सुचना !!! सुचना !!! सुचना !!!

प्रथम पटक प्रकाशित मिति : २०८१/१२/२६

दोस्रो पटक प्रकाशित मिति : २०८२/०१/०३

प्रस्तुत विषयमा यस कम्पनी अन्तर्गत तालिम तथा अनुसन्धान शाखाबाट तपशिल बमोजिमको तालिम संचालन गर्नु परेको हुँदा यस कम्पनीमा आजको मिति सम्म सुची दर्ता भएका कम्पनी / फर्महरुले कति दररेटमा काम गर्न सकिन्छ ? यो सुचना प्रकाशित मितिले ३ दिन भित्र Term of Reference (TOR) मा उल्लेख भए अनुसारको प्रस्ताब पेश गर्न हुन् सबैलाई जानकारी गरिन्छ/

तपशिल

Sl No	Description of works	Cost Estimates including VAT
1	Training on operation and maintenances of each unit of Sundarijal WTP including SCADA & PLC system	7,73,767.27

Term of References: Training on operation & Maintenances of each unit of Sundarijal water treatment plant including SCADA & PLC system

Introduction:

Kathmandu Upatyaka Khanepani Limited (KUKL) is a public company registered under the Nepal Government's Company Act 2063 and operates under the Public Private Partnership (PPP) modality. According to KUKL's Articles of Association, the company has the objective to undertake and manage the water supply and sanitation system of the Kathmandu Valley previously operated by NWSC and to provide a quantitative, qualitative and reliable service to its customers at an affordable price. It is responsible for the operation & management of water and wastewater services in the Valley. It operates the water supply and wastewater services under a License and Lease Agreement with the Kathmandu Valley Water Supply Management Board (KVWSMB) for 30 years. It is responsible for the maintenance of all assets received on lease from KVWSMB. It will also take over the responsibility for infrastructure built by the Melamchi Water Supply Project.

The main objective of the Sundarijal Water Treatment Plant is to treat raw water from the Melamchi River to potable standards according to the current World Health Organization Guidelines. Planning and design of the Water Treatment Plant shall take in to account for the proposed future expansion of capacity. Upstream of the Water Treatment Plant is the Melamchi Diversion Scheme and downstream of the WTP is the Bulk Distribution system.

Raw water diverted through 26.0 Km tunnel from Ribarma at Melamchi River to Sundarijal will be treated to produce drinking water of WHO Standard.

The water treatment plant is to be located near Mahankal, a village on the left bank of the Bagmati River about 12 km northeast of Kathmandu city at an elevation of approximately 1400 m, such that the plant will be able to distribute treated water by gravity to existing and proposed storage reservoirs in the Valley. A conventional treatment process is proposed and which includes pre-treatment, sedimentation, lime dosing, rapid sand filtration and disinfection.

Learning Objective: It is expected that the participants will be able to enhance their knowledge and competence on operation and maintenances of each unit of treatment plant. SOP Manual for operation & Maintenances of Specified Units

No of Participants: 30

Duration of training :15 days

Location/Hall : Sundarijal WTP Hall

Technical Qualification:

Resource Person: Scada expert 5-10 years

Course Content

A. Chlorination system:

1. Introduction of Chlorine System with detail connection diagram and important components.
2. Function, Operation and Maintenance of:
   - Two Way Motorized Valve
   - RVR (Remote Valve Regulator)
   - Chlorinator
   - Evaporator
   - Ejector
   - Pressure Regulator and Pressure Gauge
   - Strainer
   - Chlorine leak detector and annunciators
   - Vacuum gauge

3. Related safety equipment and their uses
4. Safety precautions to be adopted in chlorination system

B. PAC and Lime dust extraction System

- Function operation and maintenance

C. Pneumatic bladder vessel for water supply

- Function, operation and maintenance

D. Rapid Sand Filter

- General introduction of Automatic operation system

- Detail function, operation and maintenance of components of Automatic operation system
  Actuator wiring diagram details, Control Card, Power Card, etc
- Programmable Logic controller (PLC) of Automatic Operation System
- Operation and maintenance of components of Automatic Operation System
- General modification of system used in Rapid sand filter
- Identification of real-time problem and its mitigation measures of components during training

E. SCADA

- Function, operation methods, probable errors, troubleshooting of errors in SCADA
- Function and operation of PLC, filed devices, Wiring methods , remote terminal units, master terminal units, etc.

F. Laboratory units

- Function, operation, calibration and maintenance of sensor devices used in lab for automatic data reading

G.

Preparation of SOP for operation & Maintenances of Specified Units as per instruction of Engineers and should be submitted with completion report.

H. Proposal Includes,

1) Trainer Profiles

2) Training Methodology

3) Financial Propsal

4) any other relevant information

I. Selection

सबैभन्दा उपयोगी र कम मूल्य प्रस्ताब गर्ने संग गुणस्तर र मूल्य लाई यकिन गरी खरिद गरिनेछ/

सि.नं.	सेवा खर्च शिर्षक	परिमाण	एकाई	प्रति एकाई दर	जम्मा
१	जनशक्तिको पारिश्रमिक				
	क)SCADA Expert in Water Treatment Plant Operation having experience 10 yrs	२*१५=३०	दिन		
	ख)Supporting Staff	१५	दिन		
२	मालसामान,उपकरण वा सेवा लगाएतका सोधभर्ना हुने खर्च				
	क)खाजा	६००	वटा		
	ख) पानी	६००	बोत्तल		
	ग)चिया	१२००	वटा		
	घ) प्रशिक्षक यातायात	१५	दिन		
३	तालिम सामर्गी, गोष्टी,कागजात, छपाई वा अनुवाद, लगाएतका अन्य फुटकर खर्च				
	क)स्टेशनरी	१	जब		
४	जम्मा लागत अनुमान				
	मु.अ.कर १३%				
5	कूल लागत अनुमान				