

Ref. No: EPGL/ENV/2019/EC Compliance/
Date: 30.04.2019

The Director,
Ministry of Environment & Forests
Regional Office, Kendriya Paryavaran Bhavan,
E-5, Area Colony, Ravi Shankar Nagar, Link Road No. 3
BHOPAL – 462 016

Essar Power Gujarat Limited
44, KM Stone
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P.O.Box No. 07
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Subject: Environmental Clearances compliance report for period October 2018 – March 2019

Ref No.: J-13011/16/2008-IA-II (T) dated July 17, 2009

Dear Sir,

As per condition no xxx of the above referred Environmental Clearance (EC), please find enclosed compliance report for period from **October 2018 – March 2019** of the EC granted to Essar Power Gujarat Limited by Ministry of Environment & Forests under EPA (1986). Also enclosed are relevant Annexure in support of the compliance report for your perusal and record please. A soft copy of the same is being sent as per the Gazette Notification SO 5845(E) dated 26.11.2018 for your record and perusal.

Thanking You,

Yours faithfully,
for, **Essar Power Gujarat Limited**



Dr. Pratik Mehta
(Head-HSE)

Enclosures: a/a

Copy to:

Regional Officer,
Central Pollution Control Board
Parivesh Bhavan,
Opp. VMC Ward Office No. 10.
Subhanpura
Vadodara-390 023

The Principal Chief Conservator of
Forests and Chief Wildlife Warden,
Block No – 14/1, Old Sachivalaya
Gandhinagar, Gujarat.

Regional Officer
Gujarat Pollution Control
Board, Sardar Patel
Bhavan, Rameshwar
Nagar, Jamnagar-361008

Member Secretary
Gujarat Pollution Control Board
Paryavaran Bhavan, Sector 10 A,
Gandhinagar-382010

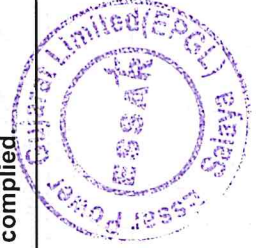
Chief Conservator of Forests,
Marine National Park, Ganjiwada,
Jamnagar

Regional Officer
Gujarat Pollution Control
Board, Sardar Patel
Commercial Complex,
Rameshwar Nagar, Bedi
Bunder Road, Jamnagar –
361 008

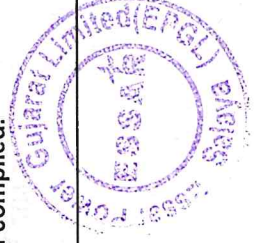
Environmental Clearances compliance status report for period October 2018 to March 2019

(ENVIRONMENTAL CLEARANCE VIDE LETTER NO.: J-13011/16/2008-IA. II(T) DATED JULY 17, 2009)

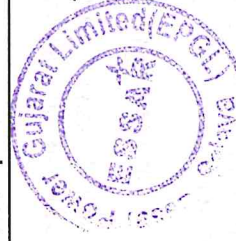
Document Reference	Condition	Present Status
3-i	Prior CRZ clearance for the activities/ facilities to be located in the CRZ area shall be obtained from the Competent Authority before start of the work on the project.	There is no Powerplant related activity in the CRZ area In view of the information furnished the condition is considered complied.
3-ii	Prior clearance for diversion of 4.60 ha of forest land under Forest (Conservation) Act, 1980 from Competent Authority shall be obtained before start of the work on the project..	Forest Clearance via letter No. 6-GJB-45/2009-BHO/1068 for diversion of 4.60 ha of forest land has been duly obtained from the competent authority by M/s Essar Bulk Terminal Salaya Ltd, the group company which is developing the port with due permissions and clearances In view of the compliance status provided the condition is considered complied.
3-iii	Environmental Clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the Competent Authority.	The project is outside the eco sensitive zone declared for the MNP/ MS of Gulf of Kutch. Please refer Annexure 3.3 In view of the information provided and the documents furnished, the condition is considered complied.
3-iv	Environmental clearance is subject to final order 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.	As per the directive of honourable SUPREME COURT OF INDIA, 2x600 MW power project and EBTSL are out of eco sensitive zone and as per the certificate C/24/LAND/survey/587/ 2013-14 dated 10/10/2013 and C/LAND/Survey/371/2012-14 dated 10/09/2013 from the Chief Conservator of Forest In view of the above information provided, the condition is considered complied.
3-v	Total land requirement for all activities of the project shall not exceed 253 ha.	Plant area is well within 253 ha. In light of the above information, the condition is considered complied



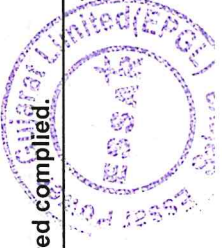
Document Reference	Condition	Present Status
3-vi	A conservation plan for the protection / conservation of endangered flora and fauna, if any, shall be prepared in consultation with Director, Marine National Park /Sanctuary and Wildlife Department of the State before the start of construction of work on the project. A copy of the same shall be submitted to this Ministry	A conservation plan has been prepared by CCF, MNP much before the start of the construction of the project which covers the entire area and is available with MNP/MS authority. All Industries have contributed towards preparation of the plan and is available with MNP, Jamnagar Authority. The new plan has been prepared by Chief Conservator of Forest and has submitted to Principal Chief Conservator of Forests, Gandhinagar and is currently under approval. In view of the details provided, the condition is considered complied.
3-vii	Since the project site is very near to the Marine National Park/ Sanctuary, it is necessary to setup a conservation cell with an Ecologist, a Marine Biologist and Wildlife Expert. The cell will be headed by the Ecologist. The function of this cell will be assess and monitor the status of the ecology of Marine Park/Sanctuary and mangroves in the area and also to create/strengthen the corridors for the Wildlife so that the Wildlife is conserved. Further an Advisory committee consisting of an Expert from NIO, representative of University of Baroda and the Ecologist of Conservation Cell should be constituted. The Ecologist of Conservation Cell will be the Member Secretary and the Expert from NIO will be the Chairman of the committee. The committee should meet at least twice a year. The committee should be reconstituted once in a three years. The function of the committee is to advice the conservation cell. The fund for the same would be met with by the power proponents.	A conservation Cell is already in place with a Marine Biologist and Wildlife expert. Meeting of this conservation cell is being conducted twice in a year to assess and monitor the status of the ecology of MNP/MS and also review to strengthen the same. An Advisory Committee is also in place as per the directives of MoEF and regular meeting at an interval of every six months is being conducted to review the activities of Conservation Cell and advice to conserve the ecology of MNP/MS and overall marine environment of the area. The committee is being reconstituted every three years and meeting regularly. 17th meeting of the Conservation Cell and Advisory Committee were conducted on 30th October 2018 and the MoM of the same are attached herewith as Annexure 3.7a . The action plan of the MoM recommendations are also attached herewith in Annexure 3.7b . In light of the information provided and the documents referred, the condition is considered complied.
3-viii	Sulphur and Ash contents in the imported coal to be used in the project shall not exceed 1.00% and 10% respectively. In case of variation of coal quality, a fresh reference shall be made to MOEF for suitable amendments to environmental clearance conditions wherever necessary.	Imported coal being sourced is with <1% of Sulphur, ash content is less than 10%. Please refer analysis report in Annexure 3.8 In view of the details provided, the condition is considered complied.



Document Reference	Condition	Present Status
3-ix	Bi-flue stacks of 275 m height each shall be provided with continuous online monitoring equipments for SO _x , NO _x and Particulate matter. Exit velocity of flue gases shall not be less than 25 m/sec.	A bi-flue stack of 275 m has been provided. CEMS is in place for both the units and the continuous display of the results of the same is being done at the main gate. Exit velocity of the flue gas is maintained more than 25 m/sec (Being displayed at the main gate of the company). Refer Annexure 3.9 . Please note that the plant was complete shutdown during the compliance period.
3-x	High efficiency Electrostatic Precipitator (ESP) shall be installed to ensure that particulate emission does not exceed 50 mg /Nm ³ .	In light of the documents provided and the information furnished, the said condition is ESP of 99.9% efficiency is installed. Emission of PM is well within the permissible limit of 50 mg/Nm ³ and is confirmed on monthly basis by NABL approved laboratory. Please refer Annexure 3.10 for detailed report which is being submitted to GPCB on a monthly basis. The results are of earlier period as the plant was complete shutdown during the compliance period.
3-xi	Space provision shall be kept for retrofitting of FGD with Mercury removal system, if required at a later date.	In view of the documents provided with reference to the stipulated condition, the condition is considered complied. Space provision is already made during planning stage itself for retrofitting of FGD with Mercury removal system (Annexure 3.11)
3-xii	Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as coal handling & ash handling points; transfer areas and other vulnerable dusty areas shall be provided.	In light of the information provided, the condition is considered complied. Adequate Dust Extraction and Dust Suppression system with cyclones, bag filters and water spray system has been provided in coal handling, ash handling areas, transfer points and other vulnerable areas (Please refer Annexure 3.12 for more details).
		In light of the documents provided, the condition is considered complied.



Document Reference	Condition	Present Status
3-xiii	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. 100% fly ash utilization shall be achieved from day one. In emergency unutilized fly ash and bottom ash shall be disposed off in the ash pond. Mercury and other heavy metals (As, Pb, Cr etc.) shall be monitored in fly ash and bottom ash and in the effluents emanating from ash pond.	Three Fly ash silos has been provided each of 1000 MT capacity. 100% Fly ash utilization has been achieved from day one (Annexure 3.13a). The results are of earlier period as the plant was complete shutdown during the compliance period. Arrangement has been made to dispose off fly ash in ash pond in case of emergency and during maintenance of ESP to dispose Ash laden water. Mercury and other heavy metals (As, Pb, Cr etc) are being monitored in Fly ash and Bottom ash on regular basis (Annexure 3.13b). The results are of earlier period as the plant was complete shutdown during the compliance period. No effluent is emanating from the ash pond as 100% utilization is achieved. MoEF approved laboratory has been contracted to monitor the Mercury and other heavy metals (As, Pb, Cr etc) in wastewater as well as pizometric wells around the ash pond. In view of the documents provided and the interpretation of the same with reference to the compliance condition, the condition is considered complied.
3-xiv	Ash pond shall be lined with impervious lining. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	Ash ponds are lined with impervious lining with adequate safety measures to protect the dyke from getting it breached (Annexure 3.14) In light of the document referred, the said condition is considered complied.
3-xv	Closed cycle cooling system with Induced Cooling Towers shall be provided. COC of 1.3 to be adopted. The effluents shall be treated as per the prescribed norms.	Closed cycle cooling system with Induced Cooling Towers have been provided with designed COC of 1.3. The Effluent is being treated as per the prescribed norms (Annexure 3.15). The results are of earlier period as the plant was complete shutdown during the compliance period. With reference to the documents provided, the condition is considered complied.
3-xvi	The treated effluents confirming to the prescribed standards only shall be discharged from cold water side in the sea. The temperature of discharged effluents shall not exceed 5°C over and above the ambient water temperature of sea. The temperature of the discharged water shall be monitored continuously and records	The effluent generated is being monitored continuously as per the requirement by MoEF approved laboratory and records are being maintained. In light of the information provided, the condition is considered complied.
3-xvii	A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.	STP is provided and all treated wastewater is being used in Green Belt of the Plant. The results of the treated water is attached as Annexure 3.17a & 3.17b . In light of the documents provided, the condition is considered complied.



Document Reference	Condition	Present Status
3-xviii	Rain water harvesting should be adopted. Central Groundwater Authority/Board shall be consulted for the finalization of the appropriate rain water harvesting technology within a period of three months from the date of clearance and details shall be furnished.	Rainwater harvesting is adopted. (Annexure 3.18a) Rain water harvesting study was under taken and the report (Annexure 3.18b) has been submitted vide letter no. EPGL/ENV/Compliance/2010/144, dated 01.12.2010. In view of the information provided, the condition is considered complied.
3-xix	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fire in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as Regional Office of the Ministry at Bhopal.	Fully functional firefighting system is available in the plant as well as in coal stock yard (Annexure 3.19) along with two fire tender available 24x7 to cater to any emergency. Apart from these two fully equipped fire team one at plant area and other at coal stock yard is available in all shifts. In light of the documents and information provided, the said condition is considered complied.
3-xx	Storage facilities for the auxiliary liquid fuel such as LDO/HFO/ LSHS shall be made in the plant area where risk is minimum to the storage facilities. Disaster Management Plan to be prepared to meet any eventuality in case of an accident taking place. Mock drills shall be conducted regularly and based on same, modifications required, if any shall be incorporated in DMP. Sulphur content in the liquid fuel will not exceed 0.5%.	Storage facility for the auxiliary liquid fuel such as LDO/HFO has been provided in an area where risk is minimum (Annexure 3.20a). Emergency Preparedness Plan is prepared and in place (Annexure 3.20b). Regular mock drill is being carried out based on the EMP (Annexure 3.20c) and all the recommendations suggested in mock drill are tracked and closed and necessary modification has been implemented (Annexure 3.20d). Liquid fuel is just a start up fuel and not a primary fuel. In light of the information provided and the documents attached by P.A. the condition is considered complied.
3-xxi	Provision shall be made for housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structure to be removed after the completion of the project.	Labour colony was provided during construction phase with facilities for accommodation, cooking, toilets, STPs, Safe drinking water, medical health centre etc. and was removed after the completion of the construction phase. In light of the information provided, the condition is considered complied.



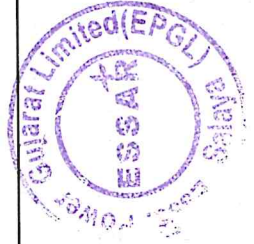
Document Reference	Condition	Present Status
3-xxii	Regular monitoring of ground water in and around ash pond area including heavy metals (Hg,Cr,As,Pb) shall be carried out, records maintained and six monthly reports shall be furnished to the Regional Office of this Ministry. The Data so obtained should be compared with the baseline data so as to ensure that groundwater quality is not adversely affected due to the project.	<p>Though 100% fly ash utilization has been achieved from day one. Monitoring of groundwater around ash pond including for heavy metals (Hg, Cr, As, Pb) is being done through MoEF approved lab on six monthly interval and report being submitted on regular basis (Annexure 3.22a).</p> <p>The data obtained are compared with earlier results revealed that the groundwater quality is not adversely affected (Annexure 3.22b).</p> <p>Hydrogeological study of the core zone and buffer zone area within 10 km radius of the site was conducted in pre and post monsoon period. The data revealed seawater ingress at various depth contour due to the fractured rocks and more freshwater yield. (Annexure 3.22c)</p> <p>In light of the documents provided and the results obtained, the condition is considered complied.</p>
3-xxiii	A green belt of adequate width and density shall be developed around the plant periphery covering 1/3 of the project area preferably with local species.	<p>Green belt has been developed covering 1/3 of the operating plant area (Annexure 3.23a) with local as well as wind breaking species (Annexure 3.23b) as per the EIA. Local Forest department was also consulted for the local species preference for the area.</p> <p>In view of the information furnished and documents provided, the condition is considered complied.</p>
3-xxiv	First aid and sanitation arrangements shall be made for the drivers & other contract workers during construction phase.	<p>First aid boxes are provided at Admin building and various places in plant as well as fully functional OHC along with sanitation facilities are provided for all the workers during construction as well as operation phase.</p> <p>In view of the information provided, the condition is considered complied.</p>
3-xxv	Noise level emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy area such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non	<p>Noise enclosures are provided in turbine area (Annexure 3.25a). Cautionary signs have been installed in the noisy area. Workers and employees working in high noise area have been provided with ear plugs (Annexure 3.25b). All the workers engaged in noisy area are initially as well as periodically examined and their audiometric records are maintained at OHC. The results till date revealed no noise induced hearing loss.</p> <p>In view of the documents provided and the information furnished, the condition is considered complied.</p>



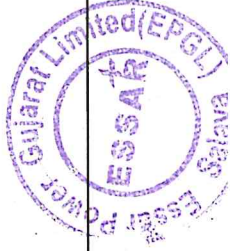
Document Reference	Condition	Present Status
3-xxvi	Regular monitoring of ambient ground level concentration of SO ₂ , NO _x , Hg, SPM and RSPM shall be carried out in the impact zone and records maintained. If at any stage these found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data so monitored shall to be put on website of the company.	Regular monitoring of AAQ is being done as per CPCB guideline. The values are well within the permissible limits (<i>Annexure 3.26a</i>). Monitoring of the ambient air done in impact zone and comparison with the historical data made (<i>Annexure 3.26b</i>). Location of the monitoring stations were decided in consultation with GPCB. Frequency of the monitoring is as per CPCB guideline. Monitoring data are displayed on company website at http://www.essar.com/article.aspx?cont_id=uZJCH0I2iwA= In light of the documents submitted and information furnished the condition is considered complied.
3-xxvii	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality, / office of Municipal Corporation/Gram Panchayat concerned and on the company's web site within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also seen at the Website of the Ministry of Environment and Forests at http://envfor.nic.in	Advertised in local news paper (<i>Annexure 3.27</i>) and also available on company website. Copies of the Environmental Clearance is available with GPCB and can also be seen on MoEF as well as company website. In view of the information provided, the condition is considered complied.
3-xxviii	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/ Municipal Corporation, urban local Body and the Local NGO, is any, from whom suggestions/ representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	The clearance letter is uploaded on the company website at http://www.essar.com/article.aspx?cont_id=uZJCH0I2iwA= . Copies of the Environmental Clearance is available with GPCB and can also be seen on MoEF as well as company website. In view of the information provided the condition is considered complied.
3-xxix	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	A separate environment management cell with qualified staff is set up for the implementation of the stipulated environmental safeguards (<i>Annexure 3.29</i>). In view of the document provided and information furnished, the condition is considered complied.



Document Reference	Condition	Present Status
3-xxx	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	(Please refer Annexure 3.30a & Annexure 3.30b) EC compliance report is being sent by email to RO, MoEF, Bhopal. Last submitted copy of the same is available on company web site for ready reference. In view of the document provided and information furnished, the condition is considered complied.
3-xxxi	Regional Office of the Ministry of Environment & Forests located at Bhopal will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Reports and Environmental Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will up-load the compliance status in their website and up-date the same from time to time at least six monthly basis. Criteria pollutants levels (Stack & ambient levels of SPM, Sox & NOx) will be displayed at the main gate of the power plant or at any other convenient locations for information of public and employees.	Complete compliance report is uploaded on regular basis at http://www.essar.com/article.aspx?cont_id=uZJCH0I2iwA= The results of the monitoring data for the criteria pollutants is being displayed continuously at the main gate of the company (Annexure 3.9) In view of the document provided and information furnished, the condition is considered complied.
3-xxxii	The proponent shall upload the status of compliance of EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of the CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO ₂ , NO _x (ambient levels as well as stack emissions) shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Compliance status report of the EC conditions is uploaded on company website at http://www.essar.com/article.aspx?cont_id=uZJCH0I2iwA= and also being sent to RO, MoEF, Bhopal periodically. The criteria pollutants are being monitored by CEMS as well as by MoEF approved laboratory and the data being submitted to GPCB on regular basis. The Criteria pollutants is being displayed at the main gate of the company (Please refer Annexure 3.9) In view of the documents provided and information furnished, the condition is considered complied.



Document Reference	Condition	Present Status
3-xxxiii	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 EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	Form-V is being submitted to Gujarat Pollution Control Board regularly (<i>Annexure 3.33</i>) Same is displayed at company website along with EC compliance report. In view of the document provided and information furnished, the condition is considered complied.
3-xxxiv	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	Separate budget is available for environmental protection measures. Also this was included in the project cost. The plant is in shutdown condition during the compliance period. In view of the document provided and information furnished, the condition is considered complied.
3-xxxv	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	Financial Closure (<i>Annexure 3.35a</i>) Approval from GPCB for establishment of the Project (<i>Annexure 3.35b</i>) Commissioning of the project is Unit 1 - 1st April 2012 & Unit 2 is 15th June 2012 In view of the documents provided and information furnished, the condition is considered complied.
3-xxxvi	Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Bhopal /the CPCB/the SPCB who would be monitoring the compliance of environmental status.	Full cooperation and support is always extended to the officials visiting the Power Plant.
4	The Ministry of Environment & Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. MoEF may impose additional environmental conditions or modify the existing ones, if necessary.	Noted & agreed to.
5	The environmental clearance accorded shall be valid for a period of 5 years to start of production operations by the power plant.	Noted & agreed to.



Document Reference	Condition	Present Status
6	In case of any deviation or alteration in the project proposed from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.	Noted.
7	The above stipulations should be enforced among others under the Water(Prevention and Control of Pollution) Act, 1974, the Air(Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.	Noted & agreed to.
8	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within 30 days as prescribed under Section of the National Environment Appellate Act, 1997	Noted.

Date: 29.04.2019



[Signature]
 Dr. Pratik Mehta
 (Authorized Signatory)