

FIJI ELECTRICITY AUTHORITY



TENDER SPECIFICATIONS

TENDER

TENDER NO: MR 85/2017

**TENDER MR 85/2017 – Relocation of Fire Pump from
Old Power Station to New Power Station at FEA
Kinoya**

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2.0 Scope of Work

The works are scheduled into three parts;

- Cartage, Install & Commission Old Kinoya Fire Pump Unit
- Civil & Piping works for New Kinoya Fire Pump
- Cartage, Install & Commission of New Kinoya Fire Pump

2.1 Install & Commission Old Kinoya Fire Pump

- 1) Service & Move the pump unit into position.
- 2) Assemble and connect the unit on site to the respectively terminals & Plumbing connection. All plumbing details will be discuss on site visit.
- 3) All pipes needs to be connected and hydraulic calculation needs to be evaluated and verified.
- 4) Connect the control panel to the pump unit. Note the panel might be tested and if it is not operational it need to be replaced.
- 5) Pressure test the new pipeline and connections as well as pump housing unit itself for leaks. All seal must be inspected as well and replaced if need be.

2.2 Civil & Piping Works for the New Kinoya Fire Pump

- 1) Calculate & design the hydraulic line & flow for the new pipeline from the newly constructed 500,000L water tank to the pump house and from the pump to the existing New Kinoya fire system. The tapping point into the existing system will be base on the design submitted but a proposed point is marked in Figure 3.
- 2) Construct new fire pump house to carter the entire pump unit with all of its auxiliary units.

2.3 Cartage, Install & Commission of New Kinoya Fire Pump

- 1) Disassemble the New Kinoya Pump unit, which is currently installed at the Old Kinoya power station and carter it to the new pump house.
- 2) Install & assemble pump unit to all its respectively terminal, pipes fixtures and auxiliary system.
- 3) Pressure test the new pipeline and connections as well as pump housing unit itself for leaks. All seal must be inspected as well and replaced if need be

3.0 Specifications

3.1 Old Kinoya Pump Details

Table 1 Old Kinoya Pump Unit Details

Engine:	Cummins	Pump
Model no. :	6B5.9 – C	Centrifuge Pump
C.I.D/L :	359/5.9	6" in/ 6" out
CPL :	714	
Engine Serial no. :	21681238	
Panel:	K58 AJAX Pump Engine Panel	



Figure 1 Old Kinoya Fire Pump

3.2 New Kinoya Pump Details

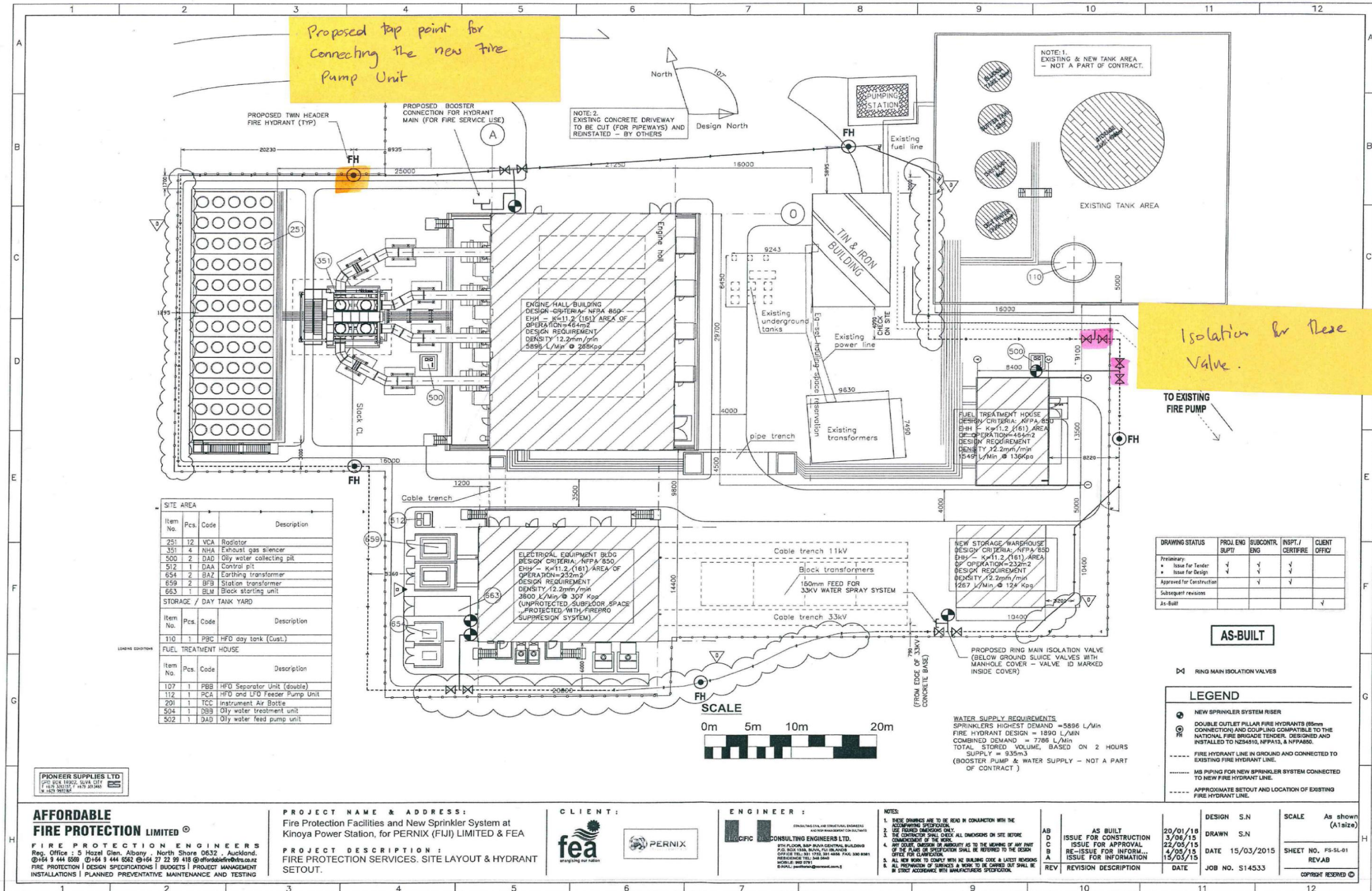
Table 2 New Kinoya Pump Unit Details

Engine:	Doosan Infracore
Model no. :	PU126TI
Speed :	2100 rpm
Output :	294KW
Serial no.	ED1PA546468
Date:	2015



Figure 2 New Kinoya Fire Pump Unit

3.3 Tap Point for New Kinoya Pump



Item No.	Pcs.	Code	Description
251	12	VCA	Radiator
351	4	NHA	Exhaust gas silencer
500	2	DAD	Oily water collecting pit
512	1	DAA	Control pit
634	2	BAZ	Earthing transformer
659	2	BBB	Station transformer
663	1	BLM	Block starting unit

Item No.	Pcs.	Code	Description
110	1	PBC	HFO day tank (Cust.)

Item No.	Pcs.	Code	Description
107	1	PBB	HFO Separator Unit (double)
112	1	PCA	HFO and LFO Feeder Pump Unit
201	1	TCC	Instrument Air Bottle
504	1	DBB	Oily water treatment unit
502	1	DAD	Oily water feed pump unit

PIONEER SUPPLIES LTD
 P.O. BOX 18922, SILVERDALE
 TEL: 09 444 6689 FAX: 09 444 6688
 18/03/2015 14:59:30

AFFORDABLE FIRE PROTECTION LIMITED
 FIRE PROTECTION ENGINEERS
 Reg. Office : 5 Hazel Glen, Albany, North Shore 0632, Auckland.
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 FIRE PROTECTION | DESIGN SPECIFICATIONS | BUDGETS | PROJECT MANAGEMENT
 INSTALLATIONS | PLANNED PREVENTATIVE MAINTENANCE AND TESTING

PROJECT NAME & ADDRESS:
 Fire Protection Facilities and New Sprinkler System at Kinoya Power Station, for PERNIX (FIJI) LIMITED & FEA

CLIENT:
 PERNIX

ENGINEER:
 CIFIC CONSULTING ENGINEERS LTD.
 8TH FLOOR, BANG BANG CENTRAL BUILDING
 P.O. BOX 1888, SILVERDALE, AUCKLAND
 OFFICE TEL: 09 444 6689 FAX: 09 444 6688
 MOBILE: 099 3791
 @cific, pccific@pccific.com

NOTES:
 1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING SPECIFICATION.
 2. USE DIMENSIONS SHOWN ONLY.
 3. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS ON SITE BEFORE COMMENCEMENT OF THE WORK.
 4. ANY QUOTE, ORDER OR AMBIGUITY AS TO THE MEANING OF ANY PART OF THE PLANS OR SPECIFICATION SHALL BE REFERRED TO THE DESIGN OFFICE FOR CLARIFICATION.
 5. ALL NEW WORK TO COMPLY WITH THE BUILDING CODE & LATEST EDITIONS.
 6. ALL PROVISIONS OF SURVEY & WORK TO BE CARRIED OUT SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATION.

CLIENT:
 fea
 PERnix

ENGINEER:
 CIFIC CONSULTING ENGINEERS LTD.
 8TH FLOOR, BANG BANG CENTRAL BUILDING
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DESIGN S.N. 20/01/18
DRAWN S.N. 3/06/15
DATE 15/03/2015
JOB NO. S14533

SCALE As shown (A1size)

REVISION DESCRIPTION

REV	DESCRIPTION	DATE
AB	AS BUILT	20/01/18
D	ISSUE FOR CONSTRUCTION	3/06/15
C	ISSUE FOR APPROVAL	22/05/15
B	RE-ISSUE FOR INFORM...	4/05/15
A	ISSUE FOR INFORMATION	15/03/15

DRAWING STATUS	PROJ. ENG. SUPT./	SUBCONTR. ENG.	INSPT./ CERTIF.	CLIENT OFFIC.
Preliminary	✓	✓	✓	✓
Issue for Tender	✓	✓	✓	✓
Issue for Design	✓	✓	✓	✓
Approved for Construction	✓	✓	✓	✓
Subsequent revisions				
As-Built				✓

AS-BUILT

☒ RING MAIN ISOLATION VALVES

LEGEND

- NEW SPRINKLER SYSTEM RISER
- DOUBLE OUTLET PILLAR FIRE HYDRANTS (85mm CONNECTION) AND COUPLING COMPATIBLE TO THE NATIONAL FIRE BRIGADE TENDER, DESIGNED AND INSTALLED TO NZS4510, NFPA13, & NFPA850.
- FIRE HYDRANT LINE IN GROUND AND CONNECTED TO EXISTING FIRE HYDRANT LINE.
- MS PIPING FOR NEW SPRINKLER SYSTEM CONNECTED TO NEW FIRE HYDRANT LINE.
- APPROXIMATE SETOUT AND LOCATION OF EXISTING FIRE HYDRANT LINE.

Figure 3 Existing New Kinoya Fire System

4.0 Work Program

Submit a construction program in the form of a bar chart. Typical milestones must be indicated. Critical Path must be clearly indicated.

5.0 Method statements and QC

Submit method statements describing details of all works within 2 weeks of contract award. Tenderer must submit details of quality control for these works.

6.0 Standards

- General requirements to NZS 4541: 2007
- Sprinklers: to NZS 4541:2007 and NFPA 13:2007
- Fire water storage tanks to AS2419, AS2304, NFPA 22
- Drencher (wall wetting) system to ANSI/ NFPA 15-1990 and ANSI/ NFPA 750-2003
- Deluge system to ANSI NFPA 16-2003
- Electricity generation and distribution to ANSI NFPA 13-2002
- Pumpsets. to NZS 4541:2007
- Valve monitors to NZS 4118.1.4
- Fire brigade booster connection to NZS 4541:2007
- Piping material: To conform to ANSI /ASME Standards
- Plumbing and drainage: To AS/ NZS 3500.0, AS/NZS 3500.1. AS/NZS 3500.2, AS/NZS 3500.3, AS/ NZS 3500.4

8.0 Payment Schedule

FIJI ELECTRICITY AUTHORITY



TENDER MR 85/2017 – Relocation of Fire Pump from Old Power Station to New Power Station at FEA Kinoya

ITEM	ITEM DESCRIPTION	UNIT PRICE	TOTAL PRICE
		Currency: _____	
1.	Mobilization and Site establishment		
2.	Demobilization, Site Clearing & Handover		
3.	Site Works		
3.1.	Cartage, Install & Commission Old Kinoya Fire Pump Unit		
3.2.	Civil & Piping works for New Kinoya Fire Pump		
3.3.	Cartage, Install & Commission of New Kinoya Fire Pump		
	TOTAL (VEP)		
	VAT 9%		
	TOTAL (VIP)		

Notes:

1. Ensure site HSE rules are followed at all times.
2. Contractor to verify all drawing measurements onsite
3. All Sub-contractors to be used for any part of the works are to be declared.
4. A detailed work plan to be provided with expected date for the works.
5. FEA financial terms are applicable for these works. Any advance payment will require a bank guarantee.
6. All design and construction must compile to NZS 4541-2007 standard

Submission of Tender

Two (2) hard copies of the tender bids in sealed envelope shall be deposited in the tender box located at the Supply Chain Office at the FEA Head Office, 2 Marlow Street, Suva, Fiji.

Courier charges for delivery of Tender Document must be paid by the bidders.

This tender closes at 04.00pm on Wednesday, 26th April, 2017.

Site Visit: 11am on 12th of April, 2017 at FEA's Kinoya Power Station – Front Gate. Site visit is compulsory requirement.

Each tender shall be sealed in an envelope with:

The envelope bearing only the following marking:

TENDER MR 85/2017 – Relocation of Fire Pump from Old Power Station to New Power Station at FEA Kinoya

The Secretary, Tender Committee
Fiji Electricity Authority
Supply Chain Office
Private Mail Bag, Suva

It must also indicate the name and address of the tenderer on the reverse of the envelope.

All late tenders, unmarked Envelopes and envelopes without bidder's name and address on the reverse of the envelope. (Bids via e-mail or fax will not be considered).

For further information or clarification please contact our Supply Chain Office on phone **(+679) 3224360 or (+679) 9991587.**