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283-0073

UNITED STATES
AGENCY FOR INTERNATIONAL DEVELOPMENT

THE
INSPECTOR
GENERAL



Regional Inspector General for Audit

SINGAPORE

**AUDIT OF THE ZACHRY-DILLINGHAM
CONTRACT WITH THE MAHAWELI
AUTHORITY OF SRI LANKA**

**AUDIT REPORT NO. 5-383-89-01-N
DECEMBER 29, 1988**

AGENCY FOR INTERNATIONAL DEVELOPMENT
OFFICE OF THE REGIONAL INSPECTOR GENERAL FOR AUDIT
-- Singapore --

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December 29, 1988

MEMORANDUM

TO : USAID/Sri Lanka, Peter Bloom
FROM : *B. Howard*
RIG/A/S, B. Reginald Howard
SUBJECT: Audit Report No. 5-383-89-01-N
Audit of the Zachry-Dillingham Contract with
The Mahaweli Authority of Sri Lanka

This report presents the results of your requested non-Federal financial and compliance audit of the Zachry-Dillingham contract with the Mahaweli Authority of Sri Lanka (USAID/Sri Lanka Project No. 383-0073). The certified public accounting firm of Price Waterhouse prepared the report which is dated December 21, 1988.

The purpose of this audit was to review (i) the fairness of the fund accountability statement for the \$100,010,104 in payments approved by the Mahaweli Authority of Sri Lanka and made to Zachry-Dillingham, (ii) the fairness of the fund accountability statement for the \$46,692,580 in unresolved claims presented for arbitration by Zachry-Dillingham, (iii) the system of internal controls, and (iv) the compliance with contract terms and applicable laws and regulations.

The results of Price Waterhouse's review are summarized below:

- Price Waterhouse concluded that of the \$100,010,104 approved for payment, a net amount of only \$54,027 could not be properly supported. This conclusion was based on certain assumptions and qualifications which are fully explained in the notes in Attachment I.
- Price Waterhouse disclaimed an overall opinion on the fairness of the \$46,692,580 in unresolved claims mainly because of legality (the claims had not been approved) and allowability issues, and because the costs claimed by Zachry-Dillingham as "additional" costs were not segregated from other costs associated with the contract. However,

while not expressing an opinion, Price Waterhouse was still requested to provide comments on the unresolved claims which might be useful to the parties involved in the arbitration process. As such, Price Waterhouse identified items totaling \$20,091,171 which were included in the unresolved claims but were contrary to specific A.I.D. requirements or were calculated erroneously. Also, Price Waterhouse provided certain comments on the remaining \$26,601,409 which should be considered when resolving these claims. The main issue was that Zachry-Dillingham could not clearly support the unresolved claims as "additional costs" over and above those which should have been anticipated under the tendered contract. These issues are very complex and are presented in detail with extensive notes in Attachment II.

- Price Waterhouse's study and evaluation of the internal controls relating to the tendered contract was somewhat limited due to the fact that the audit was performed over a year after completion of construction activities. However, based on the work which was performed and using the prior work of Zachry-Dillingham's independent auditors and internal auditors, Price Waterhouse concluded the internal control system was generally adequate. A few non-material internal control weaknesses were noted and reported in Attachment III.
- Similar to the study on internal controls, Price Waterhouse's review of compliance issues relating to the tendered contract was limited and relied on the work by others. Price Waterhouse did conclude, based on the same qualifications as mentioned for the internal controls, that Zachry-Dillingham generally complied with contract terms and applicable laws and regulations. A few non-material compliance issues were noted and reported in Attachment IV.

As agreed with your office, no specific recommendations were made by Price Waterhouse since this report is mainly for disclosure purposes. However, USAID/Sri Lanka should (i) consider providing a copy of this report to all parties involved in the arbitration process and (ii) determine whether a refund of \$54,027 should be requested from Zachry-Dillingham. Also, A.I.D. participation, if any, in the \$46,692,500 in unresolved claims presented for arbitration by Zachry-Dillingham must be consistent with A.I.D. requirements, must be allowable, and must be based on supportable costs.

Please advise this office of the actions taken based on this report and the results of the arbitration.

**NON-FEDERAL AUDIT OF THE
ZACHRY-DILLINGHAM CONTRACT
USAID/SRI LANKA PROJECT NO. 383-0073**

AUDIT OF THE ZACHRY-DILLINGHAM CONTRACT
WITH MAHAWELI AUTHORITY OF SRI LANKA
USAID/SRI LANKA PROJECT NO. 383-0073

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Price Waterhouse

December 21, 1988

Mr. B. Reginald Howard
Regional Inspector General for Audit
U.S. Agency for International Development
Singapore

Dear Mr. Howard,

NON-FEDERAL AUDIT OF THE ZACHRY-DILLINGHAM CONTRACT

1. This report presents the results of our financial and compliance audit of the Zachry-Dillingham contract with Mahaweli Authority of Sri Lanka (USAID/Sri Lanka Project No. 383-0073) for the period June, 1982 to December, 1987.
2. BACKGROUND
 - 2.1 Zachry-Dillingham, a Joint Venture (Z-D) with its Home Office at San Antonio, Texas, U.S.A was engaged by the Mahaweli Authority of Sri Lanka (MASL) for construction of the Maduru Oya - System 'B' Irrigation Canal under a Government of Sri Lanka (GSL) project for development of the Mahaweli Basin of Sri Lanka. The construction contract was financed by the U.S. Agency for International Development in Sri Lanka (USAID/Sri Lanka) under a loan/grant agreement signed with GSL in 1981, involving a commitment of US\$ 107 million in loan funds and US\$ 3 million in grant funds. In addition, 1% of the contract amount was to be funded by MASL.
 - 2.2 The construction contract between MASL and Z-D was signed in May, 1982 as a variable quantity fixed unit price contract for a total value of US\$ 91,864,374 on an estimated Bill of Quantities spread over two phases, namely Phase I (a) and Phase I (b). The contract was executed under the supervision of the Project Engineers - Berger/IECO in association with Resources Development Consultants Limited of Sri Lanka over a time span of five years covering the periods June, 1982 to February, 1986 on Phase I (a) and January, 1984 to February, 1987 on Phase I (b).

2.3 Sums expended/approved for disbursement by USAID/Sri Lanka and MASL under this contract as on December, 1987 amounted to US\$ 99,019,905 and US\$ 990,199, respectively. In addition, claims raised by Z-D for a value of US\$ 46,692,580 are disputed and have been referred to arbitration under clause 67 of the contract between Z-D and MASL. The amounts of US\$ 99,019,905 and US\$ 990,199 include payments against the estimated Bill of Quantities as well as amendments thereto approved via Change Orders and Claims resolved for settlement under the contract. The amount of US\$ 46,692,580 represents unresolved claims for additional costs, which as per Z-D contention were attributable to accelerated job execution necessary for timely completion of the project, adverse physical conditions, and delayed commencement periods faced on the contract.

3. AUDIT OBJECTIVES AND SCOPE

3.1 The overall objective of our audit was to perform a financial and compliance audit to specifically review the fund accountability statement of the Z-D contract with MASL for the period June, 1982 to December, 1987.

3.2 Our examination was made in accordance with "guidelines for financial and compliance audits of AID-financed agreements"; generally accepted auditing standards; and the U.S. Government Auditing Standards stated in the Comptroller General's "Standards for Audit of Governmental Organizations, Programs, Activities and Functions (1981 Revision)".

3.3 The results of our work are presented in the attached three reports, namely :

- Report on Fund Accountability Statement including Attachments I and II covering payments made under the contract and unresolved claims pending settlement, respectively.
- Report on internal accounting controls.
- Report on compliance with contract terms and applicable laws and regulations.

3.4 Briefly, the scope of work consisted of the following:

- Examination of the fund accountability statement for payments made/sums approved for payment to Z-D by USAID/Sri Lanka and MASL, and for the unresolved claims raised by Z-D.

- Review and evaluation of system of internal accounting controls in force at Z-D during the period of the contract.
- Verification for compliance by Z-D with the applicable laws, regulations and contract terms.

4. RESULTS OF AUDIT

4.1 Fund Accountability Statement

4.1.1 Payments made/amounts approved for disbursement under the Contract of \$ 100,010,104

Results of our review did not disclose payments made/ amounts approved for disbursement against billings/ resolved claims which were not adequately supported in the records of Z-D or for amounts which were not allowable under the terms of the contract, with the exception of a net amount of \$ 54,027, allowability of which may have to be reviewed by USAID/Sri Lanka (see notes on Attachment I).

4.1.2 Unresolved Claims Pending Settlement of \$ 46,692,580

The additional work claimed to have been carried out and costs incurred thereon did not have MASL'S approval. In view of the pending arbitration in respect of the unresolved claims including inter alia the question of legality and allowability of the claims; non-segregation of costs claimed as "additional" in the financial records of Z-D; lack of technical expertise for evaluation of the bases of the claims and computation of costs claimed to be "additional"; non-availability at Colombo of supporting documents for certain cost elements; and other matters as explained in detail in Attachment II, we could not determine the reasonableness, allocability, and allowability of the unresolved claims. As a result, we are unable to express, and do not express an opinion on this aspect of the accompanying Fund Accountability Statement. Nevertheless, as part of our examination we identified \$ 20,091,171 in costs which in our opinion, may have to be reduced from the amount being claimed. Also, various comments have been made about the balance (\$ 26,601,409) of the unresolved claims which need to be considered. (See Attachment II).

**AUDIT OF THE ZACHRY-DILLINGHAM CONTRACT WITH
MAHAWELI AUTHORITY OF SRI LANKA**

USAID/SRI LANKA PROJECT NO.383-0073

**FUND ACCOUNTABILITY STATEMENT COVERING
PAYMENTS AND CLAIMS UNDER THE CONTRACT**

AUDITORS OPINION

1. We have examined the attached Fund Accountability Statement, including Attachments I and II and the notes thereon, of the Zachry-Dillingham (Z-D) Contract with Mahaweli Authority of Sri Lanka (MASL) for the period June, 1982 to December, 1987. Our examination was made in accordance with "Guidelines for financial and compliance audits of AID-financed agreements"; generally accepted auditing standards; and the US Government Auditing Standards stated in the Comptroller General's "Standards for Audit of Governmental Organisations, Programs, Activities and Functions (1981 Revision)" and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

2. Attention is drawn to the following matters :
 - 2.1 Owing to the absence of specific approval for additional work carried out/costs incurred on the contract as represented by Z-D in the unresolved claims of \$ 46,692,580, (see Attachment II) and in view of the pending arbitration for settlement of these claims, we are not expressing an opinion on the allowability or acceptability of the said unresolved claims. Further, due to lack of technical expertise for evaluation of the bases of the claims and methods of computation thereof, scope of audit work did not include examination of the legality or methodology used by Z-D in computing quantum of resolved (Attachment I - Item 3 \$ 2,945,184) and unresolved claims.

 - 2.2 Documents/financial records maintained by Z-D in support of resolved and unresolved claims do not indicate that the costs claimed were incurred over and above expenses anticipated under the original contract as tendered nor are the records indicative of expenses having been incurred due to the Z-D contended reasons such as acceleration, adverse physical conditions etc. As a result we are not in a position to comment from an audit point of view, on whether expenses claimed are additional and attributable to the Z-D contended reasons. Further, certain cost elements claimed could not be audited by us as we are informed that supports for the same are maintained only at Z-D's Home Office in San Antonio.

2.3 Notes referred to in Attachments I and II form an integral part of our report and should be read in conjunction with this report. However, as stated in paragraph 2.1 above, the comments contained therein should in no way be construed as indicative of allowability or non allowability of the claims. These notes are for disclosure purposes only and explain necessary details of computation of the claims and our observations thereon.

3. In our opinion:

3.1 Subject to the matters stated in paragraph 2 above and an amount of \$ 54,027 identified by us for review in terms of allowability by USAID/Sri Lanka, the accompanying Fund Accountability Statement for the period June, 1982 to December, 1987 in respect of payments made/amounts approved for disbursement to Z-D of \$ 100,010,104 as described in Attachment I of our report, is fairly stated.

3.2 Our audit indicated no significant deficiencies regarding financial records from which claim amounts have been derived. However, in view of matters described in paragraph 2 above, the scope of our work on unresolved claims pending settlement was limited, and was not sufficient to enable us to express, and we do not express, an opinion on the accompanying Fund Accountability Statement for the period June, 1982 to December, 1987 insofar as the unresolved claims of \$ 46,692,580 as described in Attachment II are concerned. Nevertheless, during our examination certain items totalling \$ 20,091,171 were identified (see Attachment II) which were included in the unresolved claims but were either not allowable per specific A.I.D. regulations or calculated erroneously. Also we made various comments about the balance of \$ 26,601,409 which could be useful to the parties involved in resolving these claims.

Ruee Walthermey

December 21, 1988
NEW DELHI

**AUDIT OF THE ZACHRY-DILLINGHAM CONTRACT WITH
MAHAWELI AUTHORITY OF SRI LANKA**

**FUND ACCOUNTABILITY STATEMENT OF THE Z-D CONTRACT FOR THE
PERIOD JUNE, 1982 TO DECEMBER, 1987**

(All amounts in US Dollars)

	AMOUNT OF PAYMENT/ CLAIM	AMOUNT TO BE CONSIDERED FOR REDUCTION FROM VALUE OF PAYMENT/CLAIM	BALANCE
	\$	\$	\$
I. Payments made / amounts approved for disbursement under the contract (including change orders and resolved claims) - See NOTE 1 below	100,010,104	54,027	99,956,077
II. Value of unresolved claims pending settlement - See NOTE 2 below	46,692,580	20,091,171	26,601,409
	146,702,684	20,145,198	126,557,486

NOTES :

1. For details and comments on adjustments as well as other observations refer to Attachment I and notes thereon.
2. For details and comments on adjustments as well as observations on the balance concerning reasonableness / allocability / adequacy of supports refer to Attachment II and notes thereon.

	(A)	(B)	(C)	(D)
4. Net Adjustment for foreign exchange fluctuation and escalation under clauses 60(8) and 70, respectively of the contract :				
4.1 Phase I(a)	(178,705)			-
4.2 Phase I(b)	(153,324)			-
	<u>(332,029)</u>			-
5. Total payments under the contract :				
5.1 Phase I(a)	69,780,381		82,964	
5.2 Phase I(b)	30,229,723		(28,937)	
TOTAL	<u>100,010,104</u> =====	9	<u>54,027</u> =====	

ANALYSIS OF PAYMENTS MADE INTO DOLLAR PORTION (PAID FOR BY USAID/
SRI LANKA) AND RUPEE PORTION (PAID FOR BY MASL)
=====

	Dollar Payment <u> \$ </u>	Rupee Payment <u> \$ </u>	TOTAL <u> \$ </u>
Phase I(a)	69,089,486	690,895 (Sri Lankan Rs.16,071,458 converted at an average rate of Rs.23.3 = US\$1)	69,780,381
Phase I(b)	29,930,419	299,304 (Sri Lankan Rs.7,715,236 converted at an average rate of Rs.25.8 = US\$1)	30,229,723
TOTAL	<u>99,019,905</u> =====	<u>990,199</u> =====	<u>100,010,104</u> =====

The attached notes as referred to above form an integral part of this statement.

**NOTES ON FUND ACCOUNTABILITY STATEMENT FOR PAYMENTS MADE AGAINST
PROGRESS BILLINGS (INCLUDING RESOLVED CLAIMS) i.e., ATTACHMENT I.**

1. This column includes \$49,213 claimed in the November and December, 1987 Progress Billings which had been approved for payment but not paid as of October, 1988 because of MASL's counter claim on Z-D under Clause 52 of the Contract.
2. The audit scope for verification of payments comprised testing for compliance with contract provisions (in terms of quantities, costs and any variations thereto) and the Engineer's technical approval. It did not include an audit of contract unit prices as these were fixed in the contract. Quantities of work billed which were scrutinized in terms of summary quantitative records maintained by Z-D were, however, not further verified with the Engineer's records as no detailed measurement books were maintained by the Engineer.
3. Change Orders as approved by the Engineer, and where applicable also by MASL and USAID/Sri Lanka, represent amendments to Estimated Bill of Quantities at contract unit prices and/or lump sum amounts. As indicated in Note 2 above, audit scope comprised testing for compliance with approved Change Orders and summary quantitative records maintained by Z-D but did not include an audit of rates therein.
4. The approved Change Orders did not indicate inclusion of profit. However, our review disclosed that computations/costs considered for arriving at a value of certain lump sum Change Orders included profit. While no reference of non-allowability of profit is made in the contract, AID Handbook 11, Chapter 2, specifies that "In no event will AID finance a cost-plus percentage of cost contract". Even though this contract did not constitute a "cost plus percentage of cost contract", the methodology adopted for computation of such Change Orders considers profit which had been calculated on a "cost plus percentage of cost" basis. Accordingly, adjustments were made for this profit which, as per calculations carried out by Z-D at auditor's request, amounted to \$ 41,116 on Phase I (a) and \$ 16,400 on Phase I (b). Z-D management has explained the above as allowable in absence of any reference, express or implied to AID Handbook-11 in the Z-D Contract with MASL.

5. As stated in paragraph 2 of Price Waterhouse (PW) Opinion on Fund Accountability Statement, audit in respect of resolved claims (i.e. those accepted by both employer and contractor), did not include an evaluation of the methodology adopted for computation and settlement of these claims. For example, the audit did not go into the question of validity of using either the overhead rate of 1.696%, computed by the Engineer in case of resolved claims on excess work and relining, or the overhead amounts in respect of unresolved claims, which have been calculated by Z-D on a different basis. Further, no comment could be made on whether compensation paid represented costs in addition to those anticipated under the construction contract as tendered and whether they were attributable to the contended physical conditions.
6. Claims based on costs derived from accounting records include cost of operating equipment which had been charged at daily/hourly rates determined by Z-D's Home Office at San Antonio. Although, such rates were consistently used, PW is unable to comment on their accuracy as these cannot be reconciled to the actual operating/maintenance cost. However, audited statements by Z-D's auditors indicate that as on December 31, 1987 total amount over-absorbed in the books of Z-D due to costing at operating rates as opposed to actual cost was \$ 159,144. (Refer to Note 1 on Audit Findings attached to Report on Internal Accounting Controls).
7. The claim includes interest of \$ 7,324 on Phase I (a) and \$ 4,421 on Phase I (b) on clearing and grubbing claims. AID Hand Book 11, Chapter 4, Appendix A, specifies interest cost as an unallowable item. Z-D management has explained the above as allowable in the absence of any reference, express or implied to AID Handbook 11 in the Z-D Contract with MASL.
8. Resolved claims for excess rock need to be adjusted due to errors noted in compensation paid for explosives cost. The actual explosives costs reflected by cost code 6014 included costs for Phases I (a) and Phase I (b). An error in prorating cost pertaining to canals in Phase I (a) resulted in an overpayment of \$ 34,524. However, in determining explosives cost on Phase I (b) no consideration was given for explosive costs included in code 6014, resulting in an under payment of \$ 49,758. In computing this adjustment, audit reliance has been placed on information contained in Z-D's letter to the Engineer of December 12, 1985 which states that an amount of \$ 300,627 included in code 6014 pertains to canals on Phase I (b).

9. Although not reflected in the Fund Accountability Statement, Z-D accounts indicate payment of approximately \$ 3,000 (Rs.73,092) over and above amounts approved for payment under the monthly progress billings. This overpayment has been made by MASL against Rupee Invoice Nos.42 and 53 on Phase I (a) and B-30 on Phase I (b) and needs to be considered for adjustment.

AUDIT OF THE Z-D CONTRACT WITH MASL
FOR THE PERIOD JUNE 1982 TO DECEMBER, 1987
FUND ACCOUNTABILITY STATEMENT FOR UNRESOLVED CLAIMS (NOTE 1)
 (ALL AMOUNTS IN US\$)

ATTACHMENT-II

Z-D's DESCRIPTION (A)	CLAIM AMOUNT \$ (B)	AMOUNTS TO BE CONSIDERED FOR ADJUSTMENT		REF. TO NOTE (D)	OBSERVATIONS ON REASONABLENESS/ALLOCABILITY / ADEQUACY OF SUPPORTS FOR COSTS REFLECTED IN CLAIM AMOUNT *	
		REDUCTIONS/ (ADDITIONS) TO CLAIM AMOUNT \$ (C)			AMOUNT \$ (E)	REF. TO NOTE (F)
ACCELERATION						
A. ADDITIONAL LABOR DUE TO ACCELERATION :						
A1. Expatriate and TCN						
- Basic Cost	2,034,798	135,000	3	1,899,798	4	
- Interest Expense	1,103,162	1,105,162	5/6	-		
- Bond, Insurance & Home Office Overhead	200,945	77.187	7	123,758	8	
	3,340,905	1,317,349		2,023,556		
A2. Local Premium/Overtime						
- Basic Cost	110,772	(42,460)	9	153,232	4/10	
- Variable Overhead	17,609	1,024	11	16,585	12	
- Interest Expense	69,728	69,728	5/6	-		
- Bond, Insurance & Home Office Overhead	12,678	2,696	7	9,982	8	
	210,787	30,988		179,799		
A3. Camp Construction						
- Basic Cost	682,784	20,652	13	662,132	4/14	
- Interest Expense	370,841	370,841	5/6	-		
- Bond, Insurance & Home Office Overhead	67,428	24,295	7	43,133	8	
	1,121,053	415,788		705,265		
ACCELERATION CARRIED FORWARD	4,672,745	1,764,125		2,908,620		

61 Amounts in this column take into account adjustments in column (C). Therefore, any changes made in column (C) will automatically increase or decrease the amount shown in this column.

(A)	(B)	(C)	(D)	(E)	(F)
ACCELERATION BRAUGHT FORWARD	4,672,745	1,764,125		2,908,620	
B. ADDITIONAL EQUIPMENT :					
B1. Purchased Equipment					
- Basic Cost	6,610,725	115,288	15	6,495,437	4
- Interest Expense	3,590,492	3,590,492	5/6		
- Bond, Insurance & Home Office Overhead	652,837	229,707	7	423,130	8
	10,854,054	3,935,487		6,918,567	
B2. Rented Equipment					
- Basic Cost	1,297,871	85,976	16	1,211,895	4/17
- Variable Overhead	206,321	206,321	11		
- Interest Expense	816,973	816,973	5/6		
- Bond, Insurance & Home Office Overhead	148,545	69,599	7	78,946	8
	2,469,710	1,178,869		1,290,841	
C. INEFFICIENCIES :					
C1. Direct Labor					
- Basic Cost	332,890	15,623	18	317,267	4/19
- Variable Overhead	52,919	18,580	11	34,339	12
- Interest Expense	209,545	209,545	5/6		
- Bond, Insurance & Home Office Overhead	38,100	17,432	7	20,668	8
	633,454	261,180		372,274	
C2. Hand Paving					
- Basic Cost	538,001	246,940	20	291,061	4/21
- Variable Overhead	85,525	54,022	11	31,503	12
- Interest Expense	338,657	338,657	5/6		
- Bond, Insurance & Home Office Overhead	61,576	42,616	7	18,960	8
	1,023,759	682,235		341,524	
ACCELERATION CARRIED FORWARD	19,653,722	7,821,896		11,831,826	

	(A)	(B)	(C)	(D)	(E)	(F)
ACCELERATION BROUGHT FORWARD		19,653,722	7,821,896		11,831,826	
C3. Fuel & Lube						
- Basic Cost		552,137	(45,985)	22	598,122	4/23/24/25
- Variable Overhead		87,772	23,036	11	64,736	12
- Interest Expense		347,555	347,555	5/6	-	
- Bond, Insurance & Home Office Overhead		63,194	24,231	7	38,963	8
		1,050,658	348,837		701,821	
D. ADDITIONAL INVENTORY LOSS :						
- Basic Cost		2,307,236	301,614	26	2,005,622	4/24
- Interest Expense		1,253,132	1,253,132	5/6	-	
- Bond, Insurance & Home Office Overhead		227,849	97,198	7	130,651	8
		3,788,217	1,651,944		2,136,273	
E. EXTENDED EARTHWORK SUBCONTRACTS :						
- Basic Cost		1,784,633	-		1,784,633	4/27
- Variable Overhead		283,700	90,542	11	193,158	12
- Interest Expense		1,123,377	1,123,377	5/6	-	
- Bond, Insurance & Home Office Overhead		204,257	88,001	7	116,256	8
		3,395,967	1,301,920		2,094,047	
F. ADDITIONAL OVERHEAD :						
- Basic Cost		3,510,203	(64,663)	28	3,574,866	4/29
- Interest Expense		1,906,501	1,906,501	5/6	-	
- Bond, Insurance & Home Office Overhead		346,647	113,771	7	232,876	8
		5,763,351	1,955,609		3,807,742	
G. PROFIT :						
- On Basic Cost		1,980,159	1,980,159	30	-	
- Interest Expense allocated to profit		1,075,485	1,075,485	30	-	
- Bond, Insurance & Home Office Overhead allocated to profit		195,549	195,549	30	-	
		3,251,193	3,251,193		-	
SUB-TOTAL - ACCELERATION COST		16,903,108	16,331,399		20,571,709	21

	(A)	(B)	(C)	(D)	(E)	(F)
ADDITIONAL COST DUE TO ADVERSE PHYSICAL CONDITION						
A. INCREASED COST DUE TO UNFORESEEABLE SUBSURFACE WATER :						
A1. Increased Pumping & Water Contest						
- Basic Cost	176,731	-	-	-	176,731	31/32
- Variable Overhead	28,095	-	-	-	28,562	12
- Interest Expense	111,248	(467)	11		-	
- Bond, Insurance & Home Office Overhead	20,228	111,248	5/6	7	12,992	8
	<u>336,302</u>	<u>118,017</u>			<u>218,285</u>	
A2. Additional Dewatering Equipment						
- Basic Cost	360,732	-	-	-	360,732	31/33
- Interest Expense	195,925	-	-	-	-	
- Bond, Insurance & Home Office Overhead	35,624	195,925	5/6	7	26,517	8
	<u>592,281</u>	<u>205,032</u>			<u>387,249</u>	
A3. Additional Explosive Use						
- Basic Cost	350,189	158,818	34	-	191,371	31/35
- Variable Overhead	55,669	5,182	11	-	50,487	12
- Interest Expense	220,434	220,434	5/6	-	-	
- Bond, Insurance & Home Office Overhead	40,080	26,010	7	-	14,070	8
	<u>666,372</u>	<u>410,444</u>			<u>255,928</u>	
A4. Canal Lining Repair						
- Basic Cost	69,517	-	-	-	69,517	31/36
- Variable Overhead	11,051	-	-	-	-	
- Interest Expense	43,758	11,051	11	-	-	
- Bond, Insurance & Home Office Overhead	7,956	43,758	5/6	7	5,110	8
	<u>132,282</u>	<u>57,655</u>			<u>74,627</u>	
ADVERSE PHYSICAL CONDITION CARRIED FORWARD	1,727,237	791,148			936,089	22

(A)	(B)	(C)	(D)	(E)	(F)
ADVERSE PHYSICAL CONDITION BROUGHT FORWARD	1,727,237	791,148		936,089	
B. INCREASED COST - EXCESS ROCK :					
B1. Excess Rock Excavation	NIL				
B2. Additional Relining					
- Basic Cost	141,292	(7,918)	37	149,210	31
- Variable Overhead	22,461	(1,653)	11	24,114	12
- Interest Expense	88,939	88,939	5/6	-	
- Bond, Insurance & Home Office Overhead	16,172	5,202	7	10,970	8
	<u>268,864</u>	<u>84,570</u>		<u>184,294</u>	
C. INCREASED COST - COMBINED IMPACT OF EXCESS ROCK AND SUBSURFACE WATER :					
C1. Excavation					
- Basic Cost	1,915,680	-		1,915,680	31/38
- Variable Overhead	304,532	(5,064)	11	309,596	12
- Interest Expense	1,205,866	1,205,866	5/6	-	
- Bond, Insurance & Home Office Overhead	219,255	78,432	7	140,823	8
	<u>3,645,333</u>	<u>1,279,234</u>		<u>2,366,099</u>	
C2. Paving					
- Basic Cost	271,636	(130,461)	39	402,097	31/40
- Variable Overhead	43,181	(21,801)	11	64,982	12
- Interest Expense	170,987	170,987	5/6	-	
- Bond, Insurance & Home Office Overhead	31,090	1,531	7	29,559	8
	<u>516,894</u>	<u>20,256</u>		<u>496,638</u>	
ADVERSE PHYSICAL CONDITION CARRIED FORWARD	6,158,328	2,175,208		3,983,120	

	(A)	(B)	(C)	(D)	(E)	(F)
ADVERSE PHYSICAL CONDITION BROUGHT FORWARD		6,158,328	2,175,208		3,983,120	
D. ADDITIONAL DUE TO EXCESS UNSUITABLE MATERIALS :						
D1. Excess Borrow						
- Basic Cost		598,469	-		598,469	31/41
- Variable Overhead		95,138	(1,611)	11	96,749	12
- Interest Expense		376,719	376,719	5/6	-	
- Bond, Insurance & Home Office Overhead		68,497	24,504	7	43,993	8
		<u>1,138,823</u>	<u>399,612</u>		<u>739,211</u>	
SUB TOTAL - ADDITIONAL COST DUE TO ADVERSE PHYSICAL CONDITIONS		<u>7,297,151</u>	<u>2,574,820</u>		<u>4,722,331</u>	
OTHER CLAIMS						
1. M-4 SECTION						
- Basic Cost		508,081	2,590	43	505,491	42/44
- Overhead		676,334	(1,056)	45	677,390	17/42/46
- Interest Expense		309,091	309,091	5/6	-	
- Bond, Insurance & Home Office Overhead		56,200	27,459	7	28,741	8
- Profit		118,442	118,442	30	-	
		<u>1,668,148</u>	<u>456,526</u>		<u>1,211,622</u>	
LESS: Previous payments		733,766	-		733,766	
		<u>934,382</u>	<u>456,526</u>		<u>477,856</u>	
2. OPERATION AND MAINTENANCE ROADS						
- Basic Cost		180,871	468	47	180,403	42
- Overhead		1,399,233	(35,765)	48	1,434,998	17/42/46
- Interest Expense		490,086	490,086	5/6	-	
- Bond, Insurance & Home Office Overhead		89,109	39,217	7	49,892	8
- Profit		158,010	158,010	30	-	
		<u>2,317,309</u>	<u>652,016</u>		<u>1,665,293</u>	
LESS: Amount settled (Engineer's Award)		835,780	-		835,780	
		<u>1,481,529</u>	<u>652,016</u>		<u>829,513</u>	
OTHER CLAIMS CARRIED FORWARD		2,415,911	1,108,542		1,307,369	24

(A)	(B)	(C)	(D)	(E)	(F)
OTHER CLAIMS BROUGHT FORWARD	2,415,911	1,108,542		1,307,369	
3. INTEREST ON CLEARING & GRUBBING ON PHASE 1 (b)					
- Interest Expense	71,814	71,814	49	-	
- Bond, Insurance & Home Office Overhead	4,596	4,596	49	-	
	<u>76,410</u>	<u>76,410</u>		-	
SUB TOTAL - OTHER CLAIMS	<u>2,492,321</u>	<u>1,184,952</u>		<u>1,307,369</u>	
TOTAL ALL CLAIMS	<u>46,692,580</u>	<u>20,091,171</u>		<u>26,601,409</u>	
<u>CLAUSE 52 UNIT PRICE ADJUSTMENT</u>					
Amount due from Z-D as claimed by the Engineer (Note : amount due from MASL as claimed by Z-D \$ 1,363,439)	<u>2,686,533</u>			<u>2,686,533</u>	50

The attached notes as referred to above form an integral part of this statement.

NOTES ON FUND ACCOUNTABILITY STATEMENT FOR UNRESOLVED CLAIMS (i.e. ATTACHMENT II)

GENERAL

1. As stated in paragraph 2 of Price Waterhouse (PW) Opinion on Fund Accountability Statement, scope of work did not include an examination of the legal allowability or acceptability of methodology used. Further, PW is unable to comment on whether costs claimed represented costs in addition to those anticipated under the construction contract as tendered and whether they were attributable to the contended acceleration, adverse physical conditions, or delayed periods.

Notwithstanding this qualification, PW was requested to provide any observations it felt might be useful to the parties involved in resolving these claims. The fact that PW uses terms such as, 'acceleration', 'adverse physical conditions' and delayed period however, should not be construed as support for whether or not such a period/condition did or did not exist. The following notes on specific claims need to be read in conjunction with the scope limitations described above.

ACCELERATION PERIOD

2. The period of acceleration as defined by Z-D is November, 1983 to March, 1986. Whether or not there was in fact any acceleration is disputed and is to be settled at arbitration. Accordingly, as stated in Note 1, PW offers no opinion concerning the accuracy and validity of the acceleration period. However, examination of acceleration claims included verification as to whether the costs were incurred during the period of acceleration as defined by Z-D. Certain exceptions identified have been explained in the following notes.

EXPATRIATE AND TCN LABOUR

3. An estimated amount of \$ 135,000 has been included in this claim for expenditure incurred after March, 1986 on some of the 'acceleration personnel'. Since the defined acceleration period ends in March, 1986, we are making this adjustment. However Z-D Management contends that the above costs are claimable since, the acceleration personnel in question were engaged beyond March, 1986 in acceleration related activities, such as, processing acceleration equipment for re-export.
4. This amount was derived by Z-D's from their financial records to reflect additional costs incurred during the defined acceleration period. However, the financial documents and records of Z-D could not clearly demonstrate the validity of the personnel, equipment etc. contended to be effected by acceleration or that the costs were additional and specifically incurred because of the claimed acceleration as opposed to costs which were related to the construction contract as tendered. This determination is to be made in arbitration.

INTEREST

5. AID Handbook 11, Chapter 4, Appendix A classifies interest expense as a non allowable item under AID financed contracts. Accordingly, interest amounts which total \$15,420,503 have been adjusted. It should, however, be mentioned that no reference is made regarding allowability of interest expense in the Z-D contract. Z-D management, therefore, believes the above amount to be claimable in the absence of any reference of its non-allowability, express or implied, in the contract between Z-D and MASL.
6. The total interest included in the unresolved claims is comprised of \$ 4,073,630 in interest actually incurred and \$ 13,456,201 in imputed interest, reduced by the sum of actual interest income and originally budgeted interest expense for the project of \$2,109,328. The imputed interest was not included in Z/D financial records because the interest was not actually incurred. Instead, it was calculated using bank prime lending rates applied to the advances received from the Joint-Venture parties. In view of the non-segregation in the financial records (see note 1) and the method of calculation, PW is unable to comment on the reasonableness of this claim. However, according to A.I.D Handbook II, Chapter 4, Section 2, a cost must be incurred to be allowable. Since the imputed portion of this claim was not incurred, the A.I.D. Handbook states it is not allowable. It should also be mentioned that since the interest claim is proportionate to the amounts of the other unresolved claims, any changes in the allowability of these other claims will have a direct bearing on the claim for interest.

BOND, INSURANCE AND HOME OFFICE OVERHEAD

7. This claim is based on the following predetermined rates :
 - Bond premium at \$4.496 per \$1,000 of claimed costs and profit
 - Insurance premium at \$0.45 per \$100 claimed costs and profit
 - Home Office Overhead at 5.5% on claim amounts including profit

These rates are applied to various items in this claim. The adjustment which has been made is a direct result of adjustments made to the other unresolved claims.

8. The rates mentioned in note 7 were determined by Z-D's Home Office. Therefore, the rates were not verifiable in Colombo and PW is not commenting on their accuracy or reasonableness. The amount in this column reflects the balance of the claim for these items after the adjustment mentioned in note 7.

LOCAL PREMIUM/OVERTIME

9. The number of manhours and costs used by Z-D to calculate this claim differ from those indicated by payroll records. Applying Z-D's methodology to the correct amounts, quantum of this claim increases by \$ 70,460. However, the claim also included an estimated amount of \$ 28,000 in costs which had been claimed as variable overhead (see Note 11). Since this represents a duplicate claim, an approximate adjustment was made. The net increase on this claim therefore is \$ 42,460.
10. The methodology used by Z-D to calculate this claim includes direct labour codes which have also been used in computing other claim amounts (resolved and unresolved). It appears that the claims involve a duplication of costs to that extent. The quantum of this duplication is not readily ascertainable.

VARIABLE OVERHEAD

11. Indirect costs incurred and identified by Z-D as variable in relation to each unit of direct cost included under various heads of the unresolved claim have been calculated at a total amount of \$ 1,293,974. This total amount has been allocated proportionately to the various direct cost elements included in the claim. Audit indicates that the above amount may be considered for a reduction by \$ 379,162 prior to allocation in view of the following:
 - Classification of expenses as variable should be consistent with principles applied in earlier resolved claim on Disruption (which represents the Engineer's opinion).
 - Elements of cost considered as direct for the purpose of computing the claimable portion of variable overhead should be consistent with the direct/indirect classification maintained in Z-D's financial accounting system.
 - Revised claim amounts as indicated by 'Amount to be considered for adjustment' contained in this report should be used in calculating claimable portion of variable overhead.

The variable overhead was recalculated taking the above into account and the \$379,162 adjustment was reallocated to the various items in this claim.

12. The adjustment in Note 11 above has been made in line with the methodology proposed by Z-D (also see Note 1 above). Accordingly, the adjustments made in Note 11 above do not necessarily represent PW opinion. Further it may be noted that the quantum of this claim is dependent on the value of the other claims and any adjustments to unresolved claims will require a re-computation of this claim.

CAMP CONSTRUCTION

13. Claim amount includes \$ 20,652 which was incurred prior to the defined acceleration period.
14. Amount claimed represents a part of the of total cost incurred by Z-D on camp construction. PW is unable to comment on the accuracy or validity of the related amount as no supporting documentation was maintained to indicate its reasonableness.

ADDITIONAL EQUIPMENT

15. This claim includes \$ 101,562 on agency fee which has also been claimed as part of purchase price of the related equipment and \$ 13,726 in equipment ordered prior to the defined acceleration period, Accordingly, the claim amount needs to be adjusted by a total amount of \$115,288.
16. Claim for rental equipment needs to be considered for a net reduction of \$ 85,976 on account of the following:
 - Operating rates considered in computation of claim amount, subject to matters contained in paragraph 17 below, differed in some cases from those used by Z-D.
 - rental cost reflected in claim differed from that indicated on payment vouchers for the relevant period in certain cases.
17. This claim reflects equipment operation/maintenance cost. As explained in Note 6 in Attachment I, operation/maintenance costs are charged at rates determined by Z-D's Home Office. PW is unable to comment on the accuracy of Z-D rates as the rate on any individual item of equipment cannot be reconciled to its actual operation/maintenance cost.

DIRECT LABOUR INEFFICIENCY

18. This claim is based on a comparison of manhours of work performed and the corresponding percentage of completion achieved during the defined pre-acceleration period vis-a-vis manhours/completion recorded during the Z-D claimed acceleration period. Z-D represented the resultant difference to acceleration, and valued it at the average wage for direct labour. Audit revealed that the manhours and average wage rate used in computation of claim amount differed from those reflected by payroll records maintained indicating a need for reduction to claim amount by a net figure of \$15,623.
19. This claim considers direct labour manhours derived from cost codes classified as direct in Z-D's accounting records. Some of these codes have also been considered in computation of other claim amounts (resolved and unresolved). It appears that the claims involve a duplication of costs to that extent. The quantum of duplication in this respect is not readily ascertainable.

HAND PAVING INEFFICIENCY

20. An adjustment of \$246,940 was made because of differences noted in the unit cost for paving and yield loss borne when examined with reference to summary records maintained.
21. This claim represents the difference in cost between paving performed by hand which as represented by Z-D could have been performed by machine in absence of demands for acceleration. The anticipated cost used in computing the differential is the average unit cost experienced in unimpeded regions which were machine paved. Accordingly, the claim is based on technical determinations as to:
- pay quantity of hand paving which could have been machine paved.
 - classification of all paving work performed and related costs into impeded and unimpeded.
 - percentage of yield loss borne on quantity of work performed vis-a-vis pay quantity.
- PW is unable to comment on accuracy thereof in view of technicalities involved.

FUEL AND LUBE INEFFICIENCY

22. In arriving at value of damages under the claim, Z-D has used gross value of purchases of fuel and lube as opposed to the value of consumption. Had the claim been based on consumption of fuel and lube purchased the amount would have been higher by \$45,985.
23. This claim is based on increase in value of purchases of fuel and lube during the defined acceleration period as compared to value of purchases during the pre-acceleration period. The differential is then multiplied by a rate for loss in efficiency of 12% which was obtained from 'Caterpillar-Operations Manual'. PW is unable to comment on the viability of this percentage for the purpose of calculating inefficiency in consumption of fuel and lube during the contended acceleration period.
24. Verification of inventory details including fuel & lube used in computation were checked with reference to monthly accounts/annual audited financial statements of Z-D, as PW did not undertake an audit of inventories.
25. It should be noted that the fuel and lube consumed on the job is charged to the respective cost codes as part of the Z-D equipment operating rates used for charging costs to the costing records maintained. As a result, claims raised for adverse physical conditions (resolved and unresolved) which reflect equipment operating cost also include an element of inefficiency loss claimed under this claim. The quantum of duplication, if any, in this regard is, however, not readily ascertainable.

ADDITIONAL INVENTORY LOSS

26. This claim needs to be reduced by \$301,614 because of discrepancies noted in salvage value considered in claim computation.

EXTENDED EARTHWORK SUB-CONTRACTS

27. Z-D contends that due to the claimed acceleration, additional pay quantities of work had to be performed by sub-contractors at a higher unit cost than would have been incurred had the same work been performed by Z-D. The pay quantities were derived from Z-D's technical drawings which could not be verified by PW. Although related costs were subject to audit, validity of the claim relies on accuracy of pay quantities. As a result, PW is unable to comment on the quantum of this claim.

ADDITIONAL OVERHEAD

28. This claim represents the increase in cost experienced in certain cost codes during the defined acceleration period as compared to the pattern of these costs during the pre-acceleration period. The claim needs to be increased by a net amount of \$ 64,663 because
- Pre-acceleration periods used to compute this claim vary from cost-code to cost-code and in some cases extend into the defined acceleration period. PW recomputed this claim on the basis of a consistent pre-acceleration period which is representative of normal non-accelerated costs. In order to achieve consistency with some of the other acceleration claims, PW has used a period of July to October, 1983.
 - A major adjustment entry pertaining to the pre-acceleration period but accounted for during the acceleration period had been ignored in determining the pattern of pre-acceleration costs.
 - Salvage value received against sales and the end of the project had been ignored in determining net costs incurred during acceleration.
29. Among other cost-codes selected by Z-D for inclusion in this claim is code 1299 for which an amount of \$ 1,518,761 has been claimed. PW is unable to comment on accuracy of this amount because :
- the cost considered for the pre-acceleration period represents actual cost incurred on equipment operation/maintenance, whereas cost considered for the defined acceleration period includes costs charged at Z-D operating rates with effect from January, 1985.

- costs during the period upto December, 1984 have been spread over each month based on an estimate of equipment mobilised each month over that period. As a result, the accuracy of the cost pattern established during the pre-acceleration period is dependent on the accuracy of monthly estimations made by Z-D.

PROFIT

30. AID Handbook 11, Chapter 2 specifies that "In no event will AID finance a cost-plus percentage of cost contract". Since profit was calculated as a percent of cost as opposed to a fixed fee, an adjustment has been made. As explained in Note 4 on attachment I, the claim for profit needs to be reviewed by USAID/Sri Lanka for allowability. It should also be mentioned that since computation of the profit claim is based on the amounts of the other unresolved claims, any changes in the allowability of these claims will have a direct bearing on the claim for profit. Further, profit element is as per the budget which has not been subject to audit.

ADVERSE PHYSICAL CONDITION-GENERAL

31. Certain adverse physical conditions are being claimed by Z-D as having increased costs. These claims are being disputed and will be settled in arbitration. As stated in Note 1, PW is not commenting on whether or not adverse physical conditions did in fact occur. Further, it should be noted that though audit ascertained that this amount was incurred, financial documents/records did not clearly demonstrate the validity of selection of cost codes etc. contended to be affected by the adverse physical conditions or that the costs were additional and specifically incurred because of adverse physical conditions as opposed to costs which were related to the construction contract as tendered. This determination will have to be made in arbitration.

INCREASED PUMPING & WATER CONTROL

32. Costs claimed represent labour costs of \$ 50,703 and cost for rock underdrain installation of \$ 126,029. In arriving at quantum of claim for rock underdrain installation certain calculations based on engineering judgement/Z-D's experience have been used which cannot be verified by PW.

ADDITIONAL DEWATERING EQUIPMENT

33. The additional dewatering equipment costs claimed represent, purchase and related cost of items of equipment selected by Z-D. This selection cannot be audited by PW in the absence of documentation to support rationale for selection and to segregate from other equipment purchased by Z-D. Further, PW is unable to comment on whether items of equipment included in the claim represent dewatering equipment in view of the technicality involved in its classification.

The claim for additional explosives of \$ 350,189 needs to be reduced by \$ 158,818 for the following:

- Z-D did not include \$19,958 in credit received under a resolved claim for excess rock excavation claim resulting in an overclaim.
 - Unit costs for explosives used are incorrectly stated resulting in an overstatement to claim amount of \$ 120,724.
 - Claim represents additional cost for change in anticipated ratio of gel/dynamite:ANFO due to adverse physical conditions. However, in computing the claim, the calculations reflect not only change in ratio but also increase in quantity of explosives used which may be attributable to factors other than change in the above ratio. Further, quantities used in computation of claim do not tally with summary records maintained by Z-D. As a result, claim is further overstated by a net amount of \$ 18,136.
35. Claim represents excess cost incurred on main and branch canals due to change in anticipated ratio of explosives. Classification of quantities and types of explosives used on canals is a technical matter and as a result has not been subjected to audit. PW is unable to comment on accuracy thereof.

CANAL LINING REPAIR

36. Canal lining repair represents a day work claim and as such includes both direct and indirect costs, namely, labour equipment usage at Z-D operating rates; materials, supervision, overheads. The methodology adopted differs from that used for other adverse physical condition claims but it is similar to the methodology adopted for Change Order no.33 of \$ 74,556 which was agreed to by the parties involved. Further, overhead rates applied to labour, supervision, materials, etc. are based on technical estimations made by Z-D and as a result are not verifiable by PW. However, where applicable, rates have been checked for consistency with Change Order no.33.

ADDITIONAL RELINING

37. A computation error resulting in an underclaim of \$7,918 was noted in the claim for additional relining on phase I (a).

EXCAVATION

38. This claim is based on classification of the various types of excavation quantities (namely, rock, backhoe and scrapper excavation) and related costs into impeded and unimpeded categories. The classifications thus arrived at are then compared with anticipated excavation quantities which have been estimated by Z-D. The resultant additional excavation quantity is then evaluated in terms of additional cost (i.e. the difference in cost of unimpeded versus cost of impeded) in order to arrive at claim amount. In view of technical considerations involved in classifications/estimations made by Z-D, PW is unable to comment on accuracy thereof. As a result, verification of costs conducted is dependent on accuracy of classifications and estimations represented by Z-D.

PAVING

39. This claim was adjusted upwards by \$130,461 because of differences noted in unit cost for paving and yield loss borne when examined with reference to summary records maintained by Z-D.
40. Claim represents additional cost incurred for paving. As explained in Note 21 above, claim is based on technical considerations as to:
- pay quantity of hand paving excluded from claim.
 - classification of all paving work performed and related costs into impeded and unimpeded.
 - Percentage of yield loss borne on quantity of work performed vis-a-vis pay quantity.

PW is unable to comment on accuracy thereof in view of technicalities involved.

EXCESS BORROW

41. This claim is based on differential between actual direct cost and budgeted direct cost. Budgeted costs used are as indicated by the Job Status Report. The scope of this audit did not include a review of the actual direct costs under the tendered contract. Also many variables could cause there to be a difference between actual and budgeted direct costs. Therefore, PW is unable to comment on the accuracy of this claim. However, it may be noted that the budget amounts as supported by the Job Status Report have been used by Engineer in arriving at quantum of counter-claim on Z-D, under Clause 52 of the Contract.

DELAY PERIODS ON OTHER CLAIMS

42. According to Z-D certain delayed periods increased costs. These periods are being disputed and the issue has been referred to arbitration. As stated in Note 1, PW is not taking a position on these disputed issues. The verification performed was limited to determining whether the costs being claimed were incurred during the delayed periods defined by Z-D. These periods were as follows:

M-4 Section : June 2, 1986 to July 26, 1986 i.e. 55 days.

Operation and
Maintenance

Roads : June 8, 1986 to September 12, 1986 i.e. 97 days.

M-4 SECTION

43. This claim was adjusted by \$ 2,590 because the unit rate determined by audit for rebar was \$ 303.75 per metric tonne instead of the rate of \$ 345.53 used by Z-D.
44. This claim was based on a 15% wastage in rebar steel which could not be verified in the absence of supporting documentation.
45. The overhead claim has been increased by a net amount of \$ 1,056 on account of adjustments to costs claimed to coincide with Z-D defined period of delay. This amount is net of expense on salaries of \$ 12,663 incurred prior to the defined delay period, which, however is contended by Z-D as having been incurred due to the delay.
46. Selection of expatriates and Third country nationals and equipment is as per Z-D representation and financial documents and records could not clearly demonstrate that these were additional and specifically incurred due to the contended delay. This determination will have to be made in arbitration. Further selection of relevant "direct" cost codes for allocation of overheads is as per Z-D representation and PW is unable to comment on the validity of this classification due to the technical considerations involved.

OPERATION AND MAINTENANCE ROADS

47. This claim was adjusted by \$ 468 on account of calculation errors.
48. Overhead claim was increased by a net amount of \$ 35,765 on account of
- adjustment to costs claimed to coincide with Z-D defined period of delay (\$ 53,235). This includes expense on salaries of \$ 9,210 incurred prior to the defined delay period, which, however, is contended by Z-D as having been incurred due to the delay.

- inclusion of \$ 89,000 in claimed cost which was awarded by the Engineer in addition to costs claimed by Z-D and included in amount settled \$ 835,780.

INTEREST ON CLEARING AND GRUBBING

- 49. As explained in Note 5, interest claimed has been adjusted. Accordingly, overhead allocated to this claim (\$ 4,596) has also been adjusted.

CLAUSE 52 UNIT PRICE ADJUSTMENT

- 50. This claim is based on estimations/derivations made by the Engineer from Z-D's budgeted cost. Accuracy of budgeted cost has not been verified as the scope of audit work did not include an audit of the tender/budget. In view of technical considerations underlying the estimations/derivations made by the Engineer and the use of tender/budget amounts no comment can be made on the accuracy or validity of the claim.

AUDIT OF THE ZACHRY DILLINGHAM CONTRACT WITH
MAHAWELI AUTHORITY OF SRI LANKA

USAID /SRI LANKA PROJECT NO. 383-0073

REPORT ON INTERNAL ACCOUNTING CONTROLS

1. We have examined the Fund Accountability Statement, including Attachments I and II and the notes thereon, of the Zachry-Dillingham Contract with Mahaweli Authority of Sri Lanka for the period June, 1982 to December, 1987.
2. We commenced our audit in July, 1988 which was over a year after completion of the activities on the contract and accordingly we were not able to test the validity of certain matters related to the contract through physical examination, observation and inspection. Under the circumstances the purpose of our evaluation of internal accounting controls was to establish, from the currently available records and information, the adequacy of controls in operation during the execution of the contract in so far as they related to costs which have an effect on Claims submitted by Z-D (Attachments I and II) and to determine the nature, and extent of the auditing procedures necessary for expressing an opinion on the Fund Accountability Statement of the project. Reference was also made to Z-D's independent auditor's reports and internal auditors reports to support our overall conclusion on this section.
3. For the purpose of this audit we have evaluated the internal accounting controls related to -
 - Billings (Quantity of work done)
 - Procurement
 - Cash and Bank (Receipts/disbursements)
 - Payroll
4. The management of Z-D was responsible for establishing and maintaining a system of internal accounting controls. In fulfilling this responsibility, estimates and judgement by management were required to assess the expected benefits and related costs of control/procedures. The objectives of a system are to provide management with reasonable but not absolute assurances that assets are safeguarded against loss from unauthorised use or dispositions, and that transactions are executed in accordance with managements authorization and recorded properly to permit the presenting of financial statements in accordance with the generally accepted accounting principles. It should, however, be noted that because of inherent limitations in any system of internal accounting controls, errors or irregularities may nevertheless occur and not be detected.

5. Based on our evaluation and the criteria referred to above, in our opinion Z-D's internal control system was adequate except for our audit findings mentioned in Attachment III, which have no material significance at the present time as the contract has already been completed.
6. This report is intended solely for the use of the U.S. Agency for International Development, Sri Lanka. This restriction is not intended to limit the distribution of this report which upon acceptance by the office of the Regional Inspector General for Audit, Singapore is a matter of public record.

Arice Walidhamey

December 21, 1988
NEW DELHI

AUDIT OF THE ZACHRY DILLINGHAM CONTRACT
WITH MAHAWELI AUTHORITY OF SRI LANKA

USAID /SRI LANKA PROJECT NO. 383-0073

REPORT ON INTERNAL ACCOUNTING CONTROLS

AUDIT FINDINGS

1. From January, 1985 onwards Z-D followed the system of charging equipment operating costs to direct expenses on the basis of pre-determined daily/hourly "Equipment Operating Rates". It has been explained that these rates were based on Z-D's experience in the contracting business. Comparison of operating costs charged to expenses on the aforementioned basis with actual operating costs revealed that costs were generally over-absorbed. Tabulated below is the year wise-cumulative over/(under) absorption

CUMULATIVE OVER / (UNDER) ABSORPTION

<u>PARTICULARS</u>	<u>1985 US\$</u>	<u>1986 US\$</u>	<u>1987 US\$</u>
Allocated to jobs	4,468,118	5,767,455	5,991,074
- Owned Equipment	(243,826)	(725,509)	(777,153)
- Leased Equipment			
Unallocated-including sale proceeds of stores and spare parts	(689,559)	(2,189,459)	(5,054,777)
	<u>3,534,733</u>	<u>2,852,487</u>	<u>159,144</u>
	*****	*****	*****

Cost Ledgers which were the basis of preparation of some resolved and unresolved claims were not adjusted to match operating costs and actual costs (Refer note 6 on Attachment I)

Prior to 1985 actual equipment operating costs were charged to indirect expenses. With the change in accounting policy in 1985, aggregate of such expenses upto 1984 were transferred to direct job costs. In absence of the supporting workings it was not possible to verify the accuracy of the charge debited to various job costs on such re-allocation.

2. Z-D had entered into a contract with TKO Equipment Company/Ritchie Bros. for sale of certain used equipments for US\$5,850,000/-. In absence of details as to how the total sale value was arrived at, it was not possible to determine whether such sale value was reasonable.

3. Our comparison of the Annual Financial Statements with the year-end books and records revealed that certain financial adjustments reflected in the financial statements were not recorded in the books. The effect of such post-closing entries on costs were not material eg. in 1985 costs in the books were understated by US\$ 52,000.
4. Z-D received large amounts in cash for the sale of used equipment. Instead of being banked intact, the cash was merged with the cash on hand. As a result, controls over physical cash may have been reduced. As explained by Z-D, the system of receiving large amounts in cash was unavoidable due to the political unrest prevalent in Sri Lanka at that time and the prior experience of large number of cheques collected being dishonoured on presentation to banks.
5. Bank reconciliation statements were not prepared regularly during the initial stages of the contract period. Subsequent to May 1983, however, the reconciliations were regularly prepared although these were neither signed by the person responsible for their preparation nor were they approved by a responsible official.
6. Supporting documentation for some vouchers was not complete. In the majority of procurement transactions tested, either the purchase requisition or the receiving reports were not available.
7. Z-D did not generally follow the system of issuing Purchase Orders for items purchased in Sri Lanka prior to the item being purchased. Instead, Purchase Orders were generated subsequently merely to regularize the system.

**AUDIT OF THE ZACHRY-DILLINGHAM CONTRACT WITH
MAHAWELI AUTHORITY OF SRI LANKA**

USAID / SRI LANKA PROJECT NO. 383-0073

**REPORT ON COMPLIANCE WITH CONTRACT TERMS, APPLICABLE
LAWS AND REGULATIONS**

1. We have examined the Fund Accountability Statement, including Attachemnts I and II and notes thereon, of the Zachry-Dillingham Contract with Mahaweli Authority of Sri Lanka for the period June, 1982 to December, 1987.
2. Our examination included tests of compliance with the contract terms and applicable laws and regulations, during June 1987 to December 1987, on the part of Zachry-Dillingham as considered necessary under the circumstances. Reference was also made to Z-D's independent auditors reports and internal auditors reports to support our overall conclusion on this section.
3. The results of our examination indicated that for the items tested, Zachry-Dillingham generally complied with contract terms, applicable laws and regulations with regard to fund accountability except as described in Attachment IV. Nothing came to our attention that caused us to believe that untested items were not in compliance with contract terms and applicable laws and regulations.
4. This report is intended solely for the use of the U.S.Agency for International Development/(Sri Lanka). This restriction is not intended to limit the distribution of this report which, upon acceptance by the office of the Regional Inspector General for Audit, Singapore, is a matter of public record.

Rice Walahmsa

December 21, 1988.
NEW DELHI

AUDIT OF THE ZACHRY - DILLINGHAM CONTRACT WITH
MAHAWELI AUTHORITY OF SRI LANKA

USAID / SRI LANKA PROJECT NO. 383-0073

REPORT ON COMPLIANCE WITH CONTRACT TERMS AND
APPLICABLE LAWS AND REGULATIONS

AUDIT FINDINGS

A. CONTRACT TERMS

1. RECOVERY OF MATERIAL ADVANCES (Clause 60 (13) (1) of the Conditions of Particular Application to the Contract)
The requirement of the contract was that:

"...All advances made under this Sub-clause 60(13) in respect of phase 1(a) materials have been fully liquidated not later than the progress payment for the second month prior to the month in which all of phase 1 (a) is required to be completed under the contract..."

This clause was not fulfilled as material advances for Phase 1(a) were not liquidated prior to the month in which all of Phase 1(a) was completed. Advance amounting to US \$881,911 relating to Phase 1(a) was transferred to Phase 1(b) and adjusted from progress payments relating to this phase. However, transfer of material advance from Phase 1(a) to Phase 1(b) was approved by the Engineers Berger/IECO, and was accounted for properly.

2. PURCHASES FROM AUTHORISED GEOGRAPHIC CODE COUNTRIES (Clause 75(1) of the Conditions of Particular Application to the Contract).

The requirement of the Contract was that:

"...All goods and services provided or used by the contractor in or in connection with, the execution of the works shall have their nationality, source and origin in those countries listed in AID Geographic code 941 as in effect on the date of acquisition..."

Z-D has not fully complied with this clause as they imported explosives, valuing US \$212,278 which had their origin in South Africa - a country not included in the AID Geographic code 941. Purchases mentioned above were not approved in writing by either MASL or USAID, although they were made with the knowledge of the Engineers.

3. DISPOSAL OF GOODS IMPORTED FREE OF TARIFFS, CUSTOMS AND IMPORT DUTIES (Clause 73(1) of the Conditions of Particular Application to the Contract)

The requirement of the Contract was that:

"...All goods which are imported or brought into Sri Lanka by or on behalf of the contractor for the purpose of or in connection with the contract shall be exempt from all tariffs, customs and import duties, and all taxes, charges or fees... and other levies imposed under the laws of Sri Lanka, provided that such items are transferred to the Employer as part of the Works or removed from Sri Lanka either during or at the conclusion of the contract, or otherwise are sold in Sri Lanka with the prior approval of the Ministry of Finance and Planning subject to assessment of taxes and duties in accordance with the laws and regulations of Sri Lanka..."

The following problems were noted:

(a) Documentation relating to following 2 of the 24 items tested were not available for verification.

- CAT D 8 L Dozer Tractor US \$ 209,239

- Trimmer complex US \$ 199,373

US \$ 408,612

(b) Z-D had not obtained permission from the requisite authorities for sale of explosives valuing Rs.200,000 (approximately US \$7,000) in Sri Lanka to M/s Noordeen Hadjar against which taxes and duties in accordance with laws and regulations of Sri Lanka were also not paid. Z-D in their letter No.F 231-CMB-197 dated 17th September, 1987 to the Director - Government Supplies explained that it was not possible to identify the material sold to any procurement source and therefore it was not known whether the explosives had originally been imported duty free.

(c) Permissions obtained by Z-D from the Ministry of Finance and Planning for the sale of used equipment valuing approximately US \$230,000 in Sri Lanka were in the names of local buyers to whom TKO Equipment Company/Ritchie Bros. sold the equipment and not in the name of TKO Equipment company/Ritchie Bros. who were the first buyers of the used equipment within the country. Duties and taxes in accordance with laws and regulations of Sri Lanka were, however, paid/accrued in the books of Z-D.

B. APPLICABLE LAWS AND REGULATIONS

4. MONIES SPENT / RECEIVED ON BEHALF OF PERSONS RESIDENT OUTSIDE SRI LANKA (Section 7 of the Exchange Control Act)

This Section requires that:

"Except with the permission of the Bank (Central Bank of Sri Lanka) no person shall in Sri Lanka-

- (a) make any payment to or for the credit of a person resident outside Sri Lanka, or
- (b) place or hold any sum to the credit of any person resident outside Sri Lanka"

Review of the contract with TKO Equipment Company/Ritchie Bros. for the sale of used equipment valuing US \$5,850,000 and its related transactions revealed that -

- (a) Z-D incurred expenses amounting to approximately US \$38,000 in Sri Lanka on behalf of TKO Equipment Company/Ritchie Bros, a Joint Venture resident outside Sri Lanka.
- (b) Z-D received from various persons resident in Sri Lanka monies on behalf of TKO Equipment Company/Ritchie Bros. amounting to approximately US \$343,000 being proceeds of in-country sales of used equipment purchased from Z-D.

The above mentioned expenses/receipts had been adjusted in the foreign currency invoices raised by Z-D on TKO Equipment Company/Ritchie Bros. and settled outside Sri Lanka.

RECEIPT OF MONIES FROM A PERSON RESIDENT OUTSIDE SRI LANKA

(Section 24(1) of the Exchange Control Act)

The requirements of this section are that:

"Except with the permission of the bank no person who has a right (whether present or future and whether vested or contingent) to receive any foreign currency or to receive from a person resident outside Sri Lanka a payment in rupees, shall do, or refrain from doing, any act with intent to secure -

- (a) that the receipt by him of the whole or part of that currency or, as the case may be, of that payment in rupees is delayed; or
- (b) that the currency or payment ceases in whole or in part, to be receivable by him..."

Z-D sold certain used equipments to TKO Equipment Company/Ritchie Bros. in Sri Lanka (i.e. title of equipments transferred to TKO Equipment Company/Ritchie Bros. within Sri Lanka). The sale proceeds amounting to approximately US \$230,000 were not received in foreign currency from the buyer but were received in Rupee from local/resident persons to whom TKO Equipment Company/Ritchie Bros. further sold the used equipment. We were unable to establish whether Z-D had the right to receive from, TKO Equipment Company/Ritchie Bros. a Joint Venture, a resident outside Sri Lanka, the above payment in rupees.

6. RE-EMPLOYMENT OF LABOUR (Section 2 of the Termination of Employment of workmen law)

The requirement of this Section is that:

'Any person who fails to comply with any decision made by the Commissioner under Section 2 shall be guilty of an offence and shall on conviction after trial before a Magistrate be liable to a fine not exceeding one thousand rupees or imprisonment of either description for a term not exceeding six months or to both such fine and imprisonment".

Under Section 2 of the above mentioned Law, the Commissioner of Labour issued a directive dated February 14, 1986 granting permission to Z-D for termination of employee services specifying that "if new hands are employed, preference be given to old hands". However, re-employment of Labour by Z-D in February, 1986, subsequent to the termination of employment of all local employees on February 16, 1986 was done on the basis of ready availability of workers due to the exigencies of the contract. To date no legal action has been initiated against Z-D.

Appendix

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