

No. JSPL/ANGUL/EMD/21-22/88

Date: 25th Nov 2021

To,
Ministry of Environment, Forest & Climate Change
Eastern Regional Office
A/3, Chandershekharpur
Bhubaneswar – 751023

Subject: Compliance to Environmental Clearance of Township of M/s. Jindal Steel & Power Limited, Angul

Ref.: Environmental Clearance No. 21 – 83/ 2008 – IA.III dated 2nd June, 2009

Dear Sir,

With Reference to above, we are submitting herewith the half yearly compliance report in respect to Township of M/s Jindal Steel & Power Ltd, Angul, Odisha, for the period of April 2021 – September 2021.

Thanking you,

Yours faithfully,

for Jindal Steel & Power Limited



Alok Sahu

AVP – EMD

Copy to:

- 1) State Pollution Control Board, Odisha
- 2) Central Pollution Control Board, Kolkata

Jindal Steel & Power Ltd.

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Registered Office O. P. Jindal Marg. Hisar. 125 005. Haryana

**Environmental Clearance Compliance of Township of M/s Jindal Steel & Power
Limited, Angul, Odisha**

No. 21-83/2008-IA.III

Date of Accord: 02.06.2009

Period: April 2021 – September 2021

Sl. No.	Conditions	Compliance status
	Part A - Specific Conditions	
I	Construction Phase	
i)	“Consent for Establishment” shall be obtained from OPCB under Air & Water Act and a copy shall be submitted to the ministry before start of any construction work.	Consent to Establish under the Air Act and Water Act has been received from the State Pollution Control Board vide letter no. 19998/Ind-II-NOC-5290 Dated 29.11.10 and a copy has been submitted to MoEF&CC.
ii)	Obtain necessary permission/NOC from Forest Dept. and submit the same to ministry with in 3 Months.	The company had applied for necessary permission/NOC to the State Forest Department to preserve the 52.12 Ac of non forest private land included in DLC out of the 314.87 Ac land as greenbelt and also requested the forest department to do the necessary gap plantation as part of the Wildlife conservation plan of JSPL to be done by the Forest department. Copy of the letter enclosed at Annexure 1 .
iii)	Provision shall be made for the housing of construction labour with in the site with all necessary infrastructure & facilities. Such as fuels for cooking, mobile toilet, STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after completion of the project.	Housing for the construction labor was provided in form good quality porta cabins. They were provided with common kitchen facility with LPG as fuel. A full fledged occupational health center has been provided for health care of all the workers. Pre-employment health survey as well as periodic health check up of the labor force is done regularly. Separate toilet blocks were provided in each block of construction labor settlements. The toilets are connected to septic tank and soak pit systems. All these construction are temporary in nature.
iv)	A first Aid room to be provided in the project both during construction & operation of project.	A full fledged Occupational Health Centre with permanent doctors and visiting specialist has been provided from the starting of the project.
v)	All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development with in the project site.	Complied.
vi)	Disposal of muck during construction phase should not create any adverse effect on the neighboring communities & should be	Complied.

	disposed off safely.	
vii)	Soil & ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals & other toxic contaminants.	Soil and ground water analysis has been done and report attached herewith (Annexure – 2 & 3). Analysis of ground water and basic parameters of soil such as N, P, K, conductivity, chloride, iron, pH, texture water holding capacity is done on 6 monthly basis as treated sewage water is used for irrigation of green belt and garden in the township.
viii)	Construction spoils, including bituminous material & other hazardous materials must not be allowed to contaminate watercourses & dump site for such materials must be secured to avoid leach into ground water.	Complied.
ix)	Any hazardous waste generated during construction phase should be disposed off as per applicable rules & norms with necessary approvals of the Orissa Pollution Control Board	Renewal of Hazardous waste authorization has been obtained from SPCB, Odisha. Used oil generated from DG set is being stored in common waste oil storage shed and sold to waste oil recycler authorized by the State Pollution Control Board.
x)	The diesel generator sets to be used during construction phase should be of low sulphur diesel type and should conform to Environment Protection Rules.	One no. of 250 KVA, one no. of 500 KVA and one no. of 750 KVA DG sets have been provided for backup power during emergency. Low sulphur diesel is use in DG sets. DG set stack monitoring has been done once in 6 months. Stack monitoring report of the same is attached as Annexure – 4 . Noise level of DG sets is being monitored both day and night time and report is attached as Annexure – 5 .
xi)	The diesel required for operating DG sets shall be stored in underground tanks & if required, clearance from Chief Controller of explosives shall be taken.	The diesel required for operating DG sets are stored in 2 nos. underground tanks having capacity of 22 KL each. Clearance from chief controller of explosives is taken (Annexure – 6).
xii)	Vehicles hired for bringing construction material to the site should be in good condition & should have a pollution check certificate & should confirm air & noise emission standard & should operated only during non-peak hours.	Valid PUC certificate along with other statutory documents such as registration & insurance of all vehicles is being monitored by the security at the gate.
xiii)	Ambient noise levels should conform to residential standards both during day & night. And should be closely monitored during construction phase, so as to confirm to the stipulated standards by CPCB/OSPCB.	Noise monitoring is being done on monthly basis on both day & night time and reports are attached as Annexure – 5 . No high noise producing equipments are used in the construction of building.
xiv)	Fly ash should be used as building material in the construction as per the provisions of	All the houses in the township have been constructed by using fly ash bricks. For bricks

	fly ash notification of Sept 1999 and amended as on 27 th Aug'2013.	making the company has installed a 1.17 MTPA capacity fly ash bricks making plant. We have made few block of houses with expanded polystyrene block (EPS)
xv)	Ready mixed concrete must be used in building construction.	Complied.
xvi)	Storm water control and its re-use as per CGWB and BIS standards for various applications.	Storm water drains based on the rainfall has been provided in the developed part of the township. 9 numbers of rainwater recharge structures have been provided.
xvii)	Water demand during construction phase should be reduced by use of pre-mixed concrete, curing agents and other best practices reffered.	Complied.
xviii)	Permission to draw ground water shall be obtained from the competent authority prior to construction/operation of the project.	No groundwater is used for township domestic water consumption. Water drawn from Brahmani river for Integrated Steel Plant is used for township domestic consumption. Water after treatment in drinking water treatment plant (DWTP) of capacity 125m ³ /hr, supplied to the township.
xix)	Separation of grey & black water should be done by the use of dual plumbing line for separation of grey & black water.	The buildings have been provided with dual plumbing system along with separate overhead grey water storage tank to use the treated and recycled water from STP.
xx)	Fixtures for showers, toilet flushing & drinking should be of low flow either by use of aerators or pressure reducing devices or sensors based control.	<p>Following measures have been taken for reducing water consumption:</p> <ul style="list-style-type: none"> • Building has been provided with online flushing system with facility to use a fixed small quantity of water per flushing is used. Few building has been provided with water saving type cisterns with option for small and large flushing as per need. • Aerator type taps are used for reducing the water flow in taps. • Common urinals have been provided with pulse type flushing systems, where small fixed quantity of water is used for flushing.
xxi)	Use of glass may be reduced by upto 40% to reduce electricity consumption and load on air-conditioning. If necessary, use high quality double glass with special reflective coatings in windows.	Minimum use of glass has been made for all residential buildings which are much less than 40% of the surface area of the buildings. Single glass with special reflective coating has been provided to reduce the air conditioning loads.
xxii)	Roof should meet prespective requirement as per Energy Conservation Building Code by using appropriate thermal insulation	All roofs have been provided with brickbat coba insulation of 75 to 150 mm to provide very good thermal insulation.

	material to fulfill requirement.	Presently, roofs of all future buildings have been planned to be provided with insulation cover make up of a layer of thermocool (Expanded Polystyrene) for very good thermal insulation. For roofs, U value of 0.261 W/m ² -degree centigrade and R value of 3.5 m ² -degrees centigrade as per the code has been met.
xxiii)	Opaque wall should meet prescriptive requirement as per Energy Conservation Building code	Cavity wall which is also known as trap masonry is being used in all buildings for heat insulation. This masonry provides one layer of air gap between two layers of bricks. Now as an innovation, the company is using EPS blocks which are reinforced with steel mesh along the surface for construction of walls of buildings. These walls provide very good thermal insulation and keep the buildings 5-6 degree cooler than the ambient temperature. For opaque walls U value of 0.369 W/m ² -degree centigrade and R value of 2.35 m ² -degree centigrade as per code has been met because of these measures
xxiv)	The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments etc as per National Building Code.	The structural safety of the buildings is certified by authorized structural engineer. Three numbers of fire tenders have been procured and pressed into service by the company. Buildings have been provided with adequate setback as per the National Building Code for access by fire tenders.
xxv)	Regular supervision of the above and other measures for monitoring should be in place all through construction phase.	Implementation of all the above measures is monitored 6 monthly basis.
xxvi)	Under the provision of Environmental (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.	Construction work has been started after obtaining of Environmental Clearance and Consent to Establish.
II	Operational Stage	
i)	Installation of STP should be certified by an independent expert and a report in this regard should be submitted to the ministry before the project commissioned for operation.	STP has been fully operational and sample analysis is being done regularly. The report of the same is attached as Annexure – 7 .
ii)	The solid waste generated should be properly collected & segregated. Wet garbage should be composted and dry/inert solid waste should be disposed off to the approved site.	Each household has been provided with three number of collection of segregated waste from source in three parts-Bio degradable kitchen waste, plastic wastes are collected separately in large bins which are again lifted and transported

		<p>separately by a garbage compactor truck.</p> <p>All the segregated waste are disposed off in the following manner:</p> <p>Vermicomposting: A vermicomposting plant has been installed to produce compost from kitchen waste & garden waste.</p> <p>Paper waste: Paper recycling unit has been installed to recycle waste paper into new paper.</p> <p>Solid Waste processing Unit: This unit has been installed to process non-process waste generated from township & Plant in which non process waste after segregation of other non biodegradable waste is being converted into compost through windrow technology.</p>
iii)	Diesel power generating sets proposed as source of back up power for elevators & common area illumination during operation phase should be of enclosed type and conform to rules under EPA act.	<p>One no. of 250 KVA, one no. of 500 KVA and one no. of 750 KVA DG set have been provided for backup power. All the DG sets have been provided with acoustic enclosure and required stack height as per EPA act.</p> <p>DG set stack and noise monitoring report are attached as Annexure – 4 & 5.</p>
iv)	Noise should be controlled to ensure it does not exceed permissible limit.	<p>There are no other source of noise except the DG set and the air blowers of STP. Regular noise monitoring is also done in the township to ensure that the noise levels are within limits in both day and night time.</p>
v)	The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised.	<p>Till September 2021, 143347 no. of trees have been planted in the township. Adequate green belt cover i.e. 33% of the total area is being developed before complete development of the township.</p>
vi)	Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.	<p>Weep holes have been provided in compound walls for free passage of rain water to the catchment.</p>
vii)	Rain water harvesting should be implemented.	<p>9 no of rainwater groundwater recharge structures have been constructed.</p>
viii)	The ground water level & its quality should be monitored regularly.	<p>Ground water quality and level is monitored 6 monthly basis in township area (Annexure – 3 & 8)</p>
ix)	Traffic congestion near the entry & exit points from the roads adjoining the proposed project site must be avoided.	<p>Traffic congestion near the entry & exit points from the roads adjoining the proposed project site is avoided by providing separate entry and exit gates for both heavy and light vehicles.</p>
x)	A report on the energy conservation measures confirming to energy conservation	<p>Cavity wall which is also known as trap masonry is being used in all buildings for heat insulation.</p>

	norms finalise by Bureau of Energy efficiency should be prepared incorporating details about building materials & technology, R & U factors etc.	This masonry provides one layer of air gap between two layers of bricks. Now as an innovation, the company is using EPS blocks which are reinforced with steel mesh along the surface for construction of walls of buildings. These walls provide very good thermal insulation and keep the buildings 5-6 degree cooler than the ambient temperature. For opaque walls U value of 0.369 W/m ² -degree centigrade and R value of 2.35 m ² -degree centigrade as per code has been met because of these measures
xi)	Energy conservation measures like installation of CFLs, TFLs for the lighting the areas outside the building should be integral part of the project and should be in place before project commissioning. Used CFLs and TFLs should be properly collected & disposed off as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible.	Energy conservation measures like LED for lighting has been used. All the used LEDs are stored separately and disposed off through e-waste handlers as per the e-waste rules. 21 nos. of solar street lights have been installed.
xii)	Adequate measures should be taken to prevent odour problem from solid waste processing plant and STP.	Adequate aeration system in equalization tanks of the STP and Activated Carbon Filter & Ozonation for treated wastewater has been installed to prevent odour problem from STP.
xiii)	The buildings should have adequate distance between them to allow movement of fresh air, natural light and ventilation.	All the buildings are designed as per the provision of the National Building code 2005 to ensure movement of fresh air, natural light and ventilation.
	Part B - General Conditions	
i)	The environmental safeguards contained in the EIA report should be implemented in letter and spirit.	Complied or noted as required.
ii)	Six monthly monitoring reports should be submitted to the Ministry and its Regional Office, Bhubaneswar.	
iii)	Office from the Regional Office of MOEF, Bhubaneswar who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of documents submitted to MoEF should be forwarded to the CCF, Regional office of MoEF, Bhubaneswar.	

iv)	In case of any change(s) in scope of the project, the project would require a fresh appraisal by this ministry.	
v)	The ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking the environmental clearance under the provision of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	
vi)	All other statutory clearances such as the approvals for storage of diesel from chief controller of explosives, fire department, civil aviation department, Forest Conservation Act, 1980 and Wild Life protection Act, 1972 shall be obtained as applicable by project proponent from respective competent authority.	
vii)	These stipulations would be enforced among others under the provision of Water (Prevention & Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA notification, 2006.	



Alok Sahu <aloksahu@angul.jspl.com>

Letter to DFO, Angul for Plantation

1 message

Alok Sahu <aloksahu@angul.jspl.com>

Thu, Mar 4, 2021 at 5:33 PM

To: dfoangul@gmail.com, rccfangul@gmail.com, nodal.pccfodisha@gmail.com

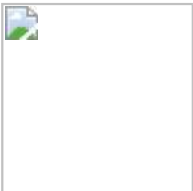
Dear Sir,
Kindly download the enclosed letter.

Kind Regards,

Alok Kumar Sahu

AVP- Environment Management Department

Jindal Steel & Power Limited, Jindal nagar, Chhendipada Road,
SH-63, Angul - 759111 (Orissa) + 91 9777443300



Letter DFO.pdf
3094K

Ref. No : JSPL/LA/ANG/20-21/04

Dt. 20.02.2021

To,
The Divisional Forest Officer
Angul Division,
Angul

Sub : Raising of Green Belt inside the lease area of Jindal Steel & Power Ltd.**Ref : Approved Wild Life Conservation plan for Jindal Steel & Power Ltd, Angul.**

Sir,

This is to bring to your kind notice that Jindal Steel & Power Ltd (JSPL) has acquired about 4418 Ac of Govt. and private land for its 6 MTPA Steel Plant including ancillary facilities in the villages namely Nisha, Niranjanpur, Ramadiha, Bhubanpur, Kaliakata, Kaliakata Jungle, Panpur, Basudevpur, Sankerjang, Sankerjang Jungle, Krushnachandrapur, Badkerjang, Badkerjang Jungle, Jamunda, Jamunda Jungle, Jarada and Paripara of Tehsils Chhendipada & Banarpal in Angul district .

With reference to the provision of the approved Site-specific Conservation Plan for lease area of JSPL project, development of Green Belt in about 350 ha area and maintenance of the same for 5 years shall be taken up by the Divisional Forest Officer, Angul. JSPL has now identified an area of 116 Ac (45 ha) to develop green belt as per the following details:

SI No	Village Name	Total area leased, Ac (Ha)	Area proposed for green belt, Ac (Ha)
1	Niranjanpur	309.61 Ac (125 Ha)	52 Ac (21 ha)
2	Jamunda Jungle	1096.2 Ac (444 Ha)	64 Ac (25 ha)
	Total	1405.82 Ac (569 Ha)	116 Ac (46 Ha)

In the village Niranjanpur, JSPL has acquired 309.61 Ac (125 Ha) of private agriculture land. Subsequently, it was identified that about 52 Ac (21 ha) private agriculture land adjacent to the township area acquired in the village Niranjanpur figures in the DLC report. Therefore, JSPL has excluded the area from township project and propose to maintain this area as green belt. The above land is private agriculture land which JSPL has purchased by paying 100% of the land cost and recorded in the name of JSPL. The plot details are given in Annexure-1.

JSPL also has earmarked patch of area of about 75.34 Ac (30.48 Ha) in its project area adjacent to the ash pond in the village Jamunda Jungle. Out of the 75.34 Ac (30.48 Ha), 11.34 Ac (4.5 Ha) of land will be used for road construction and 64 Ac (25 ha) of this area will be used for plantation purpose.

Jindal Steel & Power Ltd.**Angul Office** Chhendipada Road, SH-63, At/Po-Jindal Nagar, Dist-Angul, Odisha-759111.**T** +91 6761 264191-95, **F** +91 6761 264141-44, **W** www.jindalsteelpower.com**Registered Office** O.P. Jindal Marg, Hisar, 125005, Haryana

We therefore request you to kindly arrange for taking up plantation activities in this 116 Ac (45 ha) of land towards development of Green belt as per approved Wildlife Conservation plan for Jindal Steel & Power Ltd, Angul. JSPL will provide the necessary support such as water source, watch & ward etc at the plantation sites. In case of some un-avoidable circumstances if the forest department unable to take up the plantation JSPL may be allowed to do the same on the above mentioned areas. The location maps of both the areas and copy of the approved Conservation Plan are enclosed herewith.

Thanking You,
Yours Faithfully.

For Jindal Steel & Power Ltd.


(S K Sharma)
Vice President (Legal PR)



Encl.: As above

Copy: 1. Regional Chief Conservator of Forests, Angul
2. Principle Chief Conservator of Forests, Nodal, Bhubaneswar

Annexure-1**Land details of 52 Ac Private land in Village Niranjanpur**

Plot No	Area acquired, (Ac)	Kissam
2	2.830	Taila - I
3	2.240	Taila - I
4	2.490	Taila - I
1/255	4.950	Taila - I
1/289	1.780	Taila - I
1/292	1.700	Taila - I
1/300	2.000	Taila - I
1/301	1.000	Taila - I
1/302	1.000	Taila - I
1/304	1.500	Taila - I
1/305	1.500	Taila - I
1/306	1.500	Taila - I
1/307	1.500	Taila - I
1/308	1.500	Taila - I
1/309	1.500	Taila - I
1/343	2.000	Taila - I
1/348	1.500	Taila - I
1/391	3.130	Taila - I
1/395	2.530	Taila - I
1/396	2.350	Taila - I
1/397	2.120	Taila - I
1/439	5.000	Taila - I
1/446	1.500	Taila - I
1/447	1.500	Taila - I
1/450	1.500	Taila - I
Total	52.120	

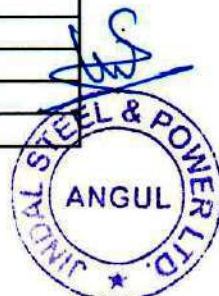


Land details of 75.43 Ac area in Vilage jamunda Jungle

Plot No.	Area (In Ac.)	Kissam of Land
193	0.38	Chhota Jungle
194	0.34	Chhota Jungle
198	0.20	Chhota Jungle
200	0.98	Chhota Jungle
206	0.33	Chhota Jungle
207	0.70	Chhota Jungle
216	0.24	Chhota Jungle
296	0.72	Chhota Jungle
314	0.56	Chhota Jungle
338	0.24	Chhota Jungle
178	0.22	Chhota Jungle
219	0.12	Chhota Jungle
195	0.52	Rasta
215	1.39	Panimahara
291	0.18	Rasta
312	0.26	Chhota Jungle
367	0.06	Rasta
190/1181	0.32	Chhota Jungle
288	0.25	Taila-I
306	0.11	Taila-I
289(1.54	Taila-I
335	0.38	Taila-I
336	0.19	Rasta
337	0.22	Taila-I
294	0.52	Rasta
295	1.47	Taila-I
310	0.92	Taila-I
313	0.20	Taila-I
217	0.25	Taila-I
205	2.04	Taila-I
283	0.70	Taila-I
316	0.37	Taila-I
369	0.16	Rasta
370	0.95	Taila-I
177	0.30	Taila-I
373	0.70	Sarad-III
260	0.40	Taila-I
284	0.49	Sarad-III
285	0.49	Sarad-III
286	0.23	Taila-I
261	1.63	Taila-I
262	0.07	Taila-I
148	0.65	Sarad-II
365	0.10	Taila-I
366	0.09	Sarad-III
368	0.27	Taila-I



Plot No.	Area (In Ac.)	Kissam of Land
168	0.05	Taila-I
170	0.15	Taila-I
218	0.80	Taila-I
307	0.16	Taila-I
308	1.50	Taila-I
315	2.10	Taila-I
339	0.66	Taila-I
340	0.20	Rasta
209	0.38	Sarad-III
211	0.17	Sarad-III
212	1.11	Taila-I
213	0.43	Taila-I
172	0.50	Sarad-III
210	0.37	Sarad-III
201	0.11	Taila-I
202	0.36	Taila-I
176	0.18	Taila-I
203	1.38	Taila-I
297	0.49	Taila-II
345	0.44	Taila-I
346	0.30	Taila-I
348	0.40	Taila-I
190	3.54	Taila-I
347	1.15	Taila-I
356	0.58	Taila-I
357	0.20	Taila-I
355	1.30	Taila-I
363	0.50	Sarad-III
208	1.02	Taila-I
214	0.50	Sarad-III
197	0.43	Taila-I
199	0.65	Taila-I
333	0.35	Sarad-II
343	0.40	Taila-I
344	0.92	Taila-I
271	0.13	Taila-I
280	0.36	Taila-I
281	0.20	Sarad-II
282	0.22	Taila-I
305	0.65	Taila-I
342	0.43	Taila-I
290	1.09	Taila-I
292	0.27	Taila-I
196	1.05	Taila-I
292	0.27	Taila-I
196	1.05	Taila-I
204	2.12	Taila-I
383	0.07	Taila-I
171	1.69	Sarad-II
192/1157	3.88	Taila-I
192	1.58	Taila-I
349	1.01	Taila-I



Plot No.	Area (In Ac.)	Kissam of Land
350	1.60	Taila-I
341	0.12	Taila-I
351	0.36	Taila-I
352	0.15	Taila-I
353	0.15	Dhora
302	1.80	Taila-I
299	0.75	Taila-II
300	4.25	Taila-II
309	0.29	Taila-I
334	0.48	Taila-I
371	0.57	Taila-I
372	0.15	Sarad-II
311	0.11	Taila-I
287	0.12	Taila-I
303	1.19	Taila-I
Total	75.34 Ac	



Coordinates of area for Plantation in project area in Village Jamunda Jungle

Identification point no on map	Latitude	Longitude	Remarks
A	20° 53.564'N	84° 56.568'E	
B	20° 53.406'N	84° 56.567'E	
C	20° 53.291'N	84° 56.569'E	
D	20° 53.244'N	84° 56.581'E	
E	20° 53.214'N	84° 56.615'E	
F	20° 53.222'N	84° 56.745'E	
G	20° 53.341'N	84° 56.791'E	
H	20° 53.439'N	84° 56.829'E	
I	20° 53.521'N	84° 56.852'E	
J	20° 53.544'N	84° 56.709'E	



FINANCIAL FORECAST

- 6.1.0. Based on activities suggested in the Chapter-V broad financial estimate for activities within the lease hold area and in the adjoining forest etc. areas.
- 6.2.0 The following table indicates the cost estimate for measures to be taken inside & outside the project area within 10-years. The cost of these measures shall be deposited with the Forest Department. This mega project will have its impact in the peripheral forest areas covering both Angul forest Division and Satkosia WL Division. All the works under this scheme are to be executed by the Divisional Forest Officer, Angul (T) Division within the project area and by DFO, Angul (T) & Satkosia WL Division outside the project area i.e. in project impact area under the guidance of Conservator of Forests, Angul Circle. The individual break up of the work division wise is to be decided and allotted by C.F., Angul Circle for Angul Forest Division and Satkosia WL Division as per field situation at the time of implementation of the scheme.

Sl. No.	Item of work	Estimated cost (Rs. in Lakhs)
A	Activities to be taken up by the Divisional Forest Officer, Angul inside lease hold area.	
1	Raising of green belt covering about 350 ha. with suitable species and maintenance for 5 years.	100.00
2	Water hole development & grass planting	10.00
3	Fire protection	10.00
4	Awareness promotion including signage	15.00
5	GIS based maps Satellite maps on GIS domain should be procured every year to know the changing profile of the project area/ project impact area in both dry season and wet season for 10 years preferably using the GIS lab of PCCF(WL), Orissa as the project area is very big.	10.00
6	Other unforeseen expenses	6.00
	Total	151.00
B	Activities to be taken by the Divisional Forest Officer of Angul(T) & Satkosia WL Divn. outside the lease hold area .	
01	Protection of forest including support to the VSS/ boundary maintenance/ pillar construction etc.	10.00
02	Fire protection for 10-years including fire lines/ incentives to VSS/ equipment/ squads etc.	10.00
3	Purchase of two vehicles (1 for DFO, Angul office+ DFO, Satkosia WL Divn), engagement of contractual drivers & POL etc. for 10 years.	24.00
4	Creation of game tanks and renovation and maintenance of old game tanks, water bodies, wallowing grounds etc in interior forest areas in both Angul (T) and Satkosia WL Divn.	20.00
5	Habitat improvement: Large scale plantation	30.00



	preferably with fodder, bamboo, fruit bearing species and development of grass land/ meadows Including watch and ward for 5 years in both Angul (T) and Satkosial WL Divn.	
6	Public awareness / Capacity Building in both Angul (T) and Satkosial WL Divn.	10.00
7	Protection/Anti-depredation squad with cost of equipments, incentives, hiring of vehicles, labourers etc for 10 years in both Angul (T) and Satkosial WL Divn.	40.00
8	Corpus fund for paying compassionate grant and wildlife depredation control measures at the time of exigencies of man wild animal conflict in both Angul (T) and Satkosial WL Divn.	10.00
9	Solar fencing & its maintenance	20.00
10	Immunization of livestock in both Angul (T) and Satkosial WL Divn.	3.00
11	Development of communication network / GIS based maps Satellite maps on GIS domain should be procured every year to know the changing profile of the project area/ project impact area in both dry season and wet season for 10 years preferably using the GIS lab of PCCF(WL), Orissa in both Angul (T) and Satkosial WL Divn.	10.00
12	Pollution monitoring mechanism to be developed in consultation with State Pollution Control Board to assess the impact of pollution in the area on the forest and wildlife in both Angul (T) and Satkosial WL Divn.	10.00
13	Development of Infrastructure like VHF sets/ towers, Watch towers, communication equipments like telephones/ computers, peripherals, environmental campaign equipments, repair of staff quarters/ check gates and maintenance in both Angul (T) and Satkosial WL Divn.	15.00
14	Eco-Development/ Income generating livelihood activities in both Angul (T) and Satkosial WL Divn.	10.00
15	Unforeseen & miscellaneous in both Angul (T) and Satkosial WL Divn.	5.00
	Total	227.00
	Grand Total	378.00

(Rupees three crores seventy-eight lakhs) only.

N.B.: All measures for dump reclamation, dust suppression, garbage bins should be taken up including retaining walls, plantation etc. as per the reclamation plan etc to be prepared in terms of the approved mining plan and other guidelines. This component is to be dealt separately as per the above guidelines. Hence no financial forecast on this account is indicated in the conservation plan. The vehicles indicated in Col.3 of Section-B will be purchased and supplied by the user agency in kind and delivered in DFO's of Angul (T) & Satkosia WL Divn offices each.

Approved by PCCF(WL) & CWLW, Orissa.

Wildlife Conservation Officer



Test Report


Document QF : 2501

Page 1 of 2

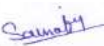
Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030045 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130339 (1) NABL ULR No. :TC592621000008589F Customer Ref. No.: WO Letter Dated :03.04.2021
--	--

Test Report as per IS: NA	With Amendment No.(s):
----------------------------------	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample #	Soil Sample
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number #	NA
g)	D.O.M #	NA
h)	Date of Expiry #	NA
i)	Sample Quantity #	500gm
j)	Batch Size/Location #	NA
k)	Mode of Packing	Packed in poly pack
l)	Date of Receipt	03-08-2021
m)	Date of Start	03-08-2021
n)	Date of Completion	13-08-2021
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 28.07.2021, Marked as D-Type Soil
r)	Test Request Submitted By	Jindal Steel & Power Limited-Angul (Odisha)
s)	Manufactured By #	NA
t)	Supplied By #	NA

PART B : SUPPLEMENTARY INFORMATIONS


Saurabh Sharma
13-08-2021
Reviewer


13-08-2021
Prem Kumar
[Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)

(A Government Approved Test House)

86, Industrial Area, Phase-1, Panchkula-134109 (Haryana)

Phone : (O) 0172-2561543, 2565825

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Test Report

Document QF : 2501

Page 2 of 2

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030045 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130339 (1) NABL ULR No. :TC592621000008589F Customer Ref. No.: WO Letter Dated :03.04.2021
--	--

a. Reference to sampling procedure, whenever applicable	: N/A
b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

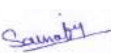
Description				
Description		Soil Sample		
S.No.	Parameters	Method	Specification	Result
Discipline : Chemical				
Group : Pollution & Environment				
1.	General Parameters			
a.	pH Value(1 % sol.)	STP/ITC/EW-20		8.95
b.	Available Nitrogen (% by mass)	APHA-23rd Edition		0.0078
c.	Available Phosphorous (% by mass)	STP/ITC/EW-16		0.0069
d.	Conductivity(μmhos/cm)(1 % sol.)	APHA-23 rd Edition		41.4
e.	Chloride(as Cl)(% by mass)	APHA-23rd Edition		0.0602
f.	Textural Class	STP/ITC/EW-19		Silt

*' represents categories/test parameters not covered under NABL '#' represents Customer Defined Fields

NOTE : NA- Not Applicable, BLQ- Below limit of Quantification, LOQ- Limit of Quantification, Sampling Procedure - SOP/ITC/EW/056

REMARKS :N/A

*******End Of Report*******


Saurabh Sharma
13-08-2021
Reviewer


13-08-2021
PremKumar
[Authorized Signatory]

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Test Report


Document QF : 2501

Page 1 of 3

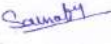
Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030045 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130339 (2) Customer Ref. No.: WO Letter Dated :03.04.2021
--	---


Test Report as per IS:NA	With Amendment No.(s):
---------------------------------	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample #	Soil Sample
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number #	NA
g)	D.O.M #	NA
h)	Date of Expiry #	NA
i)	Sample Quantity #	500gm
j)	Batch Size/Location #	NA
k)	Mode of Packing	Packed in poly pack
l)	Date of Receipt	03-08-2021
m)	Date of Start	03-08-2021
n)	Date of Completion	13-08-2021
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 28.07.2021, Marked as D-Type Soil
r)	Test Request Submitted By	Jindal Steel & Power Limited-Angul (Odisha)
s)	Manufactured By #	NA
t)	Supplied By #	NA

PART B : SUPPLEMENTARY INFORMATIONS


Saurabh Sharma
13-08-2021
Reviewer


13-08-2021
PremKumar
[Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)

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Test Report

Document QF : 2501

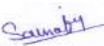
Page 2 of 3

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030045 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130339 (2) Customer Ref. No. :WO Letter Dated :03.04.2021
--	---

a.	Reference to sampling procedure, whenever applicable	: N/A
b.	Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c.	Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

Description				
Description		Soil Sample		
S.No.	Parameters	Method	Specification	Result
	Discipline : Chemical			
	Group : Pollution & Environment			
1.	General Parameters			
a.	Available Potassium (% by mass)	STP/ITC/EW-11		0.086
b.	Lead(as Pb)(mg/kg)	STP/ITC/EW-07		4.33
c.	Iron(as Fe ₂ O ₃)(% by mass)	STP/ITC/EW-07		0.59
d.	Zinc(as Zn)(mg/kg)	STP/ITC/EW-07		18.38
e.	Copper(as Cu)(mg/kg)	STP/ITC/EW-07		3.88
f.	Nickel(as Ni)(mg/kg)	STP/ITC/EW-07		5.03
g.	Total Chromium(as Cr)(mg/kg)	STP/ITC/EW-07		6.58
h.	Mercury(as Hg)(mg/kg)	STP/ITC/EW-07		BLQ(LOQ:1.0)
i.	Cadmium(as Cd)(mg/kg)	STP/ITC/EW-07		BLQ(LOQ:1.0)
j.	Arsenic(as As)(mg/kg)	STP/ITC/EW-07		BLQ(LOQ:1.0)
k.	Manganese as Mn, (mg/kg)	STP/ITC/EW-07		124.07
l.	Cobalt as Co (mg/kg)	STP/ITC/EW-07		BLQ(LOQ:1.0)
m.	Water Holding Capacity (%)	ITC/STP/BM-CH/01		1.38
n.	Bulk Density,gm/cc	APHA Guidelines		1.43

represents Customer Defined Fields


Saurabh Sharma
13-08-2021
Reviewer


13-08-2021
PremKumar
[Authorized Signatory]

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Test Report

Document QF : 2501

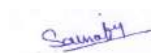
Page 3 of 3

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030045 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130339 (2) Customer Ref. No.: WO Letter Dated :03.04.2021
--	---


NOTE : NA- Not Applicable, BLQ- Below limit of Quantification, LOQ- Limit of Quantification, Sampling Procedure - SOP/ITC/EW/056

REMARKS :N/A

*****End Of Report*****



Saurabh Sharma
13-08-2021
Reviewer



13-08-2021
PremKumar
[Authorized Signatory]

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Test Report


Document QF : 2501

Page 1 of 2

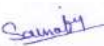
Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030044 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130338 (1) NABL ULR No. :TC592621000008588F Customer Ref. No.: WO Letter Dated :03.04.2021
--	--

Test Report as per IS: NA	With Amendment No.(s):
----------------------------------	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample #	Soil Sample
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number #	NA
g)	D.O.M #	NA
h)	Date of Expiry #	NA
i)	Sample Quantity #	500gm
j)	Batch Size/Location #	NA
k)	Mode of Packing	Packed in poly pack
l)	Date of Receipt	03-08-2021
m)	Date of Start	03-08-2021
n)	Date of Completion	13-08-2021
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 28.07.2021, Marked as G+11
r)	Test Request Submitted By	Jindal Steel & Power Limited-Angul (Odisha)
s)	Manufactured By #	NA
t)	Supplied By #	NA

PART B : SUPPLIMENTARY INFORMATIONS


Saurabh Sharma
13-08-2021
Reviewer


13-08-2021
Prem Kumar
[Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)

(A Government Approved Test House)

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Test Report

Document QF : 2501

Page 2 of 2

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030044 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130338 (1) NABL ULR No. :TC592621000008588F Customer Ref. No.: WO Letter Dated :03.04.2021
--	--

a. Reference to sampling procedure, whenever applicable	: N/A
b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

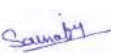
Description				
Description		Soil Sample		
S.No.	Parameters	Method	Specification	Result
Discipline : Chemical				
Group : Pollution & Environment				
1. General Parameters				
a.	pH Value(1 % sol.)	STP/ITC/EW-20		7.51
b.	Available Nitrogen (% by mass)	APHA-23rd Edition		0.0056
c.	Available Phosphorous (% by mass)	STP/ITC/EW-16		0.0079
d.	Conductivity(μmhos/cm)(1 % sol.)	APHA-23 rd Edition		24.4
e.	Chloride(as Cl)(% by mass)	APHA-23rd Edition		0.0701
f.	Textural Class	STP/ITC/EW-19		Silt

*' represents categories/test parameters not covered under NABL '#' represents Customer Defined Fields

NOTE : NA- Not Applicable, BLQ- Below limit of Quantification, LOQ- Limit of Quantification, Sampling Procedure - SOP/ITC/EW/056

REMARKS :N/A

*****End Of Report*****


Saurabh Sharma
13-08-2021
Reviewer


13-08-2021
PremKumar
[Authorized Signatory]

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Test Report


Document QF : 2501

Page 1 of 3

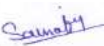
Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030044 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130338 (2) Customer Ref. No. :WO Letter Dated :03.04.2021
--	---

Test Report as per IS:NA	With Amendment No.(s):
---------------------------------	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample #	Soil Sample
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number #	NA
g)	D.O.M #	NA
h)	Date of Expiry #	NA
i)	Sample Quantity #	500gm
j)	Batch Size/Location #	NA
k)	Mode of Packing	Packed in poly pack
l)	Date of Receipt	03-08-2021
m)	Date of Start	03-08-2021
n)	Date of Completion	13-08-2021
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 28.07.2021, Marked as G+11
r)	Test Request Submitted By	Jindal Steel & Power Limited-Angul (Odisha)
s)	Manufactured By #	NA
t)	Supplied By #	NA

PART B : SUPPLIMENTARY INFORMATIONS


Saurabh Sharma
13-08-2021
Reviewer


13-08-2021
Prem Kumar
[Authorized Signatory]

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Test Report

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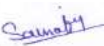
Page 2 of 3

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030044 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130338 (2) Customer Ref. No. :WO Letter Dated :03.04.2021
--	---

a. Reference to sampling procedure, whenever applicable	: N/A
b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

Description				
Description	Soil Sample			
S.No.	Parameters	Method	Specification	Result
Discipline : Chemical				
Group : Pollution & Environment				
1. General Parameters				
a.	Available Potassium (% by mass)	STP/ITC/EW-11		0.0078
b.	Lead(as Pb)(mg/kg)	STP/ITC/EW-07		4.14
c.	Iron(as Fe ₂ O ₃)(% by mass)	STP/ITC/EW-07		0.38
d.	Zinc(as Zn)(mg/kg)	STP/ITC/EW-07		15.50
e.	Copper(as Cu)(mg/kg)	STP/ITC/EW-07		1.73
f.	Nickel(as Ni)(mg/kg)	STP/ITC/EW-07		2.80
g.	Total Chromium(as Cr)(mg/kg)	STP/ITC/EW-07		4.72
h.	Mercury(as Hg)(mg/kg)	STP/ITC/EW-07		BLQ(LOQ:1.0)
i.	Cadmium(as Cd)(mg/kg)	STP/ITC/EW-07		BLQ(LOQ:1.0)
j.	Arsenic(as As)(mg/kg)	STP/ITC/EW-07		BLQ(LOQ:1.0)
k.	Manganese as Mn, (mg/kg)	STP/ITC/EW-07		127.65
l.	Cobalt as Co (mg/kg)	STP/ITC/EW-07		BLQ(LOQ:1.0)
m.	Water Holding Capacity (%)	ITC/STP/BM-CH/01		1.30
n.	Bulk Density,gm/cc	APHA Guidelines		1.44

represents Customer Defined Fields


Saurabh Sharma
13-08-2021
Reviewer


13-08-2021
PremKumar
[Authorized Signatory]

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Test Report

Document QF : 2501

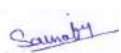
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Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030044 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130338 (2) Customer Ref. No. :WO Letter Dated :03.04.2021
--	---

NOTE : NA- Not Applicable, BLQ- Below limit of Quantification, LOQ- Limit of Quantification, Sampling Procedure - SOP/ITC/EW/056

REMARKS :N/A

*****End Of Report*****


Saurabh Sharma
13-08-2021
Reviewer


13-08-2021
PremKumar
[Authorized Signatory]

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Test Report


Document QF : 2501

Page 1 of 5

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030039 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130329 (1) NABL ULR No. :TC592621000008573F Customer Ref. No.: WO Letter Dated :03.04.2021
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Test Report as per IS: BIS Specification IS:10500-2012	With Amendment No.(s): 01 to 03
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PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample #	Township Monitoring Bore Well water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number #	NA
g)	D.O.M #	NA
h)	Date of Expiry #	NA
i)	Sample Quantity #	7 Ltr
j)	Batch Size/Location #	NA
k)	Mode of Packing	Packed in bottles & in cans
l)	Date of Receipt	03-08-2021
m)	Date of Start	03-08-2021
n)	Date of Completion	13-08-2021
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. Mr. Jit on 28.07.2021, Sample from Township Monitoring Bore Well Water
r)	Test Request Submitted By	Jindal Steel & Power Limited-Angul (Odisha)
s)	Manufactured By #	NA
t)	Supplied By #	NA

PART B : SUPPLIMENTARY INFORMATIONS



13-08-2021
Gaurav Khandelwal
[Authorized Signatory]



Saurabh Sharma
13-08-2021
Reviewer



13-08-2021
Prem Kumar
[Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)

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Test Report

Document QF : 2501


Page 2 of 5

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030039 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130329 (1) NABL ULR No. :TC592621000008573F Customer Ref. No.: WO Letter Dated :03.04.2021
--	--

a. Reference to sampling procedure, whenever applicable	: N/A
b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

Description					
Description		Clear colorless liquid			
S.No.	Parameters	Method	Acceptable Limit	Permissible Limit	Result
	Discipline : Chemical				
	Group : Water				
1.	Organoleptic & Physical Parameter				
a.	Colour (Hazen)	IS:3025(Part4):1983(RA:2017)amd. no1	5 Max.	15 Max.	4
b.	Taste	IS:3025(Part 8):1984(RA:2017)	Agreeable	-	Agreeable
c.	Odour	IS:3025(Part 5):1983(RA:2017)	Agreeable	-	Agreeable
d.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.5-8.5	No relaxation	7.02
e.	Turbidity(NTU)	IS:3025(Part 10):1984(RA:2017)	1 Max.	5 Max.	<0.5
f.	Total Dissolved Solids,(mg/l)	IS:3025(Part 16):1984(RA:2006)	500 Max.	2000 Max.	94
2.	Parameters Concerning Undesirable Substances in excess amount				
a.	Aluminium as Al, (mg/l)	IS:3025(Part 55):RA2014	0.03 Max.	0.2 Max.	BLQ(LOQ:0.02)
b.	Ammonia (as total ammonia-N) (mg/l)	IS:3025(Part 34):1988(RA:2014)	0.5 Max.	No Relaxation	BLQ(LOQ:0.1)
c.	Anionic detergent(as MBAS),(mg/l)	IS:13428:2005(RA:2009)-Annex K	0.2 Max.	1.0 Max.	BLQ(LOQ:0.05)


13-08-2021
Gaurav Khandelwal
[Authorized Signatory]


13-08-2021
Saurabh Sharma
Reviewer


13-08-2021
Prem Kumar
[Authorized Signatory]

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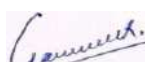
Test Report

Document QF : 2501

Page 3 of 5

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030039 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130329 (1) NABL ULR No. :TC592621000008573F Customer Ref. No.: WO Letter Dated :03.04.2021
--	--

d.	Barium (as Ba) (mg/l)	IS:13428:2005(RA:2014)Annex. F/IS:3025(P-65)	0.7 Max.	No relaxation	BLQ(LOQ:0.3)
e.	Boron (as B) (mg/l)	Apha 23rd Edn.2017-3120 B/IS:3025(Part 57):2004(RA:2017)	0.5 Max.	2.4 Max.	BLQ(LOQ:0.5)
f.	Calcium(as Ca), (mg/l)	IS:3025(Part 40):1991(RA:2014) amd no 1	75 Max.	200 Max.	21.4
g.	Chloramines (as Cl ₂), (mg/l)	IS:3025(Part 26):1986 amd no 1(RA 2014)	4.0 Max.	No relaxation	BLQ(LOQ:0.02)
h.	Chloride(as Cl) (mg/l)	IS:3025(Part 32):1988(RA:2014)	250 Max.	1000 Max.	8
i.	Copper (as Cu) (mg/l)	IS:3025(P-65)	0.05 Max.	1.5 Max.	0.009
j.	Fluoride as F (mg/l)	IS:3025(Part 60):2008 amd. no 1(RA:2013)	1.0 Max.	1.5 Max.	BLQ(LOQ:0.1)
k.	Phenolic compounds (as C ₆ H ₅ OH), (mg/l)	IS:3025(P-43)	0.001 Max.	0.002 Max.	BLQ(LOQ:0.001)
l.	Free Residual Chlorine, (mg/l)	IS:3025(P-26)	0.2 Min.	1.0 Max.	Not Applicable
m.	Iron (as Fe) (mg/l)	IS:3025(Part 53):2003(RA:2014)	1.0 Max.	No relaxation	BLQ(LOQ:0.01)
n.	Magnesium as Mg (mg/l)	IS:3025(Part 46):1994 amd. no. 2(RA:2014)	30 Max.	100 Max.	3.5
o.	Manganese as Mn, (mg/l)	Apha 23rd Edn.2017-3125 B/IS:3025(Part 59):2004(RA:2017)	0.1 Max.	0.3 Max.	BLQ(LOQ:0.1)
p.	Mineral Oil, (mg/l)	Clause 6 of IS:3025(Part39)	0.5 Max.	No Relaxation	BLQ(LOQ: 0.01)
q.	Nitrate as NO ₃ (mg/l)	IS:3025(Part 34):1988(RA:2014)	45 Max.	No Relaxation	BLQ(LOQ:1.0)
r.	Selenium (as Se) (mg/l)	IS:3025(P-65)	0.01 Max.	No Relaxation	BLQ(LOQ:0.002)
s.	Silver (as Ag) (mg/l)	IS:3025(P-65)	0.1 Max.	No Relaxation	BLQ(LOQ:0.002)
t.	Sulphate(as SO ₄) (mg/l)	IS:3025(Part 24):1986(RA:2014)	200 Max.	400 Max.	14



13-08-2021
Gaurav Khandelwal
[Authorized Signatory]



Saurabh Sharma
13-08-2021
Reviewer



13-08-2021
Prem Kumar
[Authorized Signatory]

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Test Report

Document QF : 2501

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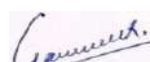
Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030039
	Sample Reg. Date :03-08-2021
	Report Date :13-08-2021
	Report No. :ICE-2108130329 (1)
	NABL ULR No. :TC592621000008573F
	Customer Ref. No.: WO
	Letter Dated :03.04.2021

u.	Sulphide as H ₂ S, (mg/l)	IS:3025(Part 29)	0.05 Max.	No Relaxation	BLQ(LOQ:0.05)
v.	Total Alkalinity(as CaCO ₃)(mg/l)	IS:3025(Part 23)	200 Max.	600 Max.	79
w.	Total Hardness(as CaCO ₃), (mg/l)	IS 3025 (Part 21)	200 Max.	600 Max.	68
x.	Zinc(as Zn)(mg/l)	IS:3025(P-65)	5 Max.	15 Max.	1.016
3.	Parameters Concerning Toxic Substances				
a.	Cadmium(as Cd)(mg/l)	IS:3025(P-65)	0.003 Max.	No Relaxation	BLQ(LOQ:0.002)
b.	Cyanide(asCN)(mg/l)	IS:3025(Part 27)	0.05 Max.	No Relaxation	BLQ(LOQ:0.01)
c.	Lead(as Pb)(mg/l)	IS:3025(P-65)	0.01 Max.	No Relaxation	0.007
d.	Mercury(as Hg)(mg/l)	IS:3025(P-65)	0.001 Max.	No Relaxation	BLQ(LOQ:0.001)
e.	Molybdenum(as Mo)(mg/l)	IS:3025(P-65)	0.07 Max.	No Relaxation	BLQ(LOQ:0.002)
f.	Nickel(as Ni) (mg/l)	IS:3025(P-65)	0.02 Max.	No Relaxation	BLQ(LOQ:0.002)
g.	Total Arsenic(as As)(mg/l)	IS:3025(P-65)	0.01 Max.	No relaxation	BLQ(LOQ:0.002)
h.	Total Chromium(as Cr)(mg/l)	IS:3025(P-65)	0.05 Max.	No Relaxation	BLQ(LOQ:0.002)
	Discipline : Biological				
	Group : Water				
1.	Microbiological Tests				
a.	E.Coli/100 ml	IS:15185(Membrane Filtration Method)	Shall not be detectable in any 100 ml sample	-	Absent
b.	Total Coliform Count/100 ml	IS:15185(Membrane Filtration Method)	Shall not be detectable in any 100 ml sample	-	Absent

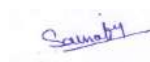
*' represents categories/test parameters not covered under NABL '#' represents Customer Defined Fields

NOTE : NA- Not Applicable, BLQ- Below limit of Quantification, LOQ- Limit of Quantification, Sampling Procedure - SOP/ITC/EW/030,

REMARKS :The above referred sample of Township Monitoring Bore Well water conforms to BIS Specification IS:10500-2012 with upto date amtds with respect to the above tests.



13-08-2021
Gaurav Khandelwal
[Authorized Signatory]



Saurabh Sharma
13-08-2021
Reviewer



13-08-2021
Prem Kumar
[Authorized Signatory]

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Test Report

Document QF : 2501

Page 5 of 5

Issued To

Jindal Steel & Power Limited
SH-63, Chendipada Road, Jindal Nagar, Angul
Angul

Sample Reg. No. :E01-2108030039
Sample Reg. Date :03-08-2021
Report Date :13-08-2021
Report No. :ICE-2108130329 (1)
NABL ULR No. :TC592621000008573F
Customer Ref. No.:WO
Letter Dated :03.04.2021

*****End Of Report*****



13-08-2021
Gaurav Khandelwal
[Authorized Signatory]



Saurabh Sharma
13-08-2021
Reviewer



13-08-2021
PremKumar
[Authorized Signatory]

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Test Report

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Page 1 of 2

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030068 Sample Reg. Date :03-08-2021 Report Date :12-08-2021 Report No. :ICE-2108120313 NABL ULR No. :TC592621000008557F Customer Ref. No.: WO Letter Dated :03.04.2021
--	--

Test Report as per :	: EPA Act 1986/PCLS/2010,G.S.R 281(E),Dated- 07.03.2016
General Information : Name of the emission source monitored (a) Rated Capacity (b) Capacity on sampling day (c) Type of fuel used & its consumption (d) Normal operating schedule 2. Stack Identification 3.Type of Stack/Duct 4.Stack Height from Ground Level(m) Diameter of Stack (mtr) (6) Sampling Duration(minutes) Purpose of Monitoring (8) Air Pollution control measure (a) Status (9) Fugitive Emission,if any	: Township DG (500 KVA) : 500 kVA : 86% : HSD & 10 ltr/hr : As required : Stack attached to Township DG (500 KVA) : M.S. : 6.5 : 0.15 : 36 : To assess the pollution load : Not Applicable : - : Nil
Observations : Flue Gas Temperature, °C,Avg. Flue Gas Velocity(m/s),Avg. Volumetric Flow Rate(Nm ³ /hr.) Ambient Air Temperature, °C Barometric Pressure, mmHg	: 297 : 27.98 : 888.52 : 34 : 726

S.No.	Parameters	Method	Specification	Result
	Discipline : Chemical			
	Group : Atmospheric Pollution			
1.	General Parameters			
a.	Particulate Matter,mg/Nm ³	IS:11255(P-1)	50 Max.	21
b.	Sulphur Dioxide(SO ₂),mg/Nm ³	IS:11255(P-2)	Not Specified	6

Saurabh Sharma
12-08-2021
Reviewer

12-08-2021
PremKumar
[Authorized Signatory]

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Test Report

Document QF : 2501
Page 2 of 2

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030068 Sample Reg. Date :03-08-2021 Report Date :12-08-2021 Report No. :ICE-2108120313 NABL ULR No. :TC592621000008557F Customer Ref. No.: WO Letter Dated :03.04.2021
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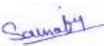
c.	Oxides of Nitrogen(As NO ₂),mg/m ³	IS:11255(P-7)	Not Specified	105
d.	Carbon Monoxide(as CO)(mg/Nm ³)	IS:13270	Not Specified	209
e.	Carbon Dioxide (CO ₂), %	IS:13270	Not Specified	4.8
f.	Oxygen (O ₂), % v/v	IS:13270	Not Specified	16.7
g.	Moisture Content (% by mass)	IS: 11255 (P-3)	Not Specified	<0.2

'#' represents Customer Defined Fields

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by lab rep. on dated 29.07.2021, Sampling Procedure - SOP/ITC/EW/056

REMARKS :N/A

*****End Of Report*****


Saurabh Sharma
12-08-2021
Reviewer


12-08-2021
PremKumar
[Authorized Signatory]

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Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030069 Sample Reg. Date :03-08-2021 Report Date :12-08-2021 Report No. :ICE-2108120319 NABL ULR No. :TC592621000008558F Customer Ref. No. :WO Letter Dated :03.04.2021
--	--

Test Report as per :	: EPA Act 1986/PCLS/2010,G.S.R 281(E),Dated- 07.03.2016
General Information :	
Name of the emission source monitored	: DG Set (750 KVA)
(a) Rated Capacity	: 750 kVA
(b) Capacity on sampling day	: 86%
(c) Type of fuel used & its consumption	: HSD & 28 ltr/hr
(d) Normal operating schedule	: As required
2. Stack Identification	: Stack attached to DG Set (750 KVA)
3.Type of Stack/Duct	: M.S.
4.Stack Height from Ground Level(m)	: 9.9
Diameter of Stack (mtr)	: 0.2
(6) Sampling Duration(minutes)	: 20
Purpose of Monitoring	: To assess the pollution load
(8) Air Pollution control measure	: Not Applicable
(a) Status	: -
(9) Fugitive Emission,if any	: Nil
Observations :	
Flue Gas Temperature, °C,Avg.	: 183
Flue Gas Velocity(m/s),Avg.	: 17.73
Volumetric Flow Rate(Nm ³ /hr.)	: 1251.17
Ambient Air Temperature, °C	: 34
Barometric Pressure, mmHg	: 726

S.No.	Parameters	Method	Specification	Result
	Discipline : Chemical			
	Group : Atmospheric Pollution			
1.	General Parameters			
a.	Particulate Matter(mg/Nm ³)	IS:11255(P-1)	50 Max.	24
b.	Sulphur Dioxide(SO ₂),mg/Nm ³	IS:11255(P-2)	Not Specified	12

Saurabh Sharma
12-08-2021
Reviewer

12-08-2021
PremKumar
[Authorized Signatory]

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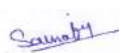
c.	Oxides of Nitrogen(NO ₂),mg/Nm ³	IS:11255(P-7)	Not Specified	226
d.	Carbon Monoxide(as CO)(mg/Nm ³)	IS:13270	Not Specified	318
e.	Carbon Dioxide (CO ₂), %	IS:13270	Not Specified	5.0
f.	Oxygen (O ₂), % v/v	IS:13270	Not Specified	15.8
g.	Moisture Content (% by mass)	IS: 11255 (P-3)	Not Specified	<0.2

'#' represents Customer Defined Fields

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by lab rep. on dated 29.07.2021, Sampling Procedure - SOP/ITC/EW/056

REMARKS :N/A

*****End Of Report*****


Saurabh Sharma
12-08-2021
Reviewer


12-08-2021
PremKumar
[Authorized Signatory]

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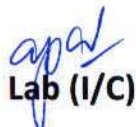
Ref. No.: EMD/LAB/2021-22/13

Date: 15.04.2021

AMBIENT NOISE MONITORING REPORT

Area : Township
Monitoring date : 14.04.21
Monitoring done by : EMD

Sl. No.	Location	Result dB (A)	
		Day time (6 am – 10 pm)	Night time (10 pm – 6 am)
1	O.H.C (N20°54.079' E85°00.140')	53.1	41.2
2	HOSTEL-4 (N20° 53.978' E85°00.580')	54.2	40.8
3	O.P.J.S. (N20° 54.051' E85°00.825')	53.1	41.6
4	FLAG POST (N20° 54.280' E85°00.713')	54.0	43.8
5	S.T.P. (N20° 54.607' E85°00.623')	53.2	43.2
6	EDEN GARDEN (N20° 54.713' E85°00.381')	51.2	40.2
7	E-12 (N20° 54.625' E85°00.392')	50.6	39.7
8	B-3 (N20°54.624' E85°00.282')	51.7	41.6
9	E.D. BANGLOW (N20° 54.542' E85°00.477')	52.1	41.9
10	D.G-1 (N20° 54.772' E85°00.268')	54.3	43.2
11	D.G-2 (N20° 54.116' E85°00.576')	52.6	43.2
12	G+11 BLOCK (N20° 54.600' E85°00.523')	51.5	44.2
Standard		55	45



Lab (I/C)



HOD (EMD)

Ref. No.: EMD/LAB/2021-22/30

Date: 17.05.2021

AMBIENT NOISE MONITORING REPORT

Area : Township
Monitoring date : 12.05.21
Monitoring done by : EMD

Sl. No.	Location	Result dB (A)	
		Day time (6 am – 10 pm)	Night time (10 pm – 6 am)
1	O.H.C (N20°54.079' E85°00.140')	51.2	40.3
2	HOSTEL-4 (N20° 53.978' E85°00.580')	53.1	41.3
3	O.P.J.S. (N20° 54.051' E85°00.825')	54.2	43.1
4	FLAG POST (N20° 54.280' E85°00.713')	52.2	40.9
5	S.T.P. (N20° 54.607' E85°00.623')	53.7	44.2
6	EDEN GARDEN (N20° 54.713' E85°00.381')	54.3	39.4
7	E-12 (N20° 54.625' E85°00.392')	51.6	42.8
8	B-3 (N20°54.624' E85°00.282')	53.9	43.2
9	E.D. BANGLOW (N20° 54.542' E85°00.477')	51.0	38.4
10	D.G-1 (N20° 54.772' E85°00.268')	51.6	41.2
11	D.G-2 (N20° 54.116' E85°00.576')	53.4	42.6
12	G+11 BLOCK (N20° 54.600' E85°00.523')	52.8	44.7
Standard		55	45


Lab (I/C)


HOD (EMD)


Ref. No.: EMD/LAB/2021-22/47

Date: 16.06.2021

AMBIENT NOISE MONITORING REPORT

Area : Township
Monitoring date : 14.06.21
Monitoring done by : EMD

Sl. No.	Location	Result dB (A)	
		Day time (6 am – 10 pm)	Night time (10 pm – 6 am)
1	O.H.C (N20°54.079' E85°00.140')	50.2	41.5
2	HOSTEL-4 (N20° 53.978' E85°00.580')	52.6	42.9
3	O.P.J.S. (N20° 54.051' E85°00.825')	51.5	41.7
4	FLAG POST (N20° 54.280' E85°00.713')	53.2	39.7
5	S.T.P. (N20° 54.607' E85°00.623')	51.7	42.1
6	EDEN GARDEN (N20° 54.713' E85°00.381')	51.9	40.6
7	E-12 (N20° 54.625' E85°00.392')	53.4	42.8
8	B-3 (N20°54.624' E85°00.282')	51.7	42.6
9	E.D. BANGLOW (N20° 54.542' E85°00.477')	51.7	40.4
10	D.G-1 (N20° 54.772' E85°00.268')	51.9	42.3
11	D.G-2 (N20° 54.116' E85°00.576')	52.7	42.9
12	G+11 BLOCK (N20° 54.600' E85°00.523')	51.8	42.7
Standard		55	45


Lab (I/C)


HOD (EMD)

Ref. No.: EMD/LAB/2021-22/63

Date: 19.07.2021

AMBIENT NOISE MONITORING REPORT

Area : Township
Monitoring date : 12.07.21
Monitoring done by : EMD

Sl. No.	Location	Result dB (A)	
		Day time (6 am – 10 pm)	Night time (10 pm – 6 am)
1	O.H.C (N20° 54.079' E85° 00.140')	51.3	43.9
2	HOSTEL-4 (N20° 53.978' E85° 00.580')	50.1	42.5
3	O.P.J.S. (N20° 54.051' E85° 00.825')	52.6	40.7
4	FLAG POST (N20° 54.280' E85° 00.713')	51.7	41.7
5	S.T.P. (N20° 54.607' E85° 00.623')	54.1	43.8
6	EDEN GARDEN (N20° 54.713' E85° 00.381')	52.5	41.6
7	E-12 (N20° 54.625' E85° 00.392')	53.1	40.7
8	B-3 (N20° 54.624' E85° 00.282')	50.8	43.6
9	E.D. BANGLOW (N20° 54.542' E85° 00.477')	52.7	41.3
10	D.G-1 (N20° 54.772' E85° 00.268')	53.7	41.7
11	D.G-2 (N20° 54.116' E85° 00.576')	53.9	43.2
12	G+11 BLOCK (N20° 54.600' E85° 00.523')	51.4	43.7
Standard		55	45


Lab (I/C)


HOD (EMD)

Ref. No.: EMD/LAB/2021-22/81

Date: 14.08.2021

AMBIENT NOISE MONITORING REPORT

Area : Township
Monitoring date : 11.08.21
Monitoring done by : EMD

Sl. No.	Location	Result dB (A)	
		Day time (6 am – 10 pm)	Night time (10 pm – 6 am)
1	O.H.C (N20°54.079' E85°00.140')	52.9	41.2
2	HOSTEL-4 (N20° 53.978' E85°00.580')	52.7	43.6
3	O.P.J.S. (N20° 54.051' E85°00.825')	53.1	41.9
4	FLAG POST (N20° 54.280' E85°00.713')	53.7	43.8
5	S.T.P. (N20° 54.607' E85°00.623')	53.7	42.7
6	EDEN GARDEN (N20° 54.713' E85°00.381')	51.8	40.6
7	E-12 (N20° 54.625' E85°00.392')	52.6	42.8
8	B-3 (N20°54.624' E85°00.282')	53.8	44.1
9	E.D. BANGLOW (N20° 54.542' E85°00.477')	52.3	42.6
10	D.G-1 (N20° 54.772' E85°00.268')	51.9	40.3
11	D.G-2 (N20° 54.116' E85°00.576')	52.8	41.6
12	G+11 BLOCK (N20° 54.600' E85°00.523')	50.2	40.5
Standard		55	45

apal
Lab (I/C)

[Signature]
HOD (EMD)


Ref. No.: EMD/LAB/2021-22/97


Date: 16.09.2021

AMBIENT NOISE MONITORING REPORT

Area : Township
Monitoring date : 14.09.21
Monitoring done by : EMD

Sl. No.	Location	Result dB (A)	
		Day time (6 am – 10 pm)	Night time (10 pm – 6 am)
1	O.H.C (N20° 54.079' E85° 00.140')	53.2	42.1
2	HOSTEL-4 (N20° 53.978' E85° 00.580')	50.0	41.3
3	O.P.J.S. (N20° 54.051' E85° 00.825')	52.7	43.2
4	FLAG POST (N20° 54.280' E85° 00.713')	51.7	42.8
5	S.T.P. (N20° 54.607' E85° 00.623')	54.2	41.8
6	EDEN GARDEN (N20° 54.713' E85° 00.381')	53.7	42.6
7	E-12 (N20° 54.625' E85° 00.392')	52.9	43.5
8	B-3 (N20° 54.624' E85° 00.282')	52.6	41.8
9	E.D. BANGLOW (N20° 54.542' E85° 00.477')	52.8	40.7
10	D.G-1 (N20° 54.772' E85° 00.268')	53.8	40.2
11	D.G-2 (N20° 54.116' E85° 00.576')	54.1	41.7
12	G+11 BLOCK (N20° 54.600' E85° 00.523')	52.8	42.7
Standard		55	45


Lab (I/C)


HOD (EMD)

Annexure 6



भारत सरकार
Government of India
वाणिज्य और उद्योग मंत्रालय
Ministry of Commerce & Industry
पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पैसो)
Petroleum & Explosives Safety Organisation (PESO)
F-35/A, बी. जे. बी. नगर,
भुवनेश्वर - 751014
F-35/A, BJB Nagar,
Bhubaneswar - 751014

E-mail : dyccehub@explosives.gov.in

Phone/Fax No : 0674-2433370, 2433390 Fax 2430656

संख्या /No. : P/EC/OR/14/1461 (P212117)

दिनांक /Dated : 01/12/2017

सेवा में /To,

M/s. Jindal Steel & Power Limited,
Plot No.751,
NA,
ANGUL,
Anugul,
Taluka: Anugul,
District: ANGUL,
State: Odisha
PIN: 759122

1 DEC 2017

विषय /Sub: Plot No, Plot No.1/387, Niranjanpur, Mouza - Niranjanpur, Tahasil - Angul, Anugul, Taluka: Anugul, District: ANGUL, State: Odisha, PIN: 759143 में स्थित विद्यमान पेट्रोलियम वर्ग A,B Consumer Pump की अनुज्ञप्ति संख्या P/EC/OR/14/1461 (P212117) - नवीकरण के संदर्भ में।
Existing Petroleum Class A,B Consumer Pump at Plot No, Plot No.1/387, Niranjanpur, Mouza - Niranjanpur, Tahasil - Angul, Anugul, Taluka: Anugul, District: ANGUL, State: Odisha, PIN: 759143 - Licence No. P/EC/OR/14/1461 (P212117) - Reg Renewal of Licence.

महोदय /Sir
(s),

कृपया आपके उपर्युक्त विषय से संबंधित पत्र संख्या nil दिनांक 29/11/2017 का संदर्भ ग्रहण करें।

Please refer to your letter No. nil dated 29/11/2017 on the subject.

अनुज्ञप्ति सं P/EC/OR/14/1461 (P212117) दिनांक 03/09/2015 दिनांक 31/12/2027 तक नवीनीकृत कर लौटाई जा रही हैं।

Licence No. P/EC/OR/14/1461 (P212117) dated 03/09/2015 is returned herewith duly renewed upto 31/12/2027.

कृपया पेट्रोलियम नियम, 2002 के अधीन बनाए गए नियम 148 में दी गई प्रक्रिया का कड़ाई से पालन करें। अनुज्ञप्ति के नवीकरण हेतु समस्त दस्तावेजों को दिनांक 31/12/2027 या उससे पहले इस कार्यालय में प्रस्तुत करें।

Please follow the procedure strictly as laid down in rule 148 of the Petroleum Rules, 2002 and submit complete documents for the Renewal of the licence so as to reach this office on or before 31/12/2027.

कृपया पावती दें। Please acknowledge the receipt.

Note : Your Balance Amount with the Organisation is Rs. 1600, which will be used for processing of the same Licence in future.

भवदीय /Yours faithfully.

((सुबाशिश रे)
(Subasis Ray))
विस्फोटक नियंत्रक
Controller of Explosives
कुते उप मुख्य विस्फोटक नियंत्रक
For Dy. Chief Controller of Explosives
भुवनेश्वर/Bhubaneswar

(अधिक जानकारी जैसे आवेदन की स्थिति, शुल्क तथा अन्य विवरण के लिए हमारी वेबसाइट : <http://peso.gov.in> देखें)

(For more information regarding status, fees and other details please visit our website: <http://peso.gov.in>)



भारत सरकार
Government of India
वाणिज्य और उद्योग मंत्रालय
Ministry of Commerce & Industry
पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पैसे)
Petroleum & Explosives Safety Organisation (PESO)
8-एस्प्लेनेड पूर्वे, पहली मंजिल
कोलकाता (प.ब.) - 700069
8, Esplanade East, 1st floor,
Kolkata - 700069

E-mail : jtccekololkata@explosives.gov.in
Phone/Fax No : 033 - 22486600, 22480427

संख्या /No.: P/EC/OR/14/1461 (P212117)

दिनांक /Dated : 03/09/2015

सेवा में /To:

- 3 SEP 2015

M/s. Jindal Steel & Power Limited,
Plot No.751,
NA,
ANGUL,
Anugul,
Taluka: Anugul,
District: ANGUL,
State: Odisha
PIN: 759122

T /Sub: Plot No.1/387, Niranjanpur, Mouza - Niranjanpur, Tahasil - Angul, Anugul, Taluka: Anugul, District: ANGUL, State: Odisha, PIN: 759143 में स्थित विद्यमान पेट्रोलियम वर्ग A,B Consumer Pump के अनुमति सं. Licence No. P/EC/OR/14/1461 (P212117)- संशोधन के संदर्भ में।
Existing Petroleum Class A,B Consumer Pump at Plot No, Plot No.1/387, Niranjanpur, Mouza - Niranjanpur, Tahasil - Angul, Anugul, Taluka: Anugul, District: ANGUL, State: Odisha, PIN: 759143- Licence No. P/EC/OR/14/1461 (P212117) - Reg Amendment of Licence.

प्रति /Sir

कृपया आपके पत्र संख्या OIN14503 दिनांक 03/09/2015 का संदर्भ ग्रहण करें।

Please refer to your letter No. OIN14503 dated 03/09/2015

दिनांक 31/12/2017 तक वैध अनुमति संख्या P/EC/OR/14/1461 (P212117) दिनांक 03/09/2015 पेट्रोलियम के निम्नलिखित वर्ग एवं मात्राओं के लिए विधिवत संशोधित कर इस पत्र के साथ लौटाई जा रही है।

Licence No. P/EC/OR/14/1461 (P212117) dated 03/09/2015 valid upto 31/12/2017 is returned herewith duly amended for following kind and quantities of Petroleum:

पेट्रोलियम का विवरण /Description of Petroleum	किलोलीटरों में अनुमति क्षमता /Quantity licenced in KL
वर्ग क प्रपुंज पेट्रोलियम /Petroleum Class A in bulk	9.00 KL
वर्ग ख प्रपुंज पेट्रोलियम /Petroleum Class B in bulk	66.00 KL
कुल क्षमता /Total Capacity	75.00 KL

कृपया पावती दें। Please acknowledge the receipt.

भवदीय /Yours faithfully,

(आर.के.मैन्दोला)
(R.K. MAINDOLA)
संयुक्त मुख्य विस्फोटक नियंत्रक
Jt. Chief Controller of Explosives
कोलकाता (प.ब.)
Kolkata

Copy forwarded to :-

1. The Addl. District Magistrate, Angul, ANGUL(Odisha) with reference to his NOC No 2175/Judl. Dated 30/12/2008
2. Dy. Chief Controller of Explosives, Bhubaneswar, KHURDA. A Copy of the licence along with approved plan is enclosed.

Jt. Chief Controller of Explosives
Kolkata

(अधिक जानकारी जैसे आवेदन की स्थिति, शुल्क तथा अन्य विवरण के लिए हमारी वेबसाइट : <http://peso.gov.in> देखें)

(For more information regarding status, fees and other details please visit our website: <http://peso.gov.in>)

Test Report


Document QF : 2501

Page 1 of 3

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030038 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130328 NABL ULR No. :TC592621000008570F Customer Ref. No.: WO Letter Dated :03.04.2021
--	--

Test Report as per IS: EPA Act 1986/PCLS/2010	With Amendment No.(s):
--	-------------------------------


PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample #	Township STP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number #	NA
g)	D.O.M #	NA
h)	Date of Expiry #	NA
i)	Sample Quantity #	2 Ltr
j)	Batch Size/Location #	NA
k)	Mode of Packing	Packed in bottles
l)	Date of Receipt	03-08-2021
m)	Date of Start	03-08-2021
n)	Date of Completion	13-08-2021
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 28.07.2021
r)	Test Request Submitted By	Jindal Steel & Power Limited-Angul (Odisha)
s)	Manufactured By #	NA
t)	Supplied By #	NA

PART B : SUPPLIMENTARY INFORMATIONS



13-08-2021
Gaurav Khandelwal
[Authorized Signatory]



Saurabh Sharma
13-08-2021
Reviewer



13-08-2021
Prem Kumar
[Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)

(A Government Approved Test House)

86, Industrial Area, Phase-1, Panchkula-134109 (Haryana)

Phone : (O) 0172-2561543, 2565825

Visit us : www.itclabs.com Email : customersupport@itclabs.com

Disclaimer :

- Sample (s) not drawn by us unless otherwise stated.
- Total Liability of this Laboratory is limited to the Invoiced amount.
- Test certificates in full or parts shall not be used for promotional or publicity purpose.
- If sample is not consumed during analysis, it will be stored as per required storage condition.
- The results relate to the item tested.

Test Report

Document QF : 2501

Page 2 of 3


Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030038
	Sample Reg. Date :03-08-2021
	Report Date :13-08-2021
	Report No. :ICE-2108130328
	NABL ULR No. :TC592621000008570F
	Customer Ref. No.: WO
	Letter Dated :03.04.2021

a.	Reference to sampling procedure, whenever applicable	: N/A
b.	Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c.	Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

Description				
Description		Township STP Outlet Water		
S.No.	Parameters	Method	Specification	Result
1.	Microbiological Tests			
a.	Faecal Coliform, MPN/100ml	APHA-23 rd Edn 17-9221 F	Max. 1000	94
	Discipline : Chemical			
	Group : Pollution & Environment			
1.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1	Not Specified	Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Not Specified	None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.11
d.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	Max. 100	18
e.	Total Dissolved Solids (mg/l)	IS:3025(Part 16):1984(RA.2006)	Max. 2100	298
f.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	81
g.	Bio-chemical Oxygen Demand, mg/l (3 days at 27°C)	IS:3025(P-44)	Max. 30	19
h.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	<0.1
i.	Ammonical Nitrogen(as N)(mg/l)	APHA-23rd Edition	Max. 5.0	2.2
j.	Total Nitrogen(as N), mg/L	APHA-23rd Edition	Max. 10	5.0

represents Customer Defined Fields


13-08-2021
Gaurav Khandelwal
[Authorized Signatory]


Saurabh Sharma
13-08-2021
Reviewer


13-08-2021
Prem Kumar
[Authorized Signatory]

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Test Report

Document QF : 2501

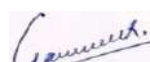
Page 3 of 3

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2108030038 Sample Reg. Date :03-08-2021 Report Date :13-08-2021 Report No. :ICE-2108130328 NABL ULR No. :TC592621000008570F Customer Ref. No.: WO Letter Dated :03.04.2021
--	--

NOTE : NA- Not Applicable, Requirements as per EPA-1986, PCLS/02/2010, Sampling Procedure - SOP/ITC/EW/030,

REMARKS :N/A

*****End Of Report*****



13-08-2021
Gaurav Khandelwal
[Authorized Signatory]



Saurabh Sharma
13-08-2021
Reviewer



13-08-2021
PremKumar
[Authorized Signatory]

Disclaimer :

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- The results relate to the item tested.

Test Report


Document QF : 2501

Page 1 of 3

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2109060103 Sample Reg. Date :06-09-2021 Report Date :13-09-2021 Report No. :ICE-2109130174 NABL ULR No. :TC592621000009875F Customer Ref. No.: WO Letter Dated :03.04.2021
--	--

Test Report as per IS: EPA Act 1986/PCLS/2010	With Amendment No.(s):
--	-------------------------------


PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample #	Township STP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number #	NA
g)	D.O.M #	NA
h)	Date of Expiry #	NA
i)	Sample Quantity #	2 Ltr
j)	Batch Size/Location #	NA
k)	Mode of Packing	Packed in bottles
l)	Date of Receipt	06-09-2021
m)	Date of Start	06-09-2021
n)	Date of Completion	13-09-2021
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 30.08.2021
r)	Test Request Submitted By	Jindal Steel & Power Limited-Angul (Odisha)
s)	Manufactured By #	NA
t)	Supplied By #	NA

PART B : SUPPLIMENTARY INFORMATIONS



13-09-2021
Gaurav Khandelwal
[Authorized Signatory]



Saurabh Sharma
13-09-2021
Reviewer



13-09-2021
PremKumar
[Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)

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- The results relate to the item tested.

Test Report

Document QF : 2501


Page 2 of 3

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2109060103 Sample Reg. Date :06-09-2021 Report Date :13-09-2021 Report No. :ICE-2109130174 NABL ULR No. :TC592621000009875F Customer Ref. No.: WO Letter Dated :03.04.2021
--	--

a. Reference to sampling procedure, whenever applicable	: N/A
b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

Description				
Description		Township STP Outlet Water		
S.No.	Parameters	Method	Specification	Result
Discipline : Chemical				
Group : Pollution & Environment				
1. General Parameters				
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1	Not Specified	Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Not Specified	None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.21
d.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	Max. 100	13
e.	Total Dissolved Solids (mg/l)	IS:3025(Part 16):1984(RA.2006)	Max. 2100	258
f.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	39
g.	Bio-chemical Oxygen Demand, mg/l (3 days at 27°C)	IS:3025(P-44)	Max. 30	11
h.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	1.2
i.	Ammonical Nitrogen(as N)(mg/l)	APHA-23rd Edition	Max. 5.0	1.7
j.	Total Nitrogen(as N), mg/L	APHA-23rd Edition	Max. 10	3.8
Discipline : Biological				
Group : Pollution & Environment				
1. Microbiological Tests				


13-09-2021
Gaurav Khandelwal
[Authorized Signatory]


Saurabh Sharma
13-09-2021
Reviewer


13-09-2021
Prem Kumar
[Authorized Signatory]

Disclaimer :

- Sample (s) not drawn by us unless otherwise stated.
- Total Liability of this Laboratory is limited to the Invoiced amount.
- Test certificates in full or parts shall not be used for promotional or publicity purpose.
- If sample is not consumed during analysis, it will be stored as per required storage condition.
- The results relate to the item tested.

Test Report

Document QF : 2501

Page 3 of 3

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2109060103 Sample Reg. Date :06-09-2021 Report Date :13-09-2021 Report No. :ICE-2109130174 NABL ULR No. :TC592621000009875F Customer Ref. No.: WO Letter Dated :03.04.2021
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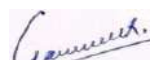
a.	Faecal Coliform, MPN/100ml	APHA-23 rd Edn 17-9221 F	Max. 1000	540
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'#' represents Customer Defined Fields

NOTE : NA- Not Applicable, Requirements as per EPA-1986, PCLS/02/2010, Sampling Procedure - SOP/ITC/EW/030,

REMARKS :N/A

*******End Of Report*******



13-09-2021
Gaurav Khandelwal
[Authorized Signatory]



Saurabh Sharma
13-09-2021
Reviewer



13-09-2021
PremKumar
[Authorized Signatory]

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Test Report


Document QF : 2501

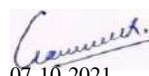
Page 1 of 3

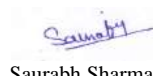
Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2109291079 Sample Reg. Date :29-09-2021 Report Date :07-10-2021 Report No. :ICE-2110070289 NABL ULR No. :TC592621000011507F Customer Ref. No.: PO Letter Dated :03.04.2021
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Test Report as per IS: EPA Act 1986/PCLS/2010	With Amendment No.(s):
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PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample [#]	Township STP Outlet Water
b)	Sample Condition	Good Condition
c)	Grade / Variety / Type / Class / Size etc.	NA
d)	Brand Name	NA
e)	Declared Values,if any	NA
f)	Code No.	
g)	Batch Number [#]	NA
h)	D.O.M [#]	NA
i)	Date of Expiry [#]	NA
j)	Sample Quantity [#]	2 Ltr
k)	Batch Size/Location [#]	NA
l)	Mode of Packing	Packed in bottles
m)	Date of Receipt	29-09-2021
n)	Date of Start	29-09-2021
o)	Date of Completion	07-10-2021
p)	Seal (Intact/Not Intact/Unsealed)	NA
q)	IO'S Signature (Signed/Unsigned)	Unsigned
r)	Any Other Information	Sample collected by lab rep. on 25.09.2021
s)	Test Request Submitted By	Jindal Steel & Power Limited-Angul (Odisha)
t)	Manufactured By [#]	NA


07-10-2021
Gaurav Khandelwal
[Authorized Signatory]


07-10-2021
Saurabh Sharma
Reviewer


07-10-2021
PremKumar
[Authorized Signatory]

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Test Report

Document QF : 2501

Page 2 of 3

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2109291079 Sample Reg. Date :29-09-2021 Report Date :07-10-2021 Report No. :ICE-2110070289 NABL ULR No. :TC592621000011507F Customer Ref. No.: PO Letter Dated :03.04.2021
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u) Supplied By #	NA
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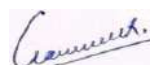
PART B : SUPPLEMENTARY INFORMATIONS

a. Reference to sampling procedure, whenever applicable	: N/A
b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

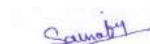
Description

Description	Township STP Outlet Water
-------------	---------------------------

S.No.	Parameters	Method	Specification	Result
	Discipline : Chemical			
	Group : Pollution & Environment			
1.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1	Not Specified	Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Not Specified	None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.60
d.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	Max. 100	16
e.	Total Dissolved Solids (mg/l)	IS:3025(Part 16):1984(RA.2006)	Max. 2100	274
f.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	84
g.	Bio-chemical Oxygen Demand, mg/l (3 days at 27°C)	IS:3025(P-44)	Max. 30	19
h.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	3.0
i.	Ammonical Nitrogen(as N)(mg/l)	APHA-23rd Edition	Max. 5.0	1.1
j.	Total Nitrogen(as N), mg/L	APHA-23rd Edition	Max. 10	3.1



07-10-2021
Gaurav Khandelwal
[Authorized Signatory]



Saurabh Sharma
07-10-2021
Reviewer



07-10-2021
Prem Kumar
[Authorized Signatory]

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Interstellar Testing Centre Pvt. Ltd.

86, Industrial Area, Phase-1, Panchkula-134109 (Haryana)

Panchkula-134109 (Haryana)

Phone : (O) 0172-2561543, 2565825

Email : customersupport@itclabs.com

Visit us : www.itclabs.com

Test Report

Document QF : 2501

Page 3 of 3

Issued To Jindal Steel & Power Limited SH-63, Chendipada Road, Jindal Nagar, Angul Angul	Sample Reg. No. :E01-2109291079 Sample Reg. Date :29-09-2021 Report Date :07-10-2021 Report No. :ICE-2110070289 NABL ULR No. :TC592621000011507F Customer Ref. No. :PO Letter Dated :03.04.2021
--	--

	Discipline : Biological			
	Group : Pollution & Environment			
1.	Microbiological Tests			
a.	Faecal Coliform, MPN/100ml	APHA-23 rd Edn 17-9221 F	Max. 1000	70

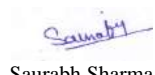
'#' represents Customer Defined Fields

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sampling Procedure - SOP/ITC/EW/030

REMARKS : N/A

*****End Of Report*****


07-10-2021
Gaurav Khandelwal
[Authorized Signatory]


Saurabh Sharma
07-10-2021
Reviewer


07-10-2021
PremKumar
[Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.
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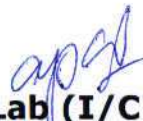
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Ref. No. EMD/LAB/MEF/21-22/04

Date: 15.11.2021

SUMMARY OF GROUND WATER LEVEL MONITORING DATA

Sl. No.	Location	Latitude	Longitude	Measuring point (meter above ground level)	Water level in meter	
					Summer (Apr'21)	Monsoon (Jul'21)
1	E type	20°54.715'	85°00.348'	0.41	1.91	2.27


Lab (I/C)
HOD (EMD)