



## त्रिपुरा गैस आधारित विद्युत संयंत्र / TRIPURA GAS BASED POWER PLANT

No.NEEPCO/TGBPP/HOP-35/2021-2022/15

Dated 24/05/2021

To,

The Scientist "D"  
Ministry of Environment & Forest,  
North Eastern Regional Office,  
LAW-U-SIB, LUMBATNGEN,  
Shillong- 793021.

Sub: Submission of six monthly Environment Monitoring Report for the period 1<sup>st</sup> October 2020 to 31<sup>st</sup> March 2021 in respect of 101MW Tripura Gas Based Power Project, Monarchak, Sonamura, Sepahijala, Tripura-799131.

Dear Sir,

With reference to the above, as desired, we are enclosing herewith the six monthly Environment Monitoring Report alongwith monitoring data for Ambient Air Quality (AAQ) (Annexure A), Liquid waste discharged data (Annexure B), NO<sub>x</sub> emission data (Annexure C) for the period 1<sup>st</sup> October 2020 to 31<sup>st</sup> March 2021 in respect of 101MW Tripura Gas Based Power Plant (TGBPP), Monarchak for your kind information and needful please.

The report is being sent in the e-mail IDs: [ro.nez.shil@gmail.com](mailto:ro.nez.shil@gmail.com) and [moefro.shillong@gov.in](mailto:moefro.shillong@gov.in)

Thanking you,

Yours faithfully,

Enclo: 1) Monitoring Report  
(1<sup>st</sup> Oct '20 to 31<sup>st</sup> March '21)  
2) Annexure A, B & C

प्रमुख 24/05/2021

(देबजानी दे/ DEBJANI DEY)

मुख्य महाप्रबंधक (वि./ यां.) - संयंत्र प्रमुख  
Chief General Manager (E/M) & HOP  
टीजीवीपीपी, नीपको/TGBPP, NEEPCO

नॉर्थ ईस्टर्न इलेक्ट्रिक पावर कॉर्पोरेशन लिमिटेड  
(मिनी रत्न श्रेणी-I)

North Eastern Electric Power Corporation Ltd.  
(Miniratna Category-I, a Subsidiary of NTPC)



ISO 9001:2015  
ISO 14001:2015  
ISO 45001:2018

मुख्य महाप्रबंधक (वि./यां) - संयंत्र प्रमुख का कार्यालय  
Office of the Chief General Manager (E/M)  
& Head of Plant,  
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## त्रिपुरा गैस आधारित विद्युत संयंत्र / TRIPURA GAS BASED POWER PLANT

**NIO**

Memo No. NEEPCO/TGBPP/HOP-35/2021-2022/16-17

Dated 24/05/2021.

Copy to:

1. The ED (O&M), NEEPCO Ltd., Shillong for favour of kind information please.
2. The CGM (E/M), Env., RR & CSR Wing for kind information please. The report is being sent through e-mail at [neepcoenvironment@gmail.com](mailto:neepcoenvironment@gmail.com).

*देवा एम*  
24/05/2021

मुख्य महाप्रबंधक (वि./ यां.) - संयंत्र प्रमुख  
Chief General Manager (E/M) & HOP  
टीजीबीपीपी, तीपको/TGBPP, NEEPCO



**REPORT ON MONITORING OF IMPLEMENTATION OF ENVIRONMENT SAFEGUARDS OF  
GAS BASED POWER PROJECT**

**MONITORING REPORT**

**Part-I (DATA SHEET)**

**Period: 1<sup>st</sup> October 2020 to 31<sup>st</sup> March 2021**

1	Project Type River valley/ Industry/ Thermal/ Nuclear/ Other(Specify)	Gas Thermal Combined Cycle
2	Name of Project	Tripura Gas Based Power Project, 101 MW
3	Clearance letter(s) OM No & Date	No. J13011/4/2001-1AII(T), dated. 27.12.2001 of MOEF, New Delhi.
4	Location	
	a) District(s)	Monarchak, Sonamura, Dist.- Sepahijala
	b) State(s)	Tripura
	c) Latitude & Longitude	Latitude (N) : 23° 26' 26" Longitude (E) : 91° 17' 00"
5	Address of Correspondence	
	a) Address of concerned Project Chief Engineer/Manager(with PIN Code and Telephone / Telex / Fax Number)	Head of the Project, TGBPP, NEEPCO, PO- Dhanpur, Sonamura, Sepahijala, Tripura, Pin- 799 131. Phone : 9401012389 Email: <a href="mailto:hoptgbpp@neepco.co.in">hoptgbpp@neepco.co.in</a>
	b) Address of Executive Project Engineer/Manager(with PIN Code and Telephone/Telex/Fax Number)	DGM (E/M) TGBPP, NEEPCO, PO- Dhanpur, Sonamura, Sepahijala, Tripura, Pin- 799 131. Phone : 9435339724
6	Salient features	
	a) Project	101 MW Gas Based Combined Cycle Power Project. (Comprising of one Gas Turbine & one Steam Turbine). Plant civil works, erection works, works of Raw Water Intake and laying of 4.7 Km long Raw water pipe line from River Gumti to the Project are completed.
	b) Environment Management Plan	Disposal of effluent after treatment only to the nearest river Gumti by 3.0 KM long pipeline. Development of green belt, Control of Air pollution & sound pollution. Creation for rain water harvesting / water body.
7	Breakup of the Project area	
	a) Submergence area (forest and non-forest)	No submergence area is involved.
	b) Other	Forest land: 60.472 Ha Non forest land including Govt. Khash land: 19.825 Ha <b>Total - 80.297 Ha</b>
8	Breakup of the project affected population with enumeration of those losing houses/dwelling units only agricultural land only, both dwelling units and agriculture land and landless labourers/artisans	
	a) SC/ST/Adivasi	NIL
	b) Others	Total 16 affected families were rehabilitated by the Govt. of Tripura acquiring additional 6.73 acres of Govt. Khash land at Kalapania.
9	Financial Details	
	a) Project as originally planned and subsequent revised estimated and the year of prime reference.	1. ₹623.44 Crores (approved cost at Nov' 2009 Price Level). PIB Clearance accorded on 23.07.2010 and CCEA Clearance accorded on 23.02.2011. 2. ₹1062.24 Crores (Revised cost at Oct '2016 Price Level). Vetted by CEA.



	b) Allocation made for environmental management plans with item wise and year wise break up.	1. Compensatory afforestation ₹88.00 lakhs paid to the Deptt. of Forest, Govt. of Tripura. 2. Development of Green belts, rain water harvesting /- water body & maintenance- ₹ 100.00 lakhs. 3. Machines include inbuilt provision for Environment Monitoring System.
	c) Benefit cost ratio/internal rate of return at the end of the year of assessment.	As per RCE (March '2015 PL): (i) FIRR : 14.83 % (ii) EIRR : 17.03 %
	d) Whether (c) includes the cost of environment management as shown in (b) above.	N.A.
	e) Actual expenditure incurred on the project so far	Expenditure (Cumulative) up to 31.03.2021 = ₹1198.88 Crores (provisional).
	f) Actual expenditure incurred on the environmental management plans so far.	An amount of ₹151.39 lakhs has been incurred for development of greenery in and around Plant Area till date.
10	Forest land requirement	
	a) The status of approval for diversion of forest land for non-forestry use	Cleared on 6 <sup>th</sup> Feb'2004 vide Letter no. 8-77/2001/FC of Asstt. Inspector General of Forest Govt. of India.
	b) Status of compensatory afforestation, if any.	An amount of ₹88.00 lakhs has been released to the Deptt of Forest, Govt. of Tripura
	c) The status of clear felling.	N.A.
	d) Comment on the viability and sustainability of compensatory afforestation programme in the light of actual field experience so far	N.A.
11	The status of clear felling in non-forest areas such as submergence area of reservoir, approach road if any, with quantitative information.	N.A.
12	Status of Construction	
	a) Date of commencement (actual and/or planned).	23.07.2010, Date of PIB Clearance.
	c) Date of completion (actual and/ or planned )	36 months from 23 <sup>rd</sup> July '2010
	d) Reason for delay if project is yet to start.	Combined Cycle commissioned in March'2017. This delay in completion was due to non-supply of gas by ONGC as per GSA.
13	Date of Site Visit.	
	a) The dates on which the Project was monitored by the Regional Office on previous occasion, if any.	On 13.03.2019 Scientist 'C' from Regional Office, Shillong visited the TGBP Plant.
	b) Date of site visit for this monitoring report.	
14	Details of correspondence with project authority for obtaining action plans, information and status of compliance to safeguards.	Six monthly monitoring reports are being submitted to MOE&F, NER, Shillong regularly. Necessary action plan is being taken up.
15	Public appreciation and public complaint on the Project.	No public complaint has been received so far.

संयंत्र प्रमुख / HEAD OF PLANT

टीजीपीपी, नीचसोरा, NEPCO  
Chief General Manager & HOP  
नीचको लि., मोनार्चक  
NEPCO Ltd., Monarchak  
सोनामुड़ा, त्रिपुरा, पिन-799131  
Tonamura, Tripura, Pin-799131

**PART-II**  
**COMPLIANCE CHECKLIST**

Information regarding implementation of terms and conditions of  
environmental clearance for implementation of  
Tripura Gas Based Power Project, Monarchak

Ref:- Letter No. J.13011/4/2001-1A.II(T) dated 27-12-2001 of the Director, Ministry of  
Environmental and Forest, Govt. of India, New Delhi.

Sl. No	Stipulation	Action Taken	Status of Compliance
I	All the conditions stipulated by Tripura State Pollution Control Board vide their letter No.F.6 (3)/TSPCB/CON/87/500MW/ 221-32 dated 9 <sup>th</sup> Feb, 2001 and its subsequent amendments should be strictly implemented.	The conditions stipulated in the NOC and its subsequent amendments are being taken care of / implemented, based on which Consent to Operate was issued. Regular renewal is being carried out. Certificate is valid up to 23.03.2023.	Being complied.
II	Acquisition of land should be restricted to 75 ha including 62 ha of forest land. Separate clearance should be obtained for diversion of forest land under the Forest (Conservation) Act, 1980.	Forest land: 60.472 Ha. Non forest land including Govt. Khash land: 19.825 Ha. <b>Total: 80.297 Ha.</b> Clearance for diversion of forest land for non-forestry use has been conveyed by the Asstt. Inspector general of Forests, Ministry of Environment and Forest, F. C. Division, Govt. of India vide letter No. 8-77/2001-FC dated 06.02.2004.	Complied
III	Stack of height 30 mtrs. should be installed with continuous on line monitoring system.	Considered during design of stack. Height of stack is 30 mtrs.	Complied
IV	NO <sub>x</sub> Emission should be restricted to 50 ppm.	Dry Low NO <sub>x</sub> Burners has been incorporated in the Gas Turbine for limiting NO <sub>x</sub> emission within permissible limit. Real time uploading of data DCS (Data Control System) to the Central Pollution Control Board's web site is operative.	Complied
V	Consumptive water to be drawn from river Gumti.	Water being drawal from river Gumti @ 68.00 cum/hr. Closed circuit cooling Towers installed for conservation of water. Permission for drawl of water has been obtained from Govt. of Tripura vide letter no. F15 (136)/51/WRPC/071931 - 34 dated 4 <sup>th</sup> August 2007. Treatment of effluents and subsequent discharge being done as per laid down terms and conditions. Discharge of treated effluents is well below the limit, i.e., 65 cum/hr.	Complied
VI	Natural Gas shall be used as primary fuel.	Agreement has been drawn with ONGCL for supply of 0.5 MMSCMD of natural gas and is being used as laid down in the terms and conditions.	Complied

Sl No	Stipulation	Action Taken	Status of Compliance
VII	HSD, which will be used as start-up fuel, should be stored in a tank of 25 KL capacity. Chlorine cylinders should be stored in a room provided with chlorine leak detector, alarm with an exhaust fan with scrubber.	No start up fuel is required as the Gas Turbine unit is started through Static Frequency Converter. Chlorine cylinders are stored in a room provided with chlorine leak detector, alarm with an exhaust fan with scrubber.	Complied
VIII	Noise level should be limited to 75 dBA.	Considered during design of equipment.	Complied
IX	Controlling of fugitive dust and regular sprinkling of water in vulnerable areas should be ensured.	Green grass carpeting outside the equipment building has been done.	Complied
X	Afforestation should be undertaken covering at least 1/3 <sup>rd</sup> plant area covering 100m wide green belt.	Plantation along the plant periphery considering a wide green belt and overall coverage of 1/3 <sup>rd</sup> plant area has been done. More plantation as a continuous process is also being observed. A Joint Implementation Committee consisting of representative of local people and NEEPCO Official is formed for implementation of Green Belt development.	Complied
XI	All effluent generated in various plant activities should be collected in the Central Effluent Treatment plant.	Effluent Treatment Plant is designed accordingly and twin central monitoring basins are provided for treatment.	Complied
XII	Machineries should be transported through the existing road network.	All the 28 nos. of OD Consignments have been transported from Kolkata to Badarpur by river route and then to Project site by Road. Non ODC transported by road.	Complied
XIII	Plant should operate only in combined cycle mode for more than 98% of the time and operation in open cycle should be only in case of emergency and for a limited time.	Plant is being operated only in combined cycle mode. Only in case of emergency the plant operated in open cycle mode for a limited time.	Complied
XIV	Regular monitoring of SPM, SO <sub>x</sub> and NO <sub>x</sub> around the power plant should be carried out.	Control & instrumentation for monitoring of SPM etc. have been designed and erected. The SO <sub>x</sub> , NO <sub>x</sub> and SPM data is being monitored on real time basis. The real time uploading of data from DCS to the Central Pollution Control Board's web site is operative.	Complied
XV	The project proponents should advertise in two local newspapers. One should in the vernacular of the locality.	<b>Published in</b> a) Dainik Sambad on 31.01.2002 b) Tripura Times on 31.01.2002 c) Danik Ganadoot on 05.02.2002	Complied
XVI	A monitoring committee should be constituted involving recognised local NGOs, PCB, experts etc.	A committee is formed to ensure effective implementation and compliance of the various environmental stipulations & guidelines indicated in the NOC issued by TSECB and Environmental Clearance	Complied



Sl No	Stipulation	Action Taken	Status of Compliance
		accorded by MOE&F, GOI for TGBP Project.	
XVII	Project Authority should inform the regional office & Ministry the date of final closure and final approval of the project.	The matter will be intimated in due course	Approval of final completion cost will be informed in due course.
XVIII	Full co-operation should be extended to the regional office & Ministry who would be monitoring the compliance of environment status.	Full co-operation is being extended.	Action will be taken as necessary.

*देवेंद्र*  
25/05/2021

संयंत्र प्रमुख / HEAD OF PLANT

टीजीवीपीपी, नीपको/TGBPP NEEPCO

मुख्य महाप्रबन्धक एवं संयंत्र प्रमुख  
Chief General Manager & HOP

नीपको लि., मोनार्चक

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*Sm*