Amendment No: 1 Issued on dated 26/09/2014

Ref: Tender Enquiry No: HLL/PCD/IMPCL-12/14-15 dtd.04/09/2014 issued on 05/09/2014

Following amendments are issued to the above Tender Enquiry Document

On the cover Page of Tender Enquiry Document:

For

FOR EFFLUENT TREATMENT PLANT
(Capacity 20KL per day)

Read As

FOR EFFLUENT TREATMENT PLANT
(Capacity 20KL per day)

In Section I: Notice Inviting Tenders(NIT)

For Clause:

1. Procurement & Consultancy Services Division of HLL Lifecare Limited, for and on behalf of The Indian Medicines Pharmaceutical Corporation Ltd. (IMPCL), invites sealed tenders, from eligible and qualified manufactures for supply/ work under this tender covers design, fabrication, manufacture, assembly, testing and supply at consignee site, erection/ commissioning , all documentation & testing for cGMP compliance of following equipment & machineries for Indian Medicines Pharmaceutical Corporation Ltd (IMPCL) :

Sl. No.	Description of Item	Qty./ Set	EMD (Rs.)
1	Effluent and Sewage Treatment Plant: Capacity – 20kl per day	1	30,000

Read As:

1. Procurement & Consultancy Services Division of HLL Lifecare Limited, for and on behalf of Indian Medicines Pharmaceutical Corporation Ltd. (IMPCL), Ministry of Health & Family Welfare, Govt. of India, invites sealed tenders, from eligible and qualified tenderers for supply/ work under this tender covers design, fabrication, manufacture, assembly, testing and supply at consignee site, erection/ commissioning , all documentation & testing for cGMP compliance of following equipment & machineries for IMPCL :

Sl. No.	Description of Item	Qty./ Set	EMD (Rs.)
1	Effluent Treatment Plant: Capacity – 20kl per day	1	30,000

In Section I: Notice Inviting Tenders(NIT)

For Clause:

1. Tender No.: HLL/PCD/IMPCL-09/14-15

Sl No.	Description	Schedule
vi.	Closing date & time for receipt of Tender	08.10.2014, 02.00 PM

Sl No.	Description	Schedule
vii.	Time and date of opening of Techno-Commercial tenders	08.10.2014, 02.30 PM

Read As:

2. Tender No.: HLL/PCD/IMPCL-09/14-15

Sl No.	Description	Schedule
vi.	Closing date & time for receipt of Tender	15.10.2014, 02.00 PM
vii.	Time and date of opening of Techno-Commercial tenders	15.10.2014, 02.30 PM

In Section VI: LIST OF REQUIREMENTS

For Clause:

Part IV: Warranty and AMC

The equipment/goods shall be warranted for 24 month.

One-year service (labour only) for maintenance to be provided after the expiry of warranty period without any additional cost to the Purchaser/ Consignee , as and when required.

Read As:

Part IV: Warranty and AMC

The equipment/goods shall be warranted for **12 months**.

One-year service (labour only) for maintenance to be provided after the expiry of warranty period without any additional cost to the Purchaser/ Consignee , as and when required.

In Section IX: Qualification Criteria

For Clause:

(1) The tenderer must be a Manufacturer or its authorized agent.

Read As:

(1) The tenderer must be a ISO certified Manufacturer or its authorized agent.

For Clause:

(2) Tenderers must have successfully executed (supplied and commissioned) during last five years prior to the date of bid opening, under their company /firm's own name at least 1 (One) order for same or higher capacity ETP plant as mentioned in List of Requirement in compliances to cGMP. Documentary evidence (duly signed and stamped) must be enclosed. The performance report from end users/clients in this regard should also be submitted along with the bid, failing which the tender is liable to be ignored.

Read As:

(2) Tenderers must have successfully executed (supplied and commissioned) during last five years prior to the date of bid opening, under their company /firm's own name **at least 1 (One) order each for same or higher capacity Effluent Treatment Plant as mentioned in List of Requirement.** Documentary evidence (duly signed and stamped) must be enclosed. The performance report from end users/clients in this regard should also be submitted along with the bid, failing which the tender is liable to be ignored.

For Clause:

(5) Manufacturer Authorization**:** In case the tenderer is an authorised agent of the manufacturer of Air compressor, they should submit a letter of authority from the Manufacturer as per the format given in Section XIV.

Read As:

(5) Manufacturer Authorization**:** In case the tenderer is an authorised agent of the **manufacturer of the tendered item**, they should submit a letter of authority from the Manufacturer as per the format given in Section XIV.

In Section VII:
Technical Specification

The Technical Specification is replaced as below:

Effluent Treatment Plant
(Capacity : 20 KL per day)

Effluent Treatment Plant of 20 KLD Capacity per day

Plant	: ETP
Total flow rate	: 20 m^3 per day
Operating hours	: Continuous
Design flow rate	: 1 m^3 per hour

BIO REACTOR

Rated Flow Capacity : 1 m^3 per hour.

DESIGN INLET AND OUTLET CHARACTERTICS

Flow rate of waste water: 20 m^3/day (Maximum)

PARAMETERS	INLET	OUTLET
Temperature	Ambient	Ambient
pH	60- 8.5	6.5-8.0
TSS	300-400 ppm	<20 ppm
BOD	500-600 ppm	<20 ppm
COD	800-1000 ppm	<250 ppm
O & G	30 ppm	<10 ppm

PROCESS DESCRIPTION

WASTEWATER TREATMENT SCHEME

Following treatment scheme shall be employed for production of quality water for irrigation discharge or recycling.

BRIEF PROCESS DESCRIPTION

COLLECTION CUM EQUALIZATION: The wastewater shall be collected in a collection cum equalization tank to meet the peak hour's requirement and to get a homogenous mixture. Equalization tank will help in sedimentation of grit in the absence of grit chamber.

PRIMARY CLARIFIER: The wastewater from collection tank will be pumped to a primary clarifier so as to settle out the solids. A chemical dosing system will be provided before clarifier to aid in solid settling and maintain the pH value where as the sludge will be sent to sludge drying bed.

BIO REACTOR - EFFLUENT CUM SEWAGE TREATMENT PLANT

The effluent from the primary clarifier to feed by gravitational force in the system.

AERATION REACTORS: After maintain the pH water is directed to bioreactors. The treatment occurs in various aerobic chambers provided in the system. The system shale be flexibility of varying the sequence of aerobic chambers depending upon flow rates. In aerobic chambers, thousands of Bio media is fed, upon which the bio mass grow.

FLOCCULATION: Water is then fed to flocculation chamber which is dosed with alum on a continuous basis at a proportional flow rate (sized to the capacity of the plant) for solids removal by sedimentation in the clarifier. Generally these chemicals are required during initial phase and once a good quality bio growth is achieved this dosing can be reduced or eliminated in some cases.

CLARIFIER: The wastewater from bioreactors will be pumped to a secondary clarifier so as to settle out the solids. A chemical dosing system will be provided before clarifier to aid in solid settling. The supernatant from the clarifier will be fed to surge tank whereas the

sludge will be sent to sludge drying bed. A part of sludge is re-circulated as MLSS to aeration tank.

CHLORINATION CUM DISINFECTION (PRE FILTRATION): Clarified water will be fed to the chlorine contact tank or surge tank. A chlorination system will dose chlorine on a continuous basis. This tank will also act as housing tank for filter feed pumps.

MULTI MEDIA FILTER (MMF): The disinfected water will then be passed through Multimedia filter(s) to reduce suspended load and turbidity, BOD, colour, odour and fine particles. It finally polishes the treated water and also reduces the residual chlorine. The wastewater so treated can be utilized for gardening or for flushing recycling. The backwash from the MMF units will be fed back into the collection tank.

CHLORINATION CUM DISINFECTION (POST FILTRATION): filtered water is again disinfected by chlorination system that dose chlorine on a continuous basis.

SLUDGE DISPOSAL: A proportion of sludge from the clarifier and bioreactor will be pumped via the hydro cyclone into the sludge holding tanks/ Sludge drying beds (SDB). Supernatant from the sludge holding tanks is decanted and returned to collection tank for re-processing. A part of sludge is periodically re-circulated as MLSS to bioreactors.

ELECTRICAL CONTROLS: complete centralized control panel mounted on the same skid. It will have both automatic and manual operation mode. The control system shall include circuit breakers, motor, starters and timers all housed in a weatherproof cubicle type panel board.

SCOPE OF SUPPLY

1. FLOCCULATION CUM MINSULATION TANK

Shall be based on sedimentation technology; skid mounted and standardized tank. Up Front Control Panel, System Feed Pump, Minsulation Tank, Settling Tank, High-Low Level switch, Piping and Valves.

The unit to be designed for continuous flow and consists of following main elements.
1.1 Mansulation Tank
1.2 In built flocculation chamber
1.3 V-Noch chamber for level settling
1.4 Inlet and out let and sludge connection point. Internal FRP coating

2. BIO REACTOR AND COMPONENTS:

The **Bio Reactor system** shall be based on biodegradation and sedimentation technology. Bio Reactor System shall be three (3) chamber ballast tank. Internal sludge handling shall be

included in the system i.e. all sludge is periodically recycled for optimum sludge digestion. Sludge is aerobically processed in sludge reduction tank.

The complete plant shall have the following main components: Up Front Control Panel, Three Chamber Ballast Tank, (Includes Sludge System) System Feed Pump, Sludge Recycling Pump, Cyclone Sludge Separator, Blower, Moving Bed Reactor and Settling Tank, bio media, Air Distribution System, High-Low Level switch, Piping and Valves.

3. SCREEN

Type	Bar rack
MOC	MS
Quantity	1 No.

4. PRIMARY CLARIFIER

4.1 Capacity	1 KL/hr.
4.2 MOC	MS
4.3 Type	Skid mounted
4.5 Unit	1 No.

5.0 EFFLUENT TRANSFER PUMP (1 Working +1 Standby) 2 Nos.

5.1 Capacity	1 KL/hr
5.2 Head	8 to 10 m
5.3 Type	Non-clogged, submersible
5.4 MOC	CI
5.5 Make	Kirloskar, CRI or Equivalent
5.6 Quantity	1 No.

6.0 SLUDGE PUMP (1 Working +1 Standby) 2 Nos.

6.1 Type	Centrifugal
6.2 Capacity	1KL/hr
6.3 Head	8 to 10 m
6.4 Make	Kirloskar, CRI or Equivalent
6.5 Quantity	1No.

7.0 AIR BLOWER (1 Working +1 Standby) 2 Nos.

7.1 Type	Twin lobe
7.2 Required Capacity	30 M^3/hr
7.3 Motor make	Kirloskar or Equivalent
7.4 Blowers: Make :	Kay, Everest, Blowvacc or Equivalent
7.5 Quantity	1 No.

8.0 AIR PURGING GRID

8.1 Type	Non –clog, segmented for easy maintenance
8.2 Tested Pressure	2.5Kg/cm^2

8.3 Quantity 1 Set

9.0 CHEMICAL DOSING SYSTEM

9.1 Capacity 0 – 5 ltrs/hrs :
9.2 Dosing Tank 100 ltrs HDPE/1 no.
9.3 Quantity 2 Set
9.4 Make Aqua, Etatron, Seko or Equivalent

10.0 DISINFECTION SYSTEM

10.1 Type On line
10.2 Chlorine Dosing Pumps : Metering Type
10.3 Capacity 0 – 5 lph
10.4 Dosing Tank 100 Ltrs. HDPE/1 No
10.5 Quantity 1No.
10.6 Make Aqua, Etatron, Seko or Equivalent

11.0 PRESSURE FEED PUMP TO MMF (1 Working +1 Standby) 2 Nos.

11.1 Capacity 1 Kl/hr
11.2 Head 15 to 20 m
11.3 Type Centrifugal
11.4 Quantity 1No.
11.5 Make Kirloskar, CRI or equivalent

12.0 MULTI MEDIA FILTERATION (MMF)

12.1 Capacity 1KL/hr
12.2 Vessel diameter 300mm
12.3 Height of vessel 1300mm
12.4 MOC FRP/MS
12.5 Tested Pressure 3.5kg/cm^2
12.6 Accessories The unit will be complete with frontal piping & valves and media
12.7 Make Wock-Oliver, Wave Cyber, MMP or Equivalent
12.8 Quantity 1No.

13.0 ELECTRICAL COMPONENTS

13.1 CONTROL PANEL/CENTRE (MCC)

13.1.1 Type Vermin proof
13.1.2 Internal electrical components C & S or Tele-mechanic or Equivalent
13.1.3 Site Cabling in Supplier scope
13.1.4Make Wock Oliver or Equivalent

13.2 EARTHING in Supplier scope

13.0 INSTRUMENTATION COMPONENTS

All valves related to the equipment/plant

Installation & Commissioning: The plant shall be installed, tested and commissioned by the supplier at purchasers site

Technical specifications of 20 kL/day ETP Plant

Sl.No.		
1	MOC	MSEP
2	Bioreactors	Complete/filled with bio medium
3	Bio Media	one lot
4	Settling Tank/Tube settler	MS / 1 No
5	Flocculation Chamber	MS / 1 No
6	High-Low Level switch (CD) for automation	Minilec or equivalent /1 Set
7	Submerged Piping and Valves	Aster/Diplast/UPVC. One lot
8	Tube Deck media	Tube media –One lot.
9	Bio catalyst	one lot
10	Over weir	MS- inbuilt with LCP / vendor to specify
11	Hydrocyclone	Inbuilt/ Vendor to specify

NOTE : 1) Where ever specific make (s)/ equivalent is specified, and in case supplier is supplying equivalent make, he shall obtain prior approval from the purchaser for such equivalent make.

2) Supplier Scope includes complete erection, Installation and commissioning and trial run at client site

3) The Trial Run shall be carried out for a period of 7 days

4) All electrical wiring, connection and trial run are in scope of supplier.

5) Scope of Standard Documentation for RO-EDI Storage and distribution pileline by the supplier:
   - Validation documents DQ, OQ, IQ, PQ etc.
   - Material Test certificate for contact parts
   - Installation & Maintenance Manual
   - Spare Part List
   - Certificates, Manual for Bought out items
   - Electrical Diagram
   - Schematic Diagram and GA Drawings of all machines showing dimensions should be approved from the purchaser before manufacturing.
   - Validation with documents to be provided by supplier.

6) Inspection- By Client/Purchaser or by their nominated agency.

7) Quarterly routine inspection of equipment, storage and distribution system in the defect liability period has to be done by the supplier that without any additional charge to purchaser.

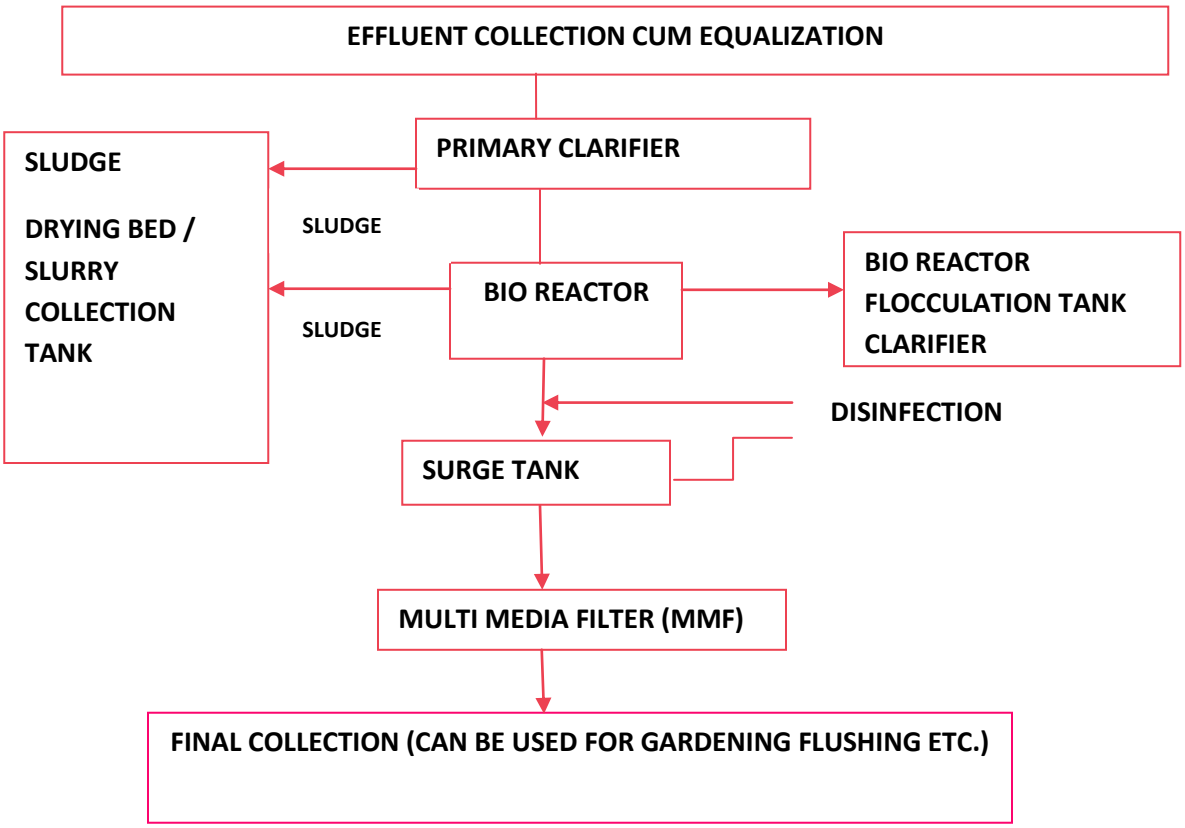
8) Packing- Wrapped in Plastic/ wooden box with Net wt and gross Wt –vendor to specify

9) Supplier's scope includes obtaining approval from Pollution Control Board, Uttarakhand

PROCESS FLOW CHART OF ETP

Proposed Waste Water Treatment Scheme

Following Treatment Scheme is Employed for Production of Quality Water for Irrigation Discharge or Recycling



Others:

All other contents of the Tender Enquiry Document including terms and conditions of the tender enquiry remain unchanged.

……..The End……