APPENDIX C

(disk memory) Container Inventory Data File Report Generating Procedure Yard Planning Procedure Appendix C-1 Image of Terminal Management System (Gate Management) computer Procedure Receiving office room or control room Rre-Planning allocation of atacking © Logging of Receiving Data officer or operator Operational Instruction Slip Receiving Report area Θ © Entry of Receiving gate in information receiving position gate container flow Receiving (receiving) (gate out) (gate in)

C-1

Container Information Data File Information Data File (disk memory) Slip Loading Procedure Modification Procedure computer office room or control room conversational input/output conversational input/output Appendix C-2 Image of Terminal Planning System (Loading) Cargo Weight calculation flexible disk for data linkage Vessel Stability Calculation Pre-stowage Sequence Stowage Plan Loading officer or operator Flan inal List for special handling ③ supervising of operation loading information procedure ① Rre-Planning @modification ...(сору)..... container flow (unatacking) onto ship) (loading C-2

Appendix C-3 Operating Revenue (Base Case & Case 1)

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Appendix C-3 Operating Revenue (Case 2)

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Appendix C-4 Project Cost and Expenditure

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	₩ # *	Civil Construction	Inland Container Yard	Reclamation	Revertment	Pavement	Accessory Construction	Ruilding Construction	Books Boad for 100	<u> </u>		Hatta Onav Yard	Building	Acresory Construction		First Purchase	Gantry Grane		O+10010	Concern	Second Parchase	Gantry Grane	Transtainer	Others	Conputer	Third Purchase	Gantry Crane	Transtainer	Aplications	Land Acquisition	Access Road L.A	Compensation Expense	ŀ	Physical Contingency	Engineering Fee	Value Added Tax	Total Project Cost

Appendix C-5 Depreciation List

																				'n	Unit: Willion	lion RP
		Direct Descuratories	Veliment.		Second P	Procureents	14.8	Third	Pro.	lnland	Container Yard		Build	Access	Access	Hatta Quay	lay	0n-g	On-going Project	ject		
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2007	1.00	267 6	5 6	3 6	348	970	90	843	348	14	158	122	248	24	20	15	65	1, 411	178	108	9, 565	7,868
1000	7,00		2	3 %	348	970	80	843	348	14	158	122	248	24	20	15	65	1,411	178	108	9, 565	7, 868
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0000	1,597		767	25	348	970	18	843	348	14	158	122	248	24	20	15	65	1,411	178	108	9, 565	7,868
2 5				3.	348	970	18	843	348	14	158	122	248	24	20	15	65	1, 411	178	108	9, 565	7,868
2017	1 587	85.7	767	3.6	348	970	18	843	348	14	158	122	248	24	50	15	65	1,411	178	108	9, 565	7,868
2017	1,587	7 438	767	26	348	970	81	843	348	14	158	122	248	77	8	15	65	1, 411	178	108	9, 565	7, 868
1 6	1,597	2 7 7 8	767	3,6	348	970	18	843	348	14	158	122	248	24	20	15	65	1, 411	178	108	9, 565	7,868
2012	1,587	2, 438	767	56	35	970	18	843	348	14	158	122	248	24	20	15	65	1,411	178	108	9, 565	7,868
2015	1,587	2 438	767	26	343	970	18	843	348	14	158	122	248	77	20	15	65	1,411	178	108	9, 565	7,868
2018	1.687	2,438	761	56	348	970	18	843	348	14	158	122	248	77	23	12	65	1,411	178	108	9, 565	7,868
2017	1 687	2.438	494	26	348	970	22	843	348	14	158	122	248	24	22	15	65	1, 411	178	108	9, 565	7, 868
2018	1.587	2, 438	6	26	348	970	18	843	348	14	158	122	248	24	20	15	65	1, 411	178	108	9. 565	7, 868
2019	1.587	2, 438	767	76	348	970	81	843	348	14	158	122	248	77	20	13.	65	1,411	178	108	9,565	7.868
2020	1.587	2.438	161	97	348	970	18	843	348	14	158	122	248	24	20	15	65	1,411	178	108	9, 565	7, 868
2021	1.587	2.438	767	26	348	970	18	843	348	7	158	122	248	24	20	15	65	1,411	178	108	9, 565	7, 868
2022	1 687	2, 438	76	56	348	970	138	843	348	14	158	122	248	24	20	15	65	1, 411	178	108	9,565	7,868
2023	1 687	2.438	494	56	348	970	22	843	348	14	158	122	248	77	22	15	\$5	1,411	178	108	9, 565	7, 868
2024	1 697	2, 438	767	56	348	970	18	843	348	14	158	122	248	24	200	15	65	1, 411	178	108	9, 565	7,868
2025	1 687	2.438	767	792	348	970	81	843	348	14	158	122	248	77	20	15	65	1,411	178	108	9,565	7, 858
2026	1.687	2, 438	494	26	348	970	18	843	348	14	158	122	248	24	25	15	65	1,411	178	108	9, 565	7,868

Appendix C-6 Calculation of FIRR (Base Case)

8. 571% 6. 889% 7. 047% 5. 411%

Base Case Study Project

Seconds Cost	-		7			_				_	_	_	_		_				_				_		_	_		_	_			_	_					т	_
Section Properties Proper			10121			2. 708	4, 452	4, 452	373 7		4.646	4, 645	4. 645	373		4. 546	4. 546	4.646	4.646	373 7		4	4, 640	4, 646	4, 645	4.645	4, 646	4.646	4.645	4.645			4.04	4.646	4, 646	4.646	779 7		129, 766
Receives	•	thers	180	1	776-	-572	285	286		0 1	358	358	35.8	0 000	0 1	358	358	358	100	-	9 6	200	22.2	358	358	358	358	358	358	6 55		0 1	20	353	358	8000			8, 378
Receives	Expense	aintenance 0	-		7, 014	3, 720	3.946	978 6		615	4.013	4.013	4 013		270.6	4.013	4.013	4.013	1033		7.0	4.013	4, 013	4,013	4.013	4,013	4, 013	4, 013	4.013	4 013	,	4, 010	4, 013	4, 013	4, 013	6.013			114 051
Sevences Revences Revences Revences Revences Revences Revences Revences Cost Cos		onnel	-	= ;	-440	-440	220							2 6	6/2	275	275	275	516	, i.	6/7	512	275	275	275	275	275	275	275	27.6	2 6	C + 7	275	275	275	275	37.6		Y 4 3 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
Sevences Revences Revences Revences Revences Revences Revences Revences Cost Cos		otal	ifference	-22, 350	-61, 294	-70, 756	-76,872	76 915	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	-82.311	-77, 197	-71, 557	65.516	3 0	20.00	-52, 821	-47, 996	41 046	782 37		200	-35, 016	-35, 785	-31, 656								-10, 174	-10.932		-7,081	200			
The following Percenters	an an		DifferenceD	nec .77-	-38, 943	-9,462	- 6, 116		2 6	3	2	140	2			6, 528	4.825	900	9 00		6, 501		-769		4, 661	4, 310				242	71.7	7.857	-818		1,814	111	1000	2: 203	•
1897 Revenues Revenues Revenues Revenues Revenues Subsists Su				72.330	44, 272	15, 751	13,089		150.041	13, 773	2, 687	2.408	9 2 6	007.7	2.041	1,880	623		300	2 6	1, 353	2, 368	7, 432	2.003	992	258	3.076	100	102		7, 000	200			883	. T. 2		.1	-
Percenting Subsidy Total Investment Expense Cost Revenues Cost Revenues Cost C	Xet.		Revenues		5, 328	6.289	6.83		067'	7,677	7, 801	8 046		,	308	8. 408	8 468			070.0	7,855	7, 235	8, 664	5, 137	50.00	5 207	4.796	A 417	890 7		/ / /	3, 451	3.179	2, 928	2 647		606.7	4: 483	-
Operating Subsidy Total Investment Expense Total	Revenues	i	-			-12, 110	807					10 889	200	16. 452	14, 263	16, 130	12 942	0.00	9 6	771.01.	22, 321	18, 141	-3, 111	18.141	22, 233	22 321	6 671		20. 20.		12, 538	22, 321	-6.939	19.318	18 141		10, 380	197, 787	
Operating Subsidy Total Investment Expens Subsidy Total Investment Expens Subsidy Total Investment Expens 1998 8.048 0.201 24,266 26,126			Total	24, 266	52, 188	20.158	18 201		10,018	22, 559	4.778	28.		4. / 44	4, 546	4.546	0 2 2 0	- 4		500.75	4.646	3,826	30.078	32.00	4 734	373 7	17 296		2 4 4		14.429	4 646	33, 906	7 649	A 22				
Nevenues	Cost		Expense	0	2.004	2 768	455	7.	4.452	4.845	4 645	373		4. 645	4.645	979	4	274	0 0	4.040	4.646	919	4.646	4 646	A 646	8.48	7 646	27.0	0.0		4, 545	4, 646	4.646	846	848		4, 646	4. 040	
1998 Subsidy Tevenues Subsidy Tevenues Subsidy 1998 Subsidy Tevenues G. Fund) Tevenues Tevenues G. Fund) Tevenues			Investment	24, 256	50, 182	17 450		D	2, 566	17, 513	132	3 6	- (80	_			- · ·	3	39, 643	•	4, 180	25. 432	180	3	3	13 850	77.	* c		9, 783	9	24.260	1003		7	3, 741	-40, 366	
Seventing Subsidy Seventing Subsidy			Total	0	5.283		0.0	e e	11,009	12 574	22.0	7 .	15, 353	17, 185	18 909	20 228		500.77	74, 744	26.967	26,987	26.957	28 957	20.00	26,06		100 00	700,00	79.00	79. 30	26.967	25.967	78 967	25.057	200.30	706 47	28, 967		
Pertating 1998 1998 1998 1998 2000 2000 2000 2000 2000 2000 2000 2	Dawania	Subsidy	(G. Fund)	0		-		→	0	_		-	-	-	-				-	0	0	-	-		-	> 0	- ·	- · ·	- ·	-	0	0	· c	> -		-	G	-	
11998 11998 11998 11998 11998 12000		H	,	0	182	100	9 6	S. 703	11,009	10 574	74.00	20.07	15, 335	17, 185	40.00	900	0.7	22.033	24 744	26,957	26.967	96 987	630 36		000	100.07	/ 05 07	796.97	26.967	26, 367	26.967	76 967	26 067	200 30	100	106.07	26,967		
			Year	22	000		_	-		_	_		_	2005	9006	9 6	1007	2008	2009	2010		_	_		_	_	2016	/102	_								-	2026	

Appendix C-6 Calculation of FIRR (Case 1)

Origin. Sense. (1) Sense. (2) Sense. (3)

Gase 1 General Project

		7	٥	180	884	628			229	822	. 822	822	822	822	. 822	622	82.2	822	822	. 822	622	82.2	822	822	322	822	. 822	822	322	7 822	822	822	822	230
		Tota!	_		·	_	-	- (_	_	_	•	·-	•	-	_	_	_	_	-	_	_	_	-	-	_	_	_	-	•	7	~	7	***
inse	Others	Cost	-	858	858							1, 788		1, 788	1, 788	1,788	1,783	1, 788	1, 783	1, 788	1.788	1, 788	1, 788	1, 788	1.788	1, 788	1, 788	1, 763	1.788	1, 788	1,788	1, 783	1,788	44 948
Expens	Maintenance Others	Cost	0	3, 662	4, 386	4. 592	695		£ 623	4.659	4,659	4, 659	4, 559	4, 659	4, 659	4, 659	4, 659	4,659	4.659	4,659	4, 559	4, 653	4, \$59	4, 659	4, 659	4, 659	4, 658	4, 659	4, 859	4, 659	4, \$59	4. 658	4, 659	123 587
	Personnel	Cost	0	099	089	1.320	1 220) L	1.375	1, 375	1, 375	1, 375	1, 375	1,375	1, 375	1.375	1, 375	1, 375	1, 375	1, 375	1, 375	1, 375	1, 375	1, 375	1, 375	1, 375	1, 375	1, 375	1, 375	1, 375	1.375	1, 375	1, 375	38, 335
	Total	fferenceDifference	-91.646	-126,093	-131,065	-133.002	-128 228		-130,033	-122,014	-112, 793	-103, 441	-93, 910	-84, 250	-76, 583	-86,772	-70, 566	-61,412	-54, 178	-53, 405	-47, 179	-40, 418	-34, 127	-30, 304	-26, 467	-21. 444	-18, 400	-19, 483	-18, 634	-16,309	-13,368	-10, 590	ę.	
ne		Difference	-91,645	-34,447	~4,972		101	_	2	8,879	_		9, 531	9.660	7.667	9.811	-3,795	9, 154	7. 234	773	6, 226	8.760	6, 292	3,218	4, 441	5, 024	3, 044	-1.083	-151	3, 325	2, 941	2, 778	10.590	Q-
Present Value		Cost	91, 646	47,650	18, 632	15.836	600		7 - T	4, 705	4, 293	4, 027	3, 695	3, 428	5, 243	2, 950	16, 399	2,539	3, 615		3, 111	1.902	1, 745	4, 237	2, 475	1, 394	2, 910	6, 507	5, 275	1, 429	1, 470	1, 313	-6, 793	286.503
Net		Revenues	0	13, 203	13, 660	13, 899	13 749		13, (33	13, 584	13, 515	13, 379	13, 226	13,088	12, 910	12, 762	12, 664	11, 694	10,849	10.065	9, 337	8, 663	8, 037	7, 458	6, 917	6, 417	5,954	5, 523	5, 124	4, 754	4, 410	4, 092	3, 796	286 503
Revenues	- Cost	-1	-98, 784	-40.022	-6,227	-2.615	200		707 6	15,010	16,804	18, 367	20, 178	22, 045	18,858	26, 013	-10.844	28, 139	24, 019	2.787	24,019	28, 111	28, 189	15, 549	23, 125	28, 199	18, 416	-7,065	-1,061	25, 198	24, 019	24, 458	100, 483	358 188
		Total	98, 784	55, 362	23, 334	21, 377	13, 194	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	601.67	7,954	7.822	7, 910	7.822	7,822	12,896	7, 822	46, 865	7.822	12,002	33, 254	12.002	7.910	7,822	20.472	12, 896	7.822	17,605	13, 086	37 082	10.825	12, 002	11, 563	-64, 462	534, 482
Cost		Expense	0	5. 180	5,884	7, 528	7.628		770'/	7.822	7.822	7.822	7.822	7,822	7,822	7,822	7.822	7.822	7.822	7,822	7.822	7,822	7,822	7, 822	7, 822	7.822	7.822	7,822	7.822	7,822	7.822	7.822	7.822	221.870
		Investment	98, 784	50, 182	17,450	13,749	38.5		77.	132	-	880	0	6	5, 674	-	39, 043	0	4, 180	25, 432	4, 180	80 80	0	12, 650	5.074	-	\$, 783	35, 264	29, 260	3, 003	4, 180		-72, 284	312, 532
~-		Total		15, 340	17, 107	18, 762	20 068		21.033	22, 984	24, 628	26, 277	28,000	29.867	31, 754	33, 835	36, 021	36.021	38, 021	36, 021	36, 021	36, 021	36.021	36, 021	36, 021	36, 021	36,021	36, 021	35, 021	36, 021	35, 021	36, 021	36, 021	907.598
Revenues	Subsidy	(6. Fund)	0	-	0	-				0			0	-	6	0	0	0	0	0	0	0	0	-	0	0		-	<u>-</u>	-	-	-	9	5
4	200	Revenues	0	15, 340	17, 107	18, 752	20 068		27, 033	22, 964	24, 526	25, 277	28, 600	29,867	31, 754	33, 835	36,021	36, 021	36,021	35, 021	36, 021	36.021	35, 021	36, 021	36, 021	36,021	36, 021	36, 021	36, 021	36, 021	36, 021		36.021	902 540
	_	Year	-	988	6.6	2006	-	-	70.	2003	2004	2002	2906	2007	808	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	7.4	2025	2026	Total

Appendix C-6 Calculation of FIRR (Case 2)

Case 2 On-going Project

		Total	0	3, 176	3.176	3, 176	3.175	11.	2	3, 175	3.176	3.175	3, 176	3.176	3, 176	3, 175	3, 176	3, 176	3, 176	3, 176	3, 176	3, 176	3, 176	3, 176	3, 176	3.176	3.176	3 176	3.176	3, 176	3, 176	3 176	3, 176	12,104
		្ន	0	20	30	30	-		2	90	30	30	30	430	130	130	130	43 0	000	130	30	000	30	30	30	30	30	410	00.7	000	430	30	30	7.0
J	Others	Cost		-	7,	1, 430	1 430			1, 430	1. 430	1. 430	1.430	-	1	1.4	-	1,4	1.4		1.4	1.4	1, 430	1. 430	1, 430	1. 430	1, 430	7	1.4	1.4	*	-		41, 470
Expens	Maintenance Others	Cost	0	246	546	9+6	y P's		9	546	246	946	546	946	246	979	546	949	946	546	946	546	979	246	848	979	979	979	646	9+9	648	646	646	18,734
	onnel	Cost	•	1.100	1. 100	1,100	100		1.100	1, 100	1, 100	1, 100	1, 100	1, 100	1,100	1, 100	1, 100	1, 100	1, 100	1, 100	1, 100	1, 100	1, 100	1, 100	1.166	1, 160	1.100	1, 160	1, 100	1, 100	1, 100	1.100	1,100	31,900
	_	Difference Co	-70, 119	4.915	0. 022	-55, 420	100		170./	-43, 173	-39, 553	-36, 149	2.947	9, 937	7, 105	-24, 442	1, 954	9.613	-17, 412	-15.342	-13, 395	~11, 554	-9.842	8, 223	-6. 700	5, 268	3, 921	-10,254	-9.062	-7.942	-6. 388	5, 897	<u>ا</u>	-755, 171
				203 - 6		602 - 5					620 -3	404 -3	201 -3		_				201 -1											1, 120	_	991	897	0 -75
Value		Differenc	9 -78 119		2	+		; .	.	e,	÷	60	6		2	- 7	.,	.7	~;	~	⊷î -							_		_	1.		2	9
Net Present V		Cost		2,80	2.642	2.484		7	Z. 197	2.067	1.944	1.828	1.719	1.617	1.520	1.430	1.345	1.265	1, 189	1, 119	1,05	989	60	87	82	7.5	728	8.284	9	603	385	50	-4, 452	111, 976
Ket		Revenues	0	8,012	7.535	7.087	2	0 0	6.268	5, 915	5, 563	5, 232	4.920	4.627	152	4.093	3, 833	3,605	3,390	3, 189	2, 999	2,820	2, 652	2, 494	2,346	2, 206	2,075	1,951	1.835	1.726	1,623	1.528	1,435	111, 978
Revenues	- Cost		-74,558	5, 883						5, 915	5.915					5, 915	20.00	5,878	, 00 07 07 07	5,878	5,878	5,878	5,878	5.878		5,878	5,878		5.00.78	60		5, 878	37, 196	92, 242
		Total		3, 176	3.178	3 1 2 2		2	3, 176	3.178	3, 176	3, 176	3 175	3 175	3 178	3, 178	3 178	3, 178	3, 176	3, 176	3, 176	3, 176	3, 175	3,175	3, 176	3, 176	3, 176	38.440	3, 176	3.175	3, 176	3, 176	-28 142	170,608
Cost		Expense	e	3.176	3 178	176		7, 1,0	3, 178	3,176	3, 176	3, 176	3 1 7 6	3 176	176	3.176	1 1 2	3.176	3, 176	3, 176	3, 176	3, 176	3, 176	3, 176	3, 176	3, 176	3, 176	3, 176	3 176	3 176	3, 175	3, 176	3, 175	92, 104
		Investment	74.558	-				-	0	0	-			, =						0	0		0	0	. 0	0	0	35.264		• =			-31, 318	78, 504
		Total	-	650	0.0		9 6	8, 059	9.059	9, 091	150	100	6,0		100.0	4 4 4	100	10.0	9 6	9 02	9.054	9,054	9.054	0.05	9, 054	9.054	9.054	450	450	720	450.6	9.0.6		262, 850
Device	Subside	(6. Fund)	0	_			-	=	-	-	. ~																. =	-	-	· c		· c	o	Đ
	Ocerating		0	9 0 2 0		, ,		9,059	9,059		100		100	100		50.0			700	750	750	12.0		10.0	100	9.054	200	750		0 0	700	9.0	9,054	282.850
	1	,	5	200		7 4	_	5 2001	5 2002		2002	_	2000			0000		_		7 2013	7102	_		_		2010	-	2022	_	-	-	202	30 2026	Total

Appendix C-6 Calculation of FIRR (Case 3)

	ا ـ			-	I_	_										_			-	
	Unit: Million RP			Total	-	4.530	5, 238	6,982	6,932	7, 176	7, 176	7.176	7, 176	7 176	7,176	7, 176	7, 176	7, 176	7, 176	95, 492
	Unit:	nse.	Others	Cost	0	858	858	1, 71\$	1, 716	1.788	1.788	1, 768	1, 788	1, 788	1.788	1, 788	1,788	1, 788	1,788	23,028
		Expense	tenance	Cost	0	3, 012	3, 720	3, 946	3, 946	4, 013	4.013	4,013	4,013	4, 013	4.013	4,013	4, 013	4, 013	4,013	54, 754
			Personnel	Cost	0	099	099	1, 320	1, 320	1, 375	1, 375	1, 375	1, 375	1.375	1.375	1, 375	1, 375	1, 175	1, 375	17, 710
•			[otal	Difference	-22,070	-55, 877	-61, 321	-63, 888	-51,002	-84, 053	-57, 078	-49, 931	-42, 792	-35, 634	-28, 495	-23,055	-16,056	-19, 491	0-	-0 -600,744
		ue		DifferenceDifference	-22,070	-33,807	-5,445	-2, 567	2,886	-3.051	6.976	7,147	7, 139	7, 159	7, 138	5, 441	6,958	-3, 434	19, 491	0-
		Net Present Value		Cost	22,070	45, 257	17,069	14, 185	8, 431	14, 200	3, 762	3, 360	3, 083	2, 779	2, 527	3, 924	2, 091	12, 247	-11, 475	143, 518
		Net		Revenues	0	11, 450	11,624	11,618	11, 317	11, 149	10,737	10, 506	10, 232	9, 938	9. 566	9,365	9, 089	6.813	8,015	143, 518
		Revenues	- Cost		-24, 256	-40,870	-7, 237	-3,751	4, 637	-5, 391	13, 551	15, 265	16, 768	18, 485	29, 267	16, 985	24, 020		80,875	116, 376
				Totai	24, 268	54, 712	22, 588	20,731	13,548	25,089	7, 308	7, 176	7, 254	7, 176	7, 176	12,250	7, 176	46, 219	-47, 516	215, 163
9, 951% 7, 280% 7, 527% 5, 015%		Cost		Expense	-	4,530	5, 238	6,982	6, 982	7,176	7.176	7,176	7,176	7, 176	7, 176	7, 176	7, 176	7. 176	7, 176	95, 492
Origin. Sense. (1) Sense. (2) Sense. (3)				nvestment	24. 286	50.182	17,456	13,749	6.566	17,913	132	0	80		6	5,074	-	39,043	-54, 792	331, 539 119, 671
				Total	G	13.842	15.451	15. 980	18, 185	19, 693	20,859	22. 441	24, 030	25.661	27, 443	29, 235	31, 196	33, 259	33, 259	331, 539
roject 1		Revenues	Subsidy	(Pund 9)	0				. 0		· C				-		-	-		6
Case 3 Privatized Project			Onersting	Revenues	0	13 842	15 451	16 980	200	40	20 859	22. 441	24, 030	25 661	27.443	29 235	31 186	33.259	33, 259	331, 539
			•	****	1 1007		7		2007	2002	7 2003		2003		2007	52 200R	2009	2010	5 2011	Total

Appendix C-6 Calculation of FIRR (Case 4)

Case 4
Privatized Project 2

ľ					Coet		Revenues	Het	Ret Present Value	ue			Expense	nse	
		ACVERICES.					4000				[ota]	Personne	Maintenance Others	Others	
	Uperating	Subsidy (C Emd)	Total	Investment	Expense	Total		Revenues	Cost	DifferenceDifference	Difference	Cost	Cost	Cost	Total
6	BEVEILLES	, , , , , , , , , , , , , , , , , , ,		22 672	c	22 672	-22 672	0	19, 955	-19,955	-19,955	0	0	•	_
1881	96.5	-	12 676	41.718	4.521	45.839	-32, 160	10, 597	35,510	-24, 914	-44.869	099	3, 003	858	4, 521
	13.013	_	10.01	017.15			4	204		7	-40 E34	989	200	#C	4.521
_	15, 261		15, 261	4.529	4, 521	0.0.0	117'0	10,400	1 1 7	? !			,		100
_	18 750	_	18, 750	9, 434	6, 737	16, 171	579	10,052	9, 705	347	-40, 286	1, 320	70.7	7.1	27.0
			17 007	12.00	F 737	12, 343	5, 624	9.469	6,499	2, 971	-37, 316	1, 320	3, 701	1.718	6, 737
	776 77		7.	7 7 7	307.1	18 870	77	178 8	C	2.1	-37, 294	1, 375	4, 543	1.788	7,706
٠.	18.616	-	13.016	11. 284	007.7	200						460		1 780	7 706
_	19.917	_	19.917	132	7, 706	7, 838		8.150	3.451	7	700 .70	7,0	2		
	21.5	_	21 217	_	7, 706	7, 706	13, 511	7.641	2, 775	. 856	-27, 486	1, 375	4, 543	I, 758	7.706
	779.79	-				400		7		7 8 S.A	-22 R22	1, 375	4,543	1.788	7.706
	22, 507	→	77. 20.	00	007'/	# C	24	7 1 1	- 1						302 6
	P5 % & 6	_	23,854	_	7,706	7, 706	16, 148	6,655	7, 150	4. 505	-18, 316	7, 3/3		001	
		•	25 340	_	7, 706	7, 785	17, 634	6, 223	1,892	4, 330	-13,986	1, 375	4.543	1. 788	7.706
	2,00	2 0	200	F 0.3	7 706	19 780	14 067	5 803	2.752	3, 040	-10,946	1, 375	4, 543	1, 788	7, 706
	160.07	_	50 107	-		200			4.	200	860 97	1 175	1 543	1.788	7, 706
	28 511	_	28, 511	<u> </u>	00/'/	9	cuo, 012	3.47	1, 20		, 200	-			
	30 289		30, 289	39.043	7. 706	46,749	-16, 460	5,071	7.827	-2,756	-9,744	1, 375	4.043	7. 198	207
	30.289	0	30, 289	-43, 536	7, 706	-35, 830	58, 119	4, 454	-5,280	9,744	٩	1, 375	4.543	1, 788	7,708
.1		ľ			363 66	105 360	776 341	105 990	105 629	÷	-362 449	17 710	90 90 90	23.028	99.576
ta.	707	_	311.404	35, 554	33,576	001 661	110.644	113, 343	100,040	2	405,300		20.		,

Appendix C-10 Financial Statements for Short-term project (Base Case)

PROFIT AND LOSS STATEMENT (UNIT: Million Br.) 1998	67 26,967 275
Operating Expenses	14 12,515 2755 2755 2755 2755 2755 2755 2755 2755 2755 2755 2756 28 28 464 14,454 14,454 14,454 14,454 14,454 14,454 14,454 14,454 14,454
Personnel	75 275 409 275 409 275 409
Maintenance and repair 0 3,016 3,220 3,946 4,013	13 4,013 4,013 4,013 4,013 4,013 4,013 4,013 4,013 4,013 4,013 4,013 4,013 4,013 4,013 358 368 368 368 368
Other expenditure	58 358 358 358 358 358 358 358 358 358 358 358 358 358 358 7,868 3,075 2,955 2,915 2,834 2,754 96 3,236 3,156 3,075 2,995 2,915 2,834 2,754 96 3,236 3,156 3,075 2,995 2,915 2,834 2,754 96 3,236 3,156 3,075 2,995 2,915
Depreciation costs 0 0 4,775 4,775 6,877 6,877 7,888 7	68 7,868 7,
Net Operating Revenues 0 4,277 555 476 -187 1,252 1,360 3,022 4,673 6,386 8,283 10,150 12,231 14,454 14,454 14,454 11,454	54 14,454
Non-operating Revenues 0 0 0 2287 841 1,396 2,187 3,210 4,466 5,972 7,712 9,739 12,073 13,973 16,876 14,273 17,311	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Interest on deposit 0 0 0 287 841 1.396 2.167 3.210 4.466 5.972 7.712 9.739 12.073 13.973 16.876 14.273 17.311 Non-operating Expenses 0 631 1.936 2.389 2.747 2.892 3.357 3.35	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Non-operating Expenses	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Interest on long-term loans	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Interest on short-term loans 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Net Income Before Tax	41 9, 294 9, 120 9, 889 10, 903 12, 001 12, 616 13, 620 28 21, 685 21, 280 23, 075 25, 441 28, 002 29, 437 31, 780 82 5, 421 5, 320 5, 769 6, 360 7, 000 7, 359 7, 945 46 16, 264 15, 960 17, 306 19, 080 21, 001 22, 078 23, 835 36 99, 600 115, 560 132, 866 151, 946 172, 348 195, 025 218, 860 12 2013 2014 2015 2016 2017 2018 2019 10 131, 739 127, 348 143, 906 165, 901 189, 759 202, 888 224, 669 33 42, 082 41, 424 43, 907 47, 207 50, 785 52, 755 56, 022 54 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 </td
Income Tax O	41 9, 294 9, 120 9, 889 10, 903 12, 001 12, 616 13, 620 28 21, 685 21, 280 23, 075 25, 441 28, 002 29, 437 31, 780 82 5, 421 5, 320 5, 769 6, 360 7, 000 7, 359 7, 945 46 16, 264 15, 960 17, 306 19, 080 21, 001 22, 078 23, 835 36 99, 600 115, 560 132, 866 151, 946 172, 348 195, 025 218, 860 12 2013 2014 2015 2016 2017 2018 2019 10 131, 739 127, 348 143, 906 165, 901 189, 759 202, 888 224, 669 33 42, 082 41, 424 43, 907 47, 207 50, 785 52, 755 56, 022 54 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 14, 454 </td
Ret Income After Tax O 2,552 -1,084 -1,072 -1,538 368 849 2,891 5,101 7,525 10,251 13,205 15,993 19,591 17,784 19,928 (Contribution To the Government) O 638 0 0 0 92 212 723 1,275 1,881 2,563 3,301 3,998 4,898 4,446 4,982 Retained Earnings 1,1914 831 -242 -1,779 -1,538 277 637 2,168 3,826 5,644 7,688 9,904 11,995 14,693 13,338 14,948 Retained Earnings 1,1914 831 -242 -1,779 -1,503 -866 1,302 5,128 10,772 18,460 28,364 40,359 55,052 68,390 83,336 (Cash FLOW STATEMENT (Unit: Million Rp.) CASH FLOW STATEMENT (Unit: Million Rp.) Cash Beginning 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 (Cash Beginning Cash Inflow (excluding G. Funds) 24,266 54,459 23,077 19,841 13,452 28,009 12,438 15,356 18,512 21,976 25,870 30,090 34,071 39,198 36,595 39,833 Net operating income 0 4,277 565 476 -187 1,252 1,380 3,022 4,673 6,395 8,263 10,150 12,231 14,454 14,454 Depreciation costs 0 0 0 4,775 4,775 6,677 6,677 7,868 7,8	28 21, 685 21, 280 23, 075 25, 441 28, 002 29, 437 31, 780 82 5, 421 5, 320 5, 769 6, 360 7, 000 7, 359 7, 945 46 16, 264 15, 960 17, 306 19, 080 21, 001 22, 078 23, 835 36 99, 600 115, 560 132, 866 151, 946 172, 948 195, 025 218, 860 10 131, 739 127, 348 143, 906 165, 901 189, 759 202, 888 224, 669 33 42, 082 41, 424 43, 907 47, 207 50, 785 52, 755 56, 022 54 14, 454
(Contribution To the Government)	82 5, 421 5, 320 5, 769 6, 360 7,000 7,359 7,945 46 16, 264 15,960 17,306 19,080 21,001 22,078 23,835 36 99,600 115,560 132,866 151,946 172,948 195,025 218,860 12 2013 2014 2015 2016 2017 2018 2019 10 131,739 127,348 143,906 165,901 189,759 202,888 224,669 33 42,082 41,424 43,907 47,207 50,785 52,755 56,022 54 14,454 14,454 14,454 14,454 14,454 14,454 14,454 14,454 14,454 14,454 14,454 14,454 14,454 14,654 14,668 7,868 7,868 7,868 7,868 7,868 7,868 7,868 7,868 7,868 7,868 7,868 7,868 7,868 7,868 7,868 7,868 7,868 7,868
Net Income After Contribution 0 1,914 -1,084 -1,072 -1,538 277 637 2,188 3.826 5.644 7,688 9,904 11,995 14,693 13,338 14,948 Retained Earnings 1,914 831 -242 -1,779 -1,503 -866 1,302 5,128 10,772 18,460 28,364 40,359 55,052 68,390 83,336 CASH FLOW STATEMENT (Unit: Million Rp.) Cash Beginning 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 Cash Beginning Cash Inflow (excluding G. Funds) 24,266 54,459 23,077 19,841 13,452 28,009 12,438 15,356 18,512 21,976 25,870 30,090 34,071 39,198 36,595 39,633 Net operating income 0 4,277 565 476 -187 1,252 1,360 3,022 4,673 6,396 8,263 10,150 12,231 14,454 14,454 Depreciation costs 0 4,775 4,775 6,677 7,868 7,868 7,868 7,868 7,868 7,868 7,868 7,868 7,868 Long-term loans 24,266 50,182 17,450 13,749 5,566 17,913 0 0 0 0 0 0 0 0 0 0 Interest on deposits 0 28,266 50,182 17,450 13,749 5,566 17,913 132 0 88 0 0 5,074 0 39,043 14,713 56,552 16,340 23,304 Investment 24,286 50,182 17,450 13,749 5,566 17,913 132 0 88 0 0 5,074 0 39,043 0 4,180 Repayment for long-term loans 0 631 1,936 2,389 2,747 2,892 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,356 3,343 3,321 3,228 Interest on long-term loans 0 631 1,936 2,389 2,747 2,892 3,357 3,357 3,357 3,357 3,357 3,357 3,356 3,343 3,321 3,228 Interest on long-term loans 0 631 1,936 2,389 2,747 2,892 3,357	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
CASH FLOW STATEMENT (Unit: Million Rp.) CASH FLOW STATEMENT (Unit: Million Rp.) 1997	36 99,600 115,560 132,866 151,946 172,948 195,025 218,860 12 2013 2014 2015 2016 2017 2018 2019 10 131,739 127,348 143,906 165,901 189,759 202,888 224,669 33 42,082 41,424 43,907 47,207 50,785 52,755 56,022 54 14,454 14,454 14,454 14,454 14,454 14,454 14,454 68 7,868 7,868 7,868 7,868 7,868 7,868 0 0 0 0 0 0 0 0 11 19,761 19,102 21,586 24,885 28,464 30,433 33,700 04 46,473 24,866 21,912 23,349 37,656 30,974 27,409
CASH FLOW STATEMENT (Unit: Million Rp.) 1937	12 2013 2014 2015 2016 2017 2018 2019 10 131,739 127,348 143,906 165,901 189,759 202,888 224,669 33 42,082 41,424 43,907 47,207 50,785 52,755 56,022 54 14,454 14,454 14,454 14,454 14,454 14,454 14,454 68 7,868 7,868 7,868 7,868 7,868 7,868 7,868 0 0 0 0 0 0 0 0 11 19,761 19,102 21,586 24,885 28,464 30,433 33,700 04 46,473 24,866 21,912 23,349 37,656 30,974 27,409
Cash Beginning	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Cash Beginning	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Cash Inflow (excluding G. Funds)	33 42,082 41,424 43,907 47,207 50,785 52,755 56,022 54 14,454 14
Net operating income 0 4,277 565 476 -187 1,252 1,360 3,022 4,673 6,396 8,263 10,150 12,231 14,454 1	54 14,454
Depreciation costs	68 7,868 <td< td=""></td<>
Long-term loans 24,266 50,182 17,450 13,749 5,566 17,913 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0
Interest on deposits 0 287 841 1,396 2,167 3,210 4,466 5,972 7,712 9,739 12,073 13,973 16,876 14,273 17,311 (Cash Outflow (excluding G. Funds) 24,266 52,545 19,386 16,138 8,313 21,055 4,065 5,319 6,906 8,464 10,313 17,423 14,713 56,552 16,340 23,304 Investment 24,266 50,182 17,450 13,749 5,566 17,913 132 0 88 0 0 5,074 0 39,043 0 4,180 (Repayment for long-term loans 0 0 0 0 0 0 0 0 0 0 0 0 0 31 504 872 951 2,305 interest on long-term loans 0 631 1,936 2,389 2,747 2,892 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357	04 46,473 24,866 21,912 23,349 37,656 30,974 27,409
Cash Outflow (excluding G. Funds) 24,266 52,545 19,386 16,138 8,313 21,055 4,065 5,319 6,906 8,464 10,313 17,423 14,713 56,552 16,340 23,304 Investment 24,266 50,182 17,450 13,749 5,566 17,913 132 0 88 0 0 5,074 0 39,043 0 4,180 Repayment for long-term loans 0 0 0 0 0 0 0 0 0 0 0 31 504 872 951 2,305 interest on long-term loans 0 631 1,936 2,389 2,747 2,892 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357	04 46,473 24,866 21,912 23,349 37,656 30,974 27,409
Investment 24,266 50,182 17,450 13,749 5,566 17,913 132 0 88 0 0 5,074 0 39,043 0 4,180 Repayment for long-term loans 0 0 0 0 0 0 0 0 0 0 0 0 31 504 872 951 2,305 interest on long-term loans 0 631 1,936 2,389 2,747 2,892 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,358 3,343 3,321 3,296	
Repayment for long-term loans 0 0 0 0 0 0 0 0 0 0 0 0 0 31 504 872 951 2,305 Interest on long-term loans 0 631 1,936 2,389 2,747 2,892 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357	
Interest on long-term loans 0 631 1,936 2,389 2,747 2,892 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357 3,357	
Income Tax 0 1,094 0 0 0 158 364 1,239 2,186 3,225 4,393 5,659 6,854 8,396 7,622 8,541	
(Contribution to the Government) 0 638 0 0 0 92 212 723 1,275 1,881 2,563 3,301 3,998 4,898 4,446 4,982	
Interest on short-term loans 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Cash Inflow - Cash Outflow 0 1,914 3,691 3,703 5,139 6,954 8,373 10,036 11,606 13,512 15,556 12,667 19,358 -17,354 20,255 16,329	29 -4.391 16.558 21.996 23.858 13.129 21.781 28.612
Cash Ending 0 1,914 5,606 9,308 14,448 21,401 29,774 39,810 51,416 64,928 80,484 93,151 112,509 95,155 115,410 131,739	
	39 127, 348 143, 906 165, 901 189, 759 202, 888 224, 669 253, 282
Cash shortage 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
BALANCE SHEET (UNIT: Million Rp.)	
1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012	12 2013 2014 2015 2016 2017 2018 2019
Assets)	22 427 240 442 200 427 204 420 770 270 200 200 200 200 200 200
Current Assets 0 1,914 5,606 9,308 14,448 21,401 29,774 39,810 51,416 64,928 80,484 93,151 112,509 95,155 115,410 131,739 Cash & Deposit 0 1,914 5,606 9,308 14,448 21,401 29,774 39,810 51,416 64,928 80,484 93,151 112,509 95,155 115,410 131,739	
	, , , , , ,
Fixed Assets 24, 266 74, 448 87, 123 96, 097 94, 986 106, 222 98, 486 90, 618 82, 838 74, 970 67, 102 64, 308 56, 440 87, 615 79, 747 76, 059 Construction costs 24, 266 74, 448 91, 898 105, 647 111, 213 129, 126 129, 258 129, 258 129, 346 129, 346 129, 346 134, 420 134, 420 173, 463 173, 463 177, 643	
Accommulated depreciation 0 4,775 9,550 16,227 22,904 30,772 38,640 46,508 54,376 62,244 70.112 77,980 85,848 93,716 101,584	, , , , ,
Net fixed assets 24,266 74,448 87,123 96,097 94,986 106,222 98,486 90,618 82,838 74,970 67,102 64,308 56,440 87,615 79,747 76,059	_ _ _
	98 220, 971 233, 841 248, 056 264, 046 281, 957 300, 944 321, 689
Liabilities and capital)	
Liabilities 24, 266 74, 448 91, 898 105, 647 111, 213 129, 126 129	62 121, 372 118, 281 115, 190 112, 100 109, 009 105, 919 102, 828
Current Liabilities (cross subsidy 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Fixed Liabilities (Long-term loan) 24,266 74,448 91,898 105,647 111,213 129,126 129,12	62 121, 372 118, 281 115, 190 112, 100 109, 009 105, 919 102, 828 }
Capital 0 1,914 831 ~242 -1,779 -1,503 ~866 1,302 5,128 10,772 18,460 28,364 40,359 55,052 68,390 83,336	36 99,600 115,560 132,866 151,946 172,948 195,025 218,860
Investment In Kind By Gov. Funds [0 0 0 0 0 0 0 0 0 0	
Net Income After Tax and Cont. 0 1,914 -1,084 -1,072 -1,538 277 637 2,168 3,826 5,644 7,688 9,904 11,995 14,693 13,338 14,946	46 16, 264 15, 960 17, 306 19, 080 21, 001 22, 078 23, 835
Retained Earnings 0 1,914 831 -242 -1,779 -1,503 -866 1,302 5,128 10,772 18,460 28,364 40,359 55,052 68,390 83,336	36 99,600 115,560 132,866 151,946 172,948 195,025 218,860
Total Liabilities and capital 24,266 76,362 92,729 105,405 109,434 127,623 128,260 130,428 134,254 139,898 147,586 157,459 168,949 182,770 195,157 207,798	98 220, 971 233, 841 248, 056 264, 046 281, 957 300, 944 321, 689
CINAMOLAL LUBICATORS	
FINANCIAL INDICATORS	10 0040 0044 0046 0046 0046 0046 0046 00
Working Ratio (%) 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2010 2011 2012 2018 2019 2010 2011 2012 2018 2019 2010 2011 2012 2018 2019 2019 2019 2019 2019 2019 2019 2019	12 2013 2014 2015 2016 2017 2018 2019
	. 2% 17.
Operating Ratio (%) Rate of Return on Net Fixed Assets 0.0% 5.7% 0.6% 0.5% 0.5% -0.2% 1.2% 1.4% 3.3% 5.6% 8.5% 12.3% 15.8% 21.7% 16.5% 18.1% 19.0%	. 4% 46.
15.17. 15	<u>, 0 4 10, 4 5 10, 136 17, 0 5 18, 3 5 18, 3 5 21, 1 5 </u>

oject (Base Case)

39 2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
	1,009 1,196	12, 574 11, 323	13,873	15, 535 12, 514	17, 186 12, 514	18,909 12,514	20,776 12,514	22, 663 12, 514	24, 744 12, 514	26, 967 12, 514	26, 967 12, 514	26, 967 12, 514	26, 967 12, 514			26, 967	26,967	26,967	26, 967	26, 967	26,967	26, 967	26, 967	26, 967	26, 967	
10 220	220	275	275	275	275	275	275	275	275	275	275	275	275	275	12, 514 275	12, 514	12, 514 275	12,514	12,514	12, 514 275	12,514	12, 514	12, 514	12,514	12,514	12,514
20 3,946 72 286	4,013 286	4,013 358	4,013 358	4, 013	4,013	4,013 358	4,013 358	4,013	4, 013 358	4,013 358	4, 013 358	4,013	4,013 358	4,013	4,013	4,013	4,013	4,013	4,013	4,013	4,013	4,013	4,013	4,013	4,013	4,013
	6, 677	6,677	7,868	7,868	7,868	7,868	7,868	7,868	7,868	7,868	7,868	7, 868	7,868	358 7,868	358 7.868	7, 868	358 7.868	358 7,868	7, 868	7,868	358 7,868	358 7,868	358 7,868	358 7, 868	358 7,868	358 7, 868
35 476 37 841	-187 1,396	1,252 2,167	1,360 3,210	3, 022 4, 466	4, 673 5, 972	6,396 7,712	8, 263 9, 739	10,150	12, 231	14, 454 16, 876		14, 454	14, 454	14, 454		14, 454	14, 454	14, 454	14, 454	14, 454	14, 454	14, 454	14,454	14, 454	+	14, 454
37 841	1,396	2,167	3, 210	4,466	5,972	7.712	9,739	12,073	13,973	16, 876			19,761 19,761	19, 102	21,586 21,586	24,885	28, 464 28, 464	30,433 30,433		37, 992 37, 992	41, 161	46,053 46,053	46, 948 46, 948	51,858 51,858	56, 984 56, 984	62, 586 62, 586
	2,747 2,747	2,892 2,892	3, 357 3, 357	3, 357 3, 357	3,357	3,357 3,357	3, 357 3, 357	3,357 3,357	3,356 3,356	3, 343 3, 343	3, 321	3, 296	3, 236		3,075	2, 995	2,915	2,834	2,754	2,674	2,593	2,513	2, 432	2, 352	2,272	2, 191
0 0	0	0	0	0	0	0	0	0	3, 330	3, 343	3, 321 0	3, 296 0	3,236	3, 156	3,075 0	2,995	2,915 0	2,834	2,754	2,674	2,593	2,513	2.432	2,352	2,272	2, 191
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1,538	527 158	1, 212 364	1, 239	7,287	10,751 3,225	14,644 4,393			27, 987 8, 396				30,400		36, 344			45, 400	49,772		57, 994	58,969	63, 959	69, 166	74, 848
4 -1,072 -	1,538	369	849	2,891	5, 101	7,525	10,251	13, 205		19, 591	7,622	8,541 19,928	9, 294 21, 685	9,120 21,280	9,889 23,075	10,903	12,001 28,002	12,616	13,620 31,780	14, 932	15,906 37,115		17,691 41,278	19,188		22, 455
34 -1,072 -	1,538	92 277	212 637	723 2,168	1,275 3,826	1,881 5,644	2,563 7,688	3,301	3, 998 11, 995	4, 898	4,446	4, 982 14, 946	5, 421	5,320	5.769	6.360	7.000	7, 359	7, 945	8.710	9 279	10 149	10,320	11, 193	12, 104	52,394 13,098
		-1,503	-866	1, 302		10,772	18, 460			55, 052	68, 390	83, 336	99.600	15,960 115,560	17,306	19,080	21,001 172 948	195 025	23,835	26, 130	27,836	30,447	30, 959	33, 578	36, 312 404, 123	39, 295
														· · · · · · · · · · · · · · · · · · ·	<u> </u>			1 100,000	1 2 2 4 0 0 0	1 2 1 7 , 3 3 1	1 2 1 2 1 0 2 1	1 202, 614	1 004, 432	1 301, 011	1 404, 145	443,410
9 2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022	2024	2025	2026
	9,308 3,452	14,448 28,009	21,401 12,438	29,774 15,356		51,416 21,976	64, 928 25, 870	80,484 30,090	93, 151 34, 071	112,509		115, 410	131,739	127, 348	143.906	165, 901	189,759	202,888	224,669			307,020	312, 985		379, 894	2026
5 476	-187	1, 252	1,360	3,022	4,673	6,396	8, 263	10,150	12, 231	39, 198 14, 454	36, 595 14, 454	39,633	14, 454	14,424	43,907 14,454	47, 207 14, 454	50,785 14,454	52,755 14,454	56,022 14,454	60, 314 14, 454	63,483 14,454	68,375 14,454	69,269 14,454		79,306	1 ' 1
	6,677 5,566	6,677 17,913	7,868 0	7,868 0	7,868	7,868	7,868	7,868	7,868	7,868	7,868	7,868	7,868	7,868	7.868	7, 868	7.868	7, 868	7, 868	7,868	7,868	7,868	7, 868	14,454	14,454 7,868	14, 454 7, 868
7 841	1,396	2,167	3,210	4,466	5,972	7,712	9,739	12,073	13, 973	16,876	14, 273	17, 311	19,761	19, 102	0 21,586	24,885	28,464	30,433	33, 700	37, 992	0 41,161	46,053	0 46,948	0 51,858	E 004	0 500
	8,313 5,566	21,055 17,913	4,065 132	5,319	6,906	8, 464	10,313	17,423 5,074	14, 713	56, 552	16,340	23, 304	46,473	24,866	21,912	23, 349	37, 656	30,974	27, 409	39, 189	30,869	62,410	36, 536	40,003	56,984 41,957	62,586
0 0	0	0	0	ŏ	0	0	0	3, 0,4	504	39,043 872	951	4, 180 2, 305	25, 432 3, 091	4, 180 3, 091	88 3,091	3,091	12,650 3,091	5,074 3,091	0 3, 091	9,783	3,091	29,260 3,091	3,003 3,091	4, 180 3, 091	3,741 3,091	2 001
0 2,389	2,747	2,892 158	3,357 364	3,357 1,239	3,357	3,357 3,225	3,357 4,393	3,357 5,659	3, 356 6, 854	3, 343	3, 321	3, 296	3, 236	3, 156	3,075	2, 995	2,915	2,834	2,754	2,674	2,593	2,513	2,432	2, 352	2, 272	3,091 2,191
0 0	0	92	212	723	1, 275	1,881	2,563	3, 301	3, 998	8,396 4,898	7, 622 4, 446	8, 541 4, 982	9, 294 5, 421	9,120 5,320	9,889 5,769	10,903 6,360	12,001 7,000	12,616	13,620	14,932 8,710	15,906 9,279	17,398	17,691 10,320	19,188 11,193	20,750 12,104	22, 455
1 3,703	5, 139	6.954	8, 373	10,036	11,606	0 13,512	0 15,556	12,667	0 19.358	17 254	0	0	0	0	. 0	0	0	0	. 0	0	0	10,143	10, 320	11,193	12, 104	13,098
	4,448	21,401	29,774	39,810	51,416	64,928	80,484	93, 151	112, 509	95, 155	115, 410	131,739	-4, 391 127, 348	143, 906	21, 996 165, 901	189 759	13, 129 202 888	224 660	28,612	274 407	32,614	5,964	246 719	34, 176	417 242	44,073
0 9,308 1	4,448	21,401	29,774 0	39, 810 0	51,416	64,928	80,484 n	93, 151	112,509	95, 155	115, 410	131, 739	127, 348	143, 906	165,901	189, 759	202, 888	224, 669	253, 282	274, 407	307,020	312, 985	345, 718	379, 894	417, 242	461, 315
		— <u>-</u> <u>-</u> <u>-</u> <u>-</u> <u>-</u>		<u>.</u>	<u> </u>	·····	U	L		<u> </u>	1 0	<u> </u>	U	<u> </u>	0_	0	0	0]0	0	0	0	0_	0	0	0
9 2000	2001	2002	2003	2004	2005	2006 i	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	0017	0040			T					
6 9,308 1	4, 448	21,401	29,774	20 910	61 410										2013	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
6 9,308 1	4,448	21,401	29,774	39,810 39,810	51,416 51,416	64,928 64,928	80,484 80,484	93, 151 93, 151	112,509 112,509		115,410			143,906 143,906	165,901	189,759 189,759	202,888	224,669	253, 282		307,020	312, 985	345,718	379,894	417, 242	461,315
		106,222 129,126	98,486 129,258	90,618	82,838	74,970	67, 102	64,308	56,440	87,615	79,747	76,059	93,623	89,935	82,155	74, 287	79,069	76, 275	253, 282 68, 407		62,454	312,985 83,846		379, 894 75, 293	417, 242 71, 166	461,315 63,298
5 9,550 1	6, 227	22,904	30,772	129,258 38,640	129,346 46,508	129,346 54,376	129,346 62,244	134,420 70,112	134,420 77,980		173, 463	177,643	203,075	207, 255 117, 320	207, 343	207, 343 133, 056	219,993		225,067	234,850	234,850	264,110	267, 113	271, 293	275,034	275,034
3 96,097 9 9 105,405 10	4,986	106, 222	98, 486	90,618 130,428	82,838	74,970	67, 102	64, 308	56,440	87, 615	1 79.747	76.059	93.623	89, 935	82 155	74 287	79 066	78 275	156,660 68,407	164,528 70,322	62 454	180, 264 83, 846	70 001	70 202	71 100	211,736
					134, 254		147, 586	157, 459	168, 949	182,770	195, 157	207, 798	220, 971	233, 841	248,056	264,046	281, 957	300, 944	321,689	344,729	369,474	396, 831	424,699	455, 187	488, 408	524, 613
18 105,647 11 0 0	1, 213	129, 126	129, 126	129, 126	129, 126	129, 126	129, 126	129,095	128, 590	127, 718	126,767	124, 462	121, 372	118, 281	115,190	112, 100	109,009	105, 919	102,828	99,738	96,647	93,557	90,466	87, 376	84, 285	81, 195
8 105, 647 11	1,213	129, 126	129, 126	129, 126	129.126	129.126	129 126	129 005	128 500	197 710	128 767	124 462	101 272	1 1 1 0 0 1	116 100	440 400		J	400 000		0		U		[U]	U
1 -242 -	1,779	-1,503	-866	1,302	5,128	10,772	18,460	28,364	40, 359	55, 052	68, 390	83, 336	99,600	115, 560	132, 866	151, 946	172, 948	195,025	218, 860	244, 991	272,827	303, 274	90,466 334,232	87, 376 367, 811	84, 285 404, 123	81, 195
4 -1.072 -	1,538	277	637	2, 168	3,826	U 5,644	0 7.688	9,904	0 11 995	0 14 802	13 332	14 046	16 264	15 060	17 205	10.000	21 001	0	0 025	0	0 00 000	0	0	0	o l	Ö
4 -1.072 - 1 -242 - 9 105,405 10	1,779	-1,503	-866 128 260	1,302	5, 128	10.772	18, 460	28,364	40, 359	55, 052	68, 390	83, 336	99,600	115, 560	132, 866	151, 946	172, 948	195,025	23, 835	244, 991	272,827	303, 274	30, 959	33,578 367,811	36,312 404,123	39, 295 443, 418
0 1 100, 400 10	2, 404	121,043	140,400	130, 428	134,254	139,898	147, 586	157, 459	168,949	182,770	195, 157	207, 798	220, 971	233, 841	248,056	264, 046	281,957	300,944	321,689	344,729	369,474	396,831	424,699	455, 187	488,408	524, 613
	2001	2002																_								
45.9%	41.0%	36.9%	2003 33.5%	29.9%	27.0%	2006 24.6%	2007 22.4%	2008 20.5%	2009 18.8%	2010 17. 2%	2011 17. 23	2012 17.2%	2013 17.2%		2015 17.2%	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
95.1% 6% 0.5%	101.7%	90.0% 1.2%	90.2%	80.6%	72.8%	66.2%	60.2%	55.2%	50.6%	48.4%	46.43	46.4%	46.4%	46.4%	46.4%	46.4%	17.2% 46.4%	17.2% 46.4%	17. 2% 46. 4%		17.2% 46.4%	17.2% 46.4%	17.2% 46.4%	17.2% 46.4%	17.2% 46.4%	17.2% 46.4%
× ~1 0.0 /6]	0.44	1.4%	1.43	3.3%	5.6%	8,5%	12.3%	15.8%	21.7%	16.5%	18.13	19.0%	15.4%	16.1%	17.6%	19.5%		18.9%	21.1%	20.6%	23.1%	17.2%	18.3%	19.2%	20.3%	

Appendix C-11 Financial Statements for Short-term project (Case 1)

PROFIT AND LOSS STATEMENT (UNIT: Mill	ion Rp.)	7																					
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Operating Revenue	0	15,340	17, 107	18,762	20,068	21,633	22,964	24,626	26,277	28,000	29,867	31, 754	33, 835	36,021	36,021		36,021	36,021	36,021		36,021	36,021	36,021
Operating Expenses	0	5,180	12, 356	14, 100	16,002	16, 196	17,387	17, 387	17, 387	17,387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387
Personne1	0	660	660	1,320	1,320	1, 375	1,375	1, 375	1,375	1,375	1,375	1,375	1,375	1, 375	1,375	1, 375	1,375	1, 375	1, 375	1, 375	1, 375	1,375	1,375
Maintenance and repair	0	3,662	4,366	4,592	4,592	4,659	4,659	4,659	4,659	4,659	4,659	4,659	4,659	4,659	4,659	4,659	4,659	4,659	4, 659	4, 659	4,659	4,659	4,659
Other expenditure	0	858	858	1,716	1,716	1,788	1,788	1,788	1,788	1,788	1,788	1,788	1,788	1,788	1,788	1,788	1,788	1,788	1,788	1,788	1,788	1,788	1,788
Depreciation costs	0	l n	6, 472	6, 472	8, 374	8, 374	9, 565	9, 565	9,565	9,565	9,565	9, 565	9,565	9, 565	9.565	9,565	9, 565	9, 565	9, 565	9, 565	9,565	9,565	
Net Operating Income	0	10.160	4, 751	4.662	4.066	5, 438	5, 578	7, 240	8,891		12, 481	14, 368	16,449	18,635	18,635	18,635							9,565
Non-operating Revenues	0	1 10,100	598	1,685	2, 815	4, 244			9, 983								18,635	18,635	18,635	18,635	18,635	18,635	18,635
Interest on deposit	0	1 %	598	1, 685			5,882	7, 782		12,474	15, 310	18,516	21, 358	25, 277	23,767	27, 984	31,705	32,418	36, 382	41, 278	46,579		55,677
Non-operating Expenses	0	7 500			2, 815	4, 244	5,882	7, 782	9,983	12,474	15,310	18, 516	21, 358	25, 277	23, 767	27,984	31, 705	32, 418	36, 382	41, 278	46,579	50,406	55,677
	U A	2,568	3,873	4, 327	4, 684	4, 829	5,295	5, 295	5, 295	5,295	5, 295	5, 295	5, 294	5, 281	5, 258	5,233	5, 173	5,093	5,013	4,932	4,852	4,772	4,691
Interest on long-term loans	U	2,568	3,873	4, 327	4,684	4,829	5, 295	5, 295	5, 295	5,295	5, 295	5,295	5, 294	5, 281	5,258	5,233	5, 173	5,093	5,013	4,932	4,852	4,772	4,691
Interest on short-term loans	U	1 F F A	U	V 000	U	U	Ü	U	Ü	U	Ų	U	U	0	Ü	0	0	0	0	0	0	0	0
Net Income Before Tax	U	7,592	1, 476	2,020	2, 196		6, 165	9,727	13,579		22,496	27,589	32,513		37, 143	41,385	45, 166	45,960	50,004	54,980	60,361	64,269	69,620
Income Tax	Ų	2.277	443	606	659	1,456	1,849	2,918	4,074	5,338	6,749	8, 277	9,754	11,589	11, 143	12,416	13,550	13,788	15,001	18,494	18,108	19,281	20,886
Net Income After Tax	0	5,314	1,033	1,414	1,538	3,397	4,315	6,809	9,505	12,455	15,747	19, 312	22,759	27,042	28,000	28, 970	31,616	32, 172	35,003	38, 486	42, 253	44, 988	48,734
(Contribution To the Government)	0	1,329	258	354	384	849	1,079	1,702	2,376	3, 114	3,937	4,828	5,690	6,760	6,500	7, 242	7,904	8,043	8, 751	9,621	10.563	11, 247	12, 184
Net Income After Contribution	00	3,986	775	1,061	1, 153	2,547	3,237	5, 107	7, 129	9,341	11,810	14, 484	17,069	20, 281	19,500	21,727	23,712	24, 129	26, 252		31,690	33,741	36, 551
Retained Earnings		3,986	4,760	5, 821	6,974	9, 521	12,758	17,865	24,994	34, 335	46, 145	60,630	77,699	97, 980	117,480								344,146 3
																				2.2, 200	2.0,000	,,	011,110 0
CASH FLOW STATEMENT (Unit: Million	Rp.)																						
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Cash Beginning		0	3,986	11,232	18,765	28, 292	39,213	51, 883	66,555	83.161	102,067	123, 442		Address Address	158, 447		211.369	216, 123		275, 185	310.524		371.180 4
Cash Inflow (excluding G. Funds)	98, 784	60,342	29, 271	26,568	20,821	35, 968	21,025	24, 587	28, 439	32,653	37, 356	42, 449	47, 371	53, 477	51,967	56, 184	59, 905	60,618	64, 582	69, 477		78,605	
Net operating income	, i	10, 160	4, 751	4, 662	4,066	5, 438	5, 578	7, 240	8,891	10,614	12, 481	14, 368	16,449	18,635	18,635	18,635	18, 635	18,635	18,635	18, 635	74,778 18,635	18,635	83, 876 18, 635
Depreciation costs	ñ	1 -1, -1	6,472	6, 472	8, 374	8, 374	9,565	9, 565	9,565	9,565	9, 565	9,565	9, 585	9, 565	9,565	9,565	9,565						
Long-term loans	98, 784	50, 182	17, 450	13,749	5, 586	17, 913	3,000	3, 303	3,303	3,000	3,303	3, 303	3, 303	3, 300	3, 303	3, 303	9, JUJ 0	9,565	9,565	9,565	9,565	9,565	9,565
Interest on deposits	00, 101	00,100	598	1, 685	2, 815	4, 244	5,882	7, 782	9.983	12.474	15 210	18,516	21, 358	25, 277	22 262	27, 984	21 705	20 410	00 000	4. 250	40.600	50 400	
Cash Outflow (excluding G. Funds)	98,784	56,356	22,024	19,035	11, 294	25, 047	8,355				15,310	The second secon			23,767		31, 705	32,418	36, 382	41, 278	46,579	50,406	55, 677
Investment	98, 784	50, 182	17, 450	13,749	5, 566			9, 915	11,833	13,746	15,980	23,505	21, 242	63, 546	23,853	31, 376	55, 150	34, 195	31,943	34, 138	49,264	43,464	40,851
Repayment for long-term loans	30,704	30, 102	17,430	10,745	3, 300	17, 913	132	U	88	U	U	5,074	504	39,043	0	4, 180	25, 432	4, 180	88	0	12,650	5,074	0
Interest on long-term loans	0	2 560	2 072	4 222	4 604	4 000		0 700 7	T 005	5 005	5 00	31	504	872	951	2,305	3,091	3,091	3,091	3,091	3,091	3,091	3,091
Income Tax	0	2,568	3,873	4, 327	4,684	4,829	5, 295	5, 295	5,295	5,295	5, 295	5,295	5,294	5, 281	5,258	5,233	5, 173	5,093	5,013	4,932	4,852	4,772	4,691
(Contribution to the Government)	0	2,277	443	808	659	1,456	1,849	2,918	4,074	5,338	6,749	8,277	9,754	11,589	11, 143	12,416	13,550	13,788	15,001	16,494	18, 108	19,281	20,886
	. 0	1,329	258	354	384	849	1,079	1,702	2,376	3, 114	3, 937	4,828	5,690	6,760	6,500	7,242	7,904	8,043	8,751	9,621	10,563	11,247	12,184
Interest on short-term loans			2 2 4 2	1 B E A A	U	U	U	U	0	0	0	0	0	0	0	0	0	0	0	0	0 '	0	0_j
Cash Inflow - Cash Outflow Cash Ending	0		7, 247		9,527			14,672	16,606	18,906	21, 375	18,944		-10,069	28, 114		4,755	26,423	32,638	35, 339	25, 514	35, 141	43,025
*	U	3,986	11, 232		28, 292	39, 213	51,883	66,555	83, 161	102,067	123, 442	142,386	168,516			211,369		242,547		310,524	336,038	371,180	414, 205 4
Cash excess	U	3,986	11, 232	18, 765	28, 292	39.213	51,883	86,555	83,161	102,067	123,442	142,386	168,516	158, 447	186,561	211,369	216, 123	242,547	275, 185	310,524	336,038	371,180	414, 205 4
Cash shortage	00_	<u> </u>	1 0	<u> </u>	<u> </u>	<u> </u>	0	0	. 0	0	0	0	0	0_	0	0	0	0	0	0	0	0	. 0)
PALANCE OBEET (INIT. W. 11' D.)																							
BALANCE SHEET (UNIT: Million Rp.)	4000	1	1000	1		· · · · · · · · · · · · · · · · · · ·																	
7.	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
(Assets)	_		l											1									
Current Assets	Ō	3,986	11, 232	18,765	28, 292	39,213	51,883	66,555	83, 161	102,067	123,442	142,386	168,516	158, 447	186,561	211,369	216, 123	242,547	275, 185	310,524	336,038	371, 180	414, 205 4
Cash & Deposit	0	3,986	11, 232	18,765	28, 292	39, 213	51,883	66,555	83, 161	102,067	123,442	142,386	168,516	158, 447	186, 561	211,369	216, 123	242,547	275, 185	310.524	336,038	371, 180	414, 205 4
Fixed Assets	98,784	148,966	159,944	167, 221	164,413	173,952	164,519	154,954	145.477	135,912	126.347	121,856	112, 291	141,769	132, 204	126,819		137, 301	127,824	118, 259	121, 344	116,853	107, 288 1
Construction costs	98,784	148,966	166,416	180, 165	185,731	203,644	203,776	203,776	203,864	203,864	203.864		208, 938	247, 981	247, 981		277,593		281.861	281, 861	294, 511	299, 585	299.585 3
Accoumulated depreciation		0	6,472	12,944	21, 318	29,692	39,257	48,822	58, 387	67,952	77, 517	87,082	96,647	106, 212	115 777	125, 342		144, 472		163,602		182, 732	192.297 2
Net fixed assets	98,784	148,966	159,944	167, 221	164,413	173, 952	164,519	154,954	145.477	135.912	126.347	121.856	112 291	141.769	132, 204	126.819	142.686	137.301	127.824	118.259	121.344	116 853	107, 288 1
Total Assets	98, 784	152, 952	171, 176	185, 986	192,705	213, 165	216,402	221.509	228.638	237.979	249 789	264 242	280 807	300, 216	318.765	338.188	358 809	379 848	403 009	428 783	457 382	488, 033	521 493 5
(Liabilities and capital)						1						1		T-'''	· ·								
Liabilities	98, 784	148,966	166,416	180, 165	185,731	203,644	203.644	203, 644	203 644	203 644	203 644	203 613	203 108	202 236	201, 285	198, 980	195 890	192 700	189 708	188 618	183 527	180 427	177, 346 1
Current Liabilities (cross subsidy	0	0	, ,	, ,	U	ł U		l O	i ti	1 (1	1 0	1 01	ก	1 11	[]	l [l	1 6		l n	1 1		1 1	0 1
Fixed Liabilities (Long-term loan)	98,784	148, 966	166, 416	180.165	185.731	203, 644	203.644	203.644	203 644	203 644	203 844	203 813	203 109	202 236	201 285	198 980	195 800	192 700	186 709	188 819	183 ድንን	190 407	177, 346 1
Capital	Ö	3, 986	4,760	5,821	6,974	9, 521	12 758	17, 865	24 004	34, 335	46 145	60,630	77 800	07 080	117 480	130,300	162 826	192,733	212 201	249 165	272 055	207 506	344, 146 3
Investment In Kind By Gov. Funds	Ō	1 0	0		i , , , ,	1 77 1	, ' "	1.,000	, , , , , , , , , , , , , , , , , , ,	37,335	40,149	սս, սոս	11,033	31,350	111, 400	103,207	102,320	107,043	213, 301	745, 103	610,000 h	101,980	244, 140 3
Net Income After Tax and Cont.	ก์	3, 986	775	1,061	1, 153	2,547	3, 237	5, 107	7, 129	الم م	11 010	1, 10,	17 000	المو مو	10 500	יי מיד וני	92 710	94 196	25 252	0 004	31 000	,, ,, ,	3c cc
Retained Earnings	ก	3, 986	4 760	5 821	8 974	9 521	19 769	17 9£F	24 004	9,341	11,810	14, 484	17,069	20, 281	19,500	21,727	23,712	44, 129	26, 252	28, 864	31,690	33, 741	36, 551
Total Liabilities and capital	98, 784	152, 952	171 176	185 986	102 705	212 165	216 402	221 500	24,994	34,335	40,145	00,030	77, 599	97, 900	117,400	139, 201	102,920	187,049	213, 301	242, 105	273,855	307, 596	344, 146 3
Tarana and the second of the second s	40, 104	130,302	1 4 1 4 , 4 1 0	1 100, 300	1 132, 703	1 519, 103	410,402	441, 309	2Z8, 638	Z37, 979	249,789	[264, 242]	280,807	JUU, 216	318,765	338, 188	<u> </u>	379,848	403,009	428, 783	457, 382	488,033	344, 146 3 521, 493 5
FINANCIAL INDICATORS	1																						
- 1940 ALICE TRAILORD	1997	1998	1999	3000	2004	1 0000	6566	0.007							······			ب ب ب ب ب ب ب ب ب				,	
Working Ratio (%)	133/	1338	1333		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
				40.79	38.0%	36.2%	34.1%	31.8%	29.8%	27.9%	26.2%	24.6%	23.1%	21.7%	21.7%	21. 7%	21.7%	21.7%	21.7%	21.7%	21.7%	21.7%	21.7%
Operating Ratio (%)	0.09	, , , , , , , , , , , , , , , , , , , ,	, , , , , ,	75. 23		74.9%	75.7%	70.6%	66.2%	62.1%	58.2%	54.8%	51.4%	48.3%	48.3%	48.3%	48.3%	48.3%	48.3%	48.3%	48.3%	48.3%	48.3%
		K 6.8%	3.0%	i 2.89	2.5%	3, 1%	3.4%	A 20 m			1	المميدا		1 4 5 4 6			نمه مها	نمه مها					امدد
Rate of Return on Net Fixed Assets	U. U.	9) <u>0. 04</u>	9.00	E. 04	2. 7.8	1	3. 7.4	4. 7%	6.1%	7.8%	9.9%	11.8%	14.6%	13.1%	14. <u>1%</u>	14.7%	13.1%	13.6%	14.6%	15.8%	15.4%	[15.9%]	17.4%
Rate of Return on Net rixed Assets	0.07	<u>0. 0.</u>	3.00	<u> </u>	£. 3/8	1	J. 3. 4.4)	4. 7.8	b. 1%	7.8%	9.9%	11.8%	14.6%	13.1%	14.1%	14.7%	13.1%	13.6%	14.6%	15.8%	15.4%	15, 9%	17.4%

roject (Case 1)

0001	0004	2002								***					,		· · · · · · · · · · · · · · · · · · ·	,								
199 2000 107 18.762	2001 20,068	2002	2003 22,964	2004	26. 277	2006 28,000	2007 29,867	2008 31,754	2009 33,835	2010 36.021	36,021	2012 36,021	2013 36,021	2014 36,021	2015 36,021	2016 36,021	2017 36,021	2018 36,021	2019 36,021	2020 36,021	2021 36,021	2022 36,021	2023 36,021	2024 36,021	2025	2026
356 14, 100	16,002	16, 196	17, 387	17, 387	17, 387	17,387	17, 387	17, 387	17, 387	17,387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	17, 387	36,021 17,387	36,021 17,387
360 1,320 366 4,592	1,320 4,592	1,375 4,659	1,375 4,659	1,375 4,659	1,375 4,659	1,375 4,659	1,375 4,659	1,375 4,659	1,375 4,659	1,375	1,375	1,375	1, 375	1,375	1, 375	1,375	1,375	1,375	1, 375	1, 375	1, 375	1,375	1, 375	1.375	1, 375	1,375
358 1,716	1,716	1, 788	1, 788	1,788	1,788	1,788	1, 788	1,788	1,788	4,659 1,788	4,659 1,788	4,659 1,788	4, 659	4, 859 1, 788	4,659 1,788	4,659 1,788	4,659 1,788	4, 659 1, 788	4,659 1,788	4,659 1,788	4,659 1,788	4,659 1,788	4,659 1,788	4,659 1,788	4,659 1,788	4,659 1,788
172 6, 472	8, 374	8, 374	9,565	9,565	9,565	9,565	9,565	9,565	9,565	9,565	9,565	9,565	9,565	9,565	9,585	9,565	9,565	9,565	9,565	9, 565	9,565	9,565	9,565	9,565	9, 565	9,565
751 4,662 398 1,685	4,066 2,815	5, 438 4, 244	5, 578 5, 882	7,240	8,891 9,983	10,614 12,474	12,481 15,310	14,368 18,516	16,449 21,358	18,635 25,277	18,635 23,767	18,635 27,984	18,635	18,635 32,418	18,635 36,382	18,635 41,278	18,635 46,579	18,635 50,406	18,635 55,677	18, 635	18,635	18,635	18,635	18,635	18,635	18,635
598 1,685	2,815	4,244	5,882	7, 782	9,983	12,474	15,310	18,516	21, 358	25, 277	23, 767	27, 984	31, 705	32, 418	36, 382	41, 278	46, 579	50,406	55, 677	62, 131 62, 131	67,632 67,632	69,750 69,750	72, 942 72, 942	80,330 80,330	88, 130 88, 130	96, 616 96, 616
373 4, 327 373 4, 327	4,684 4,684	4,829 4,829	5,295 5,295	5, 295	5, 295	5,295	5, 295	5, 295	5, 294	5, 281	5, 258	5, 233	5, 173	5,093	5,013	4, 932	4,852	4,772	4, 691	4,611	4,531	4,450	4, 370	4,290	4,209	4, 129
0 4,327	4, 004	4,025	3, 293	5, 2 95 0	5, 295 0	5, 295 0	5, 295 0	5, 295 0	5,294 0	5, 281 0	5,258 0	5, 233 0	5, 173	5,093	5,013	4,932 0	4,852 0	4,772	4,691 0	4,611	4,531 0	4,450 0	4,370	4,290 0	4, 209 0	4, 129
176 2,020 1 143 606	2, 196 659	4, 852 1, 456	6, 165 1, 849	9,727	13, 579	17,793	22,496	27, 589	32,513	38, 631	37, 143	+		45,960			60, 361		69,620	76, 154	81,735		87, 206	94,675	102,555	111,122
33 1,414	1,538	3, 397		2, 918 6, 809	4,074 9,505	5,338 12,455	6,749 15,747	8,277 19,312	9,754 22,759	11,589 27,042	11,143 26,000	12,416 28,970		13,788 32,172	15,001 35,003	16,494 38,486	18, 108 42, 253	19,281 44,988	20,886 48,734	22,846 53,308	24, 521 57, 215		26, 162 61, 044	28,402 66,272	30,767 71,789	33, 336 77, 785
258 354	384	849	1,079	1,702	2,376	3, 114	3, 937	4,828	5,690	6,760	6,500	7,242	7,904	8,043	8, 751	9,621	10,563	11,247	12, 184	13, 327	14,304	14,688	15, 261			19,446
775 1,061 760 5,821	1, 153 6, 974	2, 547 9 521	3, 237 12, 758	5, 107 17, 865	7,129	9,341 34,335		14,484	77 600	20,281	19,500	139 207	162 920	24, 129 187, 049	26, 252	28,864	31,690	33,741	36, 551	39, 981	42, 911	44,065	45, 783	49,704	53, 841	58, 339
, , , , , , , , , , , , , , , , , , , ,	0, 0, 1	0, 021	12,700	17,000	21,331	03,000	10,110	00,000	11,033	57, 300	117, 400	133,201	102, 320	107,043	[413, 301	242, 100	213,633	1 307, 330	344, 140	304, 121	421,038	14/1,104	1 510, 887	355, 391	6ZU, 433	678,771
399 2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	0000	2004	2005	2006
386 11,232	18, 765	28, 292	39,213	51,883	66,555	83, 161	102, 067		142,386			186,561			242, 547	275, 185	310, 524		371, 180	414, 205	2021 450, 877	2022 464,999	486, 278	535.533	2025 587, 532	644, 107
271 26,568 751 4,662	20,821 4,066	35, 968 5, 438	21,025 5,578	24, 587	28, 439	32,653	37, 356	42,449	47, 371	53, 477	51, 967	56, 184	59,905	60,618	64,582	69, 477	74,778	78,605	83, 876	90,330	95, 831	97,949		, ,	116,329	
172 6, 472	8, 374	8, 374	9,565	7,240 9,565	8,891 9,565	10,614 9,565	12,481 9,565	14,368 9,565	16,449 9,565	18,635 9,565	18,635 9,565	18,635 9,565	18, 635 9, 565	18,635 9,565	18,635 9,565	18,635 9,565	18,635 9,565	18,635 9,565	18,635 9,565	18,635 9,565	18,635 9,565	18,635 9,565	18,635 9,565	18,635 9,565	18,635 9,565	18,635 9,565
150 13,749	5, 566	17, 913	0	. 0	0	0	0	0	0	. 0	0	0	0	0	0	0	0	0	0	0	0,000	0,500	0 0	0	0	3, 333
598 1,685 024 19,035	2, 815 11, 294	4, 244 25, 047	5,882 8,355	7,782 9,915	9,983	12,474	15, 310 15, 980	18,516 23,505	21,358 21,242	25, 277 63, 546	23,767	27, 984	31,705 55,150	32, 418 34, 195	36,382	41,278 34,138	46, 579 49, 264	50,406 43,464	55, 677 40, 851	62,131 53,658	67,632 81,709	69,750	72,942	80,330	88, 130	96, 616
150 13,749	5, 566	17, 913	132	0, 510	88	10,740	13,300	5,074	0	39,043	20,000	4, 180	25, 432	4, 180	88	34, 130	12,650	5,074	40,631	9,783	35, 264	29, 260	51,886 3,003	56,531 4,180	59,754 3,741	60,002
0 0 0 0 373 4,327	0 4,684	0 4,829	0 5, 295	0 5,295	0	0 5,295	5 205	31	504	872	951	2, 305	3,091	3,091	3,091	3, 091	3,091	3,091	3,091	3,091	3,091	3,091	3,091	3,091	3,091	3,091
143 606	659	1, 456	1,849	2, 918	5,295 4,074	5, 338	5, 295 6, 749	5,295 8,277	5, 294 9, 754	5, 281 11, 589	5,258 11,143	5, 233 12, 416	5, 173	5,093 13,788	5,013 15,001	4,932 16,494	4, 852 18, 108	4,772 19,281	4,691 20,886	4,611 22,846	4,531 24,521	4,450 25,180	4,370 26,162	4,290 28,402	4,209 30,767	4, 129 33, 336
258 354	384	849	1,079	1,702	2,376	3, 114	3, 937	4,828	5,690	6,760	6,500	7, 242		8,043	8,751	9,621	10,563	11, 247	12, 184	13, 327	14,304	14,688	15, 261	16,568	17,947	19,446
247 7,533	9, 527	10,921	12,670	14,672	16,606	18.906	21.375	18.944	26, 130	-10.069	28, 114	24.807	4,755	26, 423	32,638	35, 339	25, 514	35, 141	43.025	36 672	14, 122	21 280	49,255	51 000	0 56 575	64 813
232 18,765	28, 292	39, 213	51,883	66,555	83, 161	102,067	123, 442	142,386	168,516	158, 447	186, 561	211, 389	216, 123	242.547	275.185	310, 524	336.038	371.180	414, 205	450.877	464, 999	486, 278	535.533	587, 532	644, 107	708, 920
232 18,765	28, 292	39, 213 0	51,883 0	66, 5 55	83,161	102,067	123,442 i	142,386	168,516	158,447 n	186, 561	211, 369	216, 123	242, 547	275, 185	310,524	336, 038	371, 180	414,205	450,877	464, 999	486, 278	535, 533	587, 532	644, 107	708, 920
				<u> </u>	4	<u>'</u>	<u> </u>	<u>-</u>	<u> </u>	<u></u>	<u> </u>	<u></u>	<u></u>	<u>.</u>	J	<u> </u>) <u>U</u>	1 0	<u> </u>	<u>Ιυ.</u> .	<u> </u>	<u> </u>	·	
999 2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
232 18, 765	28, 292	39, 213	£1 902	66 655	02 161	102 002	100 440	140 000	100 510	150 (40	.00 501	011 000		040 540												
	28, 292	39, 213	51,883 51,883	66,555 66,555	83,161	102,067	123,442 123,442	142,386	168,516 168,516	158, 447 158, 447	L	211, 369		242,547		310,524 310,524	336,038 336 038		414, 205	450,877 450,877		486,278	535,533	587,532	644,107 644,107	708,920
1 '		173, 952		154, 954	145, 477	135,912	126, 347	121,856	112,291	141,769	132, 204	126,819	142,686	137, 301	127,824	118, 259	121, 344	116,853	107, 288	107, 506		152,900	1 .	140, 953	135, 129	
	21, 318	203, 644	39, 257	48, 822	203, 864	67,952	203, 864	208,938 87,082		247, 981	247, 981	252, 161 125, 342	277, 593	281,773 144,472	281,861	281,861 163,602	294, 511	299, 585	299,585	309,368 201,862	344, 632		376,895 230,557			
944 167, 221 1	164,413	173,952	164,519	154, 954	145, 477	135,912	126, 347	121,856	112.291	141.769	132, 204	126.819	142,686	137, 301	127.824	118.259	121.344	116, 853	107.288	107.506	133, 205	152,900	146 338	140 953	135 129	125 564
176 185, 986	192, 705	213, 165	216,402	221, 509	228,638	237,979	249,789	264, 242	280,807	300, 216	318, 765	338, 188	358,809	379,848	403,009	428, 783	457, 382	488,033	521,493	558, 383	598, 204	639,178	681,871	728, 485	779,236	834, 484
416 180, 165	185, 731	203,644	203,644	203, 644	203,644	203,644	203,644	203,613	203, 108	202, 236	201, 285	198, 980	195,890	192, 799	189,708	186,618	183, 527	180, 437	177,346	174, 256	171, 165	168,075	164, 984	161,894	158,803	155,713
ប ប	U	Đ i	l U	1 U	1 0	1 0	1 9	0	101	Ω	1 0	1 0	1 0	1 0	1 0	1 1	l A	n	ı	i n	l n	1 0	l n	n l	n i	n I
416 180, 165 1 760 5, 821	6, 974	9, 521	12, 758	17, 865	24, 994	34, 335	46, 145	60,630	77,699	97,980	117, 480	139, 207	162, 920	187, 049	213, 301	242, 165	273, 855	307, 596	344, 146	384, 127	427, 038	471,104	104, 984 516, 887	566, 591	620,433	678,771
UI UI	41 1	- 11	11	1 11	1 1	1 0	l O	A	ו מו	n	1 1	1 0	1 0	ı n	1 8	1 n }	ı n	1 0	l n		1 ∩	l 0	. n l	h h	n I	Λ I
775 1,061 760 5,821 176 185,986	6, 974	9.521	12,758	17, 865	24, 994	34, 335	46,145	14, 484 60, 630	77.699	20,281 97.980	117.480	139. 207	162.920	187.049	20, 252	25,864	31,690 273,855	33,741 307,596	30,551 344,146	39, 981	42, 911 427, 038	44,065	45,783 516,887	49,704 566,591	53,841 620,433	58, 339 678, 771
176 185, 986 1	192,705	213, 165	216,402	221, 509	228,638	237,979	249,789	264,242	280,807	300,216	318, 765	338, 188	358,809	379,848	403,009	428,783	457, 382	488,033	521, 493	558, 383	598, 204	639,178	681, 871	728, 485	779, 236	834, 484
999 2000 40.7%	2001 38.0%	2002 36.2%	2003 34,1% 75,7% 3,4%	2004	2005	2006	2007	2008	2009	2010 21.7%	2011	2012 21.73 48.33 14.73	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 21.7%	2023	2024	2025	2026
75. 231	79.7%	36.2% 74.9%	75.7%	2004 31.8% 70.6% 4.7%	2005 29.8% 66.2% 6.1%	2006 27.9% 62.1% 7.8%	2007 26.2% 58.2%	2008 24.6% 54.8% 11.8%	2009 23.1% 51.4% 14.6%	21.7% 48.3%	48.3	48.3	21.75 48.35	2014 21.7% 48.3%	2015 21.7% 48.3%	2016 21.7% 48.3%	2017 21.7% 48.3% 15.4%	2018 21.7% 48.3% 15.9%	21.7% 48.3% 17.4%	21.7% 48.3% 17.3%	21.7% 48.3% 14.0%	21.7% 48.3%	21.7% 48.3%	21.7% 48.3%	21.7% 48.3%	21.7% 48.3%
3.0% 2.8%	79.7% 2.5%	3.1%	3.4%	4, 7%	6.1%	7.8%	9.9%	11.8%	14.6%	13.1%	14.1	14.79	13.19	13.6%	14.6%	15.8%	15. 4%	15.9%	17.4%	17. 3%	14.0%	12.2%	12.7%	13.2%	13.8%	14.8%

Appendix C-12 Air quality in Ujung Pandang port

PARAMETER	TINU	OBSERVATION' LOSARI BENIENG	S LOCATION HATTA PORT	STANPARP
Carbon Monoxide Sulphur Dioxide	μg/m ³	800 1.383	1250 2.556	22609 260
Nitrogen Oxide Oxidant Hydrogen Salfide	hā\w ₃ hā\w ₃	2.243 11.057 <0.001	5.934 48.742 <0.001	92.5- 200 42
Ammonia Lead Hydrocarbons	mg/m ³ mg/m ³	0.548 0.003 25	1.755 0.005 40	1360 0.06 160
Dust (*)	mg/m³	0.885	1,185	0.26

Source: SEAMEO BIOTROP, December 1994 (*) Parameter that has exceeded the NAB (maximum-limit of the standard)

Appendix C-13 Water quality analysis Ujung Pandang port

ΝО.	PARAMETER	Unit	DS,D	DS,B	DS ₁ T	05,1	DS,A	DSrA	И	A 0
						1.			уов	101
٨	PHYSICS				-		:			:
ſ.	Colour	Pt.Co	20.5	22.5	17.5	20	22.5	25,0	< 50	≤ 30
2.	Transparancy	NTU	8,5	1	1	1.7		2.0	≼ 3	≥ 5
3.	Total suspendid solid	mg/l	470	350	402	262	318	364	< 80	s 25
4.	Temperature	Ċ	30.5	30.2	29.5	30,07	30	30		
₿.	CHEMISTRY		· :	ı						
	рН		7.7	7.4	7.3	7.2	7.25	7.26	6-9	6-8.5
2.	Salinity	%	27,90	28.∞	27.80	28,00	27.90	28.∞	10,000	Alami
3.	Dissolved Oksigen (DO)	'mg/l	-	- 1	5.70		6.10	· _	>4	>
4.	800	mg/i	1.00		1,50	1,30	1.20	1.00	<45	<25
5.	COD	mg/l	130.43	101.95	101,95	88,46	142.43	143,92	<80	< 40
6.	Amonia (NH, -N)	mg/l	0.048	0.047	0.051	0.121	0.887	0.168	<1	<3
7.	Nitrit (N-NO.)	mg/l	< 0.001	<0,001	0,005	0.006	< 0.001	<0.∞1	Nihil	Nihil
8.	Cyanide (CN)	mg/l	0.00456	0.001248	0.002392	0.00354	< 0.000001	0.001872	0.2	< 0.5
9.	Sulfide (H _s S)	mg/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.01
10.	Oil & grease	mg/i	0.47	0.47	0.38	0.46	0.47	0.48	≤ 5	Nihil
11.	Fenol	mg/l	0.04	0,04	0.02	0.02	0.03	0.03	≤ 0.002	Nibil
12,	Mercury (Hg)	mg/l	0,00001	< 0.∞∞1	< 0.∞∞1	< 0.∞∞1	< 0.∞∞1	< 0,00001	≤ 0,003	0.0001
13.	Chrom Heksavalen (Cr * *)	mg/l	0.037	0.043	0.028	0.038	0.041	0,043	≤ 0.01	0.0000
14.	Arsen (As)	mg/l	0.00005	0.00007	0.00002	0.00001	< 0.00001	0.0005	≤ 0.01	0,002
15.	Selenium (Se)	mg/l	0.046	0.045	0,037	0.041	0,046	0.047	≤ 0.005	0.0004
16.	Cadmium (Cd)	mg/l	0.049	0,045	0.032	0.032	0.04	0.04	≤ 0.01	0.0000
17.	Copper (Cu)	mg/l	0.047	0,04	0.014	0.014	0,023	0,057	≤ 0.05	0,00
18.	Lead (Pb)	mg/l	0.188	0.23	0.133	0.309	0,212	0.186	≤ 0.01	0.0000
19.	Zinc (Zn)	.mg/l	0.053	0,071	0,007	0.048	0.02	0.167	≤ 0.1	0.00
20.	Nikel (Ni)	mg/l	0.058	0.033-	0,014	0.032	0.035	<0.∞1	≤ 0,002	0.00
21.	Silver (Ag)	mg/l	0.034	0.042	0.038	0,044	0.037	0.034	≤ 0.05	0.000

SAMPLING LOCATION | DS,B : Dumping Site 1 Bottom OS,B : Dumping Site 1 Bottom OS,T : Dumping Site 1 Middle

OS,T: Dumping Site 2 Middle OS,A: Dumping Site 1 Surface OS,A: Dumping Site 2 Surface

NAB: Standard Value YDB: Allowable Limit YDI: Desirable Limit

Appendix C-14 Water quality analysis Ujung Pandang port

NO.	PARAMETER	UNIT	CH-Sr	CH-ba	ĸ	АВ
			<u> </u>		YDB	YDI
A.	PHYSICS					
1.	Colour	Pl.Co	22.5	20.0	< 50	≤ 30
2.	Transparancy	NTU	8.5	. 1	≤ 3	≥ 5
3.	Total suspendid solid	mg/l	288	446	< 80	≤ 25
4	Temperature	C	30.5	30.9		
В.	CHEMISTRY					
1.	рН		7.4	7.3	6-9	6-8.5
2.	Salinity	%	27.00	28.50	10.00	Alami
3.	Dissolved Oksigen (DO)	mg/l	5.00	5.70	> 4	> 6
4.	BOD	mg/l	1.00	0.80	< 45	< 25
5.	COD	mg/l	161.91	149.92	< 80	<40
6.	Amonia (NH,-N)	mg/l	0.586	0.215	<1	<3
7.	Nitrit (N-NO ₂)	mg/l	< 0.001	0.001	Nihil	Nihil
8.	Cyanide (CN)	mg/l	58.16	37.44	0.2	< 0.5
9.	Sulfide (H,S)	mg/l	< 0.01	< 0.01	< 0.03	< 0.01
10.	Oil & grease	mg/l	0.48	0.40	≲ 5	Nihil
11.	Fenol	mg/l	0.026	0.025	≤ 0.002	Nihil
12.	Mercury (Hg)	mg/l	0.000010	< 0.00001	≤ 0.003	0.0001
13.	Chrom Heksavalen (Cr+6)	mg/l	0.040	0.032	≤ 0.01	0.00004
14.	Arsen (As)	mg/l	0.00002	<0.00001	≤ 0.01	0.0026
15.	Selenium (Se)	mg/l	0.044	0.040	≤ 0.005	0.00045
16.	Cadmium (Cd)	mg/l	0.037	0.037	≤ 0.01	0.00002
17.	Copper (Cu)	mg/l	0.023	0.023	≤ 0.06	0.001
18.	Lead (Pb)	mg/l	0.167	0.22	≤ 0.01	0.00002
19.	Zinc (Zn)	mg/l	0.067	0.021	≤ 0.1	0.002
20.	Nikel (Ni)	mg/l	0.024	0.011	≤ 0.002	0.007
21.	Silver (Ag)	mg/l	0.038	0.04	≤ 0.05	0.0003

SAMPLING LOCATION

CH-Sr: Channel Ebbtide
CH-Ps: Channel Neap
NAB: Standard Value
YDB: Allowable Limit
YDI: Desirable Limit

Appendix C-15 Water quality analysis Ujung Pandang port

HO.	PARAMETER	UNIT	KL-Ps	KL-Sr	K	A B
<u> </u>		<u></u>	<u> </u>	<u></u>	YDB	YDI
A.	PHYSICS				. 1	
1.	Colour	Pt.Co	20	20.0	< 50	- ≤ 30
2.	Transparancy	NTU	2.5	1.7	≤3	≥ 5
3.	Total suspendid solid	mg/l	312	308	< 80	≤ 25
4.	Temperature	c	30.2	31		
В.	CHEMISTRY				. :	
1.	рН		7.1	7.5	6-9	6-8.5
2.	Salinity	%	28.00	29.00	10,00	Alami
3.	Dissolved Oksigen (DO)	mg/l	5.60	4.80	>4	>6
4.	BOD	mg/l	1.20	1.00	< 45	<25
5.	COD	mg/l	118.44	95.96	< 80	< 40
6.	Amonia (NH ₃ -N)	mg/l	0.189	0.098	<1	. <3
7.	Nitrit (N-NO ₂)	mg/l	< 0.001	< 0.001	Nihil	Nihil
8.	Cyanide (CN)	mg/l	21.840	< 0.01	0.2	< 0.5
9.	Sulfide (H ₂ S)	mg/l	< 0.01	< 0.01	< 0.03	< 0.01
10.	Oil & grease	mg/l	0,440	0.440	≤ 5.	Nihil
11.	Fenol	mg/l	0.034	0.034	≤ 0.002	Nihil
12.	Mercury (Hg)	mg/l	< 0.00001	< 0.00001	≤ 0.003	0.0001
13.	Chrom Heksavalen (Cr+6)	mg/l	0.034	0.038	≤ 0.01	0.00004
14.	Arsen (As)	mg/l	0,060	0.050	≤ 0.01	0.0026
15.	Selenium (Se)	mg/l	0.043	0.043	≤ 0.005	0.00045
16.	Cadmium (Cd)	mg/l	0.040	0.044	≤ 0.01	0.00002
17.	Copper (Cu)	mg/l	0.039	0.029	≤ 0.06	0.001
18.	Lead (Pb)	mg/l	0.239	0.232	≤ 0.01	0.00002
19.	Zinc (Zn)	mg/l	0.088	0.156	≤ 0.1	0.002
20.	Nikel (Ni)	mg/l	0.067	0.072	≤ 0.002	0.007
21.	Silver (Ag)	mg/l	0.037	0.036	≤ 0.05	0.0003
<u></u>		<u> </u>		-	· · · · · · · · · · · · · · · · · · ·	

SAMPLING LOCATION

KL-Sr: Basin Port Ebbtide KL-Ps: Basin Port Neap NAB: Standard Value YDI: Desirable Limit YDB: Allowable Limit

Appendix C-16 Sediment analysis Ujung Pandang port

NO.	PARAMETER	TINU	KL-Sr	KL-Ps
A.	CHEMISTRY			
1. 2. 3. 4. 5. 6. 7. 8.	Cadmium (Cd) Timbal (Pb) Mercury (Hg) Arsen (As) Phosphat (PO ₄) Los ignation (Kadar Abu) Los indraier (Kadar Air) Nitrogen (N)	μg/g μg/g μg/g x 10 ⁻³ μg/g . ⁹ / ₆ μg/g	2.65 83.30 1.017 10.53 0.10 39.34 55.81 52.12	3.10 115.80 0.020 15.78 0.42 82.59 33.34 53.00

Note: KL-Sr = Basin Port Ebb Tide

KL-Ps = Basin Port Tide

Appendix C-17 Sediment analysis Ujung Pandang port

NO.	PARAMETER	UNIT	CH-Sr	CH-Ps
Α.	CHEMISTRY			
1.	Cadmium (Cd)	μg/g	0.85	1.40
2.	Timbal (Pb)	μg/g	87.65	71.60
3.	Mercury (Hg)	μg/g	0.036	0.020
4.	Arsen (As)	μ g/g x 10 ⁻³	10.53	10.53
5.	Phosphat (PO₄)	μg/g	0.12	0.20
6.	Los ignation (Kadar Abu)	°/0	34.78	62.70
7.	Los indraier (Kadar Air)	9/0	62.69	61.98
8.	Nitrogen (N)	μg/g	56.00	52.24
		<u> </u>		

Note: CH-Sr = Channel Ebb Tide

CH-Ps = Channel Tide

Appendix C-18 Water biota list in Ujung Pandang port

Phytoplankton Abundance (ind/l)

	ankton Abundance (ind/l)			
NO.	ORGANISM		DS	
A.	BACILLARIOPHYCEAE			
1.	Chaetoceros sp			23669
2.	Rhizosolonia sp			1406
3.	Pleurosigma sp			186
	Lauderia sp			1364
4. 5.	Amphora sp			21
6.	Guinardia sp			165
7.	Bacteriastrum sp			1197
8.	Amphipora sp		:	21
9.	Climacodium sp			372
10.	Streptotheca sp			41
11.	Leptocylindrus sp		•	83
12.	Cyclotella sp			62
в.	DINOPHYCEAE	•		
1.	Peridinium sp			83
2.	Ceratium sp			21
3.	Dinophysis sp			21
C.	CYANOPHYCEAE			
1.	Trichodesmium sp			2460
	Taxa Quantity			16
	Quantity Ind/I	•		31172
	Diversity			0.99
•	Maximum H'			2.77
	Uniformity			0.36
	Dominantion	•		0.59

Note Station:

DS = Dumping Site

Appendix C-19 Water biota list in Ujung Pandang port

Phytoplankton Abundance (Ind/I)

,	Phytoplankton Abundance (Ind/l)					
NO.	ORGANISM	KL-Sr	KL-Ps			
A.	BACILLARIOPHYCEAE	·				
. 1.	Chaeloceros sp	125401	43824			
2.	Rhizosolonia sp	1268	1778			
3.	Pleurosigma sp	-	41			
4.	Lauderia sp	6765	3307			
5.	Guinardia sp	106	413			
6.	Bacteriastrum sp	3594	. 2460			
7.	Hemiaulus sp	148	83			
8.	Streptotheca sp	_	269			
9.	Leptocylindrus sp	1057	310			
10.	Cyclotella sp	-	124			
11.	Coscinodiscus sp	106	62			
12.	Bidduliphia sp	317	83			
13.	Nitzschia sp	211	_			
14.	Triceratium sp	106	-			
15.	Thalassiathrix sp	-	83			
16,	Eucampia sp		62			
В.	DINOPHYCEAE					
1.	Peridinium sp	634				
2.	Ceratium sp	106	62			
3.	Dinophysis sp	106	_			
C.	CYANOPHYCEAE					
1.	Trichodesmium sp	6360	1057			
	Taxa Quantity	15	16			
	Quantity Ind/I	146285	54018			
	Diversity	0.66	0.84			
·	Maximum H'	2.71	2.77			
	Uniformity	0.24	0.30			
	Dominantion	0.74	0.66			

Note Station:

KL-Sr = Basin Port Ebb Tide
KL-Ps = Basin Port Tide

Appendix C-20 Water biota list in Ujung Pandang port

Zooplankton Abundance (Ind/I)

	inkton Abundance (ind/i)		
NO.	ORGANISM	KL-Sr	KL-Ps
۸.	COPEPODA		
1.	Nauplius sp	269	145
2.	Oithona sp		4
3.	Microsetella sp	i –	66
4.	Neocalanus sp	41	8
5.	Calanus sp	. –	8
B.	CILIATA		
1.	Codonella sp	41	16
2.	Tintinnopsis sp	186	
3.	Favella sp	41	_
[Taxa Quantity	5	6
1	Quantity Ind/I	578	247
l	Diversity	1.28	1.13
	Maximum H'	1.61	1.79
	Uniformity	0.80	0.63
	Dominantion	0.33	0.42

Note Station:

KL-Sr = Basin Port Ebb Tide KL-Ps = Basin Port Tide

Appendix C-21 Water biota list in Ujung Pandang port

Zooplankton Abundance (Ind/I)

NÖ.	ORGANISM	l DS
Α.	COPEPODA	
1.	Nauplius sp	10
2.	Oithona sp	
3.	Microsetella sp	2
4.	Acartia sp	
5.	Oncaea sp	
в.	CILIATA	•
1.	Codonella sp	1
2.	Tintinnopsis sp	a d
	Taxa Quantity	
	Quantity Ind/I	17
	Diversity	1.2
	Maximum H'	1.9
	Uniformity	. 0,6
	Dominantion	0.4

Note Station:

DS = Dumping Site

Appendix C-22 Water biota list in Ujung Pandang port

Zooplankton Abundance (Ind/l)

NO.	ORGANISM	CH-Sr	CH-Ps
Α.	COPEPODA		
1.	Nauplius sp	120	298
2.	Oithona sp	16	25
3.	Microsetella sp	16	50
4.	Acartia sp	4	_
5.	Neocalanus sp		25
6.	Calanus sp	8	8
7.	Enterpina sp	4	- ·
8.	Pontella sp	-	12
9.	Corycaeus sp	-	8
В.	CILIATA		
1.	Codonella sp	12	21
2.	Tintinnopsis sp	4	12
	Taxa Quantity	8	9
	Quantity Ind/I	190	459
	Diversity Maximum H'	1,26	1.31 2.20
		2.08	
	Uniformity	0.60	0.60
	Dominantion	0.42	0.44

Note Station:

CH-Sr = Ebb Tide Channel CH-Ps = Tide Channel

Appendix C-23 Water biota list in Ujung Pandang port

Benthos Density (Ind/m²)

	os Density (Ind/m²)				
NO.	ÖRGANISM	CH-Sr		CH-	Ps
A.	GASTROPODA				
1.	Umborium sp	_		_	
2.	Pysene sp	_			12
3.	Nassarius sp		6		
В.	BIVALVIA				
1.	Anadara sp	_		· -	
2.	Tellina sp		6		. 6
3.	Acanthocardia sp		8		
C.	POLYCHAETA				
1.	Nereis sp		6		
2.	Glycera sp				6
3.	Lycartopsis sp		6		
4.	Orbinia sp	3	1	_	
	Taxa Quantity		6	······································	3
	Quantity Ind/I	. 2	6		24
	Diversity	2.1	4		1.50
j	Maximum H'	2.5	8.]		1.58
	Uniformity	0.8	3		0.95
[Dominantion	0.3	1		0.37

Note: CH-Sr = Channel Ebb Tide

CH-Ps = Channel Tide

Appendix C-24 Water biota list in Ujung Pandang port

Benthos Density (Ind/m²)

NO.	ORGANISM	KL-Sr	KL-Ps
A.	GASTROPODA		
1. 2.	Umborium sp Pysene sp	6	_ 6
в.	BIVALVIA		
1. 2.	Anadara sp Tellina sp	6 12	_ 6
C.	POLYCHAETA		
1.	Glycera sp	-	6
	Taxa Quantity Quantity Ind/I	3 24	3 18
	Diversity	1.50	1.58
	Maximum H'	1.58	1.58
	Uniformity	0.95	1.00
]	Dominantion	0.37	0.33

Note: KL-Sr = Basin Port Ebb Tide KL-Ps = Basin Port Tide

Appendix C-25 Water biota list in Ujung Pandang port

	ytoplankton Abundance (ind/l)				
NO.	ORGANISM	CH-Sr	CH-Ps		
A.	BACILLARIOPHYCEAE				
1.	Chaetoceros sp	23566	21457		
2.	Rhizosolonia sp	847	4424		
3.	Pleurosigma sp	_	103		
4.	Lauderia sp	1406	2894		
5.	Guinardia sp	207	1240		
6.	Bacteriastrum sp	413	2687		
7.	Hemiaulus sp	103	868		
8.	Climacodium sp	21	868		
9.	Streptotheca sp	62	124		
10.	Leptocylindrus sp	351	372		
11,	Cyclotella sp	310	_		
12.	Coscinodiscus sp	21	62		
13.	Bidduliphia sp	62	207		
14.	Nitzschia sp	41	62		
15.	Triceratium sp		21		
16.	Thalassiathrix sp	83	83		
17.	Eucampia sp	41	, 331		
18.	Hemiduscis sp	21	21		
19.	Cerataulina sp	_	661		
20.	Diploneis sp	-	21		
21.	Ditylum sp	-	21		
В.	DINOPHYCEAE				
1.	Peridinium sp	41	289		
2.	Ceratium sp	83	. 145		
3.	Dinophysis sp	-	21		
c.	CYANOPHYCEAE				
1.	Trichodesmium sp	1268	2687		
	Taxa Quantity	10	24		
	Quantity Ind/I	28947	39669		
	Diversity	0.88	1.73		
	Maximum H'	2.94	3.18		
	Uniformity	0.30	0.54		
	Dominantion	0.67	0.32		

Note Station:

CH-Sr = Ebb Tide Channel CH-Ps = Tide Channel

Appendix C-26 Water biota list in proposed inland container terminal

Benthos Density (Ind/m²)					
NO.	ORGANISM	I	II.W	IV.W	
A. 1. 2. 3. 4. 5. B. 1.	GASTROPODA Cithon sp Cerithium sp Epitonium sp Littorina sp Polinices sp	96 336 48 - - -	64 80 32 16	192 352 336 112 16	
1. 2. 3. 4. 5. 6. 7. 8.	Plicatula sp Cardium sp Macoma sp Anadara sp Tivela sp Tellina sp Lucina sp Macrocalista sp	 	- 80 96 16 16 32 48 16	- 16 - - -	
1.	Fridericia sp Taxa Quantity Quantity Ind/I	- 4 496	- 11 496	16 7 1040	
	Diversity Maximum H' Uniformity Dominantion	0.92- 1.39 0.66 0.92	2.19 2.40 0.91 0.13	1.48 1.94 0.45 0.27	

Appendix C-27 Water biota list in proposed inland container terminal

Plankton Abundance (Ind/I) 2b ORGANISM 1a 2a 1b NO. Α. CYANOPHYCEAE 848 Pelagothrix sp 1. 848 424 2. Trichodesmium sp BACILLARIOPHYCEAE В. 25864 44520 848 52152 24188 Chaetocheros sp 1. 424 1696 424 2. Nitzschia sp 1272 3392 424 848 Skeletonema sp 3. 424 Cymbella sp 4. 424. 424 5. Pleurosigma sp C. DINOPHYCEAE 424 848 424 1. Gyrodinium sp 424 1272 848 Peridinium sp 2. 424 3. Ceratium sp 424 4. Prorocentrum sp D. CILIOPHORA 424 1. **Tintinnopsis** 5 Taxa Quantity 47488 7208 55968 25864 Quantity Ind/I 27984 0.35 0.31 0.30 1.61 Diversity 0.37 1.79 1.39 Maximum H' 1.61 1.39 1.95 0.22 0.23 0.21 0.83 0.19 Uniformity 88.0 88,0 0.28 0.87 0.87 Dominantion

Appendix C-28 Sediment analysis in proposed inland container terminal

NO.	PARAMETER	UNIT	I	II.W	IV.2
A.	CHEMISTRY				## ## ## ## ## ## ## ## ## ## ## ## ##
1.	Cadmium (Cd)	μg/g	<0,001	0.240	<0,001
2.	Timbal (Pb)	μg/g	28.613	1.276	5.492
3.	Mercury (Hg)	$\mu g/g \times 10^{-3}$	<0,01	0.10	0.15
4.	Arsen (As)	μ g/g x 10 ⁻³	4.78	1.91	1.05
5.	Phosphat (PO ₄)	μg/g	1136.36	1,590.91	1,500.00
6.	Los ignation (Kadar Abu)	0/0	47.93	57.81	51.50
7.	Los indraier (Kadar Air)	0/0	31,17	24.44	28.43
8.	Nitrogen (N)	μg/g	336.20	28.43	51.50
			· · · · · · · · · · · · · · · · · · ·		<u> </u>

Appendix C-29 Water quality analysis in proposed inland container terminal

NO.	PARAMETER	UNIT	1	2	. 3	4
	DITMOTOR					1
Α.	PHYSICS			:		
1.	Colour	Pt.Co	7.5	10.0	7.5	12.5
2.	Turbidity	NTU	3.7	0.7		1.5
3.	Suspended Solid	mg/l	172	162	330	192
4.	Temperature	°Č	30.50	30.40	30.90	30.70
В.	CHEMISTRY				·	
1.	На		7.15	7.25	7.25	7.30
2.	Salinity	mg/l	28.00	27.00		
3.	BOD	mg/l	0.80	1.00		
4	COD	mg/l	19.51	12.01		116.94
5.	$NH_3-N (NH_3 + NH_4)$	mg/l	0.530	0.043	0.150	0.707
6.	NO3-N	mg/l	0.004	< 0,001	0.007	0.004
7.	Cianide (CN)	mg/l x 10 ⁻³	_ 24.96	29.12	18.62	12.48
8.	Arsen (As)	mg/l x 10 ⁻³		0.053	0.079	0.053
9.	Mercury (Hg)	$mg/l \times 10^{-3}$	0.020	0.030	0.020	0.010
10.	Oil and Grease	mg/l	0.043	0.052		
11.	Phenol	mg/l	0.016		•	,
12.	Detergent	mg/l	0.010	0.015		0.015
13.	Chrome Hexavalent (Cr ⁶⁺)	mg/l	0.037	0.043		1
14.	Selenium (Se)	mg/l	0.014	0.021	0.014	
15.	Cadmium (Cd)	mg/l	0.009	0.010	0.017	0.013
16.	Copper (Cu)	mg/l	0.008	0.001	< 0,001	< 0,001
17.	Lead (Pb)	mg/l	< 0,001	0.093	0.164	
18.	Zinċ (Zn)	mg/l	0.026	0.138		< 0,001
19.	Nickel (Ni)	mg/l	0.010	0.018	0.043	< 0,001

