
4.	HF Communication System	9,800,000	-
5.	Installation Materials	93,560,000	-
6.	Installation Work	211,803,000	2,048,000
7.	Training (Factory & on the Job)	27,000,000	-
8.	Maintenance Service (one year)	73,000,000	-
9.	Sub Total (1.~8.)	1,121,396,000	2,048,000
10.	Consultancy Service	145,676,000	-
11.	Basic Project Cost	1,267,072,000	2,048,000
12.	Contingency	126,707,000	205,000
13.	Total Project Cost	1,393,779,000	2,253,000

TABLE-X.18 PROJECT COST FOR STAGE-II

		Foreign Currency (Japanese Yen)	Local Currency (Peso)
1.	Telemetry System by 150 MHz Radio System	55,874,000	-
2.	Warning System by Multi-Access Radio System	86,275,000	-
3.	Multiplex Radio Communication System	83,102,000	-
4.	HF Communication System	17,980,000	-
5.	Installation Materials	36,700,000	-
6.	Installation Work	111,600,000	1,185,000
7.	Training (Factory & on the Job)	-	-
8.	Maintenance Service (one year)	-	-
9.	Sub Total (1.~8.)	391,531,000	1,185,000
10.	Consultancy Service	50,116,000	-
11.	Basic Project Cost	441,647,000	1,185,000
12.	Contingency	44,164,000	119,000
13.	Total Project Cost	485,811,000	1,304,000

TABLE-X.19 PROJECT COST FOR STAGE-III

		Foreign Currency (Japanese Yen)	Local Currency (Peso)
1.	Telemetry System by 150 MHz Radio System	86,944,000	-
2.	Warning System by Multi-Access Radio System	5,075,000	-
3.	Multiplex Radio Communication System	-	-
4.	HF Communication System	-	-
5.	Installation Materials	19,210,000	-
6.	Installation Work	23,746,000	456,000
7.	Training (Factory & on the Job)	-	-
8.	Maintenance Service (one year)	-	-
9.	Sub Total (1.~8.)	134,975,000	456,000
10.	Consultancy Service	38,000,000	-
11.	Basic Project Cost	172,975,000	456,000
12.	Contingency	17,298,000	46,000
13.	Total Project Cost	190,273,000	502,000

TABLE-X.20 EQUIPMENT COST FOR HF COMMUNICATION SYSTEM

Item	Description	Quantity	Unit Price (¥)	Amount (¥)
1)	Equipment to be supplied in the first (1st) stage			
(a)	Manila PAGASA			
	- SSB Transceiver	1 set		1,120,000
	- AC Power Supply Unit	1 set		420,000
	- Antenna Log-periodic	1 set		2,150,000
	- Antenna Mast (18mH)	1 set		960,000
	- Coaxial Cables	1 set		110,000
	- Accessories	1 lot		140,000
		Sub total:		¥4,900,000
(b)	Legaspi Weather Station			
	- SSB Transceiver	1 set		1,120,000
	- AC Power Supply Unit	1 set		420,000
	- Antenna Log-periodic	1 set		2,150,000
	- Antenna Mast (18mH)	1 set		960,000
	- Coaxial Cables	1 set		110,000
	- Accessories	1 lot		140,000
		Sub total:		¥4,900,000
2)	Equipment to be supplied in the second (2nd) stage			
(a)	Legaspi Weather Station			
	- SSB Transceiver	1 set		1,120,000
	- AC Power Supply Unit	1 set		420,000
	- Antenna 3 Band-Dipole	1 set		1,400,000
	- Antenna Mast (15mH)	1 set		900,000
	- Coaxial Cables	1 set		110,000
	- Accessories	1 lot		140,000
		Sub total:		¥4,090,000

Item	Description	Quantity	Unit Price (¥)	Amount (¥)
(b)	Virac Radar Site			
	- SSB Transceiver	1 set		1,120,000
	- AC Power Supply Unit	1 set		420,000
	- Antenna 3 Band-Dipole	1 set		1,400,000
	- Antenna Mast (15mH)	1 set		900,000
	- Coaxial Cables	1 set		110,000
	- Accessories	1 lot		140,000
		Sub total:		¥4,090,000
(c)	Manila OCD			
	- SSB Transceiver	1 set		1,120,000
	- AC Power Supply Unit	1 set		420,000
	- Antenna Log-periodic	1 set		2,150,000
	- Antenna Mast (18mH)	1 set		960,000
	- Coaxial Cables	1 set		110,000
	- Accessories	1 lot		140,000
		Sub total:		¥4,900,000
(d)	Legaspi OCD			
	- SSB Transceiver	1 set		1,120,000
	- AC Power Supply Unit	1 set		420,000
	- Antenna Log-periodic	1 set		2,150,000
	- Antenna Mast (18mH)	1 set		960,000
	- Coaxial Cables	1 set		110,000
	- Accessories	1 lot		140,000
		Sub total:		¥4,900,000
	Total:			¥27,780,000

TABLE-X.21 EQUIPMENT COST FOR WARNING SYSTEM (MULTI ACCESS RADIO SYSTEM)

Item	Description	Quantity	Unit Price (¥)	Amount (¥)
1)	Equipment to be supplied in the first (1st) stage			
(a)	Legaspi Warning Center			
	- MCA control equipment	3 sets	8,000,000	24,000,000
	- Mobile control equipment	1 set		1,400,000
	- Telephone exchange equipment	1 set		115,000,000
	- Operating console	1 set		37,410,000
	- Telephone set	30 sets	16,000	480,000
	- Remote supervisory and control equipment	1 set		3,010,000
	- Charger and battery for telephone exchange equipment	1 set		11,900,000
	- Test equipment	1 set		5,200,000
	- Accessories	1 lot		1,250,000
	- Spare parts	1 lot		5,450,000
	- Spare equipment and devices	1 lot		1,200,000
		Sub total:		¥206,300,000
(b)	Legaspi radio station			
	- Remote supervisory and control equipment	1 set		1,800,000
	- Multi-channel access base (transceiver)	1 set		4,000,000
	- Antenna multiplexer and antenna distributor for MCA	1 set		1,850,000
	- Coaxial cable and coaxial connector for MCA	2 sets	140,000	280,000
	- Sleeve antenna for MCA	2 sets	40,000	80,000
	- VHF radio equipment for mobile communication	1 set		2,500,000
	- Coaxial cable and coaxial connector for mobile communication	1 set		150,000
	- Sleeve antenna for mobile communication	1 set		40,000
	- Accessories	1 lot		120,000
		Sub total:		¥10,820,000

Item	Description	Quantity	Unit Price (¥)	Amount (¥)
(c)	Ligao radio station			
	- Remote supervisory and control equipment	1 set		1,800,000
	- Multi-channel access base (transceiver)	1 set		4,000,000
	- Antenna multiplexer and antenna distributor for MCA	1 set		1,850,000
	- Coaxial cable and coaxial connector for MCA	2 sets	140,000	280,000
	- Sleeve antenna for MCA	2 sets	40,000	80,000
	- VHF radio equipment for mobile communication	1 set		2,500,000
	- Coaxial cable and coaxial connector for mobile communication	1 set		150,000
	- Sleeve antenna for mobile communication	1 set		40,000
	- Accessories	1 lot		250,000
		Sub total:		¥10,950,000
(d)	Mayon Rest House			
	- Remote supervisory and control equipment	1 set		1,800,000
	- Multi-channel access base (transceiver)	1 set		4,000,000
	- Antenna multiplexer and antenna distributor for MCA	1 set		1,850,000
	- Coaxial cable and coaxial connector for MCA	2 sets	140,000	280,000
	- Sleeve antenna for MCA	2 sets	40,000	80,000
	- VHF radio equipment for mobile communication	1 set		2,500,000
	- Coaxial cable and coaxial connector for mobile communication	1 set		150,000
	- Sleeve antenna for mobile communication	1 set		40,000
	- Accessories	1 lot		250,000
		Sub total:		¥10,950,000

Item	Description	Quantity	Unit Price (¥)	Amount (¥)
(e)	Subsidiary stations at two (2) government offices, Matanag, Ligao and Libon			
	- Radio/control equipment	5 sets	3,600,000	18,000,000
	- Five elements Yagi antenna	5 sets	80,000	400,000
	- Coaxial cable and coaxial connector	5 sets	15,000	75,000
	- Charger	5 sets	970,000	4,850,000
	- Battery	5 sets	230,000	1,150,000
	- Telephone equipment	5 sets	150,000	750,000
	- Accessories	5 lots	30,000	150,000
		Sub total:		¥25,375,000
*(f)	Mobile stations			
	- 10W radio equipment	8 sets	150,000	1,200,000
	- Antenna	8 sets	10,000	80,000
	- Coaxial cable and coaxial connector	8 sets	5,000	40,000
	- Audio amplifier	8 sets	52,000	416,000
	- Speaker	8 sets	24,000	192,000
	- Accessories	8 lots	20,000	160,000
	- Vehicles	8 ea.	4,200,000	33,600,000
		Sub total:		¥35,688,000
2)	Equipment to be supplied in the second (2nd) stage			
(a)	Subsidiary stations at St. Domingo, Mi-Isi, Budiao, Quirangay, Malabog, Camalig, Daraga, Masarawag, Guinobatan, Nasisi, Polangui, San Agustin, Oas, Tabaco, Malinao, Bonga and Oson			
	- Radio/control equipment	17 sets	3,600,000	61,200,000
	- Five elements Yagi antenna	17 sets	80,000	1,360,000
	- Coaxial cablé and coaxial connector	17 sets	15,000	255,000
	- Charger	17 sets	970,000	16,490,000
	- Battery	17 sets	230,000	3,910,000

Item	Description	Quantity	Unit Price (¥)	Amount (¥)
	- Telephone equipment	17 sets	150,000	2,550,000
	- Accessories	17 lots	30,000	510,000
		Sub total:		¥86,275,000
3)	Equipment to be supplied in the third (3rd) stage			
(a)	Subsidiary stations at Micercondia			
	- Radio/control equipment	1 set		3,600,000
	- Five elements Yagi antenna	1 set		80,000
	- Coaxial cable and coaxial connector	1 set		15,000
	- Charger	1 set		970,000
	- Battery	1 set		230,000
	- Telephone equipment	1 set		150,000
	- Accessories	1 lot		30,000
		Sub total:		¥5,075,000
	Total:			¥391,433,000

TABLE-X.22 EQUIPMENT COST FOR TELEMETRY SYSTEM

Item	Description	Quantity	Unit Price (¥)	Amount (¥)
1)	Equipment to be supplied in the first (1st) stage			
(a)	Legaspi Weather Station			
	- Telemetering supervisory equipment	1 set		11,400,000
	- Operating console	1 set		3,600,000
	- Display equipment	1 set		12,300,000
	- Typewriter	1 set		1,356,000
	- Desk top computer	1 set		5,460,000
	- CVCF power supply equipment	1 set		15,120,000
	- Air conditioner	2 sets	7,000,000	14,000,000
	- Test equipment	1 lot		6,458,000
	- Accessories	1 lot		700,000
	- Spare parts	1 lot		11,000,000
	- Spare equipment and devices	1 lot		4,560,000
		Sub total:		¥85,954,000
(b)	Mayon Rest House			
	- Repeater equipment	1 set		3,200,000
	- 10W radio equipment	2 sets	600,000	1,200,000
	- Rainfall gauging equipment	1 set		884,000
	- Antenna equipment	2 sets	400,000	800,000
	- Coaxial arrester	1 set		66,000
	- Coaxial cables	1 lot		120,000
	- Accessories	1 lot		700,000
		Sub total:		6,970,000
(c)	Legaspi R/S			
	- Repeater equipment	1 set		3,200,000
	- 10W radio equipment	2 sets	600,000	1,200,000
	- Antenna equipment	2 sets	400,000	800,000

Item	Description	Quantity	Unit Price (¥)	Amount (¥)
	- Coaxial arrester	1 set		66,000
	- Coaxial cables	1 lot		120,000
	- Accessories	1 lot		1,000,000
		Sub total:		¥6,386,000

(d) Quirangay, Mabinit, Tabaco, San Roque, Legazpi Golf and Micercordia (300 m)

*- Telemetering equipment	6 sets	4,900,000	29,400,000
- 10W radio equipment	6 sets	600,000	3,600,000
- Rainfall gauging equipment	6 sets	884,000	5,304,000
- Solar cells power supply equipment	6 sets	592,000	3,552,000
- Antenna poles	6 sets	1,700,000	10,200,000
- Antenna equipments	6 sets	120,000	720,000
- Coaxial arrester	6 sets	66,000	396,000
- Coaxial cables	6 lots	120,000	720,000
- Lightning equipment	6 sets	300,000	1,800,000
- Accessories	6 lots	300,000	1,800,000
	Sub total:		¥57,492,000

* including a housing shelter

2) Equipment to be supplied in the second (2nd) stage

(a) Ligao R/S

*- Repeater equipment	1 set		7,200,000
- 10W radio equipment	2 sets	600,000	1,200,000
- Antenna equipment	2 sets	400,000	800,000
- Coaxial arrester	1 set		66,000
- Coaxial cables	1 lot		120,000
- Accessories	1 lot		700,000
- Antenna filters	1 set		300,000
	Sub total:		¥10,386,000

* including a housing shelter

Item	Description	Quantity	Unit Price (¥)	Amount (¥)
(b)	Nasisi, Masarawag and Balaigang			
*	- Telemetering equipment	3 sets	4,900,000	14,700,000
	- 10W radio equipment	3 sets	600,000	1,800,000
	- Rainfall gauging equipment	3 sets	884,000	2,652,000
	- Solar cells power supply equipment	3 sets	592,000	1,776,000
	- Antenna pole	3 sets	1,700,000	5,100,000
	- Antenna equipment	3 sets	120,000	360,000
	- Coaxial arrester	3 sets	66,000	198,000
	- Coaxial cable	3 lots	120,000	360,000
	- Lightining equipment	3 sets	300,000	900,000
	- Accessories	3 lots	300,000	900,000
		Sub total:		¥28,746,000
	* including a housing shelter			
(c)	Bato (Existing Water Level Observatory)			
	- Telemetering equipment	1 set		900,000
	- 10W radio equipment	1 set		1,200,000
	- Solar cells power supply equipment	1 set		592,000
	- Antenna equipment	1 set		1,200,000
	- Coaxial arrester	1 set		66,000
	- Coaxial cable	1 lot		120,000
	- Lighting equipment	1 set		300,000
	- Accessories	1 lot		400,000
	- Antenna filter	1 set		200,000
		Sub total:		¥4,978,000
(d)	Libon and Ligao			
	- Telemetering equipment	2 sets	900,000	1,800,000
	- 10W radio equipment	2 sets	600,000	1,200,000
	- Rainfall gauging equipment	2 sets	884,000	1,768,000
	- Solar cells power supply equipment	2 sets	592,000	1,184,000
	- Antenna pole	2 sets	1,700,000	3,400,000

Item	Description	Quantity	Unit Price (¥)	Amount (¥)
	- Antenna equipment	2 sets	120,000	240,000
	- Coaxial arrester	2 sets	66,000	132,000
	- Coaxial cable	2 lots	120,000	240,000
	- Lightning equipment	2 sets	320,000	640,000
	- Accessories	2 lots	400,000	800,000
		Sub total:		¥11,404,000

3) Equipment to be supplied in third (3rd) stage

(a) Yawa Bridge, Culiat, Bantayan, Nasisi, Balza Bridge, Guinobatan, Polangui and Oas

*	- Telemetering equipment	8 sets	4,900,000	39,200,000
	- 10W radio equipment	8 sets	600,000	4,800,000
	- Water-level gauging equipment	8 sets	1,950,000	15,600,000
	- Solar cells power supply equipment	8 sets	592,000	4,736,000
	- Antenna pole	8 sets	1,700,000	13,600,000
	- Antenna equipment	8 sets	120,000	960,000
	- Coaxial arrester	8 sets	66,000	528,000
	- Coaxial cable	8 lots	120,000	960,000
	- Lightning equipment	8 sets	320,000	2,560,000
	- Accessories	8 lots	500,000	4,000,000
		Sub total:		¥86,944,000

* including a housing shelter

Total:	¥251,470,000

TABLE-X.23 EQUIPMENT COST FOR MULTIPLEX RADIO COMMUNICATION SYSTEM

Item	Description	Quantity	Unit Price (¥)	Amount (¥)
1)	Equipment to be supplied in the first (1st) stage			
(a)	Legaspi Warning Centre			
	- Multiplex Radio Relay Equipment	1 set		4,540,000
	- Multiplex Radio Terminal Equipment	1 set		5,100,000
	- Exchange Repeater	1 set		540,000
	- Accessories	1 set		300,000
	- Spare Parts	1 set		2,100,000
	- Antenna (8-element Yagi)	1 set		200,000
	- Coaxial Cable	1 lot		400,000
	- Tower	1 set		1,500,000
	- Power Supply Facilities	1 set		31,900,000
	- Test Equipment	1 lot		16,252,000
		Sub total:		¥62,832,000
(b)	Legaspi R/S			
	- Multiplex Radio Relay Equipment	2 sets	4,540,000	9,080,000
	- Multiplex Terminal Equipment	2 sets	5,100,000	10,200,000
	- CB Repeater	1 set		540,000
	- Accessories	1 set		600,000
	- Spare Parts	1 set		150,000
	- Antenna (1.8m ϕ Parabola)	1 set		1,200,000
	- " (8-element Yagi)	1 set		200,000
	- Coaxial Cable	1 lot		650,000
	- Power Supply Facility	1 set		31,900,000
	- Test Equipment	1 lot		302,000
	- Tower	1 set		8,920,000
		Sub total:		¥63,742,000
(c)	Mayon Rest House			
	- Multiplex Radio Telephone Equipment	1 set		4,540,000

Item	Description	Quantity	Unit Price (¥)	Amount (¥)
	- Multiplex Terminal Equipment	1 set		5,100,000
	- CB Repeater	1 set		540,000
	- Accessories	1 set		300,000
	- Spare Parts	1 set		150,000
	- Antenna (8-element Yagi)	1 set		200,000
	- Coaxial Cable	1 lot		400,000
	- Power Supply Facility	1 set		31,900,000
	- Test Equipment	1 lot		302,000
	- Tower	1 set		12,400,000
		Sub total:		¥55,832,000
(d)	Ligao R/S			
	- Multiplex Radio Relay Equipment	2 sets	4,540,000	9,080,000
	- Multiplex Terminal Equipment	2 sets	5,100,000	10,200,000
	- CB Repeater	1 set		540,000
	- Accessories	1 set		500,000
	- Spare Parts	1 set		300,000
	- Antenna (1.8m ϕ Parabola)	2 sets	450,000	900,000
	- Coaxial Cable	1 lot		820,000
	- Power Supply Facility	1 set		31,900,000
	- Test Equipment	1 lot		302,000
	- Tower	1 set		12,400,000
		Sub total:		¥66,942,000
2)	Equipment to be supplied in the second (2nd) stage			
(a)	Equipment for Ligao R/S			
	- Multiplex Radio Telephone Equipment	1 set		4,540,000
	- Multiplex Terminal Equipment	1 set		5,100,000
	- Accessories	1 set		300,000
	- Spare Parts	1 set		200,000
	- Antenna (1.8m ϕ parabola)	1 set		450,000

Item	Description	Quantity	Unit Price (¥)	Amount (¥)
	- Coaxial Cable	1 lot		450,000
		Sub total:		¥11,040,000
(b)	Naga Station (Existing Station)			
	- Multiplex Radio Telephone Equipment	1 set		4,540,000
	- Multiplex Terminal Equipment	1 set		5,100,000
	- Accessories	1 set		540,000
	- Spare Parts	1 set		200,000
	- Antenna (1.8m ϕ Parabola)	1 set		450,000
	- Coaxial Cable	1 lot		450,000
	- Test Equipment	1 lot		302,000
		Sub total:		¥11,582,000
(c)	Repeater (newly built)			
	- Multiplex Radio Telephone Equipment	2 sets	4,540,000	9,080,000
	- Accessories	1 set		600,000
	- Spare Parts	1 set		400,000
	- Antenna (1.8m ϕ Parabola)	2 sets	450,000	900,000
	- Coaxial Cable	1 lot		900,000
	- Tower	1 set		12,400,000
	- Power Supply Facility	1 set		31,900,000
	- Test Equipment	1 lot		300,000
		Sub total:		¥60,480,000
	Total:			¥332,450,000