

**BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI**

ORIGINAL APPLICATION NO.175/ 2020

IN THE MATTER OF:

Sh. Venkatapathi Raja Yenumala

..... Applicant

Versus

Union of India, Rep. by its Secretary

Ministry of Environment, Forests and Climate Change,

Indira Paryavaran Bhavan, Jorbagh Road,

New Delhi 110 003 and 11 Others

.....RESPONDENT(S)

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Signed and verified on this 23rd day of March, 2022 at Chennai.

P. Jayalalitha

Counsel for CPCB

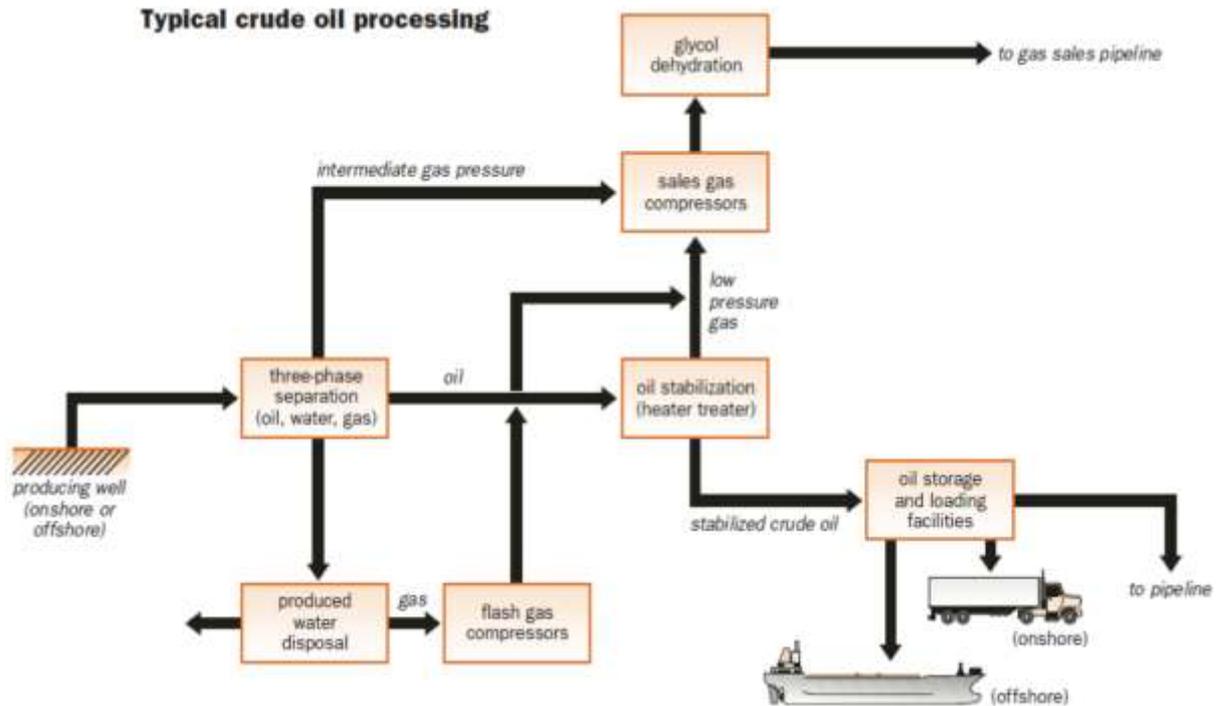
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JOINT INSPECTION REPORT OF COMMITTEE CONSTITUTED BY HON'BLE NATIONAL GREEN TRIBUNAL, SOUTHERN BENCH, CHENNAI IN COMPLIANCE TO HON'BLE NGT ORDER DATED 19.01.2022 IN THE MATTER OF OA NO. 175 OF 2020 (VENKATAPATHI RAJA YENUMALA VS UNION OF INDIA & ORS)



**SUBMITTED TO
HON'BLE NATIONAL GREEN TRIBUNAL
SOUTHERN BENCH, CHENNAI**

March, 2022

I Preamble

An application was filed in Hon'ble NGT Southern bench alleging that air, sound, soil and water pollution is caused on account of the activities of the M/s GAIL India Ltd (formerly Gas Authority of India Ltd) and M/s ONGC (Oil & Natural Gas Corporation Ltd) units in the State of Andhra Pradesh along the Krishna-Godavari Basin located in East Godavari and West Godavari District of Andhra Pradesh. According to the applicant oil leakage is being caused in the pipe lines established by these units causing damage to the agricultural land and also affecting the water bodies. It is also alleged that the units are not following the pollution control mechanism and there is no proper maintenance of pipelines. In order to ascertain the impact of the activities of M/s GAIL and M/s ONGC in Krishna Godavari River bed in East Godavari and West Godavari District, Hon'ble NGT has appointed a Joint Committee. Committee submitted the report to Hon'ble NGT during April, 2021.

ONGC submitted detailed status report and compliance report to Hon'ble NGT and in response to this Hon'ble NGT vide order dated 19.01.2022 again directed the joint committee to inspect the unit and consider the compliance report submitted by ONGC. Hon'ble NGT has directed the Joint Committee to ascertain as to whether ONGC is spending its CSR amount to meet the environmental sustainable development activities as directed to be done under Environmental Clearance and incorporate the same in the report to be filed.

II Orders of the Hon'ble Tribunal

Hon'ble NGT, Southern Bench, Chennai in Original Application No. 175/2020(SZ) in the matter of Venkatapathi Raja Yenumala Vs Union of India & Ors vide order dated 19-01-2022 has directed as follows:

“So, we direct the Joint Committee to inspect the unit again and consider the compliance report submitted by the ONGC regarding the recommendations made and the Pollution Control Board is also directed to inspect independently and submit their report regarding satisfaction of the compliance and further steps, if any, to be taken to avoid such incidents in future from their side as a regulator. They have also not filed any action taken report as undertaken by them. So, the Joint Committee as well as Pollution Control Board are directed to file their further report and action taken report, if any, required on or before 25.02.2022.

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The Joint Committee is also directed to ascertain as to whether ONGC is spending its CSR amount to meet the environmental sustainable development activities as directed to be done under Environmental Clearance and incorporate the same in the report to be filed". Copy of Hon'ble NGT order is placed as Annexure-I.

IIa. Composition of the Committee

In compliance to Hon'ble NGT order, committee comprising of following members was composed:

Name & designation of the official	Department with address
Sh. C Vishnu Charan, IAS	Sub Collector and Sub Divisional Magistrate Narsapuram West Godavari
Sh. Vasatha Rayudu,	RDO, Amalapuram, East Godavari
Dr. Suresh B Pasupuleti Scientist-D	Ministry of Environment Forest and Climate Change, Regional Office, Vijayawada
Prof. M. Deepa	Dept. of Chemical Engineering, A.U College of Engineering (A) Andhra University, Visakhapatnam
Sh. P. Ravindranath Senior Environmental Engineer	Andhra Pradesh Pollution Control Board, Zonal Office, Visakhapatnam
Smt. Mahima T Scientist-D	Central Pollution Control Board Regional Directorate, Chennai

The committee visited the site from 8th to 11th March, 2022 and carried out ambient air quality monitoring, collection of water & wastewater samples and soil samples. Committee interacted with villagers, village heads, school authorities and interacted with the applicant over phone.

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III Compliance Verification of the units

In compliance to Hon'ble NGT orders, post committee inspection M/s ONGC has taken corrective actions. M/s ONGC has submitted in the Compliance Report that following actions are implemented in all installations in Kakinada and Rajahmundry asset:

- a. Units have taken measures for periodical cleaning and desilting of drains.
- b. Measures are taken for disposal of sludge. Tenders are invited for bio-remediation of sludge.
- c. Closed loop system for VAP sampling(Tatipaka)
- d. Initiated for construction of sludge pit of 1000 m³ capacity (Tatipaka)
- e. Construction of Two sheds, One for Hazardous waste and the other for hazardous chemicals
- f. Units have initiated measures to install flowmeters at inlet of ED (effluent disposal well)
- g. LDAR (leak detection and repair) is carried out internally by the units and necessary corrective actions are taken to arrest leakages.

Compliance status of specific installation is described in below sections.

IV. Compliance Verification of Tatipaka GCS

Sl. No	Non-compliances observed by committee during first visit	Compliance status submitted by the unit and Upgradations/ Modifications made by the unit	Current status of compliance as verified by the committee	Remarks
1	The storm water from the installation is discharged into main drains laid outside the unit premises. During inspection the committee	Oil catchers are provided in two storm water drains located near process area and any oil carried over from the process area is recovered in the oil catcher. Unit has taken measures to desilt and clean the storm water drains twice a year to	Unit has desilted and cleaned the drains and the oily sludge settled in the drains are removed. but however mode of disposal of silt & oily sludge was not available. Near the effluent collection tank and near	<i>Partially complying</i>

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	<p>observed that due to heavy rains and water logging, effluent was getting mixed with storm water and from the main drain it may ultimately join sea.</p>	<p>prevent logging. Unit has submitted that all the drains were cleaned and unit has taken measures to recover oil from the storm water drains. Unit claims as complying</p>	<p>effluent tanker unloading tank, effluents were present in the drain. There are cracks in tank used for collecting effluent from tankers and effluent was seeping into adjacent ground. Storm water is discharged outside the unit. Unit has not made any arrangements to lift the first flush of rain water (for 30minutes) and to treat the same in ETP.</p>	
2	<p>The tilted plate interceptor and slop oil tank are not working properly. The capacity and retention time of plate interceptor is not adequate to treat the effluent. Hence the oil removed from effluent is stagnated and overflowing.</p>	<p>ETP Upgradation work is yet to be undertaken. Support structure of Tilted Plate interceptor is strengthened and is in operation as per the design capacity of 21 cum per hour which is adequate as per the design criteria of ETP. Unit claims as works under progress.</p>	<p>Tilted plate interceptor is not upgraded but only supporting civil structure (wall) is strengthened. The capacity and retention time of plate interceptor is not adequate to treat the effluent. Oil separators are not properly working.</p>	<p><i>Not-complying</i></p>

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3	<p>The units have not amended the consent for the revised quantity of effluent generated. Thereby presently the effluent generated from the installation is more than the quantity specified in the CFO issued by APPCB and moreover the existing ETP is not adequate in terms of capacity to treat the present effluent generated. As per the CFO issued to Tatipaka GCS on 27.02.2015 the quantity of effluent is 225 KLD but presently effluent generated is more than 500 KLD. In addition, 15 KLD of effluent generated</p>	<p>ETP upgradation works is yet to be undertaken. Post committee inspection, Tatipaka GCS is taking effluent from other installations only on very rare occasions and effluent generated from Tatipaka GCS is only treated in the ETP.</p> <p>Unit claims as work under progress</p>	<p>Unit is yet to obtain amendment of the consent order for increased quantity of effluent generated. As per the records, average effluent generated from the installation is 350m³/day but the capacity of effluent collection tank is 40 KL. Unit is not having capacity to store the effluent for even a day.</p> <p>ETP comprises of collection tank → slop oil tank → clarifier → MMF → ED wells. Committee collected effluent sample from inlet and outlet of ETP and the analysis results are given in table 1 and treated effluent is meeting with ED well disposal limits.</p> <p>Old ETP which is not in use is filled with effluent. Oily effluent is still present in clarifier.</p>	<p><i>Complying w.r.t effluent discharge limits.</i></p> <p><i>Not complying w.r.t CFO conditions</i></p>
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	<p>from Tatipaka mini refinery, Endamuru GCS and Mandapeta GCS has to be treated. Hence the existing ETP of capacity 500KL is not adequate to treat the present quantity of effluent generated.</p>		<p>Unit shall submit time bound action plan to the treat the effluent present in old ETP and to dismantle old ETP.</p>	
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Table 1: Wastewater analysis results of Tatipaka GCS

Location	TSS mg/L	Oil & grease mg/L
ETP inlet – Tatipaka	1670	66.7 mg/L
ETP Outlet- Tatipaka	15	BDL(DL:4.0)
APPCB standards	100	10
Guard pond Water- Tatipaka	12	BDL(DL:4.0)

From the results it is clear that the treated effluent is meeting the APPCB standards for ED well disposal. From the guard pond effluent is discharged to ED well. Detailed wastewater analysis results are enclosed as Annexure-II.

4	<p>Sludge drying beds are not in operation</p>	<p>Unit has invited tenders for disposal of sludge. Oily sludge is collected in Sludge storage tank. Tendering work is in progress for Oil recovery from Sludge (E-tender No. K16JC21015) followed by Bioremediation of residual for which NOA</p>	<p>Oily sludge generated from the inception of the unit is stored in open in sludge tanks upto brim of the tank. It was reported by the unit that the spillages were removed and transferred to the tank itself. During rainy season, runoff</p>	<p>Not-complying</p>
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		exist with TERI. Unit claims as work under progress.	water from sludge tank is likely to carry sludge particles with it to the surrounding area.				
Committee collected sediment samples near effluent collection tank and tanker unloading tank and analysis results for core parameters are as follows (detailed sediment analysis results is submitted as Annexure-III):							
Table 2: Sediment samples analysis results of Tatipaka							
Location	Total TPH mg/Kg	Iron (mg/kg)	Mercury (mg/kg)	Lead (mg/kg)	Benzene (mg/kg)	Benzo(a)pyrene (µg/kg)	Phenols (mg/kg)
Sediment sample adjacent to 40 KL effluent collection tank	411.84	BLQ (LOQ:11.0)	BLQ (LOQ:2.0)	BLQ (LOQ:2.0)	BLQ (LOQ:20)	BLQ (LOQ:20)	BLQ (LOQ:0.1)
Sediment sample adjacent to effluent tanker unloading tank	752.67	729.61	BLQ (LOQ:2.0)	BLQ (LOQ:2.0)	BLQ (LOQ:20)	BLQ (LOQ:20)	BLQ (LOQ:0.1)
Sediment sample near sludge tank	98.13	3148.15	BLQ(LOQ:2.0)	3.88	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
sediment analysis results indicates that effluent may be seeping into the soil from effluent collection tank and tankers unloading tank.							
5	TVOC levels measured using handheld PID analyser in the ETP area is varying from 2.2ppm to 4.0ppm	Online Hydrocarbon detectors are installed to monitor fugitive emissions. Guard pond and storm water drains cleaning has been carried out and TVOC levels are within the limits	TVOC levels was measured using handheld PID analyzer in the ETP area and TVOC levels was varying between 0ppm to 2ppm.	Complying			

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		Unit claims as complying		
6	There is no dedicated hazardous waste storage shed. ETP sludge, empty barrels, slop oil are stored haphazardly within the unit premises	Hazardous waste and chemical sheds are constructed. Storage of hazardous waste & chemicals are being stored in the designated sheds. Unit claims as complying	Unit has constructed one shed for storage of hazardous waste- lube oil but however lube oil was not stored in the shed. Reported that lube oil was disposed during February, 2022.	<i>Complying</i>
7	In old GCS plant drain effluent is joining storm water drains and pH of drain effluent was 14	Drain channels are cleaned. The pH levels are observed to be within the limits. Unit claims as complying	It was observed that no effluent was joining the drain in old GCS plant and drains were in dry condition. There were no rains in the area during committee inspection.	<i>Complying</i>
8	LDAR of refinery is not carried out. TVOC levels near the valves of distillation column is around 5ppm and near sampling point is 70ppm	Unit is periodically monitoring TVOC levels internally. Unit has carried out LDAR internally. Unit claims as complying	Unit is yet to carry out Leak detection and repair (LDAR) study through certified agencies.	<i>Partially Complying</i>
9	In the gas dehydration unit in the re-boiler system, during knocking out	The Boiling point of TEG is more than 240°C whereas, the re-boiler temperature is maintained at 190°C. So the chances of glycol	There was no odor nuisance. VOC levels was measured using handheld VOC analyzer and it was 0ppm.	<i>Complying</i>

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	some glycol vapors is carried along with moisture. There was odor nuisance in the area.	vaporisation is nil. Unit claims as complying		
10	Odour nuisance	Due to cleaning of drains, removal of oily sludge and controlled knock out emissions TVOC levels are within the limits and hence there is no odour nuisance. Unit claims as complying	There was no odour nuisance. Ambient air quality monitoring was conducted inside the unit and in malletivara merakinagalam village, Peerlacheruvu nagar village and pedapatinam nagarm village surrounding the installation and found that it is meeting ambient air quality. Ambient air quality results are enclosed as Annexure-IV	Complying
11	CFO validity		Tatipaka GCS has obtained Consent under the Water Act, 1974, the Air Act, 1981 and Hazardous Waste authorization valid till 31.07.2023. Copy of Tatipaka CFO is enclosed as Annexure-V	Complying

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Photo 1: drains in Tatipaka after cleaning



Photo 2: tilted plate interceptor



Photo 3: Hazardous waste storage shed



Photo 4: waste oil drums stored in open



Photo 5: Clarifier filled with effluent in old ETP



Photo 6: Effluent treatment plant



Photo 7: Treated effluent storage tank

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Photo 8: Sludge tank



Photo 9: area surrounding the sludge tank

IVa. Environmental compensation from Tatipaka GCS

<p>EC for violation of CFO conditions</p>	<p>$EC = PI \times N \times R \times S \times LF$</p> <p>Where,</p> <p>EC = Environmental Compensation in INR</p> <p>PI = Pollution Index of industrial sector (red-80)</p> <p>N = Number of days of violation took place (from the date of violation to date of compliance- 25.02.2021 to 11.03.2022= 379 days</p> <p>committee had calculated compensation till 25.02.2021 and committee re-inspected during 08-03-2022 to 11-03-2022 and observed following non-compliances:</p> <ol style="list-style-type: none"> 1. Tilted plate interceptor is not properly working 2. Effluent is seeping into soil from effluent collection tank and tanker unloading tank 3. Oily sludge (hazardous waste) is laying in open in sludge tank for more than 5 years. 4. Effluent and oily sludge is present in Old ETP which is not in use for more than 3 years. <p>R = A factor in Rupees for EC (Rs. 250/-)</p> <p>S = Factor for scale of operation (large-1.5)</p> <p>LF = Location factor=1</p>
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	<p>=80*379 days*250*1.5*1 = 1,13,70,000/- Rupees One crore thirteen lacs seventy thousand only Considering that unit has made improvements and is mainly complying with effluent disposal standards, committee has not imposed repeated violation factor.</p>
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V. Compliance Verification of Kesanapalli-W: GGS

Sl. No	Non-compliances observed by committee during first visit	Compliance status submitted by the unit and Upgradations/ Modifications made by the unit	Current status of compliance as verified by the committee	Remarks
1	Effluent is getting mixed with storm water and storm water is discharged into main drain outside the unit premises. pH of the storm water was 12. In addition the leaves and garden waste is in the drain and getting putrefied in the drain itself	Drains were cleaned.	Unit has cleaned storm water drains but however Oil catchers are not installed in the drains and measures to prevent entry of effluent into storm water drains is not taken up. Measures to lift or pump first flush of rain water into ETP is not taken. Records on the quantity of oily sludge removed from the drains and mode of disposal of this sludge was not made available to committee.	<i>Partially complying</i>

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2	The effluent stored in treated effluent sump was red in color and pH was more than 12	Red colored effluent is taken to ETP for treatment. Unit informed that awareness was created among the workers as not to add any chemicals into treated water or fresh water sumps. Unit claims as complying	Reported that red colored effluent from treated effluent storage tank was again taken back to ETP for re-treatment. During committee insoection no red colored effluent wss present inside the unit premises. Treated effluent samples were taken and analysis results are given table 3.	<i>Complying</i>
3	There is no dedicated hazardous waste storage sheds	Dedicated storage sheds for hazardous waste and chemicals have been built. Unit claims as complying	Unit has constructed two separate sheds for chemical storage and hazardous waste storage. Unit is generating two categories of hazardous waste: ETP sludge/ oily sludge and waste lube oil. Currently unit continues to store ETP sludge/ oily sludge openly in sludge tank and unit has proposed to store only waste lube oil in the shed. But however on the day of inspection, the shed was empty and waste lube oil was not present.	<i>Partially complying (shed is constructed)</i>

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4	<p>The unit was disposing the effluent by means of marine disposal but however the unit has not obtained necessary permissions from APPCB for marine disposal. Further, part of the pipeline used for deep sea disposal (1000m stretch of pipeline taking deep sea) is broken and washed away. Presently the unit is disposing the effluent in the coast. The unit had obtained CRZ clearance for laying of pipelines</p>	<p>ONGC having CFE and auto renewal of CFO for the operation of Kesnapalli-w ETP which is available upto 31.07.2023. CRZ clearance was also obtained for laying disposal line. New contract/tender was awarded for laying New Marine disposal line in place of broken line (which is expected to be completed by March-2022, in the favourable climate window) Meanwhile, temporary arrangement was made with 8" casing pipe and GRE flexible connection in place of the washed out portion (till the permanent line will be made available).</p>	<p>Unit is having two ETP's. Capacity of old ETP is 750 m3/day and capacity of new ETP is 1500 m3/day. Old ETP comprises of tilted plate interceptor→ flash mixer→ flocculation tank→ dissolved air floatation→ dual media filter→ guard pond→ ED well. On the day of inspection, raw effluent was directly taken to DAF and pre-treatment units were not in operation. New ETP comprises of Corrugated plate interceptor→ induced gas floatation→ Nutche filter→ sequential batch reactor→ media filters→ treated effluent storage tank→ sea disposal. Unit has obtained CRZ clearance for laying of pipeline for marine disposal. Copy of CRZ clearance is placed as Annexure-VI. Unit has obtained CFE from APPCB for laying of pipeline for marine disposal. Copy of CFE is placed as Annexure-VII. APPCB has not granted CFO to the unit for marine disposal but</p>	<p><i>Not complying</i></p>
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		<p>Also additional arrangement was done to take a substantial portion of N.ETP treated effluent to ED wells ETP(old) for disposal for deep well injection, and subsequently to reduce marine disposal quantity from New ETP. Additional high pressure water injection pump was installed for this purpose.</p> <p>Also additional Effluent disposal wells were commissioned after WOR for effluent disposal (deep well injection) for capacity expansion.</p> <p>Unit claims as work under progress</p>	<p>however unit claims that consent fees is paid by the unit for marine disposal line. However committee has clarified that unit has to obtain prior consent from APPCB for marine disposal.</p> <p>Marine disposal pipelines of 1000m was broken and washed away during 2018 and currently only 60m marine disposal pipeline is present against the requirement of 1000m of deep sea disposal. Unit continues to dispose around 1200KLD of effluent through marine disposal.</p> <p>Unit has completed laying of 1500 m HDPE line with diffuser in the sea during February, 2022 and trenching work (post-burial work) by dredger pontoon Marine is in progress. The new pipeline will be commissioned during March, 2022. The new pipeline is at a distance of 150m from the old pipeline. The unit is laying a new pipeline by deviating the alignment of old pipeline in the CRZ area, Hence it is mandatory that unit has to</p>	
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			<p>obtain CRZ clearance and CFE from APPCB for laying new pipeline but however unit has not obtained any clearances for laying new pipeline.</p> <p>Currently, around 1200 KLD of effluent from new ETP is disposed through marine disposal.</p>	
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During inspection, villagers approached the committee and informed that effluent is discharged outside Kesanapalli GGS into empty land. Committee visited the area and observed that outside the boundary wall of the unit, water stagnation (lagoon/ pond) was present at two locations and villagers informed that it is effluent discharged from the installation. At one location just beside the boundary wall of the unit large quantity of slightly reddish colored water was present. The boundary walls of the unit are weak, cracks & small openings are developed on the wall towards old ETP.

Committee collected inlet & outlet samples of old & new ETP, samples from two water stagnation points and beach water (near to disposal line) and analysis results for core parameters are as follows:

Table 3: Old ETP Kesanapalli analysis results

Location	TSS mg/L	O & G mg/L
Old ETP inlet Raw Effluent-Kesanapalli	171	BDL(DL:4.0)
Old ETP outlet Effluent-Kesanapalli	13	BDL(DL:4.0)
APPCB standards for ED well disposal	100	10

Table 4: New ETP Kesanapalli analysis results

Sl.No	Parameter	New ETP inlet	New ETP outlet	CPCB marine outfall standards
1	pH	7.98	7.08	5.5 -9.0
2	TSS mg/L	53	17	100

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3	Zinc mg/L	0.10	BLQ (LOQ:0.005)	2
4	BOD mg/L	3708	44	30
5	COD	15862	172	100
6	Chlorides	8697	9197	600
7	Sulphates	69	43	1000
8	TDS	15675	8411	2100
9	Oil & grease	BDL (DL:4.0)	BDL (DL:4.0)	10
10	cyanides	BDL (DL:0.1)	BDL (DL:0.1)	0.2
11	flourides	0.21	0.11	1.5
12	Sulphides	BDL (DL:1.0)	BDL (DL:1.0)	2.0
13	T. Cr	0.06	BLQ (LOQ:0.005)	1.0
14	Copper	0.07	BLQ (LOQ:0.005)	0.2
15	Lead	BLQ (LOQ:0.005)	BLQ (LOQ:0.005)	0.1
16	Mercury	0.04	0.01	0.01
17	Nickel	BLQ (LOQ:0.005)	BLQ (LOQ:0.005)	37

Table 5: Analysis results of wastewater at Kesanapalli

Location	pH	TPH mg/L	BOD mg/L	COD mg/L	TOC mg/L
Beach sea water	8.02	3.23	274	427	171
Water stagnation (small) around 250m away from industry boundary Kesanapalli	8.77	55.6	33	121	45
Large water stagnation besides the boundary wall of industry towards old ETP - Kesanapalli	9.01	971.17	89	345	129

From the analysis results in Table 5, it is observed that traces of TPH is present in beach sea water and at water stagnation point 250m from industry boundary. TPH of 971.17 mg/L is present in water adjacent to industry boundary which indicates that effluent may be leaking or may be discharged into adjacent land.

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5	Water logging observed at the entrance of the unit	Area is cleared of water logging. Levelling and cleaning was done. Now the premise is properly maintained.	Unit has levelled the area to prevent water logging.	Complying
6	In the ETP area, the unit had covered with fresh soil. The committee excavated the portion of the soil and found that black oily soil was present below upto depth of 1m	After excavation of the area, where ever oily soil was observed and which was removed and transferred to sludge bed for bioremediation.	The committee excavated soil in the ETP area and as well at other locations to check for oil spillages or dumping of sludge on ground. Sediment samples were collected and observed that only traces of TPH is present which implies that unit has cleaned the area. Results are given in table 6.	Complying
7	Opposite to new ETP boundary wall, waste oil & sludge is dumped on land to an extent of two to three acres	The said area was allowed to dried up water, where ever oily soil was observed and was removed and transferred to sludge bed for bioremediation .After cleaning properly, initiative was taken to bring this area under green belt (by	Opposite to new ETP boundary wall, sediment samples were collected and TPH in the sediment samples is 3.55 mg/kg which implies that unit has cleaned the area while traces of oily sludge is present. Unit has initiated plantation in the area.	Complying

		growing greenery)		
8	In around 5 acres of land opposite to DG room the effluent & sludge is accumulated. From the sediment sampling it is learnt that mercury is present in the range of 201 mg/Kg	The area allowed to dry water and where ever contaminated soil was observed and that portion was cleared from the area to sludge pit. Now greenery is visible in the area. The soil analysis by HECS, shows mercury levels below the quantifiable limit.	It was reported by the unit that wherever oily sludge was present, it was cleaned by the unit. Mercury in the soil sample is below limit of quantification	Complying

Table 6: Kesanapalli sediment samples and analysis results are as follows:

Location	TPH (mg/Kg)	Iron (mg/Kg)	Mercury (mg/kg)	Lead (mg/kg)	Benzene (mg/kg)	Benzo(a) pyrene (µg/kg)	Phenols (mg/kg)
Kesanapalli large water stagnation outside unit premises	6.52	966.23	BLQ (LOQ:2.0)	BLQ (LOQ:2.0)	BLQ (LOQ:20)	BLQ (LOQ:20)	BLQ (LOQ:0.1)
kesanapalli beach sludge- kesanapalli	5.89	2494.66	BLQ (LOQ:2.0)	BLQ (LOQ:2.0)	BLQ (LOQ:20)	BLQ (LOQ:20)	BLQ (LOQ:0.1)

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(sludge)							
behind transfer pump-kesanapalli (sludge)	93.53	2519.68	BLQ (LOQ:2.0)	BLQ (LOQ:2.0)	BLQ (LOQ:20)	BLQ (LOQ:20)	BLQ (LOQ:0.1)
behind ows kesanapalli (sludge)	55.60	1223.52	BLQ (LOQ:2.0)	BLQ (LOQ:2.0)	BLQ (LOQ:20)	BLQ (LOQ:20)	BLQ (LOQ:0.1)
sediment sample behind old ETP dmf feed sump-kesanapalli (sludge)	319.19	1894.93	BLQ (LOQ:2.0)	BLQ (LOQ:2.0)	BLQ (LOQ:20)	BLQ (LOQ:20)	BLQ (LOQ:0.1)
sediment sample in front of new etp control building kesanapalli (sludge)	3.55	1329.06	BLQ (LOQ:2.0)	BLQ (LOQ:2.0)	BLQ (LOQ:20)	BLQ (LOQ:20)	BLQ (LOQ:0.1)
Analysis results indicates that small quantity of spills/ leaks is present behind old ETP feed sump.							
9	CFO validity		Kesanapalli GGS has obtained Consent under the Water Act, 1974, the Air Act, 1981 and Hazardous Waste authorization valid till 31.07.2023. Copy of CFO is placed as Annexure-VIII				Complying

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Photo 10: water stagnation outside the unit premises (small pond)



Photo 11: water stagnation outside the industry slightly reddish in color (large pond)



Photo 12: New ETP at Kesanapalli



Photo13: new ETP treated effluent storage tank



Photo14 : Effluent disposal on the shore through existing pipeline of 60m



Photo15: laying of new pipeline

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Photo 16: old ETP area



Photo 17: Sludge tanks



V.b Environmental compensation to be levied from Kesanapalli GGS

<p>EC for violation of CFO conditions, sea disposal without obtaining permission from APPCB</p>	<p>$EC=PI \times N \times R \times S \times LF$</p> <p>Where,</p> <p>EC = Environmental Compensation in INR</p> <p>PI = Pollution Index of industrial sector (red-80)</p> <p>N = Number of days of violation took place (from the date of violation observed to date of compliance- 379 days</p> <p>committee had calculated compensation till 25.02.2021 and committee re-inspected during 08-03-2022 to 11-03-2022 and observed following non-compliances</p> <ul style="list-style-type: none"> • Old ETP was not properly operated • Unit is generating more than consented quantity of effluent
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	<ul style="list-style-type: none"> • Oily sludge is stored in open in sludge tank for more than five years • Unit is disposing effluent through marine outfall against the consented mode of ED well disposal • Marine outfall pipeline is broken and effluent is disposed with pipeline of 60m. <p>R = A factor in Rupees for EC (Rs. 250/-)</p> <p>S = Factor for scale of operation (large-1.5)</p> <p>LF = Location factor 1</p> <p>=80*379*250*1.5*1* repeated violation factor of 2</p> <p>=Rs. 2,27,40,000/-</p> <p>Rupees Two crore twenty-seven lacs forty thousand only</p> <p>Considering serious nature of violation, committee has assessed EC for repeated violation</p>
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VI. Compliance Verification of Odalarevu GCS

Sl. No	Non-compliances observed by committee during first visit	Compliance status submitted by the unit and Upgradations/ Modifications made by the unit	Current status of compliance as verified by the committee	Remarks
1	The ETP is not functioning properly. Oil is removed from slop oil tank and then effluent is stored in holding ponds. Multimedia filters	Unit has improved housekeeping and maintenance activities. Unit has replaced corroded valves, serviced pumps & pipelines,	ETP was in operation. ETP is designed to treat 160 m ³ /day of (26 m ³ /day of producer water with inlet TSS of 500 ppm and oil & grease of 500 ppm and 134 m ³ / day of storm water). Committee collected samples of producer water (inlet of ETP)	<i>Not Complying w.r.t ED well disposal limit for oil & grease</i>

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	<p>were not in operation on the day of the visit. Effluent is disposed on the ground without treatment. ETP is not properly working since 2017 and the unit is yet to replace worn out pumps</p>	<p>installation of new diaphragm pump, replacement of media of multi-media filters.</p> <p>Unit is producing 18-30 m³/day of effluent which is processed in 3-5 hours and injected into effluent disposal wells.</p> <p>The ETP is operational and functioning properly and operated in batches depending upon load to ETP.</p> <p>Unit claims as Complying</p>	<p>and treated effluent (outlet of ETP) and from storm water drain. It is found that treated effluent is not meeting with ED well discharge standards w.r.t oil & grease. Flow meters are installed at inlet and outlet of ETP. TPH is present in drain sample in traces which implies that effluent is not discharged into drain. Results are given as follows:</p>	
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Table 7: Odalarevu raw and treated effluent analysis results

Location	pH	TSS (mg/L)	Oil and Grease (mg/L)	TPH (mg/L)
Storm water drain beside Security Gate at Vashishta gate - Odaleruvu	8.01	11.6	22	1.48
ETP inlet - Odaleruvu	6.47	116	52	NA
ETP outlet - Odaleruvu	5.87	8	14	NA
APPCB ED well disposal limits		100	10	

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2	Severe odour nuisance and VOC levels inside unit premises was varying from 4.0ppm to 6.0ppm when measured using handheld PID (photo ionic detector) analyzer	Oil in the CRWS tank and other operational area pits have been processed and being maintained regularly within limits so that VOC and odour nuisance is not available in the premises anymore.	No odour nuisance sensed by the committee members. VOC was measured using handheld PID analyser and value was 0ppm.	<i>Complying</i>
3	During the visit, there were rains and water logging was observed in the area. Both Effluent mixed with storm water was present in the unlined lagoon in more than 10acres of land between M/s GAIL and M/s ONGC terminals. The pH of the lagoon water was around 5	Unit claims that MEG barrels were placed near the referred lagoon having an area of 1.25 acres (not 10 Acres) during construction activities. Unintended and inadvertent leakage of one of the barrel of MEG in the area might have resulted into low pH value in the sample. The same has been rectified. Top layer of soil has been recovered and	Since there was no rains, there was no water logging. Unit has not taken any measures for the cleanup of the area. Black oily sludge is still present in the area. Top layer of soil is not fully removed and only in certain areas top 10cm of soil is removed however bund is not constructed. Committee collected three sediment samples at different at various points where ONGC pipelines are passing and from sediment analysis results, it implies that the it contains total petroleum hydrocarbons in the range of 297 mg/kg to 421 mg/Kg. No other heavy metals is present. The summary of the results is as	<i>Partially complying</i>

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		<p>shall be processed for bio remediation/Transfer to TSDF for landfill depending upon sample analysis.</p> <p>After removal of the top layer of soil, the area will be properly protected with bund and rain water shall be stored in the pond.</p> <p>Unit claims as Complying</p>	<p>follows:</p>	
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Table 8: Odalarevu Sediment sample analysis results

Location	Total TPH mg/Kg	Iron (mg/kg)	Mercury (mg/kg)	Lead (mg/kg)	Benzene (mg/kg)	Benzo(a) pyrene (µg/kg)	Phenols (mg/kg)
Beside security gate at vashishta gate-odalarevu (soil)	693.54	1441.86	BLQ (LOQ:2.0)	BLQ (LOQ:2.0)	BLQ (LOQ:20)	BLQ (LOQ:20)	BLQ (LOQ:0.1)
Area between GAIL and ONGC-odalarevu (soil)	297.17	31.35	BLQ (LOQ:2.0)	BLQ (LOQ:2.0)	BLQ (LOQ:20)	BLQ (LOQ:20)	BLQ (LOQ:0.1)
Lagoon Area between GAIL and ONGC-odalarevu (soil)	335.57	153.73	BLQ (LOQ:2.0)	BLQ (LOQ:2.0)	BLQ (LOQ:20)	BLQ (LOQ:20)	BLQ (LOQ:0.1)
lagoon between GAIL and ONGC near watch tower-odalarevu (soil)	421.74	846.43	BLQ (LOQ:2.0)	2.28	BLQ (LOQ:20)	BLQ (LOQ:20)	BLQ (LOQ:0.1)
ETP beside settling tank –odalarevu (soil)	10019.79	1553.94	BLQ (LOQ:2.0)	BLQ (LOQ:2.0)	BLQ (LOQ:20)	BLQ (LOQ:20)	BLQ (LOQ:0.1)

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Analysis results indicate the presence of TPH in the range of 297 mg/Kg to 10019 mg/Kg. Unit has to take measures to prevent oil spillages/ leakages and to clean the existing spills.				
4	The storm water drains are completely clogged and was filled with thick oily sludge.	The storm water drains are being cleaned periodically in phase wise manner to remove the vegetation.	Storm water drains are cleaned and reported that the oily sludge and silt removed from drains was transferred to sludge tank but however the records on how much quantity of sludge was removed from drains is not made available to committee. Drains were dry and no effluent was transferred through drains.	Complying
5	CFO validity		Unit has applied for consent and renewal is awaited. Consent fees is paid.	

VI.a Environmental compensation to be levied from Odalarevu GCS

EC for violation	$EC = PI \times N \times R \times S \times LF$ <p>Where,</p> <p>EC = Environmental Compensation in INR</p> <p>PI = Pollution Index of industrial sector (red-80)</p> <p>N = Number of days of violation took place (from the date of violation observed to date of compliance- 379 days)</p> <p>committee had calculated compensation till 25.02.2021 and committee re-inspected during 08-03-2022 to 11-03-2022 and observed following non-compliances</p> <ul style="list-style-type: none"> • treated effluent not complying with ED well disposal limits • oily sludge is laying beside settling tank in the ETP area <p>R = A factor in Rupees for EC (Rs. 250/-)</p> <p>S = Factor for scale of operation (large-1.5)</p>
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Inspection Report in the matter of OA 175/2020 (SZ)

	<p>LF = Location factor 1</p> <p>=80*379*250*1.5*1</p> <p>=Rs. 1,13,70,000</p> <p>Rupees One Crore thirteen lacs seventy thousand only</p> <p>Considering unit has made improvements and unit is complying with effluent discharge standards committee has not assessed repeated violation factor</p>
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VII Compliance verification of Gopavaram GGS

Sl. No	Non-compliances observed by committee during first visit	Compliance status submitted by the unit and Upgradations/ Modifications made by the unit	Current status of compliance as verified by the committee	Remarks
1	Unit is generating 1800 KLD of effluent but the capacity of ETP is 600 KL	Unit is in the process of upgrading ETP and augmenting the capacity. Unit claims as work under progress	As per the CFO issued by APPCB, quantity of effluent is 6 KLD but actual effluent generation varies from 1500 KLD to 1800 KLD. ETP is having capacity to treat 600 KLD of effluent and both treated & untreated effluent is discharged into ED (effluent disposal) wells. Committee collected samples from inlet (producer water) and outlet of ETP, storm water drain at north-east corner and from unlined lagoon. From the analysis results it is found that effluent is getting	<i>Not Complying</i>

			<p>mixed with storm water.</p> <p>Untreated Effluent is discharged into ED wells. Storm water drains are filled with oily sludge. Oil contaminated wastewater is stored in unlined lagoon in the premises. Land in the premises is observed to be contaminated at several places indicating discharge of untreated oil bearing effluents on open land. Hazardous waste is stocked in a concrete tank without disposal since commission of the premises. Treated effluent is complying with discharge limits. Copy of CFO is enclosed as Annexure-IX</p>	
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Table 9: Gopavaram raw and treated effluent analysis results

Location	pH	TSS (mg/L)	Oil and Grease (mg/L)	TPH (mg/L)
ETP Inlet - Gopavaram	7.58	29	BDL(DL:4.0)	NA
ETP Outlet- Gopavaram	7.66	11	BDL(DL:4.0)	NA
Storm water drain North east corner- Gopavaram	8.07	6	BDL(DL:4.0)	731.78
Storm water collected from unlined lagoons in Gopavaram	7.50	71	BDL(DL:4.0)	185.53

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Photo 18: Effluent treatment area



Photo 19: effluent stagnation



Photo 20: oily sludge dumped on the ground



VII.a Environmental compensation to be levied from Gopavaram GGS

EC for violation	<p>$EC = PI \times N \times R \times S \times LF$</p> <p>Where,</p> <p>EC = Environmental Compensation in INR</p> <p>PI = Pollution Index of industrial sector (red-80)</p> <p>N = Number of days of violation took place (from the date of violation observed to date of compliance- 379 days)</p> <p>committee had calculated compensation till 25.02.2021 and committee re-inspected during 08-03-2022 to 11-03-2022 and observed following non-compliances</p> <p>oily sludge is laying beside settling tank in the ETP area</p> <p>untreated effluent is discharged through storm water drains</p> <p>Sediment contains high concentration of sludge indicating dumping of oily sludge</p> <p>R = A factor in Rupees for EC (Rs. 250/-)</p> <p>S = Factor for scale of operation (large-1.5)</p> <p>LF = Location factor 1</p> <p>$= 80 \times 379 \times 250 \times 1.5 \times 1$</p> <p>=Rs. 1,13,70,000</p> <p>Rupees One Crore thirteen lacs seventy thousand only</p>
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VIII Utilization of CSR funds by M/s ONGC in Rajahmundry and Kakinada assets

ONGC has devised framework for utilization of CSR funds. Though the installations at Kakinada asset and Rajahmundry asset are currently operating under loss but however the overall profit made by M/s ONGC nationwide is considered for CSR fund utilization. Reported that 5% of the overall profit made by M/s ONGC is utilized for CSR activities and the total profit is divided among all installations. Based on the CSR proposals received by various modes such as through District Collector, NGO's, Public representatives etc are compiled and approval is obtained through their key executive/ corporate head. Kakinada asset & Rajahmundry asset prepare a CSR plan based on the proposals received and on the allocated amount to each installation. Both

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Rajahmundry and Kakinada asset are having a CSR co-ordinator for implementation of CSR activities.

The CSR proposals received from various domain are first examined by the CSR co-ordinator by way of field visit or verifying the DPR etc and after examining the proposals it is put up to an internal screening committee and then to virtual corporate committee. These committee further examine and recommend the activities after which approval is obtained. Based on the proposal received CSR activity is implemented and then it is monitored by either CSR co-ordinator or project monitoring team. Post implementation & monitoring, documents are obtained such as utilization certificates etc and activity is completed.

For ground trothing purposes, committee verified the CSR records for last five years (2017 onwards) and also visited areas where activities are implemented such as installation of water tanks, providing cycle stand for school children etc. Committee interacted school Principle, Tehsildar and it was reported that CSR activities are taken up the units.

Four village heads met the committee and requested the committee to direct M/s ONGC to release more amount to the villages where the wells are located rather than spending the amount in diverse manner and in other villages. Committee clarified the Village heads that committee is verifying as to whether CSR funds are properly utilised or not. M/s ONGC Rajahmundry asset has spent around Rs. 21.04 crores on CSR activities during 2018-19, Rs. 23.05 crores during 2019-20 and Rs. 8.08 crores during 2020-21 respectively. Reported that during 2020-21, M/s ONGC has contributed to PM cares fund and hence hence there is a decline in amount spent on CSR activity in the region.

The committee interacted with the applicant and objections were raised on installation of two Water ATM's in Antharvedi Devasthanam and nearby village. Committee visited both the water ATM's and discussed with the M/s ONGC team. Based on the proposals received, M/s ONGC has proposed to two install water ATM's. Water ATM's are water treatment machines (basically RO system) which either draw surface or ground water treat the water and clean water is provided through tap. Each villager was given a card and on inserting the card, each villager gets

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around 20 liters of water per day. M/s ONGC has implemented the project on the condition that M/s ONGC will only bear the capital expenditure (only the cost of water ATM machine) and one year AMC and subsequently the village has to maintain the water ATM. The land required for installing ATM was identified by the villagers, electricity was provided by village/ temple authorities. After lapse of one year the expenditure towards O &M cost/ AMC cost of the water ATM had to be borne by the village. Reported that water ATM installed at Antharvedi Devasthanam was operational for one year and afterwards no one has taken responsibility and currently it is not operational. While the water ATM in the village is not put to use. During committee visit, both the water ATM's were not in operation.

The process flow followed by M/s ONGC for CSR is given in the below image. Further two case studies are given as Annexure-X.

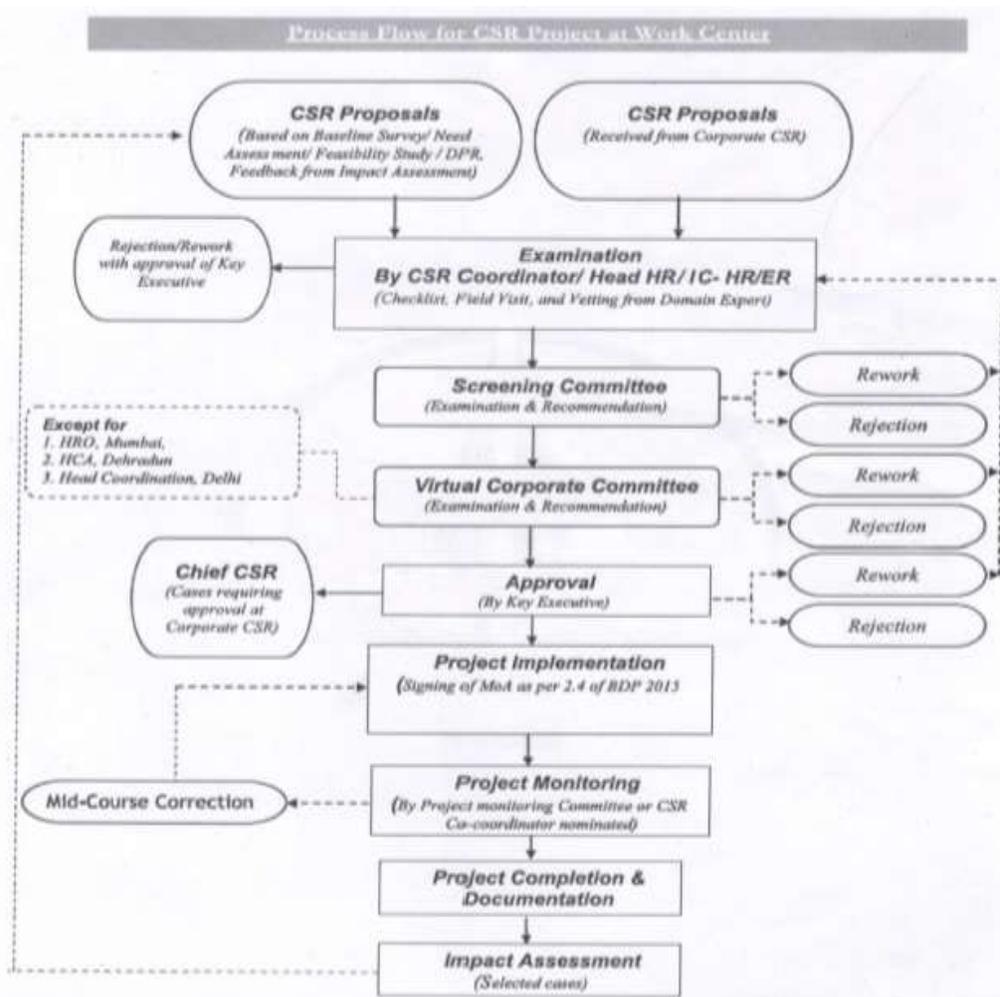


Image: Process flow followed for CSR projects at ONGC

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CSR ABSTRACT - ONGC RAJAHMUNDRY										
FY 2020-21	Total No of CSR Cases	60								
	Overall amount Spent	80871987								
	No of Cases in which Payment made to Govt. Bodies	50								
	Overall amount paid to Govt. Bodies	74286917								
	Percentage of Amount paid to Govt Bodies	91.85741535								
	No of Cases in which Payment made to Non-Govt. Bodies	10								
	Overall amount paid to Non-Govt. Bodies	6585070								
	Percentage of Amount paid to Non-Govt Bodies	8.14258465								
FY 2019-20	Total No of CSR Cases	208								
	Overall amount Spent	230578251								
	No of Cases in which Payment made to Govt. Bodies	188								
	Overall amount paid to Govt. Bodies	210475823								
	Percentage of Amount paid to Govt Bodies	91.28173281								
	No of Cases in which Payment made to Non-Govt. Bodies	20								
	Overall amount paid to Non-Govt. Bodies	20102428								
	Percentage of Amount paid to Non-Govt Bodies	8.718267188								
FY 2018-19	Total No of CSR Cases	304								
	Overall amount Spent	210411284								
	No of Cases in which Payment made to Govt. Bodies	263								
	Overall amount paid to Govt. Bodies	160664272								
	Percentage of Amount paid to Govt Bodies	76.35725088								
	No of Cases in which Payment made to Non-Govt. Bodies	41								
	Overall amount paid to Non-Govt. Bodies	49747012								
	Percentage of Amount paid to Non-Govt Bodies	23.64274912								
FY		Percentage of Amount Paid to NGO								
2018-19		23.64								
2019-20		8.718								
2020-21		8.142								
<p style="text-align: center;">Percentage of Amount Paid to NGO</p> <table border="1"> <caption>Data for Percentage of Amount Paid to NGO</caption> <thead> <tr> <th>FY</th> <th>Percentage of Amount Paid to NGO</th> </tr> </thead> <tbody> <tr> <td>FY-18-19</td> <td>23.64</td> </tr> <tr> <td>FY-19-20</td> <td>8.718</td> </tr> <tr> <td>FY-20-21</td> <td>8.142</td> </tr> </tbody> </table>			FY	Percentage of Amount Paid to NGO	FY-18-19	23.64	FY-19-20	8.718	FY-20-21	8.142
FY	Percentage of Amount Paid to NGO									
FY-18-19	23.64									
FY-19-20	8.718									
FY-20-21	8.142									

Image: CSR abstract of Rajahmundry asset from 2018- 2021

IX Conclusions and Recommendations

Hon'ble NGT vide order dated 19.01.2022 directed the committee to inspect the units and verify the compliance status of the units. Committee observed that as compared to previous visit, there are improvements but units are yet to achieve compliance and few serious & significant violations were observed by the committee.

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- i. Currently, Tatipaka GCS is operating the ETP and unit is testing the quality of treated effluent as to whether it is meeting the discharge standards or not and after ensuring that unit complies with discharge limits, treated effluent is discharged through ED wells. Unit has maintained records on the quantity of effluent generated, characteristics of effluent at inlet & outlet of ETP and quantity of effluent disposed through ED well. However unit has not taken adequate measures in handling the oily sludge, slop oil and washings. Spillages or oil deposition near the ETP area is not fully cleaned. Effluent oily sludge stored in the old ETP shall be treated and old ETP shall be dismantled. Sludge stored in the sludge tank shall be disposed. Unit shall ensure that it will comply with Hazardous Waste Management Rules, 2016 and dispose the hazardous waste within 90 days from the date of generation.
- ii. Kesanapalli ETP is handling around 1800 KLD of effluent against the consented quantity of 600 KLD and is having two ETP's. Old ETP was not properly operated however treated effluent is meeting the discharge limits for ED well disposal. New ETP is handling 1500 KLD of effluent and treated effluent is disposed in the sea with existing marine outfall pipeline of 60m against consent condition of ED well disposal. Outside the unit premises water stagnation was observed and TPH (Total Petroleum Hydrocarbons) is around 971.17 mg/L which indicates that effluent may be leaking/ discharged outside the unit premises or runoff from old ETP area has stagnated outside the unit premises. Sediment samples collected around old ETP contains TPH of 319mg/Kg indicating mixing of spillages on the ground. Unit shall ensure that ETP is properly operated, effluent is disposed as the per conditions stipulated in CFO and ensure that no effluent is discharged outside the unit premises. Sludge shall be properly managed and prevent the spillages. Kesanapalli GGS shall immediately stop disposal of treated effluent by marine outfall near the coast and dispose the treated effluent as per the conditions stipulated in CFO issued by APPCB
- iii. Laying of new pipe line in CRZ area by Kesanapalli GGS does not have prior CRZ clearance from Ministry and Consent approvals from APPCB. Kesanapalli GGS shall

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immediately approach concerned authorities for obtain prior permissions for the new pipe line.

- iv. Effluent generation is around 1800 KLD and ETP at Gopavaram is having capacity to handle 600 KLD of effluent. Hence untreated effluent is discharged outside the unit premises. Water present in the storm water drain and in unlined lagoon contained TPH of 731.78 mg/L and 185.53 mg/L indicating the presence crude oil/ effluent in the sample. Sediment samples collected from Gopavaram GGS contains high concentration of TPH in the range of 644.07 mg/Kg to 30,698 mg/Kg which indicates that oily sludge is dumped on the ground. Since unit is not having ETP of adequate capacity, untreated effluent is discharged through ED wells. Unit shall take measures to augment the treatment capacity and ensure that only treated effluent is discharged through ED wells. Till the ETP capacity is enhanced, unit shall restrict its production so that quantity of effluent generation is proportionate with ETP capacity.
- v. Whenever any oil spills/ leakages takes place within the unit premises or whenever sludge is carried with runoff, unit is covering it with fresh soil and not taking measures to clean up. Units shall ensure that during any untoward incidences of oil spill/ leakages, unit shall take measures to remove the entire quantity of spills/ leaks and scrap the underlying soil and store it in sludge tank and dispose the same along with oily sludge.
- vi. During rains, the first flush of rains is likely to carry the pollutants into adjacent area and it is essential for the industry to have facility to lift the first flush of rain water and treat the same in effluent treatment plant.
- vii. During previous committee visit it was observed that thick oily sludge was present in the storm water drains. Currently all the units have cleaned the drains and they were in dry condition. Units have also devised plan for periodical cleaning of drains. However units have not maintained records on the quantity of sludge removed from drains and mode of disposal of the silt/ sludge. Unit will take measures to install oil catchers in the drains located near process area & ETP. Based on the characteristics of the silt/ sludge present in the drains, units will safely dispose the same.

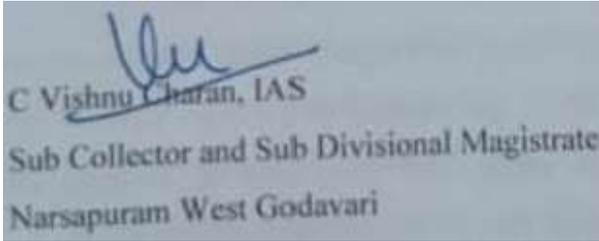
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- viii. There was no odour nuisance during this visit and ambient air quality in the installations and in the villages is meeting the National Ambient Air Quality Standards. Committee observed huge flames from flare stack at Tatipaka GCS. Units have not maintained proper records on the volume of the gas handled in the flare stack. It was reported that unit has already proposed to install new flare stack at Tatipaka and Kesanapalli. Unit may submit time bound action plan for replacement of flare stacks.
- ix. The unit has obtained consent from APPCB during 2015 and subsequently the consent is renewed (online consent monitoring and management system) but however post 2015 due to ageing of wells the quantity of produce water is increasing and there by the quantity of effluent generated is also increased. The actual quantity of effluent generated is higher than the quantities stipulated in the CFO. All the stacks installed in the installations are not covered under the purview of the Consent order. For instance stack installed at TEG unit is not included in the consent order. M/s ONGC shall ensure that every installation obtains Consent For Operation from APPCB under the Water Act, 1974 and Air Act, 1981 for the actual quantity of products manufactured, actual quantity of wastewater received and include all the stacks installed in the unit.
- x. Committee observed that M/s ONGC are utilizing the CSR funds for environmental & social development activities and other essential activities identified by the District Magistrate/ Corporate Head office/ Public representatives/ registered NGO's.
- xi. The units shall pay Environmental compensation to CPCB as follows:

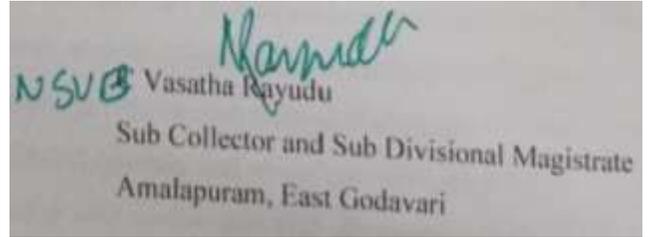
Name of the installation	EC amount assessed during first visit of the committee	EC amount assessed during second visit	Total EC amount in INR to be paid to CPCB
Tatipaka GCS	Rs. 7,28,62,500/-	Rs. 1,13,70,000/-	Rs. 8,42,32,500/-
Kesanapalli GGS	Rs. 4,11,00,000/-	Rs. 2,27,40,000/-	Rs. 6,38,40,000/-
Odalarevu GCS	Rs. 5,68,50,000/-	Rs. 1,13,70,000/-	Rs. 6,82,20,000/-
Gopavaram GGS	-	Rs. 1,13,70,000/-	Rs. 1,13,70,000/-
Total Environmental Compensation to be paid by M/s ONGC to CPCB			22,76,62,500/-

is Rs. Twenty Two crores Seventy Six lacs Sixty Two Thousand and Five hundred only	
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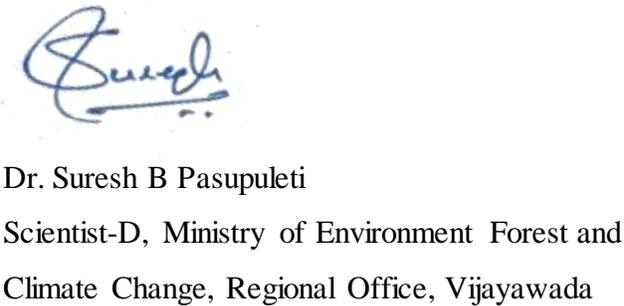
- xii. The units shall implement the corrective actions, shall submit time bound action plan for disposal of sludge. Unit shall ensure that hazardous waste are disposed within 90 days from date of generation as per the conditions stipulated in the Hazardous Waste Authorization. Unit shall submit time bound action plan for removal of oily sludge deposited in the soil at Gopavaram, Kesanapalli and at Tatipaka. APPCB shall monitor that the oily sludge is disposed as per action plan.



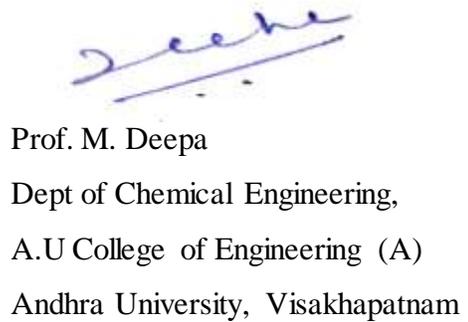
C Vishnu Charan, IAS
Sub Collector and Sub Divisional Magistrate
Narsapuram West Godavari



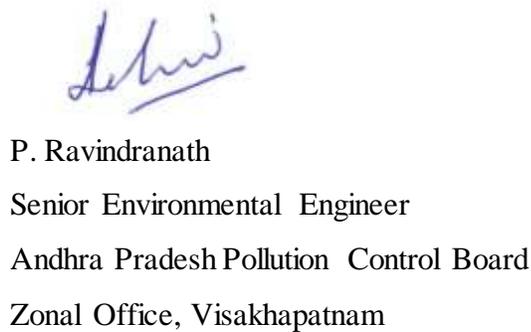
NSVB Vasatha Nayudu
Sub Collector and Sub Divisional Magistrate
Amalapuram, East Godavari



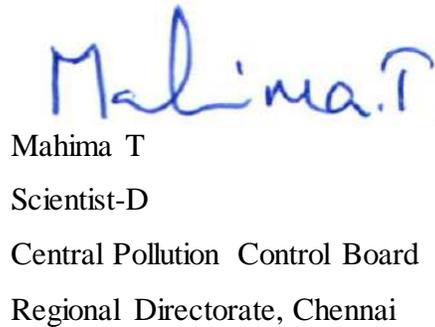
Dr. Suresh B Pasupuleti
Scientist-D, Ministry of Environment Forest and
Climate Change, Regional Office, Vijayawada



Prof. M. Deepa
Dept of Chemical Engineering,
A.U College of Engineering (A)
Andhra University, Visakhapatnam



P. Ravindranath
Senior Environmental Engineer
Andhra Pradesh Pollution Control Board
Zonal Office, Visakhapatnam



Mahima T
Scientist-D
Central Pollution Control Board
Regional Directorate, Chennai

Item No.02:

BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI

Original Application No.175 of 2020 (SZ)

(Through Video Conference)

IN THE MATTER OF:

Venkatapathi Raja Yenumula,

...Applicant(s)



Versus

Union of India and Ors.

...Respondent(s)

Date of hearing: 19.01.2022.

CORAM:

HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER

HON'BLE MR. SAIBAL DASGUPTA, EXPERT MEMBER

For Applicant(s):

Mr.Sravan Kumar

For Respondent(s):

Mr. G.M. Syed Nurullah Sheriff for R1.

Mr. A.R. Sakthivel for R2

Mr. R. Sankara Narayanan, ASGI along with
Mr.Giridhar for R3.

Mr.Basu for Ms.Madhuri Donti Reddy for R5, R7 to
R12

Ms. P. Jayalakshmi for R6

ORDER

1. As per order dated 03.12.2021, the case was originally adjourned to 06.01.2022 directing the ONGC to submit detailed status report and compliance report for consideration of report and hearing.
2. We have received the status cum compliance report filed by the ONGC to the Joint Committee report.

3. Learned Counsel appearing for the applicant wanted this to be verified by the Joint Committee as well as by Pollution Control Board and if there is any non-compliance, they will have to be directed to file further non-compliance reports.
4. Pollution Control Board is also expected to file a detailed report regarding the compliance of directions issued and its effectiveness. So, we direct the Joint Committee to inspect the unit again and consider the compliance report submitted by the ONGC regarding the recommendations made and the Pollution Control Board is also directed to inspect independently and submit their report regarding satisfaction of the compliance and further steps, if any, to be taken to avoid such incidents in future from their side as a regulator. They have also not filed any action taken report as undertaken by them. So, the Joint Committee as well as Pollution Control Board are directed to file their further report and action taken report, if any, required on or before 25.02.2022.
5. The Joint Committee is also directed to ascertain as to whether ONGC is spending its CSR amount to meet the environmental sustainable development activities as directed to be done under Environmental Clearance and incorporate the same in the report to be filed.
6. ONGC is also directed to hand over a copy of the compliance report filed by them to the Joint Committee and also to the Pollution Control Board within a week, so as to enable them to comply with the direction issued

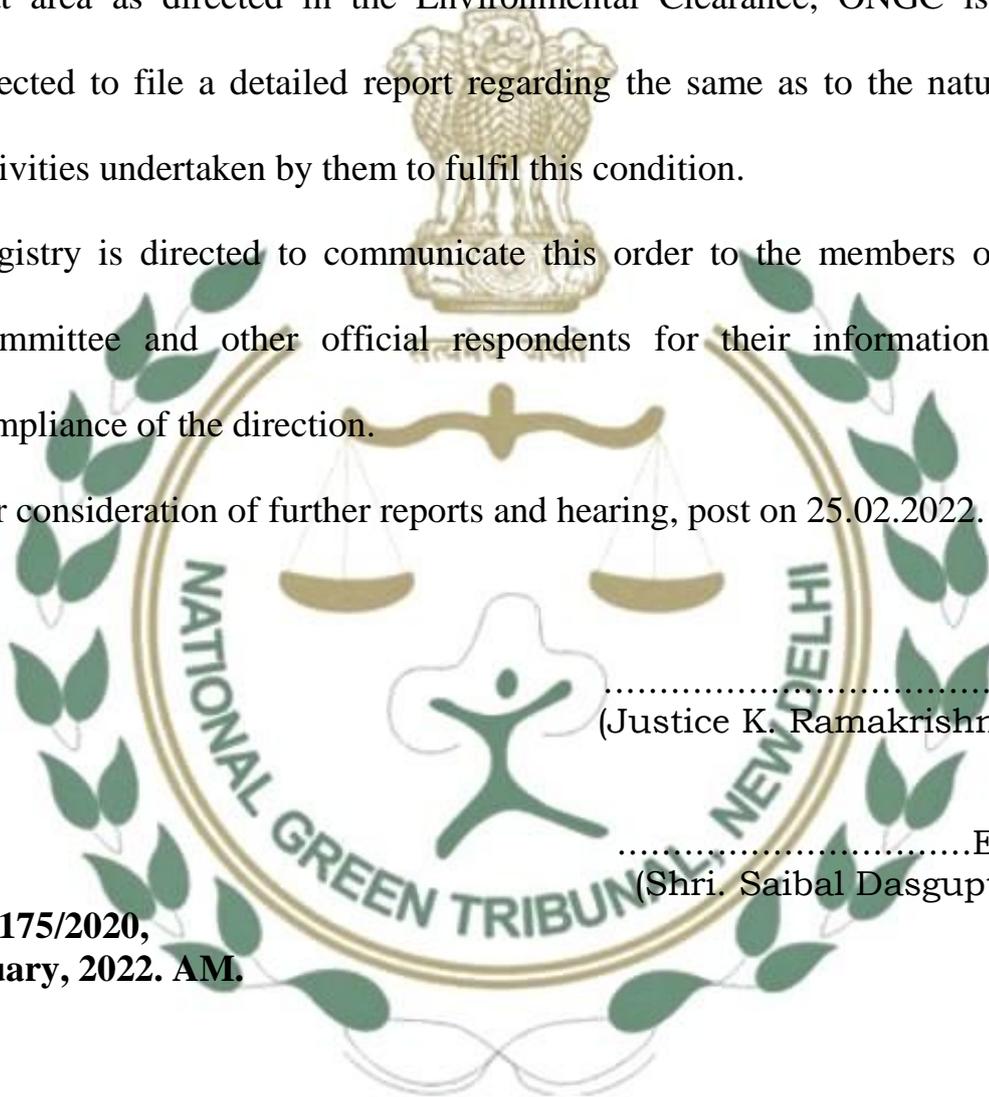
by this Tribunal.

7. Apart from the Joint Committee answering the question raised by the Learned Counsel appearing for the applicant regarding the utilisation of the CSR amount for environmental sustainable development activities in that area as directed in the Environmental Clearance, ONGC is also directed to file a detailed report regarding the same as to the nature of activities undertaken by them to fulfil this condition.
8. Registry is directed to communicate this order to the members of the Committee and other official respondents for their information and compliance of the direction.
9. For consideration of further reports and hearing, post on 25.02.2022.

.....J.M.
(Justice K. Ramakrishnan)

.....E.M.
(Shri. Saibal Dasgupta)

**O.A. No.175/2020,
19th January, 2022. AM.**





Glens Innovation Labs Pvt Ltd.

NABL ACCREDITED AS PER ISO/IEC 17025 : 2017, CERTIFIED AS PER ISO 9001:2015 & ISO 45001 : 2018

TEST REPORT

Report No : EN22030026-21 to 38 Report Date : 21 Mar 2022

SAMPLE DRAWN BY LABORATORY

Customer Name : M/S. Oil and Natural Gas Corporation Limited

Customer Address : SURVEY NO.614-A, B, SMS PLAZA, R F ROAD, TADIPATRI, DIST.ANANTAPUR,ANDHRA PRADESH, PIN 515 411.

Sampling Date : 08 to 10 Mar 2022

Sample Name : Waste Water

Sample Received on : 14 Mar 2022

Sample No : EN22030026-21 to 38

Test Started on : 14 Mar 2022

Sample Condition : Fit for Analysis

Test Completed on : 21 Mar 2022

S.NO	SAMPLE CODE NO	LOCATION	Boron (mg/kg)	Magnesium (mg/kg)	Aluminium (mg/kg)	Vanadium (mg/kg)	Chromium (mg/kg)	Manganese (mg/kg)
1	EN22030026.21	Beside Security Gate at Vashishta gate - Odaleruvu	8.01	1586	875	43	11	16
2	EN22030026.22	ETP inlet - Odaleruvu	6.47	24600	14268	57759	15748	21665
3	EN22030026.23	ETP outlet - Odaleruvu	5.87	25600	14592	23276	5791	8731
4	EN22030026.24	ETP inlet - Tatipaka	6.76	1957	1201	4310	1092	1617
5	EN22030026.25	ETP Outlet - Tatipaka	7.5	17900	10048	517	130	194
6	EN22030026.26	Guard pond Water - Tadipaka	7.53	17720	9923	931	239	349
8	EN22030026.28	ETP Inlet - Gopavaram	7.58	47300	24997	448	117	168
9	EN22030026.29	ETP Outlet - Gopavaram	7.66	31800	18126	1897	543	711
10	EN22030026.30	Storm water drain North east corner - Gopavaram	8.07	41800	23554	151	44	57
11	EN22030026.31	Storm water collected from uniline lagoons in Liberans - Gopavaram	7.50	52900	27175	690	188	259
12	EN22030026.32	Kesanapalli beach sea water - Kesanapally	8.02	53580	31960	457	274	171
13	EN22030026.33	Lagoon - Z smann lagoon water - Kesanapally	8.77	12430	6961	121	33	45

Authorized Signature

E. PRITHIVI RAJAN
LAB MANAGER

#.6/1, 1st Floor, Sri Jothi Complex, Murugesan Street, Balavinayagar Nagar, Arumbakkam, Chennai – 600 106.

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GLens Innovation Labs Pvt Ltd.

NABL ACCREDITED AS PER ISO/IEC 17025 : 2017, CERTIFIED AS PER ISO 9001:2015 & ISO 45001 : 2018

TEST REPORT

Report No : EN22030026.21 to 39

Report Date : 21 Mar 2022

Test Results

S.NO	SAMPLE CODE NO	LOCATION	Sulphide (mg/l)	Oil and Grease (mg/l)	NH3-N (mg/l)	NH3 (mg/l)	Iron (mg/l)
1	EN22030026.21	Beside Security Gate at Vashishta gate - Odaleruvu	BDL(DL:1.0)	22	BDL(DL:1.0)	BDL(DL:0.5)	0.28
2	EN22030026.22	ETP inlet - Odaleruvu	BDL(DL:1.0)	52	2.4	46.9	28.47
3	EN22030026.23	ETP outlet - Odaleruvu	BDL(DL:1.0)	14	7.2	58.4	25.88
4	EN22030026.24	ETP inlet - Tatipaka	BDL(DL:1.0)	66.70	5.4	38.4	240.33
5	EN22030026.25	ETP Outlet- Tatipaka	BDL(DL:1.0)	BDL(DL:4.0)	7.8	36.9	1.74
6	EN22030026.26	Guard pond Water- Tadipaka	BDL(DL:1.0)	BDL(DL:4.0)	4.8	39.2	2.98
8	EN22030026.28	ETP Inlet - Gopavaram	BDL(DL:1.0)	BDL(DL:4.0)	7.2	65.3	14.97
9	EN22030026.29	ETP Outlet- Gopavaram	BDL(DL:1.0)	BDL(DL:4.0)	4.2	13.1	3.77
10	EN22030026.30	Storm water drain North east corner- Gopavaram	BDL(DL:1.0)	BDL(DL:4.0)	BDL(DL:1.0)	13.1	1.83
11	EN22030026.31	Storm water collected from uniline lagoons in Liberans- Gopavaram	BDL(DL:1.0)	BDL(DL:4.0)	BDL(DL:1.0)	10	1.59
12	EN22030026.32	Kesanapalli beach sea water- Kesanapally	BDL(DL:1.0)	BDL(DL:4.0)	BDL(DL:1.0)	BDL(DL:0.5)	2.05
13	EN22030026.33	Lagoon-2 smann lagoon water- Kesanapally	BDL(DL:1.0)	BDL(DL:4.0)	BDL(DL:1.0)	3.8	1.46
14	EN22030026.34	Old ETP inlet Raw Effluent-Kesanapally	BDL(DL:1.0)	BDL(DL:4.0)	3.6	3.8	1.42
15	EN22030026.35	Old ETP outlet Effluent-Kesanapally	BDL(DL:1.0)	BDL(DL:4.0)	3	33.8	0.94
16	EN22030026.36	New ETP inlet - Kesanapally	BDL(DL:1.0)	BDL(DL:4.0)	1.8	36.9	1.63
17	EN22030026.37	New ETP Outlet- Kesanapally	BDL(DL:1.0)	BDL(DL:4.0)	BDL(DL:1.0)	9.2	BDL(DL:0.05)
18	EN22030026.38	Big Lagoon - Kesanapally	BDL(DL:1.0)	BDL(DL:4.0)	BDL(DL:1.0)	3.8	3.48

Authorized Signature
E. PRITHIVIRAJAN
LAB MANAGER

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Glens Innovation Labs Pvt Ltd.

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TEST REPORT

Report No : EN22030026-21 to 38

Report Date : 21 Mar 2022

S.NO	Sample Code No	Sample Description	n-Octane	n-Nonane	n-Decane	n-Undecane	n-Dodecane	n-Tridecane
1	EN22030026.21	Beside Security Gate at Vashishta gate - Odaleruvu	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
2	EN22030026.22	ETP inlet - Odaleruvu	BLQ(LOQ:0.1)	0.45	0.19	25.89	0.63	2.93
3	EN22030026.23	ETP outlet - Odaleruvu	BLQ(LOQ:0.1)	0.86	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.57	1.51
4	EN22030026.24	ETP inlet - Tatipaka	12.33	0.54	87.26	33.37	4.72	53.73
5	EN22030026.25	ETP Outlet - Tatipaka	BLQ(LOQ:0.1)	0.12	0.32	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
6	EN22030026.26	Guard pond Water - Tatipaka	BLQ(LOQ:0.1)	0.43	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
7	EN22030026.27	Mori Produced water sent to Kesanapally ETP for Treatment - Mori	BLQ(LOQ:0.1)	23.97	92.69	89.69	108.76	169.51
8	EN22030026.28	ETP Inlet - Gopavaram	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.32	BLQ(LOQ:0.1)
9	EN22030026.29	ETP Outlet - Gopavaram	1.65	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.25
10	EN22030026.30	Storm water drain North east corner - Gopavaram	54.08	12.60	85.37	0.77	32.98	13.45
11	EN22030026.31	Storm water collected from uniline lagoons in Liberans - Gopavaram	32.46	BLQ(LOQ:0.1)	0.24	1.24	BLQ(LOQ:0.1)	11.27
12	EN22030026.32	Kesanapalli beach sea water - Kesanapally	0.45	0.13	0.22	0.22	0.29	0.14
13	EN22030026.33	Lagoon - 2 smann lagoon water - Kesanapally	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.46	0.46	BLQ(LOQ:0.1)	0.55
14	EN22030026.34	Old ETP inlet Raw Effluent - Kesanapally	BLQ(LOQ:0.1)	0.28	0.89	0.89	1.97	5.73
15	EN22030026.35	Old ETP outlet Raw Effluent - Kesanapally	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.22	0.22	BLQ(LOQ:0.1)	0.31
16	EN22030026.36	New ETP inlet - Kesanapally	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.47	0.41	0.36	79.22
17	EN22030026.37	New ETP Outlet - Kesanapally	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.47	1.60	1.13

Authorized Signature

E. PRITHIVI RAJAN
LAB MANAGER

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Glens Innovation Labs Pvt Ltd.

NABL ACCREDITED AS PER ISO/IEC 17025 : 2017, CERTIFIED AS PER ISO 9001:2015 & ISO 45001 : 2018

TEST REPORT

Report No : ENZ2030026-21 TO 38

Report Date : 21 Mar 2022

S.NO	Sample Code No	Sample Description	n-Tetradecane	n-Pentadecane	n-Hexadecane	n-Heptadecane	n-Octadecane	n-Nonadecane
1	EN22030026.21	Beside Security Gate at Vashishta gate - Odaleruvu	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.94
2	EN22030026.22	ETP inlet - Odaleruvu	1.22	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	3.37	0.24
3	EN22030026.23	ETP outlet - Odaleruvu	0.99	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.41	2.19
4	EN22030026.24	ETP inlet - Tatipaka	7.80	BLQ(LOQ:0.1)	23.47	0.00	271.77	12.02
5	EN22030026.25	ETP Outlet - Tatipaka	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.11
6	EN22030026.26	Guard pond Water - Tatipaka	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.57	BLQ(LOQ:0.1)	0.75
7	EN22030026.27	Mori Produced water sent to Kesanapally ETP for Treatment - Mori	104.34	BLQ(LOQ:0.1)	41.74	25.13	88.76	24.41
8	EN22030026.28	ETP Inlet - Gopavaram	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.21	0.31	BLQ(LOQ:0.1)	0.18
9	EN22030026.29	ETP Outlet - Gopavaram	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.13	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
10	EN22030026.30	Storm water drain North east corner - Gopavaram	4.76	BLQ(LOQ:0.1)	40.90	82.77	17.48	56.59
11	EN22030026.31	Storm water collected from uniline lagoons in Liberans - Gopavaram	3.13	BLQ(LOQ:0.1)	1.40	0.64	4.22	3.84
12	EN22030026.32	Kesanapalli beach sea water - Kesanapally	0.22	0.26	0.38	0.10	0.13	0.31
13	EN22030026.33	Lagoon-2 smann lagoon water - Kesanapally	2.17	2.80	2.80	BLQ(LOQ:0.1)	40.18	2.04
14	EN22030026.34	Old ETP inlet Raw Effluent - Kesanapally	10.80	13.27	15.22	23.43	188.87	25.95
15	EN22030026.35	Old ETP outlet Raw Effluent - Kesanapally	0.27	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.36	0.42	0.40
16	EN22030026.36	New ETP inlet - Kesanapally	33.33	BLQ(LOQ:0.1)	37.59	23.45	60.70	12.26
17	EN22030026.37	New ETP Outlet - Kesanapally	0.10	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)

Authorized Signature

E. PRITHVI RAVAN
LAB MANAGER

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Glens Innovation Labs Pvt Ltd.

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TEST REPORT

Report No : EN22030026-21 to 38

Report Date : 21 Mar 2022

S.NO	Sample Code No	Sample Description	Pristane	n-Eicosane	n-Tetracosane	Phytane	n-Pentacosane	n-Hexacosane
1	EN22030026.21	Beside Security Gate at Vashishta gate - Odaleruvu	0.54	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
2	EN22030026.22	ETP inlet - Odaleruvu	0.26	7.27	4.88	BLQ(LOQ:0.1)	5.99	BLQ(LOQ:0.1)
3	EN22030026.23	ETP outlet - Odaleruvu	0.41	0.35	0.23	BLQ(LOQ:0.1)	0.11	BLQ(LOQ:0.1)
4	EN22030026.24	ETP inlet - Tatipaka	34.26	25.43	13.62	BLQ(LOQ:0.1)	5.06	BLQ(LOQ:0.1)
5	EN22030026.25	ETP Outlet- Tatipaka	0.15	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
6	EN22030026.26	Guard pond Water- Tatipaka	0.49	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.78	0.65
7	EN22030026.27	Mori Produced water sent to Kesanapally ETP for Treatment - Mori	36.86	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.97	11.05	BLQ(LOQ:0.1)
8	EN22030026.28	ETP Inlet - Gopavaram	0.10	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.53	BLQ(LOQ:0.1)
9	EN22030026.29	ETP Outlet- Gopavaram	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.12	BLQ(LOQ:0.1)	0.27
10	EN22030026.30	Storm water drain North east corner- Gopavaram	19.87	0.45	BLQ(LOQ:0.1)	35.59	BLQ(LOQ:0.1)	12.60
11	EN22030026.31	Storm water collected from uniline lagoons in Liberans- Gopavaram	6.63	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	44.25	BLQ(LOQ:0.1)	22.39
12	EN22030026.32	Kesanapalli beach sea water- Kesanapally	0.26	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
13	EN22030026.33	Lagoon-2 smann lagoon water- Kesanapally	4.13	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
14	EN22030026.34	Old ETP inlet Raw Effluent- Kesanapally	28.09	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
15	EN22030026.35	Old ETP outlet Raw Effluent- Kesanapally	0.30	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
16	EN22030026.36	New ETP inlet - Kesanapally	3.24	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
17	EN22030026.37	New ETP Outlet- Kesanapally	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	1.67	0.27

Authorized Signature
E. PRITHIVIRAJAN
LAB MANAGER

#.6/1, 1st Floor, Sri Jothi Complex, Murugesan Street, Balavinayagar Nagar, Arumbakkam, Chennai – 600 106.

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G Lens Innovation Labs Pvt Ltd.

NABL ACCREDITED AS PER ISO/IEC 17025 : 2017, CERTIFIED AS PER ISO 9001:2015 & ISO 45001 : 2018

TEST REPORT

Report No : EN22030026-12 to 18 Report Date : 21 Mar 2022

SAMPLE DRAWN BY LABORATORY

Customer Name : M/S. Oil and Natural Gas Corporation Limited

Customer Address : SURVEY NO.614-A, B, SMS PLAZA, R.F.ROAD, TADIPATRI, DIST.ANANTAPUR, ANDHRA PRADESH, PIN 515 411

Sample Name : Soil and Sediment

Sample Description : Soil and Sediment

Sample No : EN22030026-12 to 18

Sampling Date : 08 to 10 Mar 2022

Sample Condition : Fit for Analysis

Sample Received on : 14 Mar 2022

Sample Quantity : 2kg

Test Started on : 14 Mar 2022

Test Completed on : 21 Mar 2022

Test Results

S.NO	SAMPLE CODE NO	LOCATION	Boron (mg/kg)	Magnesium (mg/kg)	Aluminium (mg/kg)	Vanadium (mg/kg)	Chromium (mg/kg)	Manganese (mg/kg)
1	EN22030026-12	BESIDE SECURITY GATE AT VASHISHTA GATE-ODALERUVU(SOIL)	BLQ(LOQ:2.0)	1482.46	541.65	18.35	3.11	79.18
2	EN22030026-13	LAGOON BETWEEN GAIL AND ONGC-ODALEREVU(SOIL)	BLQ(LOQ:2.0)	1737.18	171.45	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	30.96
3	EN22030026-14	LAGOON BETWEEN GAIL AND ONGC-ODALEREVU(SOIL)	BLQ(LOQ:2.0)	97.19	58.39	4.13	BLQ(LOQ:2.0)	2.11
4	EN22030026-15	LAGOON BETWEEN GAIL AND ONGC NEAR WATCH TOWER-ODALAREVU(SOIL)	BLQ(LOQ:2.0)	1211.18	252.13	6.72	BLQ(LOQ:2.0)	31.05
5	EN22030026-16	ETP BESIDE SETTLING TANK - ODALAREVU(SOIL)	BLQ(LOQ:2.0)	3336.35	663.70	10.64	BLQ(LOQ:2.0)	40.85
6	EN22030026-17	EFFLUENT COLLECTION AREA-TATIPAKA(SEDIMENT)	BLQ(LOQ:2.0)	BLQ(LOQ:5.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
7	EN22030026-18	UNLOADING TANK AREA-TATIPAKA(SEDIMENT)	2.03	406.86	227.98	3.42	2.63	13.16

Authorized Signature

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TEST REPORT

Report No : EN22030026-12 to 18

Report Date : 21 Mar 2022

S.NO	SAMPLE CODE NO	LOCATION	Iron (mg/kg)	Cobalt (mg/kg)	Nickel (mg/kg)	Copper (mg/kg)	Zinc (mg/kg)	Arsenic (mg/kg)
8	EN22030026-12	BESIDE SECURITY GATE AT VASHISHTA GATE- ODALERUVU(SOIL)	1441.86	BLQ(LOQ:2.0)	2.06	BLQ(LOQ:2.0)	5.65	BLQ(LOQ:2.0)
9	EN22030026-13	LAGOON BETWEEN GAIL AND ONGC- ODALEREVU(SOIL)	31.35	BLQ(LOQ:2.0)	2.24	BLQ(LOQ:2.0)	8.54	BLQ(LOQ:2.0)
10	EN22030026-14	LAGOON BETWEEN GAIL AND ONGC- ODALEREVU(SOIL)	153.73	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
11	EN22030026-15	LAGOON BETWEEN GAIL AND ONGC NEAR WATCH TOWER- ODALAREVU(SOIL)	846.43	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
12	EN22030026-16	ETP BESIDE SETTLING TANK - ODALAREVU(SOIL)	1553.94	BLQ(LOQ:2.0)	4.28	BLQ(LOQ:2.0)	2.52	BLQ(LOQ:2.0)
13	EN22030026-17	EFFLUENT COLLECTION AREA- TATIPAKA(SEDIMENT)	BLQ(LOQ:11.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
14	EN22030026-18	UNLOADING TANK AREA- TATIPAKA(SEDIMENT)	729.61	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	0.12

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S.NO	SAMPLE CODE NO	LOCATION	Silver (mg/kg)	Cadmium (mg/kg)	Tin (mg/kg)	Antimony (mg/kg)	Mercury (mg/kg)	Lead (mg/kg)
15	EN22030026-12	BESIDE SECURITY GATE AT VASHISHTA GATE- ODALERUVU(SOIL)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
16	EN22030026-13	LAGOON BETWEEN GAIL AND ONGC- ODALAREVU(SOIL)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
17	EN22030026-14	LAGOON BETWEEN GAIL AND ONGC- ODALAREVU(SOIL)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
18	EN22030026-15	LAGOON BETWEEN GAIL AND ONGC NEAR WATCH TOWER- ODALAREVU(SOIL)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	2.28
19	EN22030026-16	ETP BESIDE SETTLING TANK ODALAREVU(SOIL)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
20	EN22030026-17	EFFLUENT COLLECTION AREA- TATIPAKA(SEDIMENT)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
21	EN22030026-18	UNLOADING TANK AREA- TATIPAKA(SEDIMENT)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	3.88

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Report Date : 21-Mar-2022

S.NO	SAMPLE CODE NO	LOCATION	Benzene (mg/kg)	Benzo(a)pyrene (µg/kg)	Phenols (mg/kg)
22	EN22030026-12	BESIDE SECURITY GATE AT VASHISHTA GATE-ODALERUVU(SOIL)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
23	EN22030026-13	LAGOON BETWEEN GAIL AND ONGC-ODALEREVU(SOIL)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
24	EN22030026-14	LAGOON BETWEEN GAIL AND ONGC-ODALEREVU(SOIL)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
25	EN22030026-15	LAGOON BETWEEN GAIL AND ONGC NEAR WATCH TOWER-ODALAREVU(SOIL)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
26	EN22030026-16	ETP BESIDE SETTLING TANK -ODALAREVU(SOIL)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
27	EN22030026-17	EFFLUENT COLLECTION AREA-TATIPAKA(SEDIMENT)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
28	EN22030026-18	UNLOADING TANK AREA-TATIPAKA(SEDIMENT)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)

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Report No : EN22030026-12 to 18

Report Date : 21 Mar 2022

S.NO	SAMPLE CODE NO	LOCATION	n-Octane	n-Nonane	n-Decane	n-Undecane	n-Dodecane	n-Tridecane
29	EN22030026-12	BESIDE SECURITY GATE AT VASHISHTA GATE- ODALERUVU(SOIL)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	1.41	1.41	1.31	1.27
30	EN22030026-13	LAGOON BETWEEN GAIL AND ONGC- ODALEREVU(SOIL)	BLQ(LOQ:0.1)	0.45	2.19	2.19	2.89	2.89
31	EN22030026-14	LAGOON BETWEEN GAIL AND ONGC- ODALEREVU(SOIL)	0.42	0.45	2.39	2.39	3.56	1.85
32	EN22030026-15	LAGOON BETWEEN GAIL AND ONGC NEAR WATCH TOWER- ODALEREVU(SOIL)	0.38	0.54	3.26	3.26	4.72	3.73
33	EN22030026-16	ETP BESIDE SETTLING TANK- ODALAREVU(SOIL)	37.77	21.19	51.11	51.11	95.32	266.09
34	EN22030026-17	EFFLUENT COLLECTION AREA- TATIPAKA(SEDIMENT)	BLQ(LOQ:0.1)	0.43	6.94	6.94	38.04	99.81
35	EN22030026-18	UNLOADING TANK AREA- TATIPAKA(SEDIMENT)	BLQ(LOQ:0.1)	20.97	89.69	89.69	108.76	149.51

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S.NO	SAMPLE CODE NO	LOCATION	n-Tetradecane	n-Pentadecane	n-Hexadecane	n-Heptadecane	n-Octadecane	n-Nonadecane
36	EN22030026-12	BESIDE SECURITY GATE AT VASHISHTA GATE- ODALERUVU(SOIL)	4.72	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	160.62	4.94
37	EN22030026-13	LAGOON BETWEEN GAIL AND ONGC- ODALEREVU(SOIL)	7.22	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	233.37	9.76
38	EN22030026-14	LAGOON BETWEEN GAIL AND ONGC- ODALEREVU(SOIL)	4.03	BLQ(LOQ:0.1)	7.69	0.00	210.49	8.19
39	EN22030026-15	LAGOON BETWEEN GAIL AND ONGC NEAR WATCH TOWER- ODALAREVU(SOIL)	7.80	BLQ(LOQ:0.1)	11.47	0.00	271.77	12.02
40	EN22030026-16	ETP BESIDE SETTLING TANK- ODALAREVU(SOIL)	548.52	878.70	811.73	1312.40	1419.98	611.82
41	EN22030026-17	EFFLUENT COLLECTION AREA- TATIPAKA(SEDIMENT)	106.42	BLQ(LOQ:0.1)	38.77	22.61	61.63	13.75
42	EN22030026-18	UNLOADING TANK AREA- TATIPAKA(SEDIMENT)	114.34	BLQ(LOQ:0.1)	41.74	25.13	88.76	14.41

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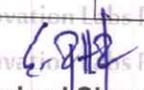
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TEST REPORT

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Report Date : 21 Mar 2022

S.NO	SAMPLE CODE NO	LOCATION	Pristane	n-Eicosane	n-Tetracosane	Phytane	n-Pentacosane	n-Hexacosane
43	EN22030026-12	BESIDE SECURITY GATE AT VASHISHTA GATE- ODALERUVU(SOIL)	15.54	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
44	EN22030026-13	LAGOON BETWEEN GAIL AND ONGC- ODALEREVU(SOIL)	28.26	2.27	2.88	BLQ(LOQ:0.1)	2.80	BLQ(LOQ:0.1)
45	EN22030026-14	LAGOON BETWEEN GAIL AND ONGC- ODALEREVU(SOIL)	24.41	1.35	3.23	BLQ(LOQ:0.1)	2.41	BLQ(LOQ:0.1)
46	EN22030026-15	LAGOON BETWEEN GAIL AND ONGC NEAR WATCH TOWER- ODALAREVU(SOIL)	34.26	1.44	3.67	BLQ(LOQ:0.1)	5.06	BLQ(LOQ:0.1)
47	EN22030026-16	ETP BESIDE SETTLING TANK - ODALAREVU(SOIL)	303.47	718.38	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	73.72
48	EN22030026-17	EFFLUENT COLLECTION AREA- TATIPAKA(SEDIMENT)	5.06	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.78	0.65
49	EN22030026-18	UNLOADING TANK AREA- TATIPAKA(SEDIMENT)	6.81	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.50	BLQ(LOQ:0.1)


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S.NO	SAMPLE CODE NO	LOCATION	n-Heneicosane	n-Heptacosane	n-Docosane	n-Tricosane	n-Octacosane	n-Nonacosane
50	EN22030026-12	BESIDE SECURITY GATE AT VASHISHTA GATE- ODALEREVU(SOIL)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	52.77	BLQ(LOQ:0.1)
51	EN22030026-13	LAGOON BETWEEN GAIL AND ONGC- ODALEREVU(SOIL)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
52	EN22030026-14	LAGOON BETWEEN GAIL AND ONGC- ODALEREVU(SOIL)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	50.41	BLQ(LOQ:0.1)	3.39
53	EN22030026-15	LAGOON BETWEEN GAIL AND ONGC NEAR WATCH TOWER- ODALAREVU(SOIL)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	35.49	9.74	3.48
54	EN22030026-16	ETP BESIDE SETTLING TANK ODALAREVU(SOIL)	1406.15	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	239.10	189.67	105.94
55	EN22030026-17	EFFLUENT COLLECTION AREA- TATIPAKA(SEDIMENT)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	3.14	0.00	1.12	1.54
56	EN22030026-18	UNLOADING TANK AREA- TATIPAKA(SEDIMENT)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	2.36	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)

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S.NO	SAMPLE CODE NO	LOCATION	n- Triacontane	n- Hentriacontane	n- Dotriacontane	n- Tritriacontane	Total TPH (mg/kg)
57	EN22030026-12	BESIDE SECURITY GATE AT VASHISHTA GATE-ODALERUVU(SOIL)	51.74	355.92	41.89	BLQ(LOQ:0.1)	693.54
58	EN22030026-13	LAGOON BETWEEN GAIL AND ONGC-ODALEREVU(SOIL)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	297.17
59	EN22030026-14	LAGOON BETWEEN GAIL AND ONGC-ODALEREVU(SOIL)	2.64	2.67	2.69	BLQ(LOQ:0.1)	335.57
60	EN22030026-15	LAGOON BETWEEN GAIL AND ONGC NEAR WATCH TOWER-ODALAREVU(SOIL)	3.56	4.22	1.86	BLQ(LOQ:0.1)	421.74
61	EN22030026-16	ETP BESIDE SETTLING TANK-ODALAREVU(SOIL)	647.43	123.00	107.18	BLQ(LOQ:0.1)	10019.79
62	EN22030026-17	EFFLUENT COLLECTION AREA-TATIPAKA(SEDIMENT)	1.97	2.21	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	411.84
63	EN22030026-18	UNLOADING TANK AREA-TATIPAKA(SEDIMENT)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	752.67

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TEST REPORT

Report No : EN22030026-19 to 20,39 to 43 Report Date : 21 Mar 2022

SAMPLE DRAWN BY LABORATORY

Customer Name : M/S. Oil and Natural Gas Corporation Limited

Customer Address : SURVEY NO.614-A, B, SMS PLAZA, R F ROAD, TADIPATRI, DIST.ANANTAPUR, ANDHRA PRADESH, PIN 515 411

Sample Name : Soil and Sediment

Sample Description : Soil and Sediment

Sample No : EN22030026-12 to 18,39 to 43

Sampling Date : 08 to 10 Mar 2022

Sample Condition : Fit for Analysis

Sample Received on : 14 Mar 2022

Sample Quantity : 2kg

Test Started on : 14 Mar 2022

Test Completed on : 21 Mar 2022

Test Results

S.NO	SAMPLE CODE NO	LOCATION	Boron (mg/kg)	Magnesium (mg/kg)	Aluminium (mg/kg)	Vanadium (mg/kg)	Chromium (mg/kg)	Manganese (mg/kg)
1	EN22030026-19	SOIL ADJACENT TO SLUDGE ZONE-1-TATIPAKA(SOIL)	26.01	2863.09	1141.58	13.90	6.45	68.86
2	EN22030026-20	PRAHARI SIDE NEAR EAST COMPOUND COAL BESIDE GAS COLLECTION HEADER-GOPAVARAM(SLUDGE)	2.59	360.86	97.84	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	5.33
3	EN22030026-39	BIG LAGOON SLUDGE-KESANAPALLY(SLUDGE)	4.39	1858.05	528.65	9.51	3.22	54.61
4	EN22030026-40	KESANAPALLY BEACH SLUDGE-KESANAPALLY(SLUDGE)	BLQ(LOQ:2.0)	1479.35	427.64	40.87	4.98	62.63
5	EN22030026-41	BEHIND TRANSFER PUMP-KESANAPALLY(SLUDGE)	5.30	1987.20	811.19	33.96	9.84	67.87
6	EN22030026-42	BEHIND OWS - KESANAPALLY(SLUDGE)	2.56	1328.20	636.46	10.91	15.75	16.84
7	EN22030026-43	SEDIMENT SAMPLE BEHIND OLD ETP DMF FEED SUMP-KESANAPALLY(SLUDGE)	13.10	3710.96	890.88	7.31	3.33	208.90

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TEST REPORT

Report No : EN22030026-19 to 20,39 to 43

Report Date : 21 Mar 2022

S.NO	SAMPLE CODE NO	LOCATION	Iron (mg/kg)	Cobalt (mg/kg)	Nickel (mg/kg)	Copper (mg/kg)	Zinc (mg/kg)	Arsenic (mg/kg)
8	EN22030026-19	SOIL ADJACENT TO SLUDGE ZONE-I-TATIPAKA(SOIL)	3148.15	3.46	4.54	BLQ(LOQ:2.0)	13.30	BLQ(LOQ:2.0)
9	EN22030026-20	PRAHARI SIDE NEAR EAST COMPOUND COAL BESIDE GAS COLLECTION HEADER-GOPAVARAM(SLUDGE)	254.20	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
10	EN22030026-39	BIG LAGOON SLUDGE-KESANAPALLY(SLUDGE)	966.23	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
11	EN22030026-40	KESANAPALLY BEACH SLUDGE-KESANAPALLY(SLUDGE)	2494.66	2.13	3.03	BLQ(LOQ:2.0)	7.96	BLQ(LOQ:2.0)
12	EN22030026-41	BEHIND TRANSFER PUMP-KESANAPALLY(SLUDGE)	2519.68	2.70	3.74	BLQ(LOQ:2.0)	6.71	BLQ(LOQ:2.0)
13	EN22030026-42	BEHIND OWS - KESANAPALLY(SLUDGE)	1223.52	BLQ(LOQ:2.0)	2.37	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
14	EN22030026-43	SEDIMENT SAMPLE BEHIND OLD ETP DMF FEED SUMP-KESANAPALLY(SLUDGE)	1894.93	BLQ(LOQ:2.0)	2.04	BLQ(LOQ:2.0)	11.24	BLQ(LOQ:2.0)

Authorized Signature

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TEST REPORT

Report No: EN22030026-19 to 20,39 to 43

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S.NO	SAMPLE CODE NO	LOCATION	Silver (mg/kg)	Cadmium (mg/kg)	Tin (mg/kg)	Antimony (mg/kg)	Mercury (mg/kg)	Lead (mg/kg)
15	EN22030026-19	SOIL ADJACENT TO SLUDGE ZONE-1-TATIPAKA(SOIL)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	6.53
16	EN22030026-20	PRAHARI SIDE NEAR EAST COMPOUND COAL BESIDE GAS COLLECTION HEADER-GOPAVARAM(SLUDGE)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
17	EN22030026-39	BIG LAGOON SLUDGE-KESANAPALLY(SLUDGE)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
18	EN22030026-40	KESANAPALLY BEACH SLUDGE-KESANAPALLY(SLUDGE)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
19	EN22030026-41	BEHIND TRANSFER PUMP-KESANAPALLY(SLUDGE)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
20	EN22030026-42	BEHIND OWS-KESANAPALLY(SLUDGE)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
21	EN22030026-43	SEDIMENT SAMPLE BEHIND OLD ETP DMF FEED SUMP-KESANAPALLY(SLUDGE)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	2.62	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)

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S.NO	SAMPLE CODE NO	LOCATION	Benzene (mg/kg)	Benzo(a)pyrene (µg/kg)	Phenols (mg/kg)
22	EN22030026-19	SOIL ADJACENT TO SLUDGE ZONE-1- TATIPAKA(SOIL)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
23	EN22030026-20	PAHARI SIDE NEAR EAST COMPOUND COAL BESIDE GAS COLLECTION HEADER GOPAVARAM(SLUDGE)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
24	EN22030026-39	BIG LAGOON SLUDGE KESANAPALLY(SLUDGE)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
25	EN22030026-40	KESANAPALLY BEACH SLUDGE- KESANAPALLY(SLUDGE)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
26	EN22030026-41	BEHIND TRANSFER PUMP- KESANAPALLY(SLUDGE)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
27	EN22030026-42	BEHIND OWS KESANAPALLY(SLUDGE)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
28	EN22030026-43	SEDIMENT SAMPLE BEHIND OLD ETP DMF FEED SUMP- KESANAPALLY(SLUDGE)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)

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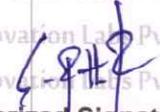
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TEST REPORT

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Report Date : 21 Mar 2022

S.NO	SAMPLE CODE NO	LOCATION	n-Octane	n-Nonane	n-Decane	n-Undecane	n-Dodecane	n-Tridecane
29	EN22030026-19	SOIL ADJACENT TO SLUDGE ZONE-1- TATIPAKA(SOIL)	BLQ(LOQ:0.1)	0.00	8.56	8.56	0.00	12.61
30	EN22030026-20	PRAHARI SIDE NEAR EAST COMPOUND COAL BESIDE GAS COLLECTION HEADER- GOPAVARAM(SLUDGE)	1.65	6.14	15.07	15.07	22.01	48.87
31	EN22030026-39	BIG LAGOON SLUDGE KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	0.22	0.35	0.35	0.21	0.55
32	EN22030026-40	KESANAPALLY BEACH SLUDGE- KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.26	0.26	BLQ(LOQ:0.1)	0.30
33	EN22030026-41	BEHIND TRANSFER PUMP- KESANAPALLY(SLUDGE)	0.45	1.51	4.98	4.98	6.66	12.54
34	EN22030026-42	BEHIND OWS - KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.46	0.46	BLQ(LOQ:0.1)	0.55
35	EN22030026-43	SEDIMENT SAMPLE BEHIND OLD ETP DMF FEED SUMP- KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	0.28	0.89	0.89	1.97	5.73

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S.NO	SAMPLE CODE NO	LOCATION	n-Tetradecane	n-Pentadecane	n-Hexadecane	n-Heptadecane	n-Octadecane	n-Nonadecane
36	EN22030026-19	SOIL ADJACENT TO SLUDGE ZONE-1-TATIPAKA(SOIL)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	4.82	6.73	46.48	2.95
37	EN22030026-20	PRAHARI SIDE NEAR EAST COMPOUND COAL BESIDE GAS COLLECTION HEADER-GOPAVARAM(SLUDGE)	85.01	BLQ(LOQ:0.1)	253.54	1132.56	1182.57	488.91
38	EN22030026-39	BIG LAGOON SLUDGE-KESANAPALLY(SLUDGE)	0.55	BLQ(LOQ:0.1)	0.50	0.88	1.48	0.56
39	EN22030026-40	KESANAPALLY BEACH SLUDGE-KESANAPALLY(SLUDGE)	0.32	BLQ(LOQ:0.1)	0.40	0.65	2.22	0.84
40	EN22030026-41	BEHIND TRANSFER PUMP-KESANAPALLY(SLUDGE)	13.25	10.76	6.84	4.10	21.61	3.39
41	EN22030026-42	BEHIND OWS - KESANAPALLY(SLUDGE)	2.17	2.80	2.80	BLQ(LOQ:0.1)	40.18	2.04
42	EN22030026-43	SEDIMENT SAMPLE BEHIND OLD ETP DMF FEED SUMP-KESANAPALLY(SLUDGE)	10.80	13.27	15.22	23.43	188.87	25.95

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S.NO	SAMPLE CODE NO	LOCATION	Pristane	n-Eicosane	n-Tetracosane	Phytane	n-Pentacosane	n-Hexacosane
43	EN22030026-19	SOIL ADJACENT TO SLUDGE ZONE-1-TATIPAKA(SOIL)	3.90	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.53	BLQ(LOQ:0.1)
44	EN22030026-20	PRAHARI SIDE NEAR EAST COMPOUND COAL BESIDE GAS COLLECTION HEADER-GOPAVARAM(SLUDGE)	312.63	557.42	0.00	255.12	BLQ(LOQ:0.1)	56.79
45	EN22030026-39	BIG LAGOON SLUDGE-KESANAPALLY(SLUDGE)	0.40	0.45	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
46	EN22030026-40	KESANAPALLY BEACH SLUDGE-KESANAPALLY(SLUDGE)	0.63	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
47	EN22030026-41	BEHIND TRANSFER PUMP-KESANAPALLY(SLUDGE)	2.45	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
48	EN22030026-42	BEHIND OWS - KESANAPALLY(SLUDGE)	4.13	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
49	EN22030026-43	SEDIMENT SAMPLE BEHIND OLD ETP DMF FEED SUMP-KESANAPALLY(SLUDGE)	28.09	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)

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S.NO	SAMPLE CODE NO	LOCATION	n-Henicosane	n-Heptacosane	n-Docosane	n-Tricosane	n-Octacosane	n-Nonacosane
50	EN22030026-19	SOIL ADJACENT TO SLUDGE ZONE-1 TATIPAKA(SOIL)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	2.98	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
51	EN22030026-20	PRAHARI SIDE NEAR EAST COMPOUND COAL BESIDE GAS COLLECTION HEADER- GOPAVARAM(SLUDGE)	840.19	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	932.51	92.95	442.13
52	EN22030026-39	BIG LAGOON SLUDGE- KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
53	EN22030026-40	KESANAPALLY BEACH SLUDGE- KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
54	EN22030026-41	BEHIND TRANSFER PUMP- KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
55	EN22030026-42	BEHIND OWS KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
56	EN22030026-43	SEDIMENT SAMPLE BEHIND OLD ETP DMF FEED SUMP- KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	3.13	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)

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S.NO	SAMPLE CODE NO	LOCATION	n-Triacontane	n-Hentriacontane	n-Dotriacontane	n-Tritriacontane	Total TPH (mg/kg)
57	EN22030026-19	SOIL ADJACENT TO SLUDGE ZONE-1-TATIPAKA(SOIL)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.00
58	EN22030026-20	PRAHARI SIDE NEAR EAST COMPOUND COAL BESIDE GAS COLLECTION HEADER-GOPAVARAM(SLUDGE)	34.90	292.77	53.06	BLQ(LOQ:0.1)	380.72
59	EN22030026-39	BIG LAGOON SLUDGE-KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.00
60	EN22030026-40	KESANAPALLY BEACH SLUDGE-KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.00
61	EN22030026-41	BEHIND TRANSFER PUMP-KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.00
62	EN22030026-42	BEHIND OWS-KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.00
63	EN22030026-43	SEDIMENT SAMPLE BEHIND OLD ETP DMF FEED SUMP-KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.65	0.65

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TEST REPORT

Report No : EN22030026-44 to 48 Report Date : 21 Mar 2022

SAMPLE DRAWN BY LABORATORY

Customer Name : M/S. Oil and Natural Gas Corporation Limited

Customer Address : SURVEY NO.614-A, B, SMS PLAZA, R F ROAD, TADIPATRI, DIST.ANANTAPUR, ANDHRA PRADESH, PIN 515 411

Sample Name : Soil and Sediment

Sample Description : Soil and Sediment

Sample No : EN22030026-44 to 48

Sampling Date : 08 to 10 Mar 2022

Sample Condition : Fit for Analysis

Sample Received on : 14 Mar 2022

Sample Quantity : 2kg

Test Started on : 14 Mar 2022

Test Completed on : 21 Mar 2022

Test Results

S.NO	SAMPLE CODE NO	LOCATION	Boron (mg/kg)	Magnesium (mg/kg)	Aluminium (mg/kg)	Vanadium (mg/kg)	Chromium (mg/kg)	Manganese (mg/kg)
1	EN22030026-44	SEDIMENT SAMPLE IN FRONT OF NEW ETP CONTROL BUILDING KESANAPALLY(SLUDGE)	BLQ(LOQ:2.0)	1233.35	576.07	17.34	5.46	33.06
2	EN22030026-45	SOUTH EAST CORNER FLARE STACK NEAR-GOPAVARAM (SLUDGE)	496.61	8971.17	503.19	5.43	10.37	94.64
3	EN22030026-46	SOLID WASTE COLLECTED FROM OPEN AREA BETWEEN EFFLUENT STORAGE NORTH-GOPAVARAM(SLUGDE)	14.89	5423.80	918.66	24.14	8.49	77.38
4	EN22030026-47	BEHIND EFFLUENT STORAGE TANK- GOPALAVARAM(SLUGDE)	5.57	1071.71	213.06	2.20	BLQ(LOQ:2.0)	14.47
5	EN22030026-48	STORM WATER COLLECTION TANK- GOPALAVARAM(SLUGDE)	5.97	261.03	87.00	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	2.44

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TEST REPORT

Report No : EN22030026-44 to 48

Report Date : 21 Mar 2022

S.NO	SAMPLE CODE NO	LOCATION	Iron (mg/kg)	Cobalt (mg/kg)	Nickel (mg/kg)	Copper (mg/kg)	Zinc (mg/kg)	Arsenic (mg/kg)
6	EN22030026-44	SEDIMENT SAMPLE IN FRONT OF NEW ETP CONTROL BUILDING - KESANAPALLY(SLUDGE)	1329.06	BLQ(LOQ:2.0)	2.40	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
7	EN22030026-45	SOUTH EAST CORNER FLARE STACK NEAR-GOPAVARAM(SLUDGE)	861.03	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	8.62	BLQ(LOQ:2.0)
8	EN22030026-46	SOLID WASTE COLLECTED FROM OPEN AREA BETWEEN EFFLUENT STORAGE NORTH-GOPAVARAM(SLUGDE)	4399.69	2.52	4.47	BLQ(LOQ:2.0)	17.04	BLQ(LOQ:2.0)
9	EN22030026-47	BEHIND EFFLUENT STORAGE TANK - GOPALAVARAM(SLUGDE)	804.91	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	6.00	BLQ(LOQ:2.0)
10	EN22030026-48	STORM WATER COLLECTION TANK-GOPALAVARAM(SLUGDE)	287.83	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)

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E PRITHVIA LAB MANAGER

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GLens Innovation Labs Pvt Ltd.

NABL ACCREDITED AS PER ISO/IEC 17025 : 2017, CERTIFIED AS PER ISO 9001:2015 & ISO 45001 : 2018

TEST REPORT

Report No : EN22030026-44 to 48

Report Date : 21 Mar 2022

S.NO	SAMPLE CODE NO	LOCATION	Silver (mg/kg)	Cadmium (mg/kg)	Tin (mg/kg)	Antimony (mg/kg)	Mercury (mg/kg)	Lead (mg/kg)
11	EN22030026-44	SEDIMENT SAMPLE IN FRONT OF NEW ETP CONTROL BUILDING - KESANAPALLY(SLUDGE)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
12	EN22030026-45	SOUTH EAST CORNER FLARE STACK NEAR- GOPAVARAM (SLUDGE)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
13	EN22030026-46	SOLID WASTE COLLECTED FROM OPEN AREA BETWEEN EFFLUENT STORAGE NORTH- GOPAVARAM(SLUDGE)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	2.06	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	36.54
14	EN22030026-47	BEHIND EFFLUENT STORAGE TANK - GOPALAVARAM(SLUDGE)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	3.66
15	EN22030026-48	STORM WATER COLLECTION TANK- GOPALAVARAM(SLUDGE)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)	8.51

Authorized Signature

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TEST REPORT

Report No : EN22030026-44 to 48 Report Date : 21 Mar 2022

S.NO	SAMPLE CODE NO	LOCATION	Benzene (mg/kg)	Benzo(a)pyrene (µg/kg)	Phenols (mg/kg)
16	EN22030026-44	SEDIMENT SAMPLE IN FRONT OF NEW ETP CONTROL BUILDING - KESANAPALLY(SLUDGE)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
17	EN22030026-45	SOUTH EAST CORNER FLARE STACK NEAR-GOPAVARAM (SLUDGE)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
18	EN22030026-46	SOLID WASTE COLLECTED FROM OPEN AREA BETWEEN EFFLUENT STORAGE NORTH-GOPAVARAM(SLUGDE)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
19	EN22030026-47	BEHIND EFFLUENT STORAGE TANK - GOPALAVARAM(SLUGDE)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)
20	EN22030026-48	STORM WATER COLLECTION TANK-GOPALAVARAM(SLUGDE)	BLQ(LOQ:20)	BLQ(LOQ:20)	BLQ(LOQ:0.1)

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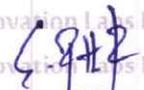
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TEST REPORT

Report No : EN22030026-44 to 48 Report Date : 21 Mar 2022

S.NO	SAMPLE CODE NO	LOCATION	n-Octane	n-Nonane	n-Decane	n-Undecane	n-Dodecane	n-Tridecane
21	EN22030026-44	SEDIMENT SAMPLE IN FRONT OF NEW ETP CONTROL BUILDING KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.22	0.22	BLQ(LOQ:0.1)	0.31
22	EN22030026-45	SOUTH EAST CORNER FLARE STACK NEAR-GOPAVARAM (SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	5.47	5.47	26.36	79.22
23	EN22030026-46	SOLID WASTE COLLECTED FROM OPEN AREA BETWEEN EFFLUENT STORAGE NORTH-GOPAVARAM(SLUDGE)	40.01	26.32	60.47	60.47	122.60	411.13
24	EN22030026-47	BEHIND EFFLUENT STORAGE TANK - GOPALAVARAM(SLUGDE)	57.51	422.93	765.33	765.33	1554.51	1557.16
25	EN22030026-48	STORM WATER COLLECTION TANK- GOPALAVARAM(SLUGDE)	2.93	9.96	29.82	29.82	79.33	281.00


 Authorized Signature
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TEST REPORT

Report No : EN22030026-44 to 48 Report Date : 21 Mar 2022

S.NO	SAMPLE CODE NO	LOCATION	n-Tetradecane	n-Pentadecane	n-Hexadecane	n-Heptadecane	n-Octadecane	n-Nonadecane
26	EN22030026-44	SEDIMENT SAMPLE IN FRONT OF NEW ETP CONTROL BUILDING - KESANAPALLY(SLUDGE)	0.27	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.36	0.42	0.40
27	EN22030026-45	SOUTH EAST CORNER FLARE STACK NEAR GOPAVARAM (SLUDGE)	93.33	BLQ(LOQ:0.1)	37.59	23.45	60.70	12.26
28	EN22030026-46	SOLID WASTE COLLECTED FROM OPEN AREA BETWEEN EFFLUENT STORAGE NORTH-GOPAVARAM(SLUDGE)	749.10	1059.01	1070.55	1605.27	1749.53	1860.70
29	EN22030026-47	BEHIND EFFLUENT STORAGE TANK - GOPALAVARAM(SLUDGE)	1429.31	1810.47	1490.52	1377.64	1420.68	898.72
30	EN22030026-48	STORM WATER COLLECTION TANK - GOPALAVARAM(SLUDGE)	483.76	748.89	558.84	1307.47	1355.41	495.39

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TEST REPORT

Report No : EN22030026-44 to 48

Report Date : 21 Mar 2022

S.NO	SAMPLE CODE NO	LOCATION	Pristane	n-Eicosane	n-Tetracosane	Phytane	n-Pentacosane	n-Hexacosane
31	EN22030026-44	SEDIMENT SAMPLE IN FRONT OF NEW ETP CONTROL BUILDING - KESANAPALLY(SLUDGE)	0.30	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
32	EN22030026-45	SOUTH EAST CORNER FLARE STACK NEAR GOPAVARAM (SLUDGE)	3.24	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
33	EN22030026-46	SOLID WASTE COLLECTED FROM OPEN AREA BETWEEN EFFLUENT STORAGE NORTH-GOPAVARAM(SLUGDE)	295.82	860.74	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	129.67	86.27
34	EN22030026-47	BEHIND EFFLUENT STORAGE TANK - GOPALAVARAM(SLUGDE)	852.22	800.65	1836.57	BLQ(LOQ:0.1)	1532.52	1760.91
35	EN22030026-48	STORM WATER COLLECTION TANK - GOPALAVARAM(SLUGDE)	321.60	580.31	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	118.50	169.41

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TEST REPORT

Report No : EN22030026-44 to 48

Report Date : 21 Mar 2022

S.NO	SAMPLE CODE NO	LOCATION	n-Heneicosane	n-Heptacosane	n-Docosane	n-Tricosane	n-Octacosane	n-Nonacosane
36	EN22030026-44	SEDIMENT SAMPLE IN FRONT OF NEW ETP CONTROL BUILDING - KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	1.04	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)
37	EN22030026-45	SOUTH EAST CORNER FLARE STACK NEAR-GOPAVARAM (SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	45.82	BLQ(LOQ:0.1)
38	EN22030026-46	SOLID WASTE COLLECTED FROM OPEN AREA BETWEEN EFFLUENT STORAGE NORTH-GOPAVARAM(SLUGDE)	0.00	2777.52	0.00	77.72	110.97	171.72
39	EN22030026-47	BEHIND EFFLUENT STORAGE TANK - GOPALAVARAM(SLUGDE)	2272.86	4252.70	2449.23	654.63	104.74	352.71
40	EN22030026-48	STORM WATER COLLECTION TANK GOPALAVARAM(SLUGDE)	1093.74	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	894.05	91.52	410.36

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TEST REPORT

Report No : EN22030026-44 to 48

Report Date : 21 Mar 2022

S.NO	SAMPLE CODE NO	LOCATION	n-Triacontane	n-Hentriacontane	n-Dotriacontane	n-Tritriacontane	Total TPH (mg/kg)
41	EN22030026-44	SEDIMENT SAMPLE IN FRONT OF NEW ETP CONTROL BUILDING - KESANAPALLY(SLUDGE)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	0.00
42	EN22030026-45	SOUTH EAST CORNER FLARE STACK NEAR-GOPAVARAM (SLUDGE)	BLQ(LOQ:0.1)	251.15	BLQ(LOQ:0.1)	BLQ(LOQ:0.1)	251.15
43	EN22030026-46	SOLID WASTE COLLECTED FROM OPEN AREA BETWEEN EFFLUENT STORAGE NORTH-GOPAVARAM(SLUDGE)	185.91	185.08	109.56	BLQ(LOQ:0.1)	480.55
44	EN22030026-47	BEHIND EFFLUENT STORAGE TANK - GOPALAVARAM(SLUDGE)	0.00	267.61	10.68	BLQ(LOQ:0.1)	278.30
45	EN22030026-48	STORM WATER COLLECTION TANK - GOPALAVARAM(SLUDGE)	83.29	212.47	86.91	BLQ(LOQ:0.1)	382.67

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TEST REPORT

Annexure-IV

Report No : EN22030026-01 to 10 Report Date : 21 Mar 2022

SAMPLE DRAWN BY LABORATORY

Customer Name : M/S. Oil and Natural Gas Corporation Limited

Customer Address : SURVEY NO.614-A, B, SMS PLAZA, R F ROAD, TADIPATRI, DIST.ANANTAPUR, ANDHRA PRADESH, PIN 515 411

Sample Name : Ambient Air Quality Sampling Date : 08 to 12 Mar 2022

Sample No : EN22030026-01 to 10 Sample Received on : 14 Mar 2022

Sampling Procedure : IS 5182 Part V & XIV Test Started on : 14 Mar 2022

Sample Condition : Fit for Analysis Test Completed on : 21 Mar 2022

Test Results

S.NO	Location	Sample No	Particulate Matter (PM 10) (µg/m ³)	Particulate Matter (PM 2.5) (µg/m ³)	Nitrogen Dioxide as NO ₂ (µg/m ³)	Sulphur Dioxide as SO ₂ (µg/m ³)	Ozone as O ₃ (µg/m ³)	Lead as Pb (µg/m ³)
1	Near Security Gate-Odalarevu	EN22030026.01	48.6	19.8	17.8	13.8	BDL(DL:20)	BLQ(LOQ:0.002)
2	Top of the Fire station-Odalarevu	EN22030026.02	52.1	23.9	21.4	11	BDL(DL:20)	BLQ(LOQ:0.002)
3	Mulletivara Merakinagalam - Tatipaka	EN22030026.03	49.3	15.6	23.4	11.2	BDL(DL:20)	BLQ(LOQ:0.002)
4	Peeralacheruvu Nager Village - Tatipaka	EN22030026.04	55.6	23.9	19	14.6	BDL(DL:20)	BLQ(LOQ:0.002)
5	Pedapatinam Nagaram-Tatipaka	EN22030026.05	46.2	18.1	16.7	11.4	BDL(DL:20)	BLQ(LOQ:0.002)
6	Near GDU -Tatipaka	EN22030026.06	53.1	24.8	12.8	8	BDL(DL:20)	BLQ(LOQ:0.002)
7	Near Flare Area - Kesanapalli	EN22030026.07	47.6	17.7	20.2	14.1	BDL(DL:20)	BLQ(LOQ:0.002)
8	Gollapalem Village North - Kesanapalli	EN22030026.08	54.2	21.9	26.9	21.4	BDL(DL:20)	BLQ(LOQ:0.002)
9	Thurupupalem Village - Kesanapalli	EN22030026.09	45.1	16.5	14	9.8	BDL(DL:20)	BLQ(LOQ:0.002)
10	Gollapalem Village South - Kesanapalli	EN22030026.10	59	23	15.2	11.3	BDL(DL:20)	BLQ(LOQ:0.002)

Authorized Signature

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TEST REPORT

Report No : EN22030026-01 to 10

Report Date : 21 Mar 2022

Test Results

S.NO	Location	Sample No	Carbon Monoxide as CO (mg/m ³)	Ammonia as NH ₃ (µg/m ³)	Benzene (µg/m ³)	Benzo (a)Pyrene (Particulate Phase) (ng/m ³)	Arsenic as As (ng/m ³)	Nickel as Ni (ng/m ³)
1	Near Security Gate - Odalarevu	EN22030026.01	BDL(DL:1.14)	BDL(DL:20)	5.60	BLQ(LOQ:0.03)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
2	Top of the Fire station - Odalarevu	EN22030026.02	BDL(DL:1.14)	BDL(DL:20)	BLQ(LOQ:4)	BLQ(LOQ:0.03)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
3	Mulletivara Merakinagalam - Tatipaka	EN22030026.03	BDL(DL:1.14)	BDL(DL:20)	BLQ(LOQ:4)	BLQ(LOQ:0.03)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
4	Peeralacheruvu Nager Village - Tatipaka	EN22030026.04	BDL(DL:1.14)	BDL(DL:20)	6.2	BLQ(LOQ:0.03)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
5	Pedapatnam Nagaram - Tatipaka	EN22030026.05	BDL(DL:1.14)	BDL(DL:20)	BLQ(LOQ:4)	BLQ(LOQ:0.03)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
6	Near GDU - Tatipaka	EN22030026.06	BDL(DL:1.14)	BDL(DL:20)	7.4	BLQ(LOQ:0.03)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
7	Near Flare Area Kesanapalli	EN22030026.07	BDL(DL:1.14)	BDL(DL:20)	5.6	BLQ(LOQ:0.03)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
8	Gollapalem Village North - Kesanapalli	EN22030026.08	BDL(DL:1.14)	BDL(DL:20)	BLQ(LOQ:4)	BLQ(LOQ:0.03)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
9	Thurupapalem Village - Kesanapalli	EN22030026.09	BDL(DL:1.14)	BDL(DL:20)	BLQ(LOQ:4)	BLQ(LOQ:0.03)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)
10	Gollapalem Village South - Kesanapalli	EN22030026.10	BDL(DL:1.14)	BDL(DL:20)	BLQ(LOQ:4)	BLQ(LOQ:0.03)	BLQ(LOQ:2.0)	BLQ(LOQ:2.0)

Authorized Signature

E. PRITHIVIRAJAN
LAB MANAGER



ANDHRA PRADESH POLLUTION CONTROL BOARD

Paryavarana Bhavan, A-III, Industrial Estate,
Sanathnagar, Hyderabad-500 018

Phone : 040-23887500

Website : www.appcb.ap.nic.in

RED CATEGORY

RENEWAL OF CONSENT & AUTHORISATION ORDER BY REGISTERED POST WITH ACKNOWLEDGEMENT DUE

Consent Order No : APPCB/VSP/RJY/381/CFO/HO/2015-

Date : 27.02.2015

(Consent Order for Existing/New or altered discharge of sewage and/or trade effluents/outlet under Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and amendments thereof, Operation of the plant under section 21 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorisation / Renewal of Authorisation under Rule 5 of the Hazardous Wastes (Management, Handling & Transboundary, Movement) Rules 2008 & Amendments thereof.

CONSENT is hereby granted under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974, under section 21 of Air (Prevention & Control of Pollution) Act 1981 and Authorisation under the provisions of HW (MH & TM) Rules (hereinafter referred to as 'the Acts', 'the Rules') and the rules and orders made thereunder to

M/s. ONGC (GCS - Tatipaka),
Tatipaka (V), Razole (M),
East Godavari District-533003
E-mail: Sarma_vrks@ongc.co.in

(Hereinafter referred to as 'the Applicant') authorizing to operate the industrial plant to discharge the effluents from the outlets and the quantity of emissions per hour from the chimneys as detailed below:

i) Out lets for discharge of effluents:

Outlet No.	Outlet Description	Max Daily Discharge KLD	Point of Disposal
1.	Trade Effluents after Treatment	225	Reinjection into abandoned wells KSP 7 & 3 with a depth of not less than 1000 mts after treatment in ETP at Tatipaka GCS complex and meeting the standards.
2.	Domestic Effluents	3	Septic tank followed by soak pit.

ii) Emissions from chimneys:

Chimney No.	Description of Chimney	Quantity of Emissions at peak flow
1.	Attached to Flare Stack	--
2.	Attached to 250 KVA + 500 KVA D.G. Sets	--

iii) HAZARDOUS WASTE AUTHORISATION (FORM – II) [See Rule 5 (4)]:

M/s. Oil & Natural Gas Corporation Ltd., Tatipaka -GCS, Nagaram (V), Razole (M), East Godavari District., is hereby granted an authorization to operate a facility for collection, reception, storage, treatment, transport and disposal of Hazardous Wastes namely:

- HAZARDOUS WASTES WITH RECYCLER OPTION:

S. No.	Name of the Hazardous Waste	Stream	Quantity of Hazardous waste	Disposal Option
1.	Waste oil	5.1 of Schedule – I	1200 LPA	Authorised Reprocessors / Recyclers.

This consent order is valid to manufacture the following products along with quantities indicated only:

S. No.	Product	Quantity
1.	Natural Gas	18,52,000 M ³ /day
2.	Condensate Oil	56 M ³ /day

This order is subject to the provisions of 'the Acts' and the Rules' and orders made thereunder and further subject to the terms and conditions incorporated in the schedule A, B & C enclosed to this order.

This combined order of consent & Hazardous Waste Authorisation shall be valid for a period ending with the 31st day of July, 2018.

Sd/-
MEMBER SECRETARY

To
M/s. ONGC (GCS - Tatipaka),
Tatipaka Village,
Razole Mandal,
East Godavari District

Copy to :

1. The JCEE, Zonal Office, **Visakhapatnam** for information and necessary action.
2. The JCEE(HWM), Hyderabad for information.
3. The JCEE (Cess), APPCB, Hyderabad for information.
4. The Environmental Engineer, Regional Office, **Kakinada** for information and necessary action.

//T.C.F.B.O//

W Rao
23/15

JOINT CHIEF ENVIRONMENTAL ENGINEER
UNIT HEAD - IV

SCHEDULE – A

1. The applicant shall make **applications online** for renewal of Consent (under Water and Air Acts) **at least 120 days before the date of expiry of this order**, along with prescribed fee under Water and Air Acts for obtaining Consent of the Board and detailed compliance report.
2. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of the Water(Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air(Prevention and Control of Pollution) Act, 1981.

3. All other conditions stipulated in the Schedule – A of the earlier combined CFO order No: **APPCB/VSP/RJY/381HO/2007-2520, dated 05.03.2007** remain same. The industry shall ensure consistent compliance of each condition of Schedule-A.
4. The industry may explore the possibility of tapping the solar energy for their energy requirements.

SCHEDULE - B

1. The effluent discharged shall comply with the tolerance limits mentioned below:

Outlet	Parameter	Limiting Standards
1	Total Suspended Solids (at 103 – 105 ^o C)	100 mg/l
	Oil and Grease	10 mg/l

2. The industry shall file the water cess returns in Form-I as required under section (5) of Water (Prevention and Control of Pollution) Cess Act, 1977 on or before the 5th of every calendar month, showing the quantity of water consumed in the previous month along with water meter readings. The industry shall remit water cess as per the assessment orders as and when issued by Board.
3. The industry shall comply with emission limits for DG sets upto 800 KW as per the Notification G.S.R.520 (E), dated 01.07.2003 under the Environment (Protection) Amendment Rules, 2003 and G.S.R.448(E), dated 12.07.2004 under the Environment (Protection) Second Amendment Rules, 2004. In case of DG sets more than 800 KW shall comply with emission limits as per the Notification G.S.R.489 (E), dated 09.07.2002 at serial no.96, under the Environment (Protection) Act, 1986
4. The industry shall comply with ambient air quality standards of PM₁₀(Particulate Matter size less than 10µm) - 100 µ/ m³; PM_{2.5}(Particulate Matter size less than 2.5 µm) - 60 µg/ m³; SO₂ - 80 µg/ m³; NO_x - 80 µg/m³, outside the factory premises at the periphery of the industry.
Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009

Noise Levels: Day time (6 AM to 10 PM) - 75 dB (A)
Night time (10 PM to 6 AM) - 70 dB (A).

5. The industry shall not increase the capacity beyond the permitted capacity mentioned in this order.
6. The industry shall obtain CFE for increasing production, water consumption, waste water generation, marine disposal etc.
7. Industry shall submit performance evaluation report of ETP at GCS Tatipaka to the Regional Office, Kakinada every year.
8. The 3 new ETPs mentioned shall be commissioned by M/s. ONGC to address increase in the produced water quantity due to ageing of the mature fields in the area and submit progress report every 2 months to RO-Kakinada:
 - i. At Kesanapalli(W)-GGs with marine disposal facility with handling capacity of 1500 KLD.
 - ii. At Gopavaram-GGS with sub-surface disposal with handling capacity of 600 KLD.
 - iii. At Lingala-GGS with sub-surface disposal with handling capacity of 200 KLD.
9. The industry shall ensure safety precautions of Disaster Management Plan and Oil Spill Contingency Plan and TERI suggestions on bio-remediation of oil soaked soil.
10. The industry shall maintain records for tankers movement for transport of the waste water to Reinjection wells for disposal and submit details to RO, Kakinada and ZO, Visakhapatnam for every month along with manifest copies.
11. The industry shall ensure the waste water to meet the Board standards before re-injection into wells for final disposal.
12. There shall not be discharge of wastewater outside the premises under any circumstances.

13. Green belt shall be developed & maintained with ever green trees in the vacant spaces of the unit keeping in view the fire safety aspects.
14. The industry shall not cause any air pollution / dust nuisance to the surrounding environment.
15. The industry shall maintain good housekeeping within the plant premises.
16. Proof of having insured the facility under the Public Liability Insurance Act shall be submitted to the Board annually.
17. The industry shall maintain good house keeping within the plant premises.
18. The industry shall comply with directions issued by Board from time to time.
19. The applicant shall submit Environment statement in Form V before 30th September every year as per Rule No.14 of E(P) Rules, 1986 & amendments.
20. The conditions are stipulated without prejudice to the rights and contentions of this Board in any Hon'ble Court of Law.

SCHEDULE - C

[see rule 5(4)]

[CONDITIONS OF AUTHORISATION FOR OCCUPIER OR OPERATOR HANDLING HAZARDOUS WASTES]

1. The industry shall give top priority for waste minimization and cleaner production practices.
2. The industry shall not store hazardous waste for more than 90 days as per the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 and amendments thereof.
3. The industry shall store Used / Waste Oil and Used Lead Acid Batteries in a secured way in their premises till its disposal.
4. The industry shall not dispose Waste oils to the traders and the same shall be disposed to the authorized Reprocessors/ Recyclers.
5. The industry shall dispose Used Lead Acid Batteries to the manufacturers / dealers on buyback basis.
6. The industry shall take necessary practical steps for prevention of oil spillages and carry over of oil from the premises.
7. The industry shall maintain 6 copy manifest system for transportation of waste generated and a copy shall be submitted to Board Office and concerned Regional Office.
8. The industry shall maintain good house keeping & maintain proper records for Hazardous Wastes stated in Authorisation.
9. The industry shall maintain proper records for Hazardous Wastes stated in Authorisation in FORM-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form- 4 as per Rule 22(2) of the Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008 and amendments thereof.
10. The industry shall dispose of e-waste to the authorised recyclers only.
11. The industry shall submit the condition wise compliance report of the conditions stipulated in Schedule A, B & C of this Order on half yearly basis to Board Office, Hyderabad and concerned Regional Office.

Sd/-

MEMBER SECRETARY

To
M/s. ONGC (GCS - Tatipaka),
Tatipaka Village, Razole Mandal,
East Godavari District.

//T.C.F.B.O//

23/15

*** JOINT CHIEF ENVIRONMENTAL ENGINEER
UNIT HEAD - IV**

 <p>ఆంధ్ర ప్రదేశ్ ANDHRA PRADESH</p>	<p>ANDHRA PRADESH POLLUTION CONTROL BOARD D.No.33-26-14D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamalavari Street, Kasturibaipet, Vijayawada - 520 010 Phone. No.0866-2463200, Website : www.appcb.ap.nic.in</p>
<p>Member Secretary</p>	

06/08/2018

AUTO RENEWAL OF CONSENT, HAZARDOUS WASTE AUTHORISATION ORDER FOR OPERATIONS

In response to your application dated 06.07.2018 for Auto Renewal of Consent for Operation & Hazardous waste Authorisation Order, the Board is hereby extending validity period of Consent and Authorisation order issued vide Order No: **APPCB/VSP/RJY/381/CFO/HO/2015**, Dated: 27.02.2015 and valid upto 31.07.2018, for further period of 5 (five) years i.e., **upto 31.07.2023** under sections 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorization under Rule 6 of the Hazardous & Other Wastes (Management & Transboundary, Movement) Rules, 2016.

1. All other conditions mentioned in Schedules A, B & C of the combined CFO&HWA order issued by the Board vide order dated 27.02.2015 will remain same.
2. The industry shall comply with the standards issued by MoEF&CC / CPCB from time to time.
3. The facility shall submit the compliance report to all the stipulated conditions for Consent for Operation for every six months i.e. on 1st of January and 1st of July of every year.
4. The facility shall ensure that dedicated fund is allotted towards Environment Relief Fund (ERF) in the Public Liability Insurance policy and submit a copy of the policy at the Regional Office: Kakinada every year.
5. In case of false certification, non compliance of conditions / directions and discrepancy in furnishing the information by the industry, the Board can withdraw the auto renewed consent and take action under provisions of relevant Acts & Rules.

VIVEK YADAV IAS
MEMBER SECRETARY

To

**M/s. Oil & Natural Gas Corporation Limited,
GCS-Tatipaka,
Tatipaka (V), Razole (M),
East Godavari district**

Copy to:

1. The JCEE, Zonal Office, **Visakhapatnam** for information and necessary action.
2. The JCEE, Unit-II, APPCB, Vijayawada for information and necessary action.
3. The Environmental Engineer, Regional Office, **Kakinada** for information and necessary action.

F.No.11-38/2015-IA-III
Government of India
Ministry of Environment, Forest and Climate Change
(IA-III Section)

Indira Paryavaran Bhawan,
Jor Bag Road, New Delhi - 3

Dated: 11th August, 2016

To

The Executive Director (Asset Manager)
M/s Oil and Natural Gas Corporation Ltd,
Godavari Bhawan, ONGC Base Complex, Lala Cheruvu,
Rajahmundry - 533106 (Andhra Pradesh)

Sub: 'Marine disposal of treated effluent from ETP pipeline route' at Kesanapalli (Andhra Pradesh) by M/s Oil and Natural Gas Corporation Ltd - CRZ Clearance - reg.

Sir,

This has reference to your application No.ONG/RA/HSE/2015-16 dated 11.03.2016 and subsequent letter dated 16.06.2016, submitted the above proposal to this Ministry for grant of CRZ Clearance in terms of the provisions of the Coastal Regulation Zone (CRZ) Notification, 2011 under the Environment (Protection), Act, 1986.

2. The proposal for '**Marine disposal of treated effluent from ETP pipeline route**' at Kesanapalli (Andhra Pradesh) promoted by M/s Oil and Natural Gas Corporation Ltd, was considered by the Expert Appraisal Committee (EAC) in the Ministry for Infrastructure Development, Coastal Regulation Zone, Building/ Construction and Miscellaneous projects, in its 154th meeting held on 22-23 December, 2015.

3. The details of the project, as per the documents submitted by the project proponent, and also as informed during the above said EAC meeting, are reported to be as under:-

(i) The proposal involves laying of 8" GRE pipeline of 1.85 km for marine disposal of treated effluent from Effluent Treatment Plant (ETP) at Kesanapalli Group Gathering Station (GGS) to seashore, and 8" HDPE pipeline of 1.5 km from seashore to disposal point in the sea.

(ii) The raw effluent is treated in ETP to remove oil and grease and suspended solids employing treatment process of aerobic biological decomposition in Sequential batch reactor.

(iii) The existing capacity of ETP is 750 cum/day which is proposed to be enhanced to 1500 cum/day, and thus the marine disposal is designed for 3000 cum/day to meet future requirement.

(iv) At present, the expected generation of effluent is 1500 cum/day into sea at 1500 m offshore in water depth of 6.7m CD.

(v) The outfall will have multiple ports of (8 Nos. of 225 dia) oriented at 45° to the horizontal. The estimated dilution is expected to be 163 times initially within 50 m during spring tide.

22/8/16

Asset Use

Asset Manager

- (vi) IRS, Chennai has carried out the required survey and demarcation of LTL, HTL and CRZ. The terrain is plane and marine sandy clay in nature. In the approved CZMP, the entire terrestrial area is classified as CRZ-III.
- (vii) The proposed pipeline crosses the creek carrying tidal water. The surrounding area of the Kesanapalli GGS is covered with vegetation, patches of mangroves and sand humps of 3-4 m height on the Southern parts of the pipeline route.
- (viii) No mangroves plantation would be disturbed by developing pipeline.
- (ix) **SCZMA Recommendation:** The Andhra Pradesh Coastal Zone Management Authority has recommended the project vide their letter No.1742/Env./CZMA/2015 dated 25th June, 2015, subject to the implementation of safety regulations, guidelines issued by Ministry of Petroleum and Natural Gas, MoEF&CC, and also fulfilment of certain conditions.
- (x) **Investment/Cost:** The cost of the project is Rs.26,04,798.00.
- (xi) **Whether the project is in Critically Polluted area:** No.
- (xii) **Wildlife issues:** It is not located within 10 km of any Eco-Sensitive Zone.

4. The proposal was considered by the EAC in its 154th meeting held on 22-23 December, 2015 and was recommended for grant of CRZ Clearance. As per the recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords CRZ Clearance to the above project '**Marine disposal of treated effluent from ETP pipeline route**' at Kesanapalli (Andhra Pradesh) by M/s Oil and Natural Gas Corporation Ltd, under the provisions of the CRZ Notification, 2011 and amendments/circulars issued thereon, and subject to the compliance of the specific and general conditions as below:-

A. SPECIFIC CONDITIONS:

- (i) 'Consent to Establish' shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
- (ii) There shall be online monitoring of the effluents at the diffuser points at the two extremes of the plume during North East Monsoon period and South West monsoon period. There shall also be online pollution monitoring at the corresponding landing points of the waves on the shore line during this season.
- (iii) The project proponent shall undertake periodic inspection and maintenance to avoid spillages, wear and tear of the proposed conveying system.
- (iv) Adequate safe guards including Alarm and Emergency shutdown system shall be provided for the proposed conveying system.
- (v) Proper fire hydrant and fire extinguishers shall be provided at appropriate locations conforming to prevailing norms or fire safety.
- (vi) There shall no destruction of the mangroves during construction as well as the operation phase.

- (vii) The top soil of excavated area during the construction shall be kept separately and will be used for vegetation.
- (viii) The labour camps, storage of material and machinery during construction phase shall be away from the CRZ area.
- (ix) Crossing of creek shall be on trestles with adequate clearance thereby having negligible impact on the flow.
- (x) During construction, solid waste generated will include packaging and wrapping material, stubs of spent welding electrodes, used rags and housekeeping etc. The project proponent shall ensure disposal of such wastes at approved sites only.
- (xi) There shall be no ground water withdrawal within CRZ limits.
- (xii) All the recommendations/conditions stipulated by the Andhra Pradesh Coastal Zone Management Authority (APCZMA) vide letter No.1742/Env./CZMA/2015 dated 25th June, 2015, shall be strictly complied with.
- (xiii) **The outlet quality as well as the sea water near the outfall shall be monitored regularly** including for temperature and salinity. If the parameters are found to be of significant consequence, necessary remediation measures shall be taken. A report in this regard shall be submitted to Regional Office, MoEFCC along with six monthly monitoring report.
- (xiv) The project proponent shall explore enhancement of recycling of effluent.
- (xv) The outfall shall meet the norms stipulated by the SPCB. The State Pollution Control Board shall devise a mechanism by which they will keep watch on any adverse damage to marine life from temperature or salinity adverse effects.
- (xvi) The project shall be implemented in such a manner that there is no damage whatsoever to the mangroves/other sensitive coastal ecosystems.
- (xvii) The effluent to be disposed of shall meet the standards prescribed by State Pollution Control Board.
- (xviii) The pipeline shall not cause any hindrance to the movement of the local communities including the fishermen.
- (xix) A continuous and comprehensive post-project marine quality monitoring programme shall be taken up. This shall include monitoring of water quality, sediment quality and biological characteristics covered in the EIA studies.
- (xx) It shall be ensured that there is no displacement of people, houses or fishing activity as a result of the project.
- (xxi) It shall be ensured that due to the project, there is no adverse impact on the drainage of the area and recharge of groundwater. No

groundwater shall be tapped in the project area falling in Coastal Regulation Zone.

- (xxii) All the recommendation of the EMP/DMP shall be complied with letter and spirit. All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to Ministry along with half yearly compliance report to MoEF&CC-RO.
- (xxiii) Construction activity shall be carried out strictly as per the provisions of CRZ Notification, 2011. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.
- (xxiv) The storm water drainage shall be worked out after analyzing the contour levels of the site and the surrounding area and the capacity of storm water drainage
- (xxv) There shall be no ground water drawal within CRZ area.
- (xxvi) The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.
- (xxvii) The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purposes.

B. GENERAL CONDITIONS:

- (i) A six-Monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Chennai regarding the implementation of the stipulated conditions.
- (ii) Ministry of Environment, Forest & Climate Change or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.
- (iii) The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.
- (iv) In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment, Forest and Climate Change.
- (v) The project proponents shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.

SH

- (vi) A copy of the clearance letter shall be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/representation has been made received while processing the proposal.
- (vii) Safety provision such as bus bays, service roads intersection improvement etc., will be carried out by the project proponent. The project proponent shall provide adequate facilities as per IRC norms/guidelines.
- (viii) A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.

5. The above stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 2006, including the amendments and rules made thereafter.

6. 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 Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

7. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded CRZ Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forest and Climate Change at <http://www.envfor.nic.in>. The advertisement should be made within Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Chennai.

8. This Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

9. Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

10. Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website.

11. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective

Regional Office of Ministry, the respective Zonal Office of CPCB and the SPCB.

12. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of Clearance conditions and shall also be sent to the respective Regional Offices of Ministry by e-mail.


11/8/2016
(S.K. Srivastava)
Scientist E

Copy to:

- 1) The Chairman, Andhra Pradesh Coastal Zone Management Authority and Special Chief Secretary to Government, E.F.S & T. Department Government of Andhra Pradesh, Secretariat, Hyderabad- 2
- 2) The Chairman, CPCB, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
- 3) The Chairman, Andhra Pradesh State Pollution Control Board, Paryavarana Bhawan, A-III Industrial Area, Sanathnagar, Hyderabad - 18
- 4) The APCCF (C), MoEF&CC, RO, 1st Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai - 34
- 5) Guard File
- 6) Monitoring Cell


11/8/2016
(S.K. Srivastava)
Scientist E

REGD.POST WITH ACK.DUE

CONSENT ORDER FOR ESTABLISHMENT

Order No. 379 /APPCB/CFE/RO-KKD/HO/2015

Dt. 13.08.2015

Sub: APPCB - CFE - M/s. Oil & Natural Gas Corporation Ltd., Kasanapalli (V), Malkipuram (M), East Godavari District - Consent for Establishment (CFE) of the Board for Laying and Commissioning of the pipeline for marine disposal of treated effluent from ETP at Kesanapalli GGS, East Godavari District under Sec.25 of Water (P & C of P) Act, 1974 and Under Sec.21 of Air (P&C of P) Act, 1981 - for Marine outfall - Issued - Reg.

Ref: 1) CFE application received on 20.06.2015 and Addl. Information received on 29.06.2015.
 2) R.O's inspection report dt. 07.07.2015.
 3) CFE Committee meeting held on 31.07.2015.

1. In the reference 1st cited, an application was submitted to the Board seeking Consent for Establishment (CFE) for laying and commissioning of the pipeline for marine disposal of treated effluent from ETP at Kesanapalli GGS, East Godavari District to Bay of Bengal with a capital investment of Rs.26.047 lakhs.
2. As per the application the marine pipeline to the length of approx 8 km. with marine disposal line (2 km is on land and 5-6 km in subsea) for discharge of the treated effluent from ETP at Kesanapalli(W)-GGS to the landfall point on surface and the subsea line to be laid till the final discharge point in the sea for discharging effluent of 1500 cu. m per day.
3. The site proposed for alignment of marine outfall for the Oil and Natural Gas Corporation Ltd., Kesanapalli, ETP was inspected by the Asst. Environmental Engineer-I, Regional Office, Kakinada, A.P Pollution Control Board on 06.07.2015.
4. The Board, after careful scrutiny of the application verification report of Regional Officer and recommendations of the CFE Committee, hereby issues **CONSENT FOR ESTABLISHMENT (NOC) TO YOUR ACTIVITY FOR ESTABLISHMENT OF MARINE OUTFALL** Under Section 25 of Water (Prevention & Control of Pollution) Act 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 and the rules made there under.
5. This Consent Order now issued is subject to the conditions mentioned in Schedule 'A'.

U.R. K.K. (b)exp
 (19/7/15)
 (V.R.K.S. Solima)
 DGM (chem) - Head Head HSE.

o/c

18/8/15

6. This order is issued from pollution control point of view only. Zoning and other regulations are not considered.

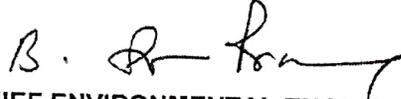
Encl: Schedule 'A'

Sd/-
MEMBER SECRETARY

To,
M/s.Oil & Natural Gas Corporation Ltd.,
Godavari Bhavan,
ONGC Base Complex, Lala Cheruvu,
Rajahmundry – 533 106.
East Godavari District.

- Copy to: 1. The JCEE, Z.O., Visakhapatnam for information and necessary action.
2. The E.E., R.O., Kakinada for information and necessary action.

// T.C.F.B.O. //




JOINT CHIEF ENVIRONMENTAL ENGINEER (UH-1)

SCHEDULE - A

1. The proponent shall obtain CRZ Clearance before starting the pipeline project.
2. Progress on implementation of the project shall be reported to the concerned Regional Office, A.P. Pollution Control Board once in six months.
3. The proponent shall obtain amendment to Consents for Operation (CFO) from APPCB, as required Under Sec.25/26 of the Water (P&C of P) Act, 1974 and under sec. 21/22 of the Air (P&C of P) Act, 1981, before commencement of the activity.
4. Notwithstanding anything contained in this conditional letter or consent, the Board hereby reserves its right and power Under Sec.27(2) of Water (Prevention and Control of Pollution) Act, 1974 and Under Sec.21(4) of Air (Prevention and Control of Pollution) Act, 1981 to review any or all the conditions imposed herein and to make such alternation as deemed fit and stipulate any additional conditions by the Board.
5. Compensation is to be paid for any environmental damage caused by it, as fixed by the Collector and District Magistrate as civil liability.
6. The effluents shall be treated to the marine discharge standards, as stipulated under Schedule VI of Environment (Protection) Rules, 1986, notified by Ministry of Environment and Forests, Government of India vide G.S.R.422 (E), dt.19.05.1993 and its amendments thereof.
7. The proponent shall construct guard pond of 8 days storage capacity of effluent day generation capacity.
8. The proponent shall regularly monitor the flora and fauna of the marine aquatic life. The trend analysis of the monitoring reports shall be compared with the base line data. If it is found any negative impacts, immediate restorative measures shall be implemented duly submitting a report to Board.
9. The proponent shall dispose only treated effluents into Bay of Bengal through marine outfall.
10. The proponent shall provide magnetic flow meter with the digital totalizer with recording facility for the purpose of quantification of treated effluent discharged through marine outfall.
11. Concealing the factual data or submission of false information/ fabricated data and failure to comply with any of the conditions mentioned in this order may result in withdrawal of this order and attract action under the provisions of relevant pollution control Acts.
12. The Board reserves its right to modify above conditions or stipulate any additional conditions in the interest of environment protection.
13. This order is valid for period of 5 years from the date of issue.

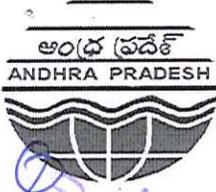
Sd/-
MEMBER SECRETARY

To,
M/s.Oil & Natural Gas Corporation Ltd.,
Godavari Bhavan,
ONGC Base Complex, Lala Cheruvu,
Rajahmundry – 533 106.
East Godavari District.

// T.C.F.B.O. //

B. S. R.

JOINT CHIEF ENVIRONMENTAL ENGINEER (UH-1)



ANDHRA PRADESH POLLUTION CONTROL BOARD

Paryavarana Bhavan, A-III, Industrial Estate,
Sanathnagar, Hyderabad-500 018

Phone : 040-23887500

Website : www.appcb.ap.nic.in

RED CATEGORY
RENEWAL OF CONSENT & AUTHORISATION ORDER
BY REGISTERED POST WITH ACKNOWLEDGEMENT DUE

Consent Order No : APPCB/VSP/KKD/5056/CFO/HO/2015- 1772

Date : 28.02.2015

(Consent Order for Existing/New or altered discharge of sewage and/or trade effluents/outlet under Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and amendments thereof, Operation of the plant under section 21 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorisation / Renewal of Authorisation under Rule 5 of the Hazardous Wastes (Management, Handling & Transboundary, Movement) Rules 2008 & Amendments thereof.

CONSENT is hereby granted under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974, under section 21 of Air (Prevention & Control of Pollution) Act 1981 and Authorisation under the provisions of HW (MH & TM) Rules (hereinafter referred to as 'the Acts', 'the Rules') and the rules and orders made thereunder to

M/s. Oil & Natural Gas Corporation Ltd.,
Kesanapalli-GGS, Turpupalem(V),
Malkipuram(M),
East Godavari District-533003
E-mail: Sarma_vrks@ongc.co.in

(Hereinafter referred to as 'the Applicant') authorizing to operate the industrial plant to discharge the effluents from the outlets and the quantity of emissions per hour from the chimneys as detailed below:

1) Out lets for discharge of effluents:

Outlet No.	Outlet Description	Max Daily Discharge in KLD	Point of Disposal
1.	Process	600	Reinjection into abandoned wells KSP 7 & 3 with a depth of not less than 1000 mts after treatment in ETP at Kesanapalli GGS complex and meeting the standards.
2.	Domestic Effluents	3	Septic tank followed by soak pit.

ii) Emissions from chimneys:

Chimney No.	Description of Chimney	Quantity of Emissions at peak flow
1.	Attached to 2 x 125 KVA D.G. Sets	--

iii) HAZARDOUS WASTE AUTHORISATION (FORM – II) [See Rule 5 (4)]:

M/s. Oil & Natural Gas Corporation Ltd., Kesanapalli -GCS, Turpupalem (V), Malkipuram (M), East Godavari District., is hereby granted an authorization to operate a facility for collection, reception, storage, treatment, transport and disposal of Hazardous Wastes namely:

• HAZARDOUS WASTES WITH RECYCLER OPTION:

S. No.	Name of the Hazardous Waste	Stream	Quantity of Hazardous waste	Disposal Option
1.	Waste oil	5.1 of Schedule – I	500 LPA	Authorised Reprocessors / Recyclers.

This consent order is valid to manufacture the following products along with quantities indicated only:

S. No.	Product	Quantity
1.	Natural Gas	2,69,000 M ³ per day
2.	Condensate oil	530 M ³ /day

This order is subject to the provisions of 'the Acts' and the Rules' and orders made thereunder and further subject to the terms and conditions incorporated in the schedule A, B & C enclosed to this order.

This combined order of consent & Hazardous Waste Authorisation shall be valid for a period ending with the 31st day of July, 2018.

Sd/-
MEMBER SECRETARY

To
M/s. Oil & Natural Gas Corporation Ltd.,
Kesanapalli-GGS,
Malkipuram(V),
East Godavari District.

Copy to :

1. The JCEE, Zonal Office, Visakhapatnam for information and necessary action.
2. The JCEE (Cess), APPCB, Hyderabad for information.
3. The SEE(HWM), Hyderabad for information.
4. The Environmental Engineer, Regional Office, Kakinada for information and necessary action.

//T.C.F.B.O//

Kulap
4/3/15

✱ JOINT CHIEF ENVIRONMENTAL ENGINEER
UNIT HEAD - IV

SCHEDULE - A

1. The applicant shall make applications online for renewal of Consent (under Water and Air Acts) at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts for obtaining Consent of the Board and detailed compliance report.
2. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of the Water(Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air(Prevention and Control of Pollution) Act, 1981.
3. All other conditions stipulated in the Schedule - A of the earlier combined CFO order No: 1077/APPCB/ZO-VSP/Tech/2006-2218, dated 06.01.2007 remain same. The industry shall ensure consistent compliance of each condition of Schedule-A.
4. The industry may explore the possibility of tapping the solar energy for their energy requirements.

SCHEDULE - B

1. The effluent discharged shall comply with the tolerance limits mentioned below:

Outlet	Parameter	Limiting Standards
1.	Total Suspended Solids (at 103 – 105 ^o C)	100 mg/l
	Oil and Grease	10 mg/l

2. Water consumption shall not exceed the quantities mentioned below:

S.No.	Purpose	Quantity (KLD)
1.	Domestic	5.0
	Total	5.0

3. The industry shall file the water cess returns in Form-I as required under section (5) of Water (Prevention and Control of Pollution) Cess Act, 1977 on or before the 5th of every calendar month, showing the quantity of water consumed in the previous month along with water meter readings. The industry shall remit water cess as per the assessment orders as and when issued by Board.
4. The industry shall comply with emission limits for DG sets upto 800 KW as per the Notification G.S.R.520 (E), dated 01.07.2003 under the Environment (Protection) Amendment Rules, 2003 and G.S.R.448(E), dated 12.07.2004 under the Environment (Protection) Second Amendment Rules, 2004. In case of DG sets more than 800 KW shall comply with emission limits as per the Notification G.S.R.489 (E), dated 09.07.2002 at serial no.96, under the Environment (Protection) Act, 1986
5. The industry shall comply with ambient air quality standards of PM₁₀(Particulate Matter size less than 10 μ m) - 100 μ / m³; PM_{2.5}(Particulate Matter size less than 2.5 μ m) - 60 μ / m³; SO₂ - 80 μ g/ m³; NO_x - 80 μ g/m³, outside the factory premises at the periphery of the industry.

Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009

Noise Levels: Day time (6 AM to 10 PM) - 75 dB (A)
Night time (10 PM to 6 AM) - 70 dB (A).

6. The industry shall not increase the capacity beyond the permitted capacity mentioned in this order.
7. **The industry shall obtain CFE for increasing production, water consumption, waste water generation, marine disposal etc.**
8. **Industry shall submit performance evaluation report of ETP at GGS Kesanapalli to the Regional Office, Kakinada every year.**
9. **The 3 new ETPs mentioned shall be commissioned by M/s. ONGC to address increase in the produced water quantity due to ageing of the mature fields in the area and submit progress report every 2 months to RO-Kakinada:**
- i. **At Kesanapalli(W)-GGs with marine disposal facility with handling capacity of 1500 KLD.**
 - ii. **At Gopavaram-GGS with sub-surface disposal with handling capacity of 600 KLD.**
 - iii. **At Lingala-GGS with sub-surface disposal with handling capacity of 200 KLD.**
10. **The industry shall ensure safety precautions of Disaster Management Plan and Oil Spill Contingency Plan and TERI suggestions on bio-remediation of oil soaked soil.**
11. **The industry shall maintain records for tankers movement for transport of the waste water to Reinjection wells for disposal and submit details to RO, Kakinada and ZO, Visakhapatnam for every month along with manifest copies.**
12. The industry shall ensure the waste water to meet the Board standards before re-injection into wells for final disposal.
13. There shall not be discharge of wastewater outside the premises under any circumstances.
14. The generator shall be operated in a closed area with silencer & mufflers and suitable noise absorption system shall be provided.
15. The industry shall not cause any air pollution / dust nuisance to the surrounding environment.
16. Green belt shall be developed & maintained with ever green trees in the vacant spaces of the unit keeping in view the fire safety aspects.

17. All low pressure gases shall be flared in the flare stack.
18. Proof of having insured the facility under the Public Liability Insurance Act shall be submitted to the Board annually.
19. The industry shall maintain good house keeping within the plant premises.
20. The industry shall comply with directions issued by Board from time to time.
21. The applicant shall submit Environment statement in Form V before 30th September every year as per Rule No.14 of E(P) Rules, 1986 & amendments.
22. The conditions are stipulated without prejudice to the rights and contentions of this Board in any Hon'ble Court of Law.

SCHEDULE - C

[see rule 5(4)]

[CONDITIONS OF AUTHORISATION FOR OCCUPIER OR OPERATOR HANDLING HAZARDOUS WASTES]

1. The industry shall give top priority for waste minimization and cleaner production practices.
2. The industry shall not store hazardous waste for more than 90 days as per the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 and amendments thereof.
3. The industry shall store Used / Waste Oil and Used Lead Acid Batteries in a secured way in their premises till its disposal.
4. The industry shall not dispose Waste oils to the traders and the same shall be disposed to the authorized Reprocessors/ Recyclers.
5. The industry shall dispose Used Lead Acid Batteries to the manufacturers / dealers on buyback basis.
6. The industry shall take necessary practical steps for prevention of oil spillages and carry over of oil from the premises.
7. The industry shall maintain 6 copy manifest system for transportation of waste generated and a copy shall be submitted to Board Office and concerned Regional Office.
8. The industry shall maintain good house keeping & maintain proper records for Hazardous Wastes stated in Authorisation.
9. The industry shall maintain proper records for Hazardous Wastes stated in Authorisation in FORM-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form- 4 as per Rule 22(2) of the Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008 and amendments thereof.
10. The industry shall dispose of e-waste to the authorised recyclers only.
11. The industry shall submit the condition wise compliance report of the conditions stipulated in Schedule A, B & C of this Order on half yearly basis to Board Office, Hyderabad and concerned Regional Office.

Sd/-

MEMBER SECRETARY

To
M/s. Oil & Natural Gas Corporation Ltd.,
Kesanapalli-GGS,
Malkipuram(V),
East Godavari District.

//T.C.F.B.O//

K. S. Rao
4/3/15

**JOINT CHIEF ENVIRONMENTAL ENGINEER
UNIT HEAD - IV**

	<p align="center">ANDHRA PRADESH POLLUTION CONTROL BOARD D.No.33-26-14D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamalavari Street, Kasturibaipet, Vijayawada - 520 010 Phone. No.0866-2463200, Website : www.appcb.ap.nic.in</p>
<p>Member Secretary</p>	

06/08/2018

AUTO RENEWAL OF CONSENT, HAZARDOUS WASTE AUTHORISATION ORDER FOR OPERATIONS

In response to your application dated 06.07.2018 for Auto Renewal of Consent for Operation & Hazardous waste Authorisation Order, the Board is hereby extending validity period of Consent and Authorisation order issued vide Order No: **APPCB/VSP/KKD/5056/CFO/HO/2015-1772**, Dated: 28.02.2015 and valid upto 31.07.2018, for further period of 5 (five) years i.e., **upto 31.07.2023** under sections 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorization under Rule 6 of the Hazardous & Other Wastes (Management & Transboundary, Movement) Rules, 2016.

1. All other conditions mentioned in Schedules A, B & C of the combined CFO&HWA order issued by the Board vide order dated 28.02.2015 will remain same.
2. The industry shall comply with the standards issued by MoEF&CC / CPCB from time to time.
3. The facility shall submit the compliance report to all the stipulated conditions for Consent for Operation for every six months i.e. on 1st of January and 1st of July of every year.
4. The facility shall ensure that dedicated fund is allotted towards Environment Relief Fund (ERF) in the Public Liability Insurance policy and submit a copy of the policy at the Regional Office: Kakinada every year.
5. In case of false certification, non compliance of conditions / directions and discrepancy in furnishing the information by the industry, the Board can withdraw the auto renewed consent and take action under provisions of relevant Acts & Rules.

VIVEK YADAV IAS
MEMBER SECRETARY

To

M/s. Oil & Natural Gas Corporation Limited,

**Kesanapalli-GCS,
Turpupalem (V), Malkipuram (M),
East Godavari district – 533 003**

Copy to:

1. The JCEE, Zonal Office, **Visakhapatnam** for information and necessary action.
2. The JCEE, Unit-II, APPCB, Vijayawada for information and necessary action.
3. The Environmental Engineer, Regional Office, **Kakinada** for information and necessary action.



ANDHRA PRADESH POLLUTION CONTROL BOARD

Paryavarana Bhavan, A-III, Industrial Estate,
Sanathnagar, Hyderabad-500 018

Phone : 040-23887500

Website : www.appcb.ap.nic.in

RED CATEGORY

RENEWAL OF CONSENT & AUTHORISATION ORDER BY REGISTERED POST WITH ACKNOWLEDGEMENT DUE

Consent Order No : APPCB/VSP/RJY/306/CFO/HO/2015- 1818.

Date : 27.02.2015

(Consent Order for Existing/New or altered discharge of sewage and/or trade effluents/outlet under Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and amendments thereof, Operation of the plant under section 21 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorisation / Renewal of Authorisation under Rule 5 of the Hazardous Wastes (Management, Handling & Transboundary, Movement) Rules 2008 & Amendments thereof.

CONSENT is hereby granted under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974, under section 21 of Air (Prevention & Control of Pollution) Act 1981 and Authorisation under the provisions of HW (MH & TM) Rules (hereinafter referred to as 'the Acts', 'the Rules') and the rules and orders made thereunder to

M/s. ONGC Ltd., (GGS – Gopavaram)

Jaggarajupeta Village,

Uppalaguptam Mandal,

East Godavari District

E-mail: Sarma_vrks@ongc.co.in

(Hereinafter referred to as 'the Applicant') authorizing to operate the industrial plant to discharge the effluents from the outlets and the quantity of emissions per hour from the chimneys as detailed below:

1) Out lets for discharge of effluents:

Outlet No.	Outlet Description	Max Daily Discharge KLD	Point of Disposal
1.	Process (Produced water)	6.0	Reinjection into abandoned wells with a depth of not less than 1000 mts after treatment in ETP at Tatipaka GCS complex and meeting the standards.
2.	Domestic Effluents	0.1	Septic tank followed by soak pit.

ii) Emissions from chimneys:

Chimney No.	Description of Chimney	Quantity of Emissions at peak flow
1.	Attached to Heat Treater – 10 KL	--
2.	Attached to 62.5 KVA Gas Based Generator	--
3.	Attached to 62.5 KVA D.G. Set	--

iii) HAZARDOUS WASTE AUTHORISATION (FORM – II) [See Rule 5 (4)]:

M/s. Oil & Natural Gas Corporation Ltd., Gopavaram GGS, Jaggarajupeta (V), Uppalaguptam (M), East Godavari District., is hereby granted an authorization to operate a facility for collection, reception, storage, treatment, transport and disposal of Hazardous Wastes namely:

• **HAZARDOUS WASTES WITH RECYCLER OPTION:**

S. No.	Name of the Hazardous Waste	Stream	Quantity of Hazardous waste	Disposal Option
1.	Waste oil	5.1 of Schedule – I	1000 LPA	Authorised Reprocessors / Recyclers.

This consent order is valid to manufacture the following products along with quantities indicated only:

S. No.	Product	Quantity
1.	Crude Oil	350 M ³ /day
2.	Gas (Natural gas)	0.1 MMSCMD

This order is subject to the provisions of 'the Acts' and the Rules' and orders made thereunder and further subject to the terms and conditions incorporated in the schedule A, B & C enclosed to this order.

This combined order of consent & Hazardous Waste Authorisation shall be valid for a period ending with the 30th day of September, 2018.

Sd/-
MEMBER SECRETARY

To
M/s. ONGC Ltd., (GGS – Gopavaram)
Jaggarajupeta Village,
Uppalaguptam Mandal,
East Godavari District

Copy to :

1. The JCEE, Zonal Office, Visakhapatnam for information and necessary action.
2. The JCEE(HWM), Hyderabad for information.
3. The JCEE (Cess), APPCB, Hyderabad for information.
4. The Environmental Engineer, Regional Office, Kakinada for information and necessary action.

//T.C.F.B.O//

Kulao
23/15.

JOINT CHIEF ENVIRONMENTAL ENGINEER
UNIT HEAD - IV

SCHEDULE – A

1. The applicant shall make applications online for renewal of Consent (under Water and Air Acts) at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts for obtaining Consent of the Board and detailed compliance report.
2. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of the Water(Prevention and Control of

Pollution) Act, 1974 and Section 31 of the Air(Prevention and Control of Pollution) Act, 1981.

3. All other conditions stipulated in the Schedule – A of the earlier combined CFO order No: **APPCB/VSP/RJY/306/CFO/HO/2010-2267 Dated 04.01.2010** remain same. The industry shall ensure consistent compliance of each condition of Schedule-A.
4. The industry may explore the possibility of tapping the solar energy for their energy requirements.

SCHEDULE - B

1. The effluent discharged shall comply with the tolerance limits mentioned below:

Outlet	Parameter	Limiting Standards
1	Total Suspended Solids (at 103 – 105 ⁰ C)	100 mg/l
	Oil and Grease	10 mg/l

2. The industry shall file the water cess returns in Form-I as required under section (5) of Water (Prevention and Control of Pollution) Cess Act, 1977 on or before the 5th of every calendar month, showing the quantity of water consumed in the previous month along with water meter readings. The industry shall remit water cess as per the assessment orders as and when issued by Board.
3. Water consumption shall not exceed the quantities mentioned below:

S.No	Purpose	Quantity
1	Process (Bath heater)	0.1 KLD
2	Cooling for Gas generator	0.1 KLD
3	Domestic	0.3 KLD
Total		0.5 KLD

The industry shall install water and effluent meters separately for the above areas.

4. The emissions shall not contain constituents in excess of the prescribed limits mentioned below.

Chimney No.	Parameter	Emission Standards
1	Particulate Matter	115 mg/NM ³

5. The industry shall comply with emission limits for DG sets upto 800 KW as per the Notification G.S.R.520 (E), dated 01.07.2003 under the Environment (Protection) Amendment Rules, 2003 and G.S.R.448(E), dated 12.07.2004 under the Environment (Protection) Second Amendment Rules, 2004. in case of DG sets more than 800 KW shall comply with emission limits as per the Notification G.S.R.489 (E), dated 09.07.2002 at serial no.96, under the Environment (Protection) Act, 1986
6. The industry shall comply with ambient air quality standards of PM₁₀(Particulate Matter size less than 10µm) - 100 µ/ m³; PM_{2.5}(Particulate Matter size less than 2.5 µm) - 60 µg/ m³; SO₂ - 80 µg/ m³; NO_x - 80 µg/m³, outside the factory premises at the periphery of the industry.

Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009

Noise Levels: Day time (6 AM to 10 PM) - 75 dB (A)

Night time (10 PM to 6 AM) - 70 dB (A).

7. The industry shall not increase the capacity beyond the permitted capacity mentioned in this order.
8. The industry shall obtain CFE for increasing production, water consumption, waste water generation, marine disposal etc.
9. Industry shall submit performance evaluation report of ETP at Tatipaka GCS to the Regional Office, Kakinada every year.

10. The 3 new ETPs mentioned shall be commissioned by M/s. ONGC to address increase in the produced water quantity due to ageing of the mature fields in the area and submit progress report every 2 months to RO-Kakinada:
 - i. At Kesanapalli(W)-GGs with marine disposal facility with handling capacity of 1500 KLD.
 - ii. At Gopavaram-GGS with sub-surface disposal with handling capacity of 600 KLD.
 - iii. At Lingala-GGS with sub-surface disposal with handling capacity of 200 KLD.
11. The industry shall ensure safety precautions of Disaster Management Plan and Oil Spill Contingency Plan and TERI suggestions on bio-remediation of oil soaked soil.
12. The industry shall maintain records for tankers movement for transport of the waste water to Reinjection wells for disposal and submit details to RO, Kakinada and ZO, Visakhapatnam for every month along with manifest copies.
13. There shall not be discharge of wastewater outside the premises under any circumstances.
14. The industry shall acquire the land between the Jaggarajupeta village and the wells and develop thick green belt in the area.
15. Green belt shall be developed & maintained with ever green trees in the vacant spaces of the unit keeping in view the fire safety aspects.
16. The industry shall not cause any air pollution / dust nuisance to the surrounding environment.
17. The industry shall carry out a study on the safety aspects, oil leakage management including oil pollution problems.
18. Proof of having insured the facility under the Public Liability Insurance Act shall be submitted to the Board annually.
19. The industry shall maintain good house keeping within the plant premises.
20. The industry shall comply with the conditions of CFE order dated 16.10.2008.
21. The industry shall comply with the conditions of EC order dated 11.06.2008.
22. The industry shall comply with directions issued by Board from time to time.
23. The applicant shall submit Environment statement in Form V before 30th September every year as per Rule No.14 of E(P) Rules, 1986 & amendments.
24. The conditions are stipulated without prejudice to the rights and contentions of this Board in any Hon'ble Court of Law.

SCHEDULE - C

[see rule 5(4)]

[CONDITIONS OF AUTHORISATION FOR OCCUPIER OR OPERATOR HANDLING HAZARDOUS WASTES]

1. The industry shall give top priority for waste minimization and cleaner production practices.
2. The industry shall not store hazardous waste for more than 90 days as per the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 and amendments thereof.
3. The industry shall store Used / Waste Oil and Used Lead Acid Batteries in a secured way in their premises till its disposal.
4. The industry shall not dispose Waste oils to the traders and the same shall be disposed to the authorized Reprocessors/ Recyclers.
5. The industry shall dispose Used Lead Acid Batteries to the manufacturers / dealers on buyback basis.
6. The industry shall take necessary practical steps for prevention of oil spillages and carry over of oil from the premises.
7. The industry shall maintain 6 copy manifest system for transportation of waste generated and a copy shall be submitted to Board Office and concerned Regional Office.

8. The industry shall maintain good house keeping & maintain proper records for Hazardous Wastes stated in Authorisation.
9. The industry shall maintain proper records for Hazardous Wastes stated in Authorisation in FORM-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form- 4 as per Rule 22(2) of the Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008 and amendments thereof.
10. The industry shall dispose of e-waste to the authorised recyclers only.
11. The industry shall submit the condition wise compliance report of the conditions stipulated in Schedule A, B & C of this Order on half yearly basis to Board Office, Hyderabad and concerned Regional Office.

Sd/-
MEMBER SECRETARY

To
M/s. ONGC Ltd., (GGS – Gopavaram)
Jaggarajupeta Village,
Uppalaguptam Mandal,
East Godavari District.

//T.C.F.E.O//

K. Rao
2/3/15

* JOINT CHIEF ENVIRONMENTAL ENGINEER
UNIT HEAD - IV

 <p>ఆంధ్ర ప్రదేశ్ ANDHRA PRADESH</p>	<p align="center">ANDHRA PRADESH POLLUTION CONTROL BOARD D.No.33-26-14D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamalavari Street, Kasturibaipet, Vijayawada - 520 010 Phone. No.0866-2463200, Website : www.appcb.ap.nic.in</p>
<p>MEMBER SECRETARY</p>	

Order No.APPCB/VSP/RJY/306/CFO/HO/2018

12/10/2018

AUTO RENEWAL OF CONSENT, HAZARDOUS WASTE AUTHORISATION ORDER FOR OPERATIONS

In response to your CFO & HWA application received on 27.09.2018 for Auto Renewal of Consent for Operation and Authorisation, the A P Pollution Control Board hereby extends the validity period of Consent and Authorisation order No. APPCB/VSP/RJY/306/CFO/HO/2015 -1818, Dated 27.02.2015, Valid up to 30.09.2018, under Section 25/26 of Water (Prevention and Control of Pollution) Acts, 1974 and 21 of the Air Prevention and Control of Pollution) Acts, 1981, Rule 6 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 for a further period of five years i.e., upto 30.09.2023.

1. All other conditions mentioned in Schedules A, B & C of the combined CFO & HWA order issued by the Board vide order dated 27.02.2015 will remain same.
2. The industry shall comply with the standards issued by MoEF&CC / CPCB from time to time.
3. The facility shall submit the compliance report to all the stipulated conditions for Consent for Operation for every six months i.e. on 1st of January and 1st of July of every year.
4. In case of false certification, non compliance of conditions / directions and discrepancy in furnishing the information by the industry, the Board can withdraw the auto renewed consent and take action under provisions of relevant Acts & Rules.

VIVEK YADAV IAS
MEMBER SECRETARY

To
M/s. Oil & Natural Gas Corporation Limited,
GGs - Gopavaram,
Jaggarajupeta (V), Uppalaguptam (M),
East Godavari district

Copy to:

1. The JCEE, Zonal Office, Visakhapatnam for information and necessary action.
2. The Environmental Engineer, Regional Office, Kakinada for information and necessary action.

Financial Assistance towards providing Artificial Limbs to poor & needy amputees/ Divyangs in Krishna District– Project Executed by NGO (Genentech Foundation charitable Trust (a division of Genentech Foundation) is a registered charitable trust under section 12A of Income Tax Act, 1961)

ONGC Rajahmundry Asset had received a proposal from Greentech Foundation charitable Trust (a division of Genentech Foundation) is a registered charitable trust under section 12A of Income Tax Act, 1961 for providing Artificial limbs to Divyangs in and around Krishna District on 21.12.2017. Accordingly, ONGC Rajahmundry had asked Greentech to conduct an intelligent Artificial Limbs Screening Camp/need assessment.

Greentech vide e-mail Dt.15.01.2018 had informed ONGC that they had conducted measurements & customized castings for 42 amputees from Krishna District on 04.01.2018 & 05.01.2018. These amputees were primarily identified by Andhra Pradesh Differently Abled & Senior Citizens Assistance Corporation (Details Placed at **Annexure-1A**).

As specified in Chapter-4 on CSR Project/Program Guidelines the above project was identified through "Need Assessment Study/Baseline Survey" as mentioned under item No. 4.2.2(a).

The instant proposal was screened & agreed in-principle by a multidisciplinary team of ONGC Rajahmundry Asset on 03.01.2018 (Details Placed at **Annexure-2A – SL NO - 1**) and the same was recommended by Asset Virtual Corporate Committee on 11/12.09.2018 (Details Placed at **Annexure-3A –Agenda item no. 688.08– SL NO - 1**).

The Proposal was further obtained Administrative Approval by the ED-Chief CSR of ONGC & accorded Expenditure Sanction on 28.02.2018 (Details Placed at **Annexure-4A**).

MoA was signed as per the agreed terms and conditions between ONGC & Greentech Foundation charitable Trust (a division of Greentech Foundation) on 14.03.2018 and the payment of 1st instalment was made to Greentech Foundation charitable Trust (a division of Greentech Foundation) on 10.04.2018 (Details Placed at **Annexure-5A**).

An letter vide ONGC/RA/CSR/2017-18 Dt.10.12.2018 was sent to Greentech Foundation charitable Trust seeking fund utilization status (Details Placed at **Annexure-6A**). In response, vide letter, Dt. 12.01.2019, it was informed that 8 beneficiaries were present during final fitment in ONGC Rajahmundry Asset on 11.01.2019. The Project Monitoring Committee had certified the same (Details Placed at **Annexure-7A**). Further, vide letter dated 19.03.2019, Greentech had informed that the aforesaid project has been completed in Andhra Pradesh Differently Abled & Senior Citizens Assistance Corporation, Vijayawada (The Same was observed and certified by ONGC PMC).

Utilization Certificate for the completed project along with Photographic evidence were submitted as per the terms agreed in our MoA. Request for remaining pending instalment was made along with it (Details Placed at **Annexure-8A**). On project completion, feedbacks were obtained from the beneficiaries. Upon satisfaction, ONGC, Rajahmundry Asset had made the pending payment on 27.08.2019 (Details Placed at **Annexure-9A**).

Financial assistance towards providing a Tractor with Truck and 2 E-Rikshaws with Hydraulic Lift (Swatcha Bharat Programme) in Pidimgoyyi(V) in Rajahmundry (Rural) in East Godavari – Project Executed by District Administration of East Godavari

ONGC Rajahmundry Asset had received a CSR request from Shri. Gorantla Butchaiah Choudary, Hon'ble MLA, Rajahmundry (Rural) seeking Tractor with Truck and 2 E-Rickshaws with Hydarulic Lift vide Letter Dated 17.07.2018. The request was based on the Resolution of Pidimgoyyi Village Gram Panchayat (Details Placed at **Annexure-1**). As specified in Chapter-4 on CSR Project/Program Guidelines the above project was identified through "Request from MLA's & Village Sarpanch/Secretary" as mentioned under item No. 4.2.2© & 4.2.2(d).

Thus, the proposal was subjected to Field Visit & further examined by CSR Team. It was found that three quotations were not present and the same was sought from the MPDO vide Letter Dated 18.09.2018, 31.10.2018, 21.11.2018, 14.12.2018, 21.01.2019 & 21.02.2019. In response to the same, MPDO Rajahmundry (Rural) & Panchayat Secretary had arranged for the Quotations vide Roc no 50/2017, Dt.21.02.2019. These estimates were subjected to Logistic Vetting for the verification of Rate Reasonability (Details Placed at **Annexure-2**).

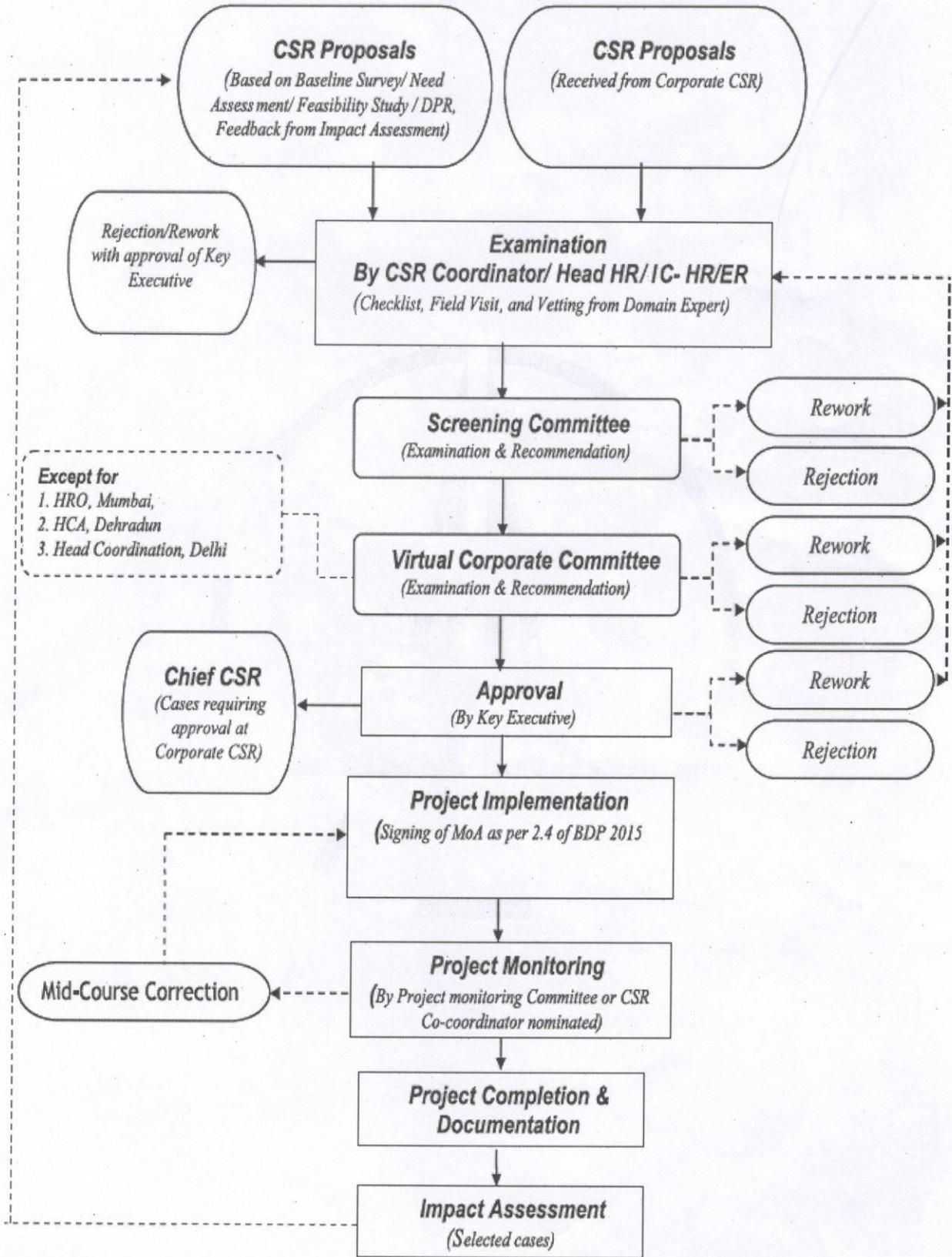
The instant proposal was screened & agreed in-principle by a multidisciplinary team of ONGC Rajahmundry Asset on 28.08.2018 & 29.08.2018 (Details Placed at **Annexure-3 – SL NO - 50**) and the same was recommended by Asset Virtual Corporate Committee on 11/12.09.2018 (Details Placed at **Annexure-4 –Agenda item no. 712.05– SL NO - 25**).

The Proposal was further obtained Administrative Approval by the Key Executive of ONGC Rajahmundry Asset on 02.05.2019 & accorded Expenditure Sanction on 02.01.2020 (The Delay caused due to submissions in quotations as desired for verification of rate reasonability) (Details Placed at **Annexure-5**).

MoA was signed as per the agreed terms and conditions between ONGC & District Panchayat Officer, East Godavari (on behalf on District Collector, East Godavari) on 09.03.2020 and the payment was made to District Collector & Magistrate of East Godavari on 29.04.2020 (Details Placed at **Annexure-6**).

The District Administration of East Godavari had completed the aforesaid project and the same was inaugurated by Shri. Margani Bharat, Hon'ble MP, Rajahmundry and Utilization Certificate for the completed works were submitted as per the terms agreed in our MoA (Details Placed at **Annexure-7**)

Process Flow for CSR Project at Work Center



CSR ABSTRACT - ONGC RAJAHMUNDRY

FY 2020-21	Total No of CSR Cases	60
	Overall amount Spent	80871987
	No of Cases in which Payment made to Govt. Bodies	50
	Overall amount paid to Govt. Bodies	74286917
	Percentage of Amount paid to Govt Bodies	91.85741535
	No of Cases in which Payment made to Non-Govt. Bodies	10
	Overall amount paid to Non-Govt. Bodies	6585070
	Percentage of Amount paid to Non-Govt Bodies	8.14258465

FY 2019-20	Total No of CSR Cases	208
	Overall amount Spent	230578251
	No of Cases in which Payment made to Govt. Bodies	188
	Overall amount paid to Govt. Bodies	210475823
	Percentage of Amount paid to Govt Bodies	91.28173281
	No of Cases in which Payment made to Non-Govt. Bodies	20
	Overall amount paid to Non-Govt. Bodies	20102428
	Percentage of Amount paid to Non-Govt Bodies	8.718267188

FY 2018-19	Total No of CSR Cases	304
	Overall amount Spent	210411284
	No of Cases in which Payment made to Govt. Bodies	263
	Overall amount paid to Govt. Bodies	160664272
	Percentage of Amount paid to Govt Bodies	76.35725088
	No of Cases in which Payment made to Non-Govt. Bodies	41
	Overall amount paid to Non-Govt. Bodies	49747012
	Percentage of Amount paid to Non-Govt Bodies	23.64274912

FY	Percentage of Amount Paid to NGO
2018-19	23.64
2019-20	8.718
2020-21	8.142

Percentage of Amount Paid to NGO

