





<b>Town</b> Ermera	<b>No. &amp; Facility:</b> 04 - Proposed Water Treatment Plant	<b>Year of Construction</b>	<b>Financed by:</b>						
<b>Existing Condition:</b>		<b>Photograph:</b>							
<p><b>Evaluation:</b></p> <p>The water quality from the source requires treatment of the water prior to distribution.</p>									
<p><b>Rehabilitation Plan:</b></p> <p>1) <i>Basic Consideration:</i></p> <p>Required production capacity of the town is 5L/sec. Two basins of SSF will be constructed. Assuming design filtration rate 4.5m<sup>3</sup>/m<sup>2</sup>/day, required area for filtration is computed as follows:</p> $= 5 * 86,400/1000 / 4.5$ $= 96 \text{ m}^2$ <p>2) <i>Civil Work:</i></p> <p>Construction of SSF, concrete apron for sand washing (below are the specifications), fence and staff house.</p> <table border="0"> <tr> <td>SSF:</td> <td>Apron:</td> </tr> <tr> <td>Filtration rate: 4.5m<sup>3</sup>/m<sup>2</sup>/day</td> <td>Structure: concrete</td> </tr> <tr> <td>Size: 6m x 8m - two basins</td> <td>Size: 6m x 8m x 40cm height separated into two</td> </tr> </table> <p>3) <i>Piping work:</i></p> <p>Installation of 75mm and 100mm for inlet and outlet, respectively. Installation of gate valves, flow meter and controller and other appurtenances.</p> <p>4) <i>Mechanical work:</i> none</p> <p>5) <i>Electrical work:</i> none</p> <p>6) <i>Miscellaneous:</i></p> <p>Installation of chlorination facilities. Land acquisition with approximate area, A = 1,000 m<sup>2</sup></p>				SSF:	Apron:	Filtration rate: 4.5m <sup>3</sup> /m <sup>2</sup> /day	Structure: concrete	Size: 6m x 8m - two basins	Size: 6m x 8m x 40cm height separated into two
SSF:	Apron:								
Filtration rate: 4.5m <sup>3</sup> /m <sup>2</sup> /day	Structure: concrete								
Size: 6m x 8m - two basins	Size: 6m x 8m x 40cm height separated into two								
<b>Estimated cost:</b> US\$69,241		<b>Construction schedule:</b>	<b>Priority:</b> C-1						

<b>Town</b> Ermera	<b>No. &amp; Facility:</b> 05 - Poetete Reservoirs 1 & 2	<b>Year of Construction</b>	<b>Financed by:</b>
<b>Existing Condition:</b> <i>Facility:</i> Service reservoirs <i>Structure:</i> Reinforced Concrete <i>Shape:</i> Rectangular <i>Dimension:</i> 2.4m x 5.4m x 2.2m Reservoir 1: 6.0 m x 4.0 m x 1.5 m Reservoir 2: 3.8 m x 3.5 m x 2.0 m <i>Total Volume:</i> 63 m <sup>3</sup> <i>Function:</i> Storage <i>Source of Water:</i> Ersoi and Lubulala springs <i>Ground level (amsl):</i> <i>Accessories:</i>		<b>Photograph:</b>  Poetete Reservoir No.2 (Date: )	
<b>Evaluation:</b> Working but require rehabilitation and expansion. The existing 2 reservoirs will be insufficient to provide the required storage requirement. Both tanks are not equipped with flow meters and control valves.			
<b>Rehabilitation Plan:</b> 1) <i>Basic Calculation:</i> Storage requirement = Water demand * 8 hrs storage/day where: water demand = 428 m <sup>3</sup> /day Storage requirement = 428 * 8/24 = 143 m <sup>3</sup> /day Storage deficit = 143 - 63 = 80 m <sup>3</sup> /day  2) <i>Civil Work:</i> Construction of service reservoir with the capacity of 80 m3 including the necessary appurtenances Construction of security fence and staff house  3) <i>Piping work:</i> Installation of 100mm including flow meter and control valves for the proposed reservoir Installation of 50mm x 50 m including 2 sets of control valves for existing reservoirs  4) <i>Mechanical work:</i> none          5) <i>Electrical work:</i> none          6) <i>Miscellaneous:</i> none			
<b>Estimated cost:</b> US\$27,083		<b>Construction schedule:</b>	<b>Priority:</b> C-2

<b>Town</b> Ermera	<b>No. &amp; Facility:</b> 06 - Proposed Distribution Main	<b>Year of Construction</b>	<b>Financed by:</b>
<b>Existing Condition:</b>		<b>Photograph:</b>	
<p><b>Evaluation:</b></p> <p>The existing distribution main will be insufficient for the future water demand</p>			
<p><b>Rehabilitation Plan:</b></p> <p>1) <i>Basic Consideration:</i> Additional distribution network will be required to maintain an efficient distribution of water supply.</p> <p>2) <i>Civil Work:</i> none</p> <p>3) <i>Piping work:</i> Installation of 100mm x 6 km with the necessary appurtenances.</p> <p>4) <i>Mechanical work:</i> none</p> <p>5) <i>Electrical work:</i> none</p> <p>6) <i>Miscellaneous:</i> none</p>			
<b>Estimated cost:</b> US\$150,000		<b>Construction schedule:</b>	<b>Priority:</b> C-1

<b>Town</b> Liquica	<b>No. &amp; Facility:</b> 01 - Enalua and Daulo Intake	<b>Year of Construction</b> Portuguese Period	<b>Financed by:</b> Portugal
<b>Existing Condition:</b> <i>Facility:</i> Collection chamber & intake pipes <i>Function:</i> Water collection from source <i>Sources of water:</i> Enalua - Goularlua River Daulo - Goularlua <i>Structure:</i> Concrete <i>Elevation (amsl):</i> <i>Collection Chamber:</i> Enalua - 2.8 m x 2.8 m x 1.5 m Daulo - damaged and eroded <i>Inlet &amp; Outlet Pipes:</i> Enalua: 2 x 4-inch and 1 x 3-inch Daulo: damaged and eroded		<b>Photograph:</b>  (Date:                      )	
<b>Evaluation:</b> The existing facilities are oftentimes subjected to natural damage because they were constructed below standard.			
<b>Rehabilitation Plan:</b> 1) <i>Basic Consideration</i> To improve water collection, new intake will be constructed with a design intake rate, 5L/sec for each.			
2) <i>Civil Work:</i> Construction of the intake facilities to include the following: Perforated pipes: 150mm GSP protected by concrete Gabion: 50cm x 50cm x 150cm x 17 Security fence, flow controller, grit chamber (2m x 4m x 2mH)			
3) <i>Piping work</i> Design intake rate: 5 L/sec (Daulo), 5 L/sec (Enalua) Intake pipes: 100mm x 50 m (for Enalua) and 100mm x 100 m (for Daulo) Raw water transmission: 150mm (Daulo) x 4km			
4) <i>Mechanical work:</i> none			
5) <i>Electrical work:</i> none			
6) <i>Miscellaneous:</i> none			
<b>Estimated cost:</b> US\$168,320		<b>Construction schedule:</b>	<b>Priority:</b> A-1

<b>Town</b> Liquica	<b>No. &amp; Facility:</b> 02 - Manlaka Intake	<b>Year of Construction</b>	<b>Financed by:</b>
<b>Existing Condition:</b> <i>Facility:</i> Collection chamber and intake pipes <i>Function:</i> Water collection from source <i>Source of Water:</i> Manlaka River <i>Structure:</i> Concrete <i>Collection Chamber:</i> 2.0 m x 2.0 m x 1.0 m <i>Elevation (amsl):</i> <i>Inlet Pipe:</i> Temporarily replaced by bamboo <i>Outlet Pipe:</i> GSP 3-inch & 2-inch		<b>Photograph:</b>  (Date: )	
<b>Evaluation:</b> Oxfam carried rehabilitation works on this source particularly on the intake structures.			
<b>Rehabilitation Plan:</b> 1) <i>Basic Consideration</i> The existing facilities are not sufficient to abstract the design intake rate, 5L/sec. Construction of new intake facilities is necessary to upgrade water collection. Rehabilitation work is necessary on the transmission main.  2) <i>Civil Work:</i> Construction of intake facilities safe from natural damages Installation of perforated pipes protected by concrete, 1.5m underneath the river bed together with gabion. Construction of a grit chamber (2m x 4m x 2mH) Construction of river crossings. 3) <i>Piping work:</i> Installation of transmission main 75mm x 7 km and 100mm x 2.5km (from intake to Maumeta reservoir) including necessary appurtenances such as air release valves, blow-off  4) <i>Mechanical work:</i> none          5) <i>Electrical work:</i> none          6) <i>Miscellaneous:</i> none			
<b>Estimated cost:</b> US\$234,466		<b>Construction schedule:</b>	<b>Priority:</b> A-1


<b>Town</b> Liquica	<b>No. &amp; Facility:</b> 03 - Maumeta 1 & 2	<b>Year of Construction</b> 1985	<b>Financed by:</b> Indonesia
<b>Existing Condition:</b> <i>Facility:</i> Deepwell <i>Casing Diameter:</i> 8-inch <i>Drilled Depth:</i> 84 m <i>Designed Capacity:</i> Maumeta 1 = 5 L/s Maumeta 2 = 10 L/s <i>Function:</i> Water source <i>Supplies to:</i> Maumeta Reservoir <i>Elevation (amsl):</i> <i>Accessories:</i> Outlet pipe: GSP 3-inch Gate valve non-return valve Pumping Stations with minor damages		<b>Photograph:</b>   (Date: )	
<b>Evaluation:</b> Not in operation due to damage of the pumping facilities and electro-mechanical equipment			
<b>Rehabilitation Plan:</b> 1) <i>Basic Consideration:</i> In the course of the study, this deepwell will be abandoned.  2) <i>Civil Work:</i>          3) <i>Piping work:</i> none          4) <i>Mechanical work:</i> none          5) <i>Electrical work:</i>          6) <i>Miscellaneous:</i> none			
<b>Estimated cost:</b> None		<b>Construction schedule:</b>	<b>Priority:</b> -


<b>Town</b> Liquica	<b>No. &amp; Facility:</b> 04-Proposed WTP	<b>Year of Construction</b>	<b>Financed by:</b>
<b>Existing Condition:</b>		<b>Photograph:</b>	
<b>Evaluation:</b>			
<b>Rehabilitation Plan:</b> 1) <i>Basic Consideration</i> Water from Manlaka intake are being supplied to the consumers without treatment. As the raw water becomes turbid after heavy rains, water treatment is required. Slow sand filtration is considered most appropriate.  2) <i>Civil Work:</i> Construction of slow sand filter basin with production rate, 5 L/s. Dimension: 6m x 9m - 2 basins Design filtration rate: 4.5m/day Appurtenances: filter media, underdrain pipes (GS), ladders, overflow, drains, security fence, outlet chambers Construction of concrete apron for washing filter media (6m x 10m) with drains 3) <i>Piping work:</i> Inlet(150mm x 30m) from Manlaka source, with necessary appurtenances including flow meter and controller Outlet main to be installed (150mm x 10m) 4) <i>Mechanical work:</i> none          5) <i>Electrical work:</i> none          6) <i>Miscellaneous:</i> staff house, land acquisition (60m x 40m)			
<b>Estimated cost:</b> US\$76,862		<b>Construction schedule:</b>	<b>Priority:</b> A-1

<b>Town</b> Liquica	<b>No. &amp; Facility:</b> 05 - Proposed Deep Well	<b>Year of Construction</b>	<b>Financed by:</b>
<b>Existing Condition:</b>		<b>Photograph:</b>	
<b>Evaluation:</b>			
<b>Rehabilitation Plan:</b> 1) <i>Basic Consideration:</i> This proposed deep well will be constructed to augment the existing water sources production.  2) <i>Civil Work:</i> Construction of the new deep well including the necessary pumping and electrical facilities and the pumping station building. Construction of the security fence.  3) <i>Piping work:</i> none Installation of pipeline to convey deep well water to the Maumeta Res., 75mm x 2 km The pipeline will be interconnected to the proposed transmission main (the Maumeta deep wells No.1 and No.2 - Mean Res.)  4) <i>Mechanical work:</i> A submersible pump with a design capacity, 3L/sec  5) <i>Electrical work:</i> Main Power Switch Panel, Generator Set, Fuel Tank  6) <i>Miscellaneous:</i> Geophysical Survey Work Land Acquisition Area = 200m <sup>2</sup>			
<b>Estimated cost:</b> US\$36,000		<b>Construction schedule:</b>	<b>Priority:</b> A-1






<b>Town</b> Liquica	<b>No. &amp; Facility:</b> 07 - Serlema SSF	<b>Year of Construction</b> Indonesian Period	<b>Financed by:</b> Indonesia
<b>Existing Condition:</b> Facility: Service reservoir (2 basins) Structure: Reinforced Concrete Shape: Rectangular Dimension: 8.5m x 29.6m Production Capacity: 12L/sec Design filtration rate: 4.5m <sup>3</sup> /m <sup>2</sup> /day Function: Filtration Source of Water: Daulo and Eanlua intakes Elevation (amsl): Accessories: Inlet: GSP 1 x 4-inch from Eanlua GSP 1 x 3-inch from Daulo		<b>Photograph:</b> 	
		(Date: )	
<b>Evaluation:</b> In operation but requires repair and rehabilitation			
<b>Rehabilitation Plan:</b> 1) Basic Consideration  2) Civil Work: Repair of concrete base and walls after removal of filter media. Provide concrete apron for sand washing with drain. Wash and seive filter sands and gravel for reuse Installation of ladders for maintenance  3) Piping work: Installation of flow meter and control valves on the inlets  4) Mechanical work: none  5) Electrical work: none  6) Miscellaneous: none			
<b>Estimated cost:</b> US\$16,574		<b>Construction schedule:</b> 	
		<b>Priority:</b> A-1	


<b>Town</b> Liquica	<b>No. &amp; Facility:</b> 08 - Mean Reservoir	<b>Year of Construction</b>	<b>Financed by:</b>
<b>Existing Condition:</b> <i>Facility:</i> Service reservoir <i>Structure:</i> Reinforced Concrete <i>Shape:</i> Rectangular <i>Dimension:</i> 10.5m x 6.5m x 2.5m <i>Capacity:</i> 170 m <sup>3</sup> <i>Function:</i> Storage <i>Source of Water:</i> Serlema Reservoir & Narlolo Spring <i>Elevation (amsl):</i> <i>Accessories:</i>		<b>Photograph:</b> 	
		(Date: )	
<b>Evaluation:</b> In use but requires minor rehabilitation.			
<b>Rehabilitation Plan:</b> 1) <i>Basic Consideration</i>  2) <i>Civil Work:</i> Construction of security fence.  3) <i>Piping work:</i> Installation of pipes to interconnect to the existing.  4) <i>Mechanical work:</i> none  5) <i>Electrical work:</i> none  6) <i>Miscellaneous:</i> Installation of chlorine dosing device			
<b>Estimated cost:</b> US\$5,300		<b>Construction schedule:</b> Priority: A-2	

<b>Town</b> Liquica	<b>No. &amp; Facility:</b> 09 - Proposed Reservoir	<b>Year of Construction</b>	<b>Financed by:</b>
<b>Existing Condition:</b>		<b>Photograph:</b>	
		(Date: )	
<b>Evaluation:</b>			
<b>Rehabilitation Plan:</b>			
<p>1) <i>Basic Consideration</i></p> <p>As distribution center of the West Supply Zone, Mean reservoir should be upgraded.  Storage capacity required: <math>2249\text{m}^3/\text{day} \times 65\% \times 8\text{hrs}/24\text{hrs} = 487\text{m}^3</math>  Existing: <math>170\text{m}^3</math> (Mean) + <math>145\text{m}^3</math> (Koramil) = <math>315\text{m}^3</math>  Costruction of new reserovir with a storage capacity <math>172\text{m}^3</math> is required.</p> <p>2) <i>Civil Work:</i></p> <p>New reservoir will be of rectangular shape, made of concrete (10m x 14m x 2.5m) with necessary appurtenances (flow meter, flow controller, air valves, overflow, drain, ventilator, level gauge, chlorine dosage devices, fence, etc.)  Location to be near Mean Reservoir at the similar height</p> <p>3) <i>Piping work:</i></p> <p>Installation of pipes to interconnect to the existing.  100mm GSP x 500m</p> <p>4) <i>Mechanical work:</i> none</p> <p>5) <i>Electrical work:</i> none</p> <p>6) <i>Miscellaneous:</i> none</p>			
<b>Estimated cost:</b>		<b>Construction schedule:</b>	<b>Priority:</b>
US\$64,376			A-2


<b>Town</b> Liquica	<b>No. &amp; Facility:</b> 10 - Koramil Reservoir	<b>Year of Construction</b>	<b>Financed by:</b>
<b>Existing Condition:</b> Structure: Reinforced Concrete Shape: Rectangular Dimension: 9.3m x 6.4m x 2.5m Capacity: 145m <sup>3</sup> Function: Storage Source of Water: Mean Reservoir Elevation (amsl): Accessories:		<b>Photograph:</b> 	
		(Date: )	
<b>Evaluation:</b> In use but requires minor rehabilitation.			
<b>Rehabilitation Plan:</b> 1) Basic Consideration  2) Civil Work: Construction of security fence  3) Piping work: none  4) Mechanical work: none  5) Electrical work: none  6) Miscellaneous: none			
<b>Estimated cost:</b>  US\$2,400		<b>Construction schedule:</b>	<b>Priority:</b>  A-2




<b>Town</b> Liquica	<b>No. &amp; Facility:</b> 12 - Proposed Distribution Main	<b>Year of Construction</b>	<b>Financed by:</b>
<b>Existing Condition:</b>		<b>Photograph:</b>	
<b>Evaluation:</b>			
<b>Rehabilitation Plan:</b> 1) <i>Basic Consideration:</i> The establishment of the high and low zones requires the installation of distribution mains.  2) <i>Civil Work:</i> River crossings (150mm x three, 200mm x one)  3) <i>Piping work:</i> Installation of the following pipeline including appurtenances and river crossings. High zone = 200mm x 4km, 150mm x 3 km Low zone = 150mm x 6 km, 100mm x 2 km Installation of gate valves, air release valves and blow-off.  4) <i>Mechanical work:</i> none          5) <i>Electrical work:</i> none          6) <i>Miscellaneous:</i> none			
<b>Estimated cost:</b> US\$717,000		<b>Construction schedule:</b>	<b>Priority:</b> A-1

<b>Town :</b> Suai	<b>No. &amp; Facility:</b> 01 - Sukabilaran 1	<b>Year of Construction</b> 1995	<b>Financed by:</b> Indonesian gov't
<b>Existing Condition:</b> Facility : Deep well Diameter (casing): 200mm Well depth: 84m below ground level Static water level : Pumping water level : Capacity: Supply to: Hospital reservoir Elevation (amsl) : Accessories: Pumps: _____m <sup>3</sup> /min x 46m head x 7kw Delivery: 2 inch 1/2 Type : submersible pump Main Power Switch Panel Generator Pump Panel		<b>Photograph:</b>  (Date: _____ )	
<b>Evaluation:</b> 1. In operation. 2. Pumps, generator set and electro-mechanical facilities had lapsed their economic life. Need replacement.			
<b>Rehabilitation Plan:</b> 1) <i>Basic Consideration :</i> For an efficient operation, the existing pumping facilities and generator set to be replaced with new one. The pumping station needs to be refurbished.  2) <i>Civil Architectural:</i> a) Pumping station : Installation at doors with locks, windows and accessories. Ceiling to be repaired. b) Security fence : New security fence to be installed.  3) <i>Piping work:</i> none  4) <i>Mechanical work:</i> Pumps: 0.45m <sup>3</sup> /min x 46m head x 7kw Delivery: 2 inch 1/2 Type : submersible pump  5) <i>Electrical work:</i> Watt-hour Meter Box x1set      Fuel Tank x1set Main Power Switch Panel x1set      Pump Control Board x1set Generator Set x1set 6) <i>Miscellaneous:</i> none			
<b>Estimated cost:</b> US\$92,172		<b>Construction schedule:</b>	<b>Priority:</b> B-1



<b>Town :</b> Suai	<b>No. &amp; Facility:</b> 02 - Sukabilaran 2	<b>Year of Construction</b> 1995	<b>Financed by:</b> Indonesian gov't						
<b>Existing Condition:</b> Facility : Deep well Diameter (casing): 200mm Well depth: Static water level : 0.5m below ground level Pumping water level : Capacity: Supply to: Hospital reservoir Elevation (amsl) : Accessories: Pumps: 0.45m <sup>3</sup> /min x 70m head x 7kw Delivery: 1/2 inch Type : temporary submersible pump Main Power Switch Panel Generator Pump Panel		<b>Photograph:</b>  (Date: )							
<b>Evaluation:</b> <ol style="list-style-type: none"> <li>1. Pumps, generator set and electro-mechanical facilities heavily damaged.</li> <li>2. Put back into operation by PKF on temporary basis.</li> <li>3. Installed with mobile pumping equipment and generator set.</li> <li>4. Pumps water into PKF water trucks on routine basis.</li> </ol>									
<b>Rehabilitation Plan:</b> <ol style="list-style-type: none"> <li>1) <i>Basic Consideration :</i> New set of pumps and electron-mechanical facilities need to be installed on this well in order to operate normally. The pumping station needs to be refurbished.</li> <li>2) <i>Civil Architectural:</i> <ol style="list-style-type: none"> <li>a) Pumping station : Installation at doors with locks, windows and accessories. Ceiling to be repaired.</li> <li>b) Security fence : New security fence to be installed.</li> </ol> </li> <li>3) <i>Piping work:</i> Replacement and realignment of the discharge pipe.</li> <li>4) <i>Mechanical work:</i> Pumps: 0.45m<sup>3</sup>/min x 70m head x 7kw Delivery: 1/2 inch Type : submersible pump</li> <li>5) <i>Electrical work:</i> <table border="0"> <tr> <td>Watt-hour Meter Box x1set</td> <td>Fuel Tank x1set</td> </tr> <tr> <td>Main Power Switch Panel x1set</td> <td>Pump Control Board x1set</td> </tr> <tr> <td>Generator Set x1set</td> <td></td> </tr> </table> </li> <li>6) <i>Miscellaneous:</i> none</li> </ol>				Watt-hour Meter Box x1set	Fuel Tank x1set	Main Power Switch Panel x1set	Pump Control Board x1set	Generator Set x1set	
Watt-hour Meter Box x1set	Fuel Tank x1set								
Main Power Switch Panel x1set	Pump Control Board x1set								
Generator Set x1set									
<b>Estimated cost:</b> US\$94,972		<b>Construction schedule:</b>							
		<b>Priority:</b> B-1							

<b>Town :</b> Suai	<b>No. &amp; Facility:</b> 03 - Ameriko Stream Intake	<b>Year of Construction</b>	<b>Financed by:</b>
<b>Existing Condition:</b> <i>Facilities:</i> spring water collecting basin, grit chamber <i>Structure:</i> concrete <i>Dimension:</i> W4.5m x 2.5m x 1.5m <i>Observed flow:</i> 0.6 L/sec in 10 / 20 / 2000 <i>Function:</i> spring water collection and grit removal <i>Supply to:</i> Bereluik 2 <i>Elevation (amsl) :</i> <i>Accessories:</i> Inlet weir		<b>Photograph:</b> 	
		(Date: )	
<b>Evaluation:</b> 1. In operation. 2. Yield decreases in dry season. 3. Lacks routine maintenance.			
<b>Rehabilitation Plan:</b> 1) <i>Basic Consideration :</i>  2) <i>Civil Architectural:</i> Installation of security fence.  3) <i>Piping work:</i> none  4) <i>Mechanical work:</i> none  5) <i>Electrical work:</i> none  6) <i>Miscellaneous:</i> none			
<b>Estimated cost:</b> US\$1,800		<b>Construction schedule:</b> 	
		<b>Priority:</b> B-2	

<b>Town :</b>	<b>No. &amp; Facility:</b>	<b>Year of Construction</b>	<b>Financed by:</b>
Suai	04 - Kuluai Stream Intake		
<b>Existing Condition:</b>		<b>Photograph:</b>	
<i>Facilities:</i> Water collection tank, and grit chamber <i>Structure:</i> concrete <i>Dimension:</i> W4.5m x 2.5m x 1.5m <i>Capacity:</i> <i>Function:</i> spring water collection and grit removal <i>Supply to:</i> Bereluik 1 <i>Elevation (amsl) :</i> <i>Accessories:</i> none			
		(Date: )	
<b>Evaluation:</b>			
1. Not in operation. 2. Transmission main GSP 3-inch damaged by flood. 3. Yield decreases in dry season.			
<b>Rehabilitation Plan:</b>			
<b>1) Basic Consideration :</b> It needs rehabilitation to augment water supply. Transmission main to be installed in safe location. Intake facilities to be well protected from natural damage.			
<b>2) Civil Architectural:</b> Installation of security fence			
<b>3) Piping work:</b> Installation of 75mm x 200m to replace damaged section.			
<b>4) Mechanical work:</b> none			
<b>5) Electrical work:</b> none			
<b>6) Miscellaneous:</b> none			
<b>Estimated cost:</b>		<b>Construction schedule:</b>	
US\$5,400		B-2	

