

COMPLIANCE REPORT
ON
ENVIRONMENT CLEARANCE

(MoEF & CC File No J11011/154/2016-IAII (I) dated 29/08/2017)

For the period

October 2022 to March 2023

Submitted

to

MoEF & CC, Regional Office (ECZ), Ranchi

**Ammonia Urea Fertilizer Plant
(2200MTPD Ammonia & 3850MTPD Urea)
SINDRI**

May 2023



**हिंदुस्तान उर्वरक एवं रसायन लिमिटेड
HINDUSTAN URVARAK & RASAYAN LTD.
(A joint Venture of NTPC, CIL, IOCL, FCIL & HFCL)**



Hindustan Urvarak & Rasayan Limited

(A Joint Venture of NTPC, CIL, IOCL, FCIL & HFCL)

Office of The Project Head, Sindri Project, HURL

Old FCIL Office Complex, PO- Sindri,

Dhanbad Jharkhand-828122, Tel: -0326-2245454

GST Reg. No.: - 20AADCH9368N1Z6

Ref. No.: HURL/SND/23-24/ 279

Date: 27.05.2023

Sri T. H. Mahato

Scientist D

Ministry of Environment, Forest and Climate Change,
Regional Office (ECZ), Bungalow No. A-2, Shyamali Colony,
Ranchi – 834002.

Subject: Ammonia (2200 MTPD) Urea (3850 MTPD) Fertilizer Project at Sindri in District Dhanbad, Jharkhand of M/s Hindustan Urvarak & Rasayan Limited (HURL)- Compliance Report for October 2022 – March 2023.

Ref: MoEF&CC, Environmental Clearance Letter No. J11011/154/2016-IAII (I) dated 29.08.2017.

Dear Sir,

With reference to the subject as mentioned above, please find attached herewith the compliance report for the period October 2022 – March 2023.

Yours faithfully

(Dipten Roy)

Sr. Vice President

Hindustan Urvarak & Rasayan Ltd. (HURL)

Old FCIL Office Complex, Sindri

PO-Sindri, Dist.- Dhanbad-828122

Telephone – 0326-2245454

COMPLIANCE OF EC CONDITIONS FOR THE PERIOD OCTOBER 2022 - MARCH 2023

Sl. No.	COMPLIANCE CONDITIONS	Status
A	SPECIFIC CONDITIONS	
i)	Emissions-limits for the pollutants from the Diesel Generator Sets and the stack height shall be in conformity with the extant statutory regulations and/or the CPCB guidelines in this regard.	<p>Diesel Generator Sets are being used only in case of total Power Failure for safe shutdown of the Plants. Normally, the Complex Power requirement is being met from two incoming Grids (DVC Power) and Natural Gas based own Captive Power Generation (2 Gas Turbines).</p> <p>Adequate stack height provided to ensure the statutory regulations & guidelines.</p>
ii)	To control source emissions, scrubber and/or other suitable pollution control device shall be installed to meet the prescribed Particulate Matter emission norms of 50 mg/Nm ³ , and also the NAAQS.	<p>Fully Complied and this has considered in the Design itself.</p> <p>Design consideration include scrubbers, adequate height of prilling tower and other gas sensors/control measures in the proposed plant to meet emission norms as per NAAQs.</p>
iii)	Fresh water requirement shall not exceed 5.36 cum/ton of Urea production. Fresh water for plant operation shall be sourced from Damodar River only after the required permission from the concerned authority. During construction phase, ground water may be used after prior permission in this regard from the concerned regulatory authority.	<p>The water supply through existing FCIL's pump house from Damodar River to project site is being used.</p> <p>6.6 MGD water drawal agreement has already been done with DVC.</p> <p>However, Fresh water requirement shall not exceed 5.36 cum/ton of Urea production and the same has been included in the Detailed Project Report of the Project.</p>
iv)	As already committed by the project proponent, no waste/treated water shall be discharged outside to ensure ZLD. The effluent discharge, if any, shall meet the standards for 'Nitrogenous Fertilizer Industry' prescribed under the Environment (Protection) Rules, 1986.	<p>The HURL, Sindri project has considered and executed with provisions of ZLD and therefore there will be no discharge outside the project boundary, once the plant become operational. (During the present compliance period, the plant is under construction.)</p> <p>Entire waste water generated will be treated up to tertiary level in the ETP inside the plant & shall be sent to RO for further reuse.</p>
v)	The project proponent shall develop Greenbelt in an area of 33% i.e. nearly 132 acres out of 400 acres of plant area of the project. The greenbelt of 30 m width around periphery shall be provided.	<p>We have already planned for development of green belt in 33% area around plant periphery and is under implementation. The Complex is already having some jungle Area. Besides this, on 40 Hectares of land, the plantation activities are going on through Department of Forest GoJ.</p> <p>The conditions for provision of Green Belt shall be complied. The Green Belt Development Plan as well as the workorders issues to Forest GoJ.</p>

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R.B. Singh
27/05/2023

Sl. No.	COMPLIANCE CONDITIONS	Status
vi)	5000 trees per year in 5 years shall be planted in nearby villages with the consultation of the villagers. Survival rate of plants shall be reported to RO, MoEF&CC in 6 monthly compliance reports.	As first phase of Green cover development and for primary barrier protection, Greenbelt is being developed within the premises and Order was already issued to Forest Department. Plantation of trees in nearby villages is under active consideration and will be taken up during this Financial Year.
vii)	All the commitments made during Public Hearing/Public Consultation meeting held on 24 th April, 2017 shall be satisfactorily implemented and adequate budget provision should be made accordingly.	<p>The commitments made during Public Hearing/Public Consultation meeting held on 24th April, 2017 shall be implemented, it is already considered in the project cost. Details of Expenditure on public hearing issue has been attached in Annexure – I.</p> <p>Further various initiatives are in active consideration with District Officials for Education & skill development, Infrastructure for basic necessities, societal empowerment- women empowerment, creation of sustainable livelihood opportunities/avenues, sustainable agriculture and other rural areas activities etc.</p> <p>In this regard a letter was submitted with refer no HURL/SND/ CER/CSR/23-24/222 dated 13th May 2023 to get No Objection Certificate.</p>
viii)	At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Ranchi. Implementation of such program shall be ensured accordingly in a time bound manner.	<p>ESC programme will be carried out in accordance with the proposals explained above in point no vii.</p> <p>As part of the same, necessary discussions have been initiated with District Authorities for obtaining NOC for developing the nearby Schools.</p>
ix)	A regular environment manager having post graduate qualification in environmental sciences/environmental engineering to be appointed for looking after the environmental management activities of the proposed plant.	<p>The EC conditions relating to establishment of Environmental Cell have been complied with and the following arrangement for environment cell is in place.</p> <ol style="list-style-type: none"> 1) At present environment cell is headed by Mr. Goutam Majee, V P (Technical), who is reporting to Mr. Dipten Roy (Sr. Vice President). <li style="text-align: center;">& 2) Dr. Naga Raju Batti, Manager (Env. & QC) 3) Mr. Aman Singh, Lab Asst - I (Env. & QC) <p>Further, Process has already been initiated for strengthening the team</p>

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N. B. Roy
27/05/2023

Sl. No.	COMPLIANCE CONDITIONS	Status
x)	Continuous online (24 X 7) monitoring system for emissions and effluent generation shall be installed for flow/discharge measurement and the pollutants concentration within the plant. Data shall be uploaded on company's website and provided to the respective RO of MoEF & CC, CPCB and SPCB.	The Continuous Emission Monitoring System has been installed at the site. Its Connectivity with server is under progress.
xi)	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.	This has already been addressed in the Detailed Project Report and RRA conducted for the Project. All the recommendations are being complied. Plant is equipped with adequate measures for control of failure/hazards. Firefighting facilities are implemented as per norms.
xii)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Regular Occupational health surveillance of the workers is being done and records are maintained.
xiii)	Storage of hazardous raw material shall not exceed more than 7 days.	HURL has agreement with M/s Nialaynarayan Polychem LLP for the hazardous waste disposal as per the CPCB/SPCB guidelines (copy attached Annexure - III)
xiv)	Urea dust shall be controlled by prescribed standard technique.	Complied. Adequate height of prilling tower has been provided. The Urea Dust is within the prescribed Norms.
xv)	In Urea Plant, particulate emissions shall not exceed 50 mg/Nm ³ . Monitoring of Prilling Tower shall be carried out as per CPCB guidelines.	Particulate Emissions are within the 50 mg/Nm ³ . Urea Prilling tower Emissions are being monitored as per the CPCB Guidelines.
xvi)	The levels of PM10 (Urea dust), SO ₂ , NO _x , Ammonia, Ozone and HC shall be monitored in the ambient air and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MoEF&CC, the respective Zonal office of MoEF&CC and SPCB.	Environmental Monitoring w.r.t. Air, Water and Noise during construction phase is being carried out by the CPCB recognised Laboratory in consultation with JSPCB since April 2018. (Six Monthly <i>Monitoring Report for the period October 2022- March 2023 is attached as Annexure- II</i>) The results have been uploaded on HURL's website and updated periodically. Simultaneously, it also sent to the regional office of MoEF&CC, Govt. of India and JSPCB.
xvii)	In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling	Adequate protection measures are incorporated in the design itself and all the fugitive emissions are connected to Flares and they are burnt before releasing to Atmosphere.

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Sl. No.	COMPLIANCE CONDITIONS	Status
	system. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits stipulated by the SPCB.	The Complex is designed with 4 Flares (2 in Ammonia Plant, 1 in Urea Plant and 1 in Ammonia Storage Area) to handle the Fugitive Emissions Air Quality is being monitored in work zone environment as per monitoring plan for assessment of pollution level. The emissions are conforming to the limits stipulated by JSPCB.
xviii)	The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2016 and amended as on date for management of Hazardous wastes. Measures shall be taken for fire-fighting facilities in case of emergency.	HURL has agreement with <i>M/s. Nialaynarayan Polychem LLP</i> for authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2016. Accordingly, HURL has obtained authorization under Hazardous waste rules. HURL has three numbers of Fire Tenders for fire fighting in case of fire emergencies & apart from fire tenders, HURL has also fire hydrant, sprinkler system, fire extinguishers inside the plant.
xix)	Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile-sewage treatment plant, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.	HURL has earmarked old buildings of FCIL & HFCL in the neighbouring area of Project Site for housing of construction labourers. The necessary arrangement for all facilities such as fuel for cooking, toilets, safe drinking water, etc is done in the labour camps. Medical healthcare at construction site is being provided by experienced Doctor & first aider, two nos. ambulance is also available to shift the critical cases to nearby specialized hospitals. Construction wastes are being kept at designated place & shall be disposed after completion of construction activity as per provisions of Construction and Demolition Waste Management Rules, 2016.
B. GENERAL CONDITIONS		
i)	The Project authorities shall strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), State Government and any other statutory authority.	HURL shall strictly comply with the conditions laid by JSPCB, Jharkhand State Government and any other Statutory Authority.
ii)	No further expansion or modifications in the plant shall not be carried out without prior approval of the MoEF&CC. In case of deviations or alterations in the project proposal from those submitted to MoEF&CC for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Noted, there is no modification planned at this stage. However, approval of the MoEF&CC, Govt. of India shall be obtained before any changes / alteration in the project.
iii)	The locations of ambient air quality monitoring stations shall be decided in	The existing temporary locations of ambient air quality monitoring stations (6 Nos) have been

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Sl. No.	COMPLIANCE CONDITIONS	Status
	consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one stations is installed in the upwind and downwind direction as well as. Where maximum ground level concentrations are anticipated.	decided in consultation with the PDIL (Noida, CPCB Recognized Laboratory) for the execution of the project. However, HURL Sindri submitted a letter to Jharkhand State Pollution Control Board (JSPCB) for fixation of 3 permanent Ambient Air Quality monitoring Stations (Reference letter HURL/SND/E&QC/JSPCB/2022-23/01 dated 17.05.2023)
iv)	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated is November, 2009 shall be followed.	The fugitive dust emission is being contained within the limits of National Ambient Air Quality Emission Standards.
v)	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	The noise levels are within the standard limits. Noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation are included in the design itself.
vi)	The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.	This condition will be complied with as detailed in Annexure IV . Inside the plant, roofs of all buildings have the provision of Rainwater Harvesting.
vii)	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	Training is an essential aspect and ongoing Activity. All Employees are imparted on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees is being undertaken on regular basis.
viii)	The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing be implemented.	Being Complied.
ix)	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by	As per definition of CSR Act, this is applicable once the plant becomes operational and profit making. CSR activities will be undertaken by involving local villages


N.B. Roy
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Sl. No.	COMPLIANCE CONDITIONS	Status
	involving local villages and administration.	and administration as per the extant Government guidelines for CSR.
x)	The company shall undertake all eco-developmental measures including community welfare measures for overall improvement of the environment.	Once the plant becomes fully operational all eco-developmental measures including community welfare measures for overall improvement of the environment will be undertaken by involving local villages and administration as per rule and Government guidelines.
xi)	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	<p>The EC conditions relating to establishment of Environmental Cell have been complied with and the following arrangement for environment cell is in place.</p> <ol style="list-style-type: none"> 1) At present environment cell is headed by Mr. Goutam Majee, V P Technical, who is reporting to Mr. Dipten Roy, Sr. Vice President. <li style="text-align: center;">& 2) Dr. Naga Raju Batti, Manager (Env. & QC) 3) Mr. Aman Singh, Lab Asst - I (Env. & QC) <p>Further, Process has already been initiated for strengthening the team</p> <p>Full-fledged laboratory facilities are established to carry out the Environmental Management and Monitoring functions.</p>
xii)	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management, pollution control measures shall not be diverted for any other purpose.	This has been addressed in the Feasibility Report of the Project and being complied.
xiii)	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, ZilaParisad / Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions, representations, if any, were received while processing the proposal.	Copy of clearance letter has already been submitted to municipal corporation and District Industry Centre also. During the Public Hearing, none of the local NGOs participated, and as such, we have not furnished copy of EC to them.
xiv)	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both	Environmental monitoring work has commenced from April 2018 by M/s PDIL and the results of monitoring data from October 2022 – March 2022 have been provided in this six-monthly compliance report (<i>Annexure-II</i>).

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27/05/2023

Sl. No.	COMPLIANCE CONDITIONS	Status
	in hard copies as well as by email) to the respective Regional Office of MoEF&CC, the respective Zonal Office of Environmental Clearance and six-monthly compliance status reports shall be posted on the website of the company.	
xv)	The environmental statement for each financial year ending 31 st April in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by email.	Noted. The Environment Statement will be submitted before September' 2023 for the financial year ending 31 st March' 2023 in Form-V .
xvi)	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at http://moef.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.	Environment Clearance granted by Ministry vide MoEF&CC letter no J11011/154/2016-IAII(I) DATED 29/08/2017 has already been updated on Company website hurl.net.in . The same was also advertised on 16/09/2017 on page 16 in Hindustan (Hindi) and page 13 in Hindustan Times (English) published from Ranchi, Jharkhand and submitted along with the Compliance Report.
xvii)	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	Date of Financial Closure: 26.04.2018 Cabinet Committee on Economic Affairs (CCEA), Govt of India formally approved the revival of the Sindri, Gorakhpur & Barauni on 13.07.2016. Date of final approval of the Sindri Project: 05.02.2018. Date of Start of the project: 18.05.2018


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(Dipten Roy)

Sr. Vice President
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Telephone – 0326-2245454


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Expenditure incurred under
Public Hearing commitment
Sindri Project, HURL

S No.	Item description	Quantity	Amount (including GST) (in Rs.)	Purchase done by	Instructions received from Dist. Admin./ HURL internal decision/ if other case- (please specify)	Action taken with date
1	Covid-19 Testing Kits	10000 nos.	7,84,000.00	HURL	Dist. Admin	Handed over to Civil Surgeon, Dhanbad on 15 May 2021
2	3-Ply Nose Masks	15,000 Nos.	21,300.00	HURL	HURL internal decision	Distribution to nearby Locality of Sindri by P&S/ Safety department HURL started from 31 May2021
3	N-95 Nose Masks	1,000 Nos.	19,990.00	HURL	HURL internal decision	Distributed to nearby Locality of Sindri by P&S/ Safety department HURL started from 31 May2021
4	Infrared Thermometer (IR)	20 Nos.	13,900.00	HURL	HURL internal decision	Distribution will be done to nearby Society/ Locality of HURL
5	Hand Sanitizer	400 Nos. (500ml each)	22,000.00	HURL	HURL internal decision	Distribution will be done to nearby Society/ Locality of HURL
6	Pulse Oximeter	30 Nos.	48,000.00	HURL	HURL internal decision	Distribution will be done to nearby Society/ Locality of HURL
7	Sanitization works for Community	06 Nos.	1,48,762.20	HURL	HURL internal decision	sanitization of nearby Locality of Sindri by P&S / Safety department HURL started from 20 May2021
8	Face Shield	50 Nos.	3,150.00	HURL	HURL internal decision	sanitization of nearby Locality of Sindri by P&S / Safety department HURL started from 20 May2021

S No.	Item description	Quantity	Amount (including GST) (in Rs.)	Purchase done by	Instructions received from Dist. Admin./ HURL internal decision/ if other case- (please specify)	Action taken with date
9	Hiring of Ambulance for 02 Months	01 No.	1,50,000.00	HURL	HURL internal decision	Proposal initiated by HR department for catering the need medical emergency during Covid pandemic of nearby locality of Sindri
10	3-Ply Nose Masks & Hand Sanitizer	20,000 Nos. & 1000 Nos. (250 ml each)	95,900.00	HURL	HURL internal decision	Distribution will be done to nearby Society/ Locality of HURL
11	5 Litres Oxygen Concentrator	5 nos	3,03,500.00	HURL	Addi. Seceretary Home, Prision and Dis. Mgmt. Deptt.	Handed over to District Administration after procurement of the same
12	Pulse Oxymeter	25 nos	23,625.00	HURL	Addi. Seceretary Home, Prision and Dis. Mgmt. Deptt.	Handed over to District Administration after procurement of the same
13	Oxygen Plant	02 nos.	71,68,000.00	HURL	Dist. Admin	Handed over to District Administration after procurement of the same
14	Street light	94 sets	9,66,320.00	HURL	HURL internal decision	-
GRAND TOTAL (in Rs.)			97,68,447.20			

This Compliance Report is the fulfillments of the condition of the Environmental Clearance (EC) vide File No. EC [IA/JH/IND2/54024/2016, J-11011/154/2016-IA II(I)] for the period of October 2022 to March 2023. This report has been prepared by Projects and Development India Limited (PDIL) by collecting respective samples in consultation with the State Pollution Control Board (SPCB) officials and Hindustan Urvarak and Rasayan Limited (HURL) officials. During the above mentioned period the analysis of the environmental parameters has been conducted by the CPCB recognized Laboratory at PDIL Noida under the strict supervision of the Government Analysts.

The proposed project is located at Sindri with the capacity of 2200MTPD Ammonia and 3850MTPD Urea in the District Dhanbad in the state of Jharkhand. The area falls in the agricultural belt of the Jharkhand.

The compliance report fulfills the 19 Nos. of Specific Conditions and 17 Nos. of Standard Conditions led by Ministry of Environment, Forests and Climate Change. Rainwater Harvesting and Ground Water charging has been proposed as per Standard Guidelines:

Guidelines on Artificial Recharge of Water, Central Water Ground Board, Ministry of Water Resources, Gol (2000)

Manual on Artificial Recharge of Ground Water, Central Water Ground Board, Ministry of Water Resources, Gol (2007)

Rain Water Harvesting and Conservation: Manual, Consultancy Services Organization, CPWD, Gol (2002)

The green belt proposed by MoEF&CC is under review for selection of suitable plant species in consultation with local experts of the area.

The Environmental Monitoring report of 6 months w.r.t Air, Water and Noise have been presented separately with the average values. The environmental conditions and the compliance have been found normal as per the Standards. The Air Quality results have been presented through a self explanatory table with the NAAQ Standards w.r.t the parameter PM₁₀, PM_{2.5}, NO_x, SO₂. No abnormal value has been recorded during the study period. Three sets each of Ground Water Samples and Surface Water Samples have been collected, analyzed in a self explanatory table and compared with Drinking Water Standards IS10500:2012. The analysis consists of five No. of physical parameters, thirteen No. of chemical parameters, nine No. of Heavy metals and three No. of miscellaneous parameters. No abnormal value has been recorded as per standard. Noise Quality has also been measured at six different locations in the periphery of the project area. The results have been presented through self explanatory table consisting of the Standard NAAQS w.r.t. noise.

The above report with respect to Air, Water and Noise represents the average values of different sampling stations collected at different time during the study period of October 2022 to March 2023.

Compliance of EC conditions for the period October 2022 - March 2023 for Proposed Ammonia-Urea (2200MTPD & 3850 MTPD) plants of HURL at Sindri

ANNEXURE- II

HURL, SINDRI, AIR QUALITY DATA: OCTOBER 2022- MARCH 2023

MONTH	Parameters	Admn. Building HURL Gate (SA1)	Railway Phatak (inside the Plant) (SA2)	Domgarh Gate (inside the Plant) (SA3)	Settling Tank (SA4)	PDIL Guest House(SA5)	Sindri Basti Village(SA6)	NAAQ Standard
OCTOBER 2022	PM10	93.2	90.1	96.2	82.4	86.6	81.7	100
	PM 2.5	50.3	45.6	48.4	40.6	42.8	40.8	60
	SO2	14.0	14.3	15.0	12.8	13.1	11.7	80
	NOx	23.2	20.8	23.0	16.7	16.4	16.2	80
	NH3	BDL	BDL	BDL	BDL	BDL	BDL	400
	C6H6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	05
	Benzo (a)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	01
	CO	0.5	0.46	0.6	0.31	0.28	0.32	02
	Ozone	18.5	17.1	18.5	15.5	14.0	14.1	180
	Ni	BDL	BDL	BDL	BDL	BDL	BDL	20
	As	BDL	BDL	BDL	BDL	BDL	BDL	06
NOVEMBER 2022	PM10	97.1	96.1	101.9	89.6	92.1	88.8	100
	PM 2.5	54.8	55.8	58.1	51.4	53.4	50.6	60
	SO2	13.7	14.2	15.1	13.1	15.2	13.2	80
	NOx	22.4	24.5	26.6	21.8	23.1	19.4	80
	NH3	BDL	BDL	BDL	BDL	BDL	BDL	400
	C6H6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	05
	Benzo (a)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	01
	CO	0.82	0.73	0.81	0.45	0.64	0.42	02
	Ozone	22.6	23.4	23.7	17.3	17.9	15.9	180
	Ni	BDL	BDL	BDL	BDL	BDL	BDL	20
	As	BDL	BDL	BDL	BDL	BDL	BDL	06
DECEMBER 2022	PM10	101.6	100.2	102	91.3	95.4	90.7	100
	PM 2.5	60.6	58.7	60.1	52.9	55.4	51.1	60
	SO2	14.3	15.6	17.0	15.3	14.5	14.2	80
	NOx	24.5	25.4	28.2	19.2	19.5	19.1	80
	NH3	BDL	BDL	BDL	BDL	BDL	BDL	400
	C6H6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	05
	Benzo (a)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	01
	CO	1.03	0.89	0.95	0.68	0.67	0.72	02
	Ozone	25.3	20.6	21.9	17.8	16.2	16.7	180
	Ni	BDL	BDL	BDL	BDL	BDL	BDL	20
	As	BDL	BDL	BDL	BDL	BDL	BDL	06
JANUARY 2023	PM10	99.1	100.4	102.2	95.7	95.9	92.1	100
	PM 2.5	54.7	54.7	57.7	54.1	53.3	52.8	60
	SO2	15.5	14.2	20.6	15.3	15.1	15.5	80
	NOx	24.4	24.0	26.4	20.4	21.3	20.7	80
	NH3	BDL	BDL	BDL	BDL	BDL	BDL	400
	C6H6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	05
	Benzo (a)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	01
	CO	1.23	1.13	1.3	0.8	0.58	0.74	02
	Ozone	23	20	23.3	23.7	18.3	17.6	180
	Ni	BDL	BDL	BDL	BDL	BDL	BDL	20
	As	BDL	BDL	BDL	BDL	BDL	BDL	06
Lead	BDL	BDL	BDL	BDL	BDL	BDL	1.0	

2/11/23

डॉ० प्रशांत कुमार सिंह
 सरकारी विरलेपक
 पर्यावरणीय प्रयोगशाला
 (केन्द्रीय प्रदुषण नियंत्रण बोर्ड)
 प्रोजेक्ट्स एण्ड डेवलपमेंट इण्डिया लिमिटेड
 (भारत सरकार का उपक्रम)

**Compliance of EC conditions for the period October 2022 - March 2023 for
Proposed Ammonia-Urea (2200MTPD & 3850 MTPD) plants of HURL at Sindri**

FEBRUARY 2023	PM10	103.5	100.6	107.4	97.4	96.8	92.6	100
	PM 2.5	59.9	57.3	62.0	55.1	54.1	52.9	60
	SO2	15.0	16.5	22.4	14.2	17.2	15.4	80
	NOx	29.3	26.8	31.1	24.8	25.7	23.9	80
	NH3	34.0	36.1	65.5	48.1	26.3	46.1	400
	C6H6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	05
	Benzo (α)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	01
	CO	1.03	1.1	1.12	0.89	0.61	0.74	02
	Ozone	26.5	25.6	29.5	24.8	19.9	21.3	180
	Ni	BDL	BDL	BDL	BDL	BDL	BDL	20
	As	BDL	BDL	BDL	BDL	BDL	BDL	06
	Lead	BDL	BDL	BDL	BDL	BDL	BDL	1.0
MARCH 2022	PM10	102.0	104.6	107.6	100.1	100.4	95.9	100
	PM 2.5	59.6	60.9	63.3	58.8	58.9	56.5	60
	SO2	16.6	17.7	21.4	16.0	19.1	17.5	80
	NOx	31.4	29.2	31.7	27.4	26.3	26.8	80
	NH3	41.9	36.1	74.5	59.9	30.8	48.3	400
	C6H6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	05
	Benzo (α)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	01
	CO	1.13	1.21	1.26	1.05	0.66	0.86	02
	Ozone	29.2	28.8	32.8	24.4	20.8	24.3	180
	Ni	BDL	BDL	BDL	BDL	BDL	BDL	20
	As	BDL	BDL	BDL	BDL	BDL	BDL	06
	Lead	BDL	BDL	BDL	BDL	BDL	BDL	1.0
AVG. OCTOBER 2022 TO MARCH 2023	PM10	99.4	98.7	102.9	92.8	94.5	90.3	100
	PM 2.5	56.7	55.5	58.3	52.2	53.0	50.8	60
	SO2	14.9	15.4	18.6	14.5	15.7	14.6	80
	NOx	25.9	25.1	27.8	21.7	22.1	21.0	80
	NH3	38.0	36.1	70.0	54.0	28.6	47.2	400
	C ₆ H ₆	BDL	BDL	BDL	BDL	BDL	BDL	05
	Benzo (α)pyrene	BDL	BDL	BDL	BDL	BDL	BDL	01
	CO	1.0	0.9	1.0	0.7	0.6	0.6	02
	Ozone	24.2	22.6	25.0	20.6	17.9	18.3	180
	Ni	BDL	BDL	BDL	BDL	BDL	BDL	20
	As	BDL	BDL	BDL	BDL	BDL	BDL	06
	Lead	BDL	BDL	BDL	BDL	BDL	BDL	1.0

NOTE: BDL = Below Detection Limit, (µg/m³) = PM₁₀, PM_{2.5}, SO₂, NO_x, NH₃, C₆H₆, Lead, Ozone
 ng/m³ = Arsenic (As), Benzo(α)Pyrene, Ni
 (mg/m³) = CO

यशोधर

डॉ० प्रशांत कुमार सिंह
 सरकारी विश्लेषक
 पर्यावरणीय प्रयोगशाला
 (केन्द्रीय प्रदूषण नियंत्रण बोर्ड)
 प्रोजेक्ट्स एण्ड डेवलपमेंट इण्डिया लिमिटेड
 (भारत सरकार का उपक्रम)

**HURL, SINDRI, GROUND WATER QUALITY DATA:
AVG. (OCTOBER 2022 TO MARCH 2023)**

(Results are expressed in mg/l, unless otherwise stated)

Sl. No	Parameters	Analysis Results			Requirement (Acceptable) / Permissible Limits (IS:10500:2012)
		Near Instrumentation Coke Oven & Amm. Storage (Hand Pump) (GW1)	Near Domgarh Mandir (Hand Pump) (GW2)	Rohraband (Hand Pump) (GW3)	
PHYSICAL					
1	pH	7.3	7.4	7.2	6.5-8.5
2	Temperature (°C)	28.6	28.4	28.0	-
3	Colour, HU	<5	<5	<5	5/15
4	Odour	Agreeable	Agreeable	Agreeable	Agreeable
5	Taste	Agreeable	Agreeable	Agreeable	Agreeable
6	Turbidity (NTU)	<1	<1	<1	1/5
7	Total Suspended Solid	NT	NT	NT	-
8	Total Dissolved Solids	527.0	520.2	407.2	500/2000
CHEMICAL					
1	P- Alkalinity as CaCO ₃	NIL	NIL	NIL	-
2	Total Alkalinity as CaCO ₃	251	303	253	200/600
3	Chloride as Cl	130	83	41	250/1000
4	Sulphate as SO ₄	44	53	31	200/400
5	Nitrate as NO ₃	4.3	4.3	4.2	45/NR
6	Fluoride as F	0.50	0.51	0.52	1.0/1.5
7	Total Hardness as CaCO ₃	417	465	263	200/600
8	Ca. Hardness as CaCO ₃	252	321	180	75/200
9	Mg. Hardness as CaCO ₃	165	143	83	30/100**
10	Sodium as Na	28	6	36	-
11	Potassium as K	4	1	5	-
12	Silica as SiO ₂	26	28	16	-
13	Iron as Fe	0.29	0.31	0.29	0.3/NR
HEAVY METALS					
1	Manganese as Mn	BDL	BDL	BDL	0.1/0.3
2	Total Chromium as Cr	BDL	BDL	BDL	0.05/NR
3	Lead as Pb	BDL	BDL	BDL	0.01/NR
4	Zinc as Zn	0.50	0.47	0.53	5.0/15
5	Cadmium as Cd	BDL	BDL	BDL	0.003/NR
6	Copper as Cu	BDL	BDL	BDL	0.05/1.5
7	Nickel as Ni	BDL	BDL	BDL	0.02/NR
8	Arsenic as As	BDL	BDL	BDL	0.01/0.05
9	Selenium as Se	BDL	BDL	BDL	0.01/NR
OTHERS					
1	Mineral oil,	BDL	BDL	BDL	0.5/NR
2	Ph.Compound as C ₆ H ₅ OH	BDL	BDL	BDL	0.001/0.002
3	Coliform (MPN/100ml)	<50	<50	<50	-

(Signature)

**HURL, SINDRI, SURFACE WATER QUALITY DATA-2019
AVG. (OCTOBER 2022 TO MARCH 2023)**

(Results are expressed in mg/l, unless otherwise stated)

Sl. No.	Parameters	Nimtand Village (Pond) SW1	Seven Lake (Pond) SW2	Damodar River SW3	Requirement (Acceptable) / Permissible Limits(IS:10500:2012)
PHYSICAL					
1	Temperature (°C)	27.3	27.4	27.8	-
2	Colour, HU	10	11	14	5/15
3	Turbidity (NTU)	12	13	17	1/5
4	pH	7.4	7.5	7.6	6.5-8.5
5	Total Dissolved Solids	172	226	200	500/2000
6	Suspended Solids	47	56	55	-
CHEMICAL					
1	Total Alkalinity as CaCO ₃	109	132	121	200/600
2	Chloride as Cl	22	39	33	250/1000
3	Sulphate as SO ₄	20	22	23	200/400
4	Nitrate as NO ₃	4.3	4.4	4.4	45/NR
5	Fluoride as F	0.40	0.40	0.34	1.0/1.5
6	Total Hardness as CaCO ₃	135	155	177	200/600
7	Calcium Hardness as CaCO ₃	86	98	103	75/200
8	Magnesium Hardness as CaCO ₃	49	58	74	30/100
9	Dissolve Oxygen	6	6	7	-
10	COD	22	25	29	-
11	BOD ₅ (3 days at 27 °C)	8	8	8	-
12	Sodium as Na	13	25	8	-
13	Potassium as K	2	3	1	-
HEAVY METALS					
1	Iron as Fe	0.33	0.33	0.29	0.3/NR
2	Manganese as Mn	BDL	BDL	BDL	0.1/0.3
3	Total Chromium as Cr	BDL	BDL	BDL	0.05/NR
4	Lead as Pb	BDL	BDL	BDL	0.01/NR
5	Zinc as Zn	0.34	0.36	0.40	5.0/15
6	Cadmium as Cd	BDL	BDL	BDL	0.003/NR
7	Copper as Cu	BDL	BDL	BDL	0.05/1.5
8	Nickel as Ni	BDL	BDL	BDL	0.02/NR
9	Arsenic as As	BDL	BDL	BDL	0.01/0.05
10	Selenium as Se	BDL	BDL	BDL	0.01/NR
OTHERS					
1	Oil & grease	BDL	BDL	BDL	0.5/NR
2	Phenolic Compound	BDL	BDL	BDL	0.001/0.002
3	Coliform Organisms (MPN/100ml)	933	1067	1167	-

डॉ० प्रशांत कुमार सिंह
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(केन्द्रीय प्रदूषण नियंत्रण बोर्ड)
प्रोजेक्ट्स एण्ड डेवलपमेंट इण्डिया लिमि
(भारत सरकार का उपक्रम)

Compliance of EC conditions for the period October 2022 - March 2023 for
Proposed Ammonia-Urea (2200MTPD & 3850 MTPD) plants of HURL at Sindri

ANNEXURE- II

HURL, SINDRI, NOISE QUALITY DATA FROM OCTOBER 2022- MARCH 2023

MONTH	Parameters	Admn. Building HURL Gate (SA1) (Industrial Area)	Railway Phatak (inside the Plant) (SA2) (Industrial Area)	Domgarh Gate (inside the Plant) (SA3) (Industrial Area)	Settling Tank (SA4) (Industrial Area)	PDIL Guest House (SA5) (Residential Area)	Sindri Basti Village (SA6) (Residential Area)	Prescribed Limits in dB(A) as per NAAQS (Ind. / Res. Area)
OCTOBER 2022	24-hrs Avg L_{eq} Value dB(A)	55.6	55.2	56.0	52.8	52.7	52.0	-
	Day time L_{eq} Value dB(A)	56.9	56.5	57.3	54.2	53.8	53.2	75/55
	Night time L_{eq} Value dB(A)	50.4	49.3	50.9	46.7	48.7	47.4	70/45
NOVEMBER 2022	24-hrs Avg L_{eq} Value dB(A)	56.5	56.1	58.5	53.0	53.7	52.0	-
	Day time L_{eq} Value dB(A)	57.9	57.5	60.0	54.3	54.9	53.1	75/55
	Night time L_{eq} Value dB(A)	50.9	49.8	51.3	48.4	49.2	48.5	70/45
DECEMBER 2022	24-hrs Avg L_{eq} Value dB(A)	58.4	55.5	59.5	53.3	54.4	52.7	-
	Day time L_{eq} Value dB(A)	60.0	56.8	61.0	54.5	55.6	53.9	75/55
	Night time L_{eq} Value dB(A)	50.1	50.2	51.1	49.2	50.2	48.9	70/45
JANUARY 2023	24-hrs Avg L_{eq} Value dB(A)	54.5	53.4	54.6	52.3	54.0	51.6	-
	Day time L_{eq} Value dB(A)	55.7	54.7	55.8	53.6	55.3	52.8	75/55
	Night time L_{eq} Value dB(A)	49.7	47.4	50.4	47.1	48.4	46.8	70/45
FEBRUARY 2023	24-hrs Avg L_{eq} Value dB(A)	57.7	54.9	60.2	53.3	52.1	51.9	-
	Day time L_{eq} Value dB(A)	59.2	56.2	61.8	54.6	53.0	53.2	75/55
	Night time L_{eq} Value dB(A)	51.0	49.6	51.2	47.9	49.2	47.5	70/45
MARCH 2023	24-hrs Avg L_{eq} Value dB(A)	58.1	57.1	60.4	53.9	52.9	52.7	-
	Day time L_{eq} Value dB(A)	59.6	58.5	62.0	55.0	54.1	53.9	75/55
	Night time L_{eq} Value dB(A)	51.2	50.2	51.9	50.0	48.5	48.5	70/45
AVG. (OCTOBER 2022 TO MARCH 2023)	24-hrs L_{eq} Value dB(A)	56.8	55.4	58.2	53.1	53.3	52.2	-
	Day time L_{eq} Value dB(A)	58.2	56.7	59.7	54.4	54.5	53.4	75/55
	Night time L_{eq} Value dB(A)	50.6	49.4	51.1	48.2	49.0	47.9	70/45

यशोद

डॉ० प्रशांत कुमार सिंह
सरकारी विश्लेषक
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प्रोजेक्टस एण्ड डेवलपमेंट इण्डिया लिमिटेड
(भारत सरकार का उपक्रम)



Government of Jharkhand

Receipt of Online Payment of Stamp Duty

NON JUDICIAL

Receipt Number : 7bfcd2ae8d0ecb927d7a

Receipt Date : 23-Mar-2022 01:00:56 pm

Receipt Amount : 100/-

Amount In Words : One Hundred Rupees Only

Document Type : Agreement or Memorandum of an Agreement

District Name : Dhanbad

Stamp Duty Paid By : PUSHPA DEVI

Purpose of stamp duty paid : AGREEMENT

First Party Name : NILAYNARAYAN POLYCHEM LLP

Second Party Name : HINDUSTAN URVARAK AND RASAYAN LIMITED SINDRI DHANBAD

GRN Number : 2210443804

-: This stamp paper can be verified in the jharnibandhan site through receipt number :-

MEMBERSHIP AND WASTE OFFTAKE AGREEMENT



This Receipt is to be used as proof of payment of stamp duty only for one document. The use of the same receipt as proof of payment of stamp duty in another document through reprint, photo copy or other means is penal offence under section-62 of Indian Stamp Act, 1899

इस रसीद का उपयोग केवल एक ही दस्तावेज पर मुद्रांक शुल्क का भुगतान के प्रमाण हेतु ही किया जा सकता है। पुनः प्रिन्ट कर अथवा फोटो कॉपी आदि द्वारा इसी रसीद का दुसरे दस्तावेज पर मुद्रांक शुल्क का भुगतान के प्रमाण हेतु उपयोग भारतीय मुद्रांक अधिनियम, 1899 की धारा 62 अन्तर्गत दण्डनीय अपराध है।

MEMBERSHIP AND WASTE OFFTAKE AGREEMENT

THE MEMBERSHIP AND WASTE OFFTAKE AGREEMENT thereafter referred as "the agreement" made on this 23rd day of March of the year 2022 by and valid upto 22nd day of March 2024.

M/s Nilaynarayan Polychem LLP, Plot D-167,4&5, Kandra Industrial Area, Govindpur, Dhanbad, Jharkhand-828109 hereinafter referred to as "Disposal and Recycling Agency" which expression shall unless repugnant to the context or meaning thereof mean and include its successors and assigns represented by LLP.

AND

M/s Hindustan Urvarak and Rasayan Limited, Sindri located at old FCIL Office complex, Sindri, Dhanbad, Pin- 828122 a corporation incorporated under the laws of India and having its registered office at Core-4,9th Floor, Scope Minar, Laxmi Nagar District Centre, New Delhi, India- 110092 Hereinafter referred to as the "Generator" which expression shall unless repugnant to the context or meaning thereof, men and include its successors and permitted assigns represented by HURL Officials.

Whereas:

1. That Generator desires to get its hazardous waste being generated at their productions unit mentioned above as per their valid authorization from Jharkhand Pollution Control Board (JPCB) to be collected, transported, treated, stored and disposed of by Disposal and Recycling Agency to which the agency has mutually agreed on the terms and conditions contained in this agreement.
2. That Disposal and Recycling Agency has been authorized by Jharkhand Pollution Control Board, Ranchi dated 24/03/2021 valid upto 23/03/2026.
3. The generator shall provide Manifest to Disposal and Recycling Agency as per the rules upon receipt of a manifested waste: the agency shall determine the Manifest accurately describe the wastes it accompanies. Any waste or waste type considered significant should be noted on all manifest at the time of signatures. The recycler shall try to reconcile the discrepancy with Generator as early as possible.
4. This agreement shall remain in force only for the active term.
5. In the event any change and/or revision is made in the operating conditions, financial implications, etc, by or on the behest of a statutory authority, the same will be binding on the parties to this agreement
6. This Agreement may be modified or amended mutually and only by writing, duly executed by on behalf of the parties hereto.

Responsibility/Scope of generator

- Packing & Labelling- The generator shall ensure that the hazardous waste is packaged in a manner suitable for storage and transport with labelling and packaging should be in full compliance of the Rules.
- The generator shall handover the waste to Disposal and Recycling Agency through manifest system.
- The generator shall intimate to Jharkhand Pollution control board through manifest system and timely file the annual return as per HWM Rule-2016



Responsibility/Scope of Disposal and Recycling Agency

- NNP team will visit quarterly for collection and transportation of hazardous waste generated at HURL Sindri,
- It will be the sole responsibility of the Disposal and Recycling Agency to handle, treat and dispose the hazardous waste in accordance with HWM Rule -2016 and that generator will not be responsible in any manner whatsoever.
- Disposal and Recycling Agency shall provide the disposal certificate of the waste received from the generator.
- The Disposal and Recycling Agency will timely file the annual return as per Form-4 to Pollution control board.

Estimated Charges

- HURL shall pay one time Non-Refundable Two Years Membership Charges of Rs. 2,50,000.00/-(Two Lakhs Fifty Thousand Only) + GST (18%) which may be renewed on mutually agreed terms and conditions.
- Hazardous waste disposal and transportation charges will be as per attached as Annexure-I.

For Nilaynarayan Polychem LLP



Name: Anshul Kumar

Designation: Engineer Execution

For Hindustan Urvarak & Rasayan Limited



Name: Goutam Majee

Designation: Vice President (Technical)

HAZARDOUS WASTE HANDLING/DISPOSAL QUOTATION					
1	Name of the Bidder/Bidding Firm	NILAYNARAYAN POLYCHEM LLP			
2	Authorization Validity of the bidder (by JSPCB)	23-03-2026			
Category of Hazardous Waste as per the Schedules I,II and III of these rules	Authorised mode of disposal or recycling or utilization or co-processing, etc.	UoM	Estimated Rate/ MT/KL (Excluding GST)	Applicable GST%	Total Amount
3	Used/spent Oil (Under Cat. 5.1)	Through TSDF	KL	22,000/MT	18
4	Spent Catalyst (Under Cat. 18.1)	Through TSDF	MT	22,000/MT	18
5	Process Sludge (Under Cat. 20.4)	Through TSDF	MT	22,000/MT	18
6	Empty Barrels/Containers/Liners Contaminated with Hazardous Chemicals/Wastes (Under Cat. 33.1)	Through TSDF	MT	22,000/MT	18
7	Contaminated Cotton Rags or other Cleaning Materials (Under Cat. 33.2)	Through TSDF	MT	22,000/MT	18
8	Chemical Sludge from Waste Water Treatment (Under Cat.35.3)	Through TSDF	MT	22,000/MT	18
9	Sludge from Treatment of Waste Water Arising out of Cleaning/Disposal of Barrels/Containers (Under Cat.34.2)	Through TSDF	MT	22,000/MT	18
10	Spent Ion Exchange Resin Containing Toxic Metals (Under Cat. 35.2),	Through TSDF	MT	22,000/MT	18
11	Transportation Charge, if any (Including loading & unloading)	-	MT	700/MT	5
12	Other Charges, If any (please specify in detail) Membership Charge for 2 years	-			
			Rs.250000	18	



RAINWATER HARVESTING

The rain water collected from the roof of the permanent buildings shall be harvested for ground water recharge as a compensation to meet the requirement due to loss of permeable area promoting ground water recharge, maintenance of existing hydro-dynamic pattern of the area and to conserve the salinity of ground water in the area. The excess rainwater shall be sent to the trap through storm water drain and attempts shall be made not to mix any process waste with the storm water. The trap shall have two compartments, one consisting of sized boulders and the other, sized hard coke. The excess water from sized hard coke shall be collected in another tank before discharge in to natural drainage system. The drainage system of project area shall be aligned as per the existing natural drainage pattern of the area.

Rain water harvesting and recharging system shall be installed as per the relevant the central ground water board guidelines applicable for the area. The rain water harvesting/aquifer recharging system have been proposed as water conservation measure. The systems shall be installed at such location of the project area close to the Administrative building so as to facilitate collection of most of the rain water from the roofs of the building in the project area. Similarly, same system of rain water harvesting shall be implemented in the township.

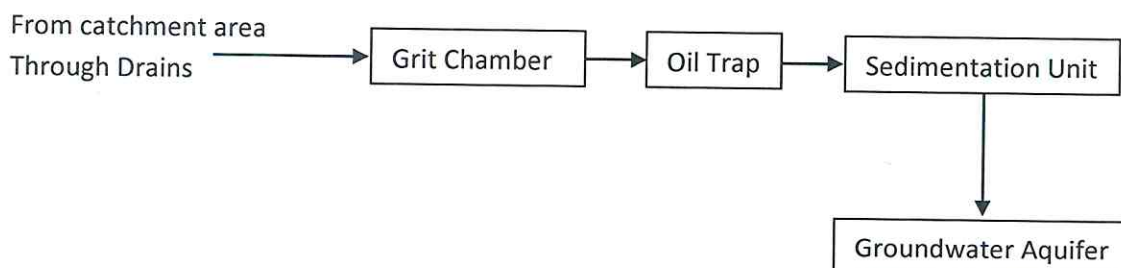
The bores shall be provided within 3 m deep enclosures, which will comprise layers of boulders, gravel and coarse sand so as to separate suspended matter from the rainwater. Three nos. of ground water recharging systems have been proposed to be developed in the township area and three nos. in the factory area. Rainwater harvesting system will consist of the following units:

1. Rainwater Collection System
2. Rainwater Filtration System
3. Rainwater Recharging Pond including an active well of depth 20m and dia 100-150mm.

The system will be cleaned during dry season and will be made ready to collect water for harvesting from its command area during monsoon. Provision shall also be made in the rainwater harvesting system for Chlorination/disinfection especially during the first phase of monsoon. The system shall be designed as per the guidelines for rainwater harvesting prepared by Central Ground Water Board (Ministry of Water Resources).

The scheme of rain water harvesting and aquifer recharging is presented below:

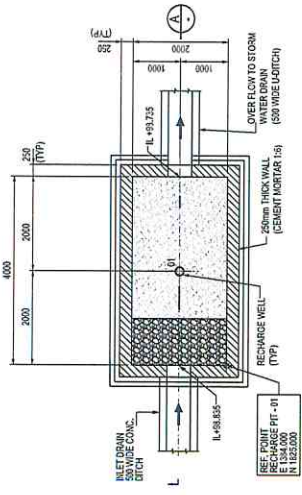
Block Diagram for Proposed Rain Water Harvesting / Aquifer Recharging System



The rainwater harvesting system for the fertilizer plant will follow the guidelines laid out by different Departments/Ministries as far as possible.

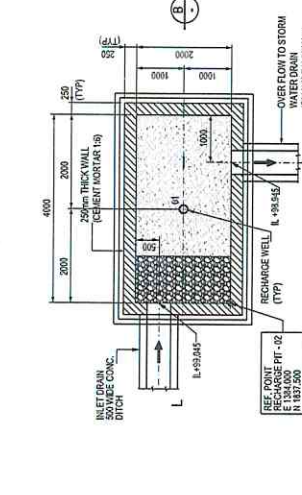
- a) Guidelines on Artificial Recharge of Water, Central Water Ground Board, Ministry of Water Resources, GoI (2000);
- b) Manual on Artificial Recharge of Ground Water, Central Water Ground Board, Ministry of Water Resources, GoI (2007);
- c) Rain Water Harvesting and Conservation: Manual, Consultancy Services Organization, CPWD, GoI (2002);

The sizing of the rain water collection drain and sub-units including the harvesting pond shall be calculated depending upon the maximum rain intensity within 50 years and roof area of the building after finalization of the building design.



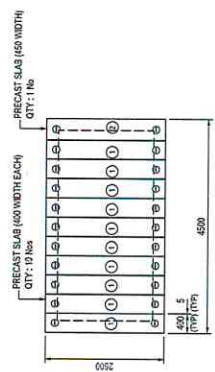
PLAN: RECHARGE PIT - 01
 (FOR ORIENTATION REF. LAYOUT SHT 1 OF 3)
 (CATCHMENT AREA: 1900 TO 2000 m²)

DATE	BY	CHKD BY	REVISION
01.10.2020			01

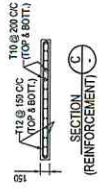


PLAN: RECHARGE PIT - 02
 (FOR ORIENTATION REF. LAYOUT SHT 1 OF 3)
 (CATCHMENT AREA: 1900 TO 2000 m²)

DATE	BY	CHKD BY	REVISION
01.10.2020			01



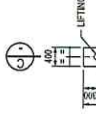
PRECAST SLAB LAYOUT
 (ONLY FOR RECHARGE PIT: 01 & 02)



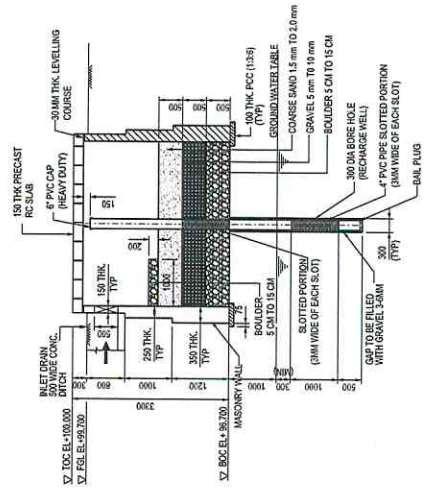
SECTION (REINFORCEMENT)



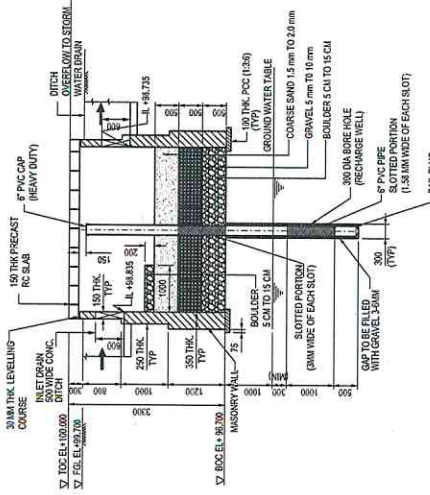
PRECAST SLAB No. 1
 (QTY: 19 Nos.)



PRECAST SLAB No. 2
 (QTY: 11 Nos.)



SECTION (FORMWORK)



SECTION (FORMWORK)

NOTES
 1. FOR GENERAL NOTES REFER SHEET 1 OF 3

Rev	Date	By	Checked by	Approved by
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TechnipFMC
 Engineering
 Hindustan Uranium & Rasayan Limited

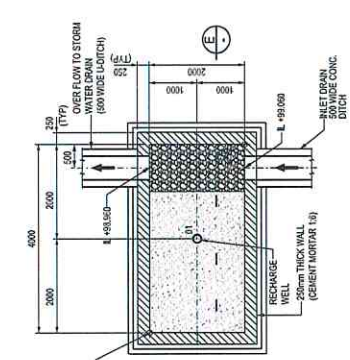
PDIL
 Project Development & Implementation Ltd.

Hindustan Uranium & Rasayan Limited
 Baraut & Sindri

SINDRI-INTERCONNECTING
 RECHARGE PIT SECTION
 AND DETAILS

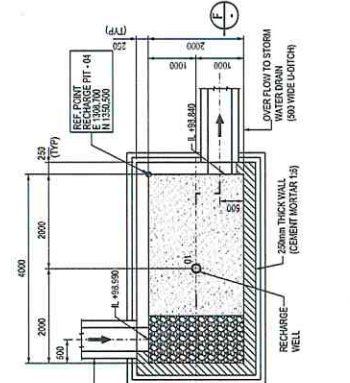
ORIGINATOR OF DOCUMENT: TP
 SCALE: 1:100
 SHEET: 23
 REVISION: 0
 FORMAT: A1

COMMENTS:
 All dimensions are in millimeters unless otherwise specified.
 This document is approved only in accordance with the conditions of the contract.
 It is not to be used for any other purpose without the written approval of the Engineer in Charge.



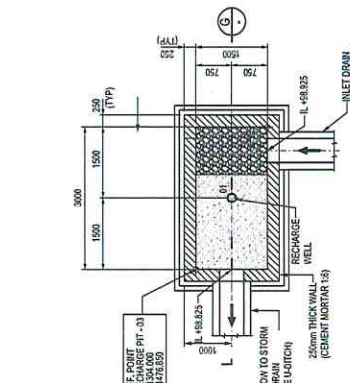
PLAN: RECHARGE PIT-03
(FOR ORIENTATION REF LAYOUT SHEET OF 3)
(CATCHMENT AREA: 1500 TO 2000 SF)
RECHARGE WELL

BORE HOLE	EASTING	NORTHING	REMARKS
01	1300.000	1475.000	



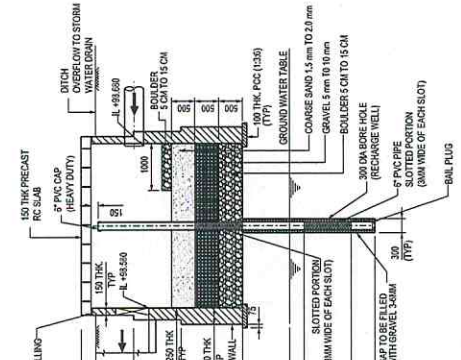
PLAN: RECHARGE PIT-04
(FOR ORIENTATION REF LAYOUT SHEET OF 3)
(CATCHMENT AREA: 1500 TO 2000 SF)
RECHARGE WELL

BORE HOLE	EASTING	NORTHING	REMARKS
01	1311.000	1483.000	

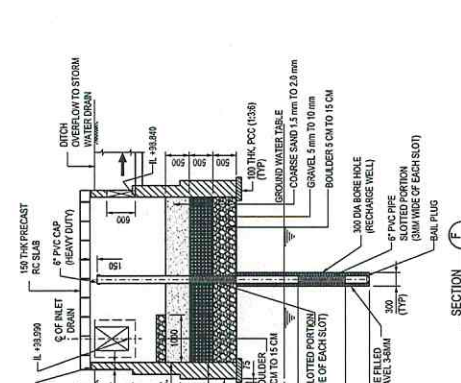


PLAN: RECHARGE PIT-05
(FOR ORIENTATION REF LAYOUT SHEET OF 3)
(CATCHMENT AREA: 1000 TO 1500 SF)
RECHARGE WELL

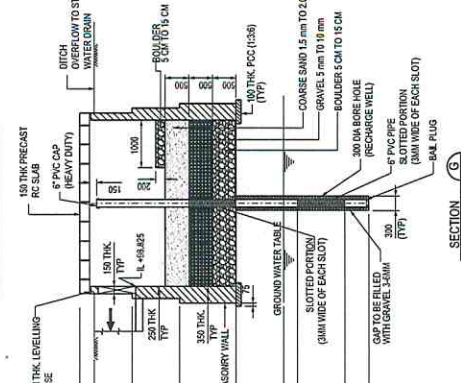
BORE HOLE	EASTING	NORTHING	REMARKS
01	1382.500	1481.000	



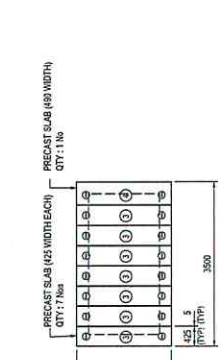
SECTION (FORMWORK)



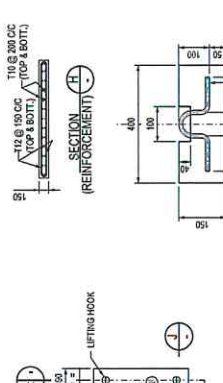
SECTION (FORMWORK)



SECTION (FORMWORK)



PRECAST SLAB No.3
(QTY: 3 Nos)

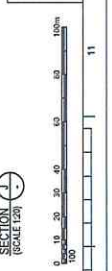


PRECAST SLAB No.4
(QTY: 1 Nos)



PRECAST SLAB No.5
(QTY: 1 Nos)

CONSTRUCTION NOTES
1. FOR GENERAL NOTES REFER SHEET (OF 3)
2. THIS DOCUMENT IS ISSUED ONLY AS A PRELIMINARY DESIGN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS ON SITE BEFORE COMMENCING WORK. ANY DISCREPANCY SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT.



NO.	DATE	ISSUED FOR	BY	CHECKED BY	APPROVED BY
1	20/05/2024	ISSUED FOR CONSTRUCTION	MAB	PMK	VA
2	20/05/2024	ISSUED FOR REVIEW	MAB	PMK	PAB

Prepared by: **TechnipPMC**
Checked by: **TechnipPMC**
Approved by: **TechnipPMC**

SINDRI - INTERCONNECTING
RECHARGE PIT SECTION
AND DETAILS

Hindustan Unvarkit and Rasayan Limited
Baraukt & Sindri

SCALE: 1:100
SHEET: 3/3
077625-S00-DW-1745-0002

ORGANIZATION OF DOCUMENT: TP
SCALE: 1:100
SHEET: 3/3
REVISION FORMAT
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A1

Government of India
Ministry of Environment, Forests and Climate Change (MoEF&CC)
Regional Office – Ranchi

MONITORING REPORT

PART I

DATA SHEET

File No


1		Project Type	Fertilizer Plant Revival
2		Name of the project	Ammonia-Urea Fertilizer Project Hindustan Urvarak & Rasayan Limited, Sindri
3		Clearance letters/Om No. and dated	J11011/154/30166-IAII (I)
4		Locations	Sindri
	a	Taluk(S) District	Jharia Dhanbad
	b	State(S)	Jharkhand
	c	Latitudes/Longitudes	Location Longitude Latitude Elevation (m) NE Boundary 86°29'37.8"E 23°40'17.44"N 164.90 Northern Boundary 86°29'17.30"E 23°39'48.73"N 165.20 m NW Boundary 86°29'2.84"E 23°39'45.45"N 165.20 m Centre of FCIL Plant 86°29'25.52"E 23°39'22.45"N 155.45 m Eastern Boundary 86°29'0.78"E 23°39'22.08"N 160.02 m Western Boundary 86°29'0.78"E 23°39'47.34"N 161.54 m Southern Boundary 86°29'38.05"E 23°38'59.17"N 153.01 m <i>Source: GPS</i>
5		Address for correspondence	
	a	Address of concerned Project Chief Engineer (with Pin Code & Telephone/Telex/fax nos)	Senior Vice President Hindustan Urvarak & Rasayan Limited (HURL) Old FCIL Office Complex, Sindri PO-Sindri, Dist.-Dhanbad – 828122 Telephone – 0326-2245454
	b	Address of Executive Project Engineer (with Pin Code/fax numbers)	Manager, Env. & QC Hindustan Urvarak & Rasayan Limited (HURL) Old FCIL Office Complex, Sindri PO-Sindri, Dist.-Dhanbad – 828122 Telephone – 0326-2245454

RB
27/05/23
ctj

6		Salient Features
	a	<p>Salient features of the project</p> <p>The Ammonia and Urea plants shall be one of the latest energy efficient Natural Gas Based plant (2200 MTPD for Ammonia and 3850 MTPD for Urea). The technology suppliers shall consider the latest technological features with an objective to have lowest energy consumption & high reliability of plant having state of the art technology with latest technological features. Ammonia and Urea plants operation considered for 330 days in a year with planned shutdown of once in two years.</p> <p>One blast proof central control room for control & monitoring of operation of all Ammonia/Urea/Offsite & utility facilities shall be provided by LSTK Contractor.</p> <p>The ETP facility shall treat all effluents, continuous, intermittent or emergency discharges from ammonia/urea plants. All liquid treated effluent from various sections of the plants shall be collected in final effluent pond made of RCC. The treated effluent shall be pre-treated with chemicals to make it Suitable for feeding to RO plant. The RO plant shall be two stage RO systems. The treated water from RO shall be recycled back to filtered water tank in WTP. The final reject waste water from RO units shall be further treated in thermal evaporation unit using low pressure steam to achieve zero liquid discharge from ETP plant.</p> <p>All Liquid & gaseous effluents generated from various plans & facilities shall be treated before final discharge to meet the requirements of Central/State pollution control board.</p>
	b	<p>Of the environmental management plans.</p> <p>An Environmental Management Plan (EMP) has been prepared keeping in view all possible strategies oriented towards the impact minimization. The EMP for the proposed project is divided into three phases i.e. Planning, Construction and Operational phase.</p> <p>During the planning stage, Energy efficient machines with 5 star rating shall be utilised</p>

Handwritten signature and date:
 27/05/23
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9		Financial Details		
	a	Project cost as originally planned and subsequent revised estimates and the years of price reference	Rs. 8939.25 crore	
	b	Allocation made for environmental management plans with item wise and year wise breakup	It is included in the project cost. Actual cost will be furnished after completion of project.	
	c	Benefit cost ratio/internal rate of return and the years of assessment	Debt Service Coverage Ratio*	1.58
			Internal rate of Return*	10.98
			*As per Project Feasibility Report	
	d	Whether (c) includes the cost of environmental management as shown in (b) above	Yes	
	e	Total expenditure on the Project so far	Rs. 7176.87 crore	
	f	Actual expenditure incurred on the environmental management plans so far	Rs. 4.56 crore	
10		Forest land requirement	No Forest Land is involved	
	a	The status of approval for a diversion of forest land for non-forestry use	NA	
	b	The status of compensatory afforestation, if any	NA	
	c	The status of clear felling	NA	
	d	Comments on the viability and sustainability of compensatory afforestation in the light of actual field experience so far	NA	
11		The status of clear felling in no-forest area (such as submergence area of reservoir, approach road) if any with quantitative information	NA	
12		Status of Construction	Construction work is in progress by LSTK agency M/s Technip FMC consortium and other offsite work is being carried out by M/s NICE, M/s Driplex, M/s Sanjay Kumar, M/s MISPL, M/s WAPCOS, M/s EDAC, M/s TSPL	
	a	Date of commencement	18 th May,2018	



 N. B. Roy

 27/05/23

	b	Date of completion (actual and / or planned)	36 months from 18 th May,2018, delayed due to COVID Pandemic by 1.5 year (Scheduled to be commissioned by Nov 2022)
13		Reasons for the delay if the project is yet to start	NA
14		Date of site visit	
	a	The dates on which the project was monitored by the Regional Office on previous occasions, if any	Not inspected by RO, MoEF&CC
	b	Date of site visit for this monitoring report	PDIL's environmental monitoring team visits the monitoring locations as per schedule of monitoring and construction site is regularly visited by designated Nodal Officer.



(Dipten Roy)

Senior Vice President

Hindustan Urvarak & Rasayan Ltd. (HURL)

Old FCIL Office Complex, Sindri

PO-Sindri, Dist.- Dhanbad-828122

Telephone – 0326-2245454

