

BRIEF SUMMARY

OF

ANJAR-CHOTILA PIPELINE PROJECT OF

GUJARAT STATE PETRONET LIMITED

1. Introduction of the Project / Background Information :

M/s Gujarat State Petronet Limited (GSPL), a Govt of Gujarat undertaking is one of the leading companies in the field of Natural Gas transmission line. It is in the process of establishing pipeline network all over the Gujarat State to take care of future demand-supply gap of natural gas to fulfill the requirements of various consumers throughout Gujarat. It is first company in India to transport natural gas on open access basis and is a Pure Natural Gas Transmission Company.

GSPL is a pioneer in developing energy transportation infrastructure and connecting natural gas supply basins and LNG terminals to growing markets. It is continuously expanding its pipeline network in Gujarat to reach the demand centers by laying gas pipeline network. The company has developed requisite expertise and confidence with proven project management competencies.

GSPL proposes to lay a network of Gas Pipeline for the supply of Natural Gas to various consumers situated at Gujarat, Rajasthan & Madhya Pradesh state. There are numbers of supporting industries that have been developed in Anjar, Gandhidham, Kandla & Bhuj region of Kachchh districts. In order to fulfill the requirement of natural gas in future, GSPL proposes to lay a gas pipeline, which will originate from ARPL SV-8 Top-8 Ratanpar, Sayla in Surendranagar district to GSPL dispatch station Rata talav, and Anjar in Kachchh district. The proposed pipeline will also be utilized for distribution of GSPL's existing Gas pipeline Grid network in Gujarat state.

2. Brief description of nature of the project.

Gujarat is a highly industrialized state, which leads to a high demand of energy in the state. Looking to the limited availability of fossil fuel resources in the state, Govt. of Gujarat has been actively studying various options for augmenting supply of primary commercial energy sources. Natural gas has been one of the most suitable source to take care of the energy requirement of the state. Following factors support for such choice of fuel:

- The environmental impact of the fuel,

- The 1600 Kms coastal line which offers many opportunities for planning to establish LNG terminals,
- The discovery of offshore gas fields & the potential of Coal Bed Methane,
- The advantage this fuel offers in terms of better efficiency in combined cycle power plants and co-generation facilities and worldwide shift towards gas as an energy source
- Support Petro-chemicals Industries for Manufacturing petroleum product at affordable cost as compared to imported costly products and there by securing the economic development.

In order to facilitate augmentation of gas supply to various consumers in Gujarat, an analysis of the infrastructure requirements has been carried out and based on such analysis, it was decided to create suitable infrastructure facilities like LNG import terminal and creation of network of high-pressure gas transmission pipelines to facilitate transportation of gas from point of supply to points of demand.

The project is required as existing pipeline from Varsamedi; Anjar-Kutch to Chotila will not meet the total transportation volume requirement from the GSPC LNG Terminal. GSPL would be the only company to have pipelines in this section for transportation of natural gas for which GSPL has been authorized by Petroleum and Natural Gas Regulatory Board (PNGRB) vide its letter dated 27 July 2012 Ref:Infra/PL/Exis/18(1)/GSPL/Guj-Gas-Grid-HP/01/12. Apart from evacuation of gas from the proposed LNG Terminal, this pipeline would help in the acting as a catalyst in accelerating economic development of Kutch and Saurashtra region.

Proposed pipeline alignment runs through several talukas of Gujarat state.

SL. No	Chainage (Km)		Length (Km)	Taluk	District	State
	From	To				
1	0/00	14/566.99	14/566.99	Sayla	Surendranagar	Gujarat
2	14/566.99	26/320.83	11/753.84	Thangadh	Surendranagar	
3	26/320.83	41/703.04	15/382.21	Muli	Surendranagar	
4	41/703.04	58/961.40	17/258.36	Halavad	Morbi	
5	58/961.40	85/952.68	26/991.28	Morbi	Morbi	
6	85/952.68	100/939.55	14/986.87	Maliya	Morbi	
7	100/939.55	111/897.95	10/958.40	Salt Pan Area, Kachchh		
8	111/897.95	173/244.09	61/346.14	Bhachau	Kachchh	

9	173/244.09	196/140.02	22/895.93	Anjar	Kachchh	
		Total	196/140.02			

Certain length of pipeline has been proposed within existing GSPL – Pipeline network and certain section of pipeline is proposed cross country having fresh independent RoU. The details of alignment of proposed Chotila-Anjar pipeline from take-off to terminal point is furnished below:

Sl. No.	Chainage (km)		Length (Km)	Details of Alignment
	From	To		
1	0/00	17/500	17/500	Parallel to GSPL Ratanpar-Morbi Pipeline
2	17/500	93/282	75/782	Pipeline runs through cross country
3	93/282	98/304	05/022	Parallel to GSPL Morbi-Mundra Pipeline
4	98/304	119/149	20/845	Pipeline runs through cross country
5	119/149	144/239	25/090	Parallel to GSPL Morbi-Mundra Pipeline
6	144/239	193/241	49/002	Pipeline runs through cross country
7	193/241	196/140.02	02/899.02	Parallel to GSPL Morbi-Mundra Pipeline
		Total	196/140.02	

The existing pipeline from Varsamedi; Anjar-Kutch to Chotila, will not meet the total transportation volume requirement from the GSPC LNG Terminal. For which, GSPL has already obtain clearance from MoEF and NOC from GPCB for Phase III Natural Gas pipeline project. Attached as **Appendix A & Appendix B respectively**. Now, present proposal is to lay a Natural gas pipeline, which will originate from ARPL SV-8 Top-8 Ratanpar, Sayla in Surendranagar district to GSPL dispatch station Rata talav, and Anjar in Kachchh district. The proposed pipeline will also be utilized for distribution of GSPL's existing Gas pipeline Grid network in Gujarat state. The same is given in the **Fig. 1**.

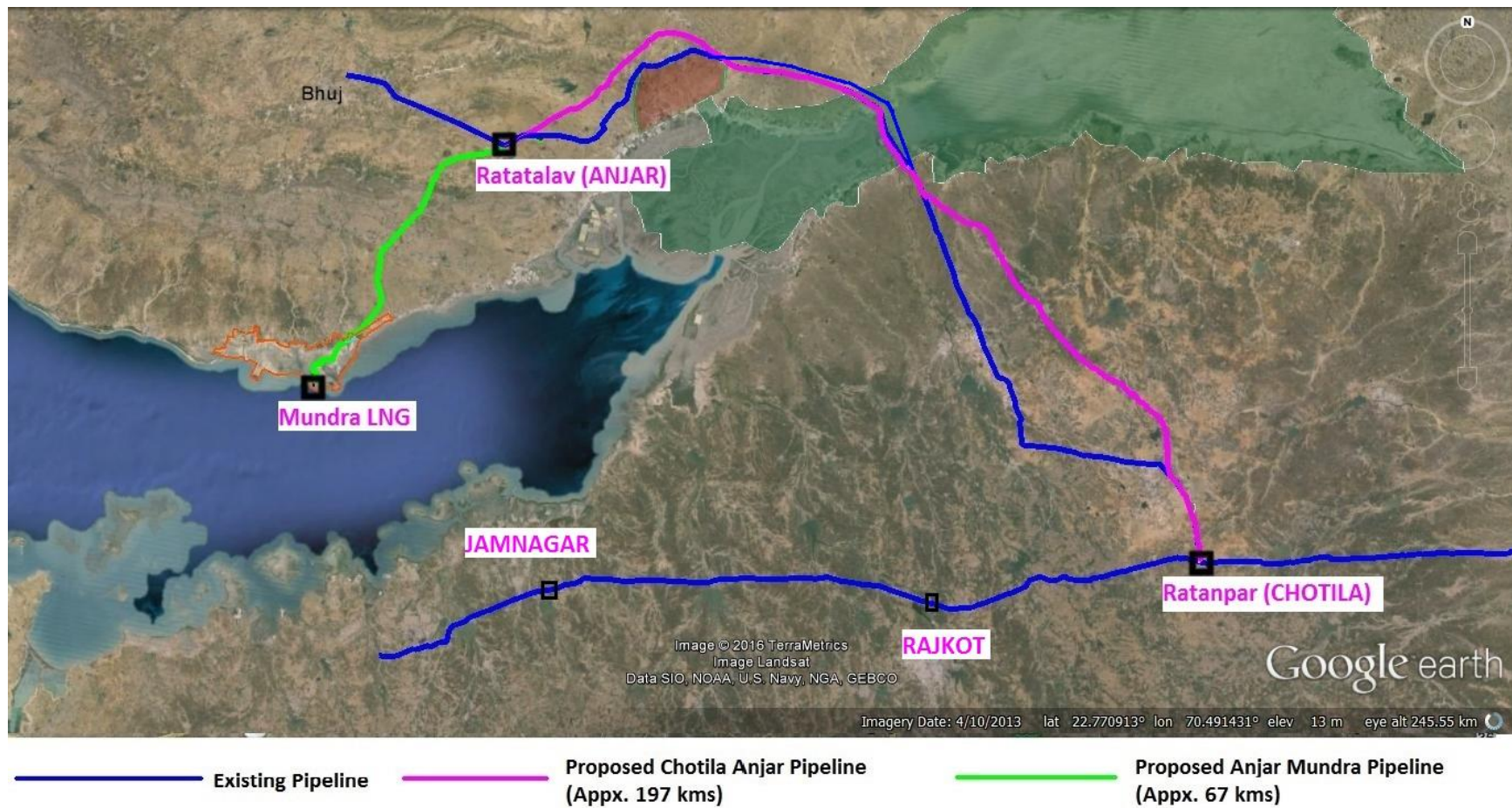


Fig.1 Route map for Chotila – Anjar – Mundra pipeline project.

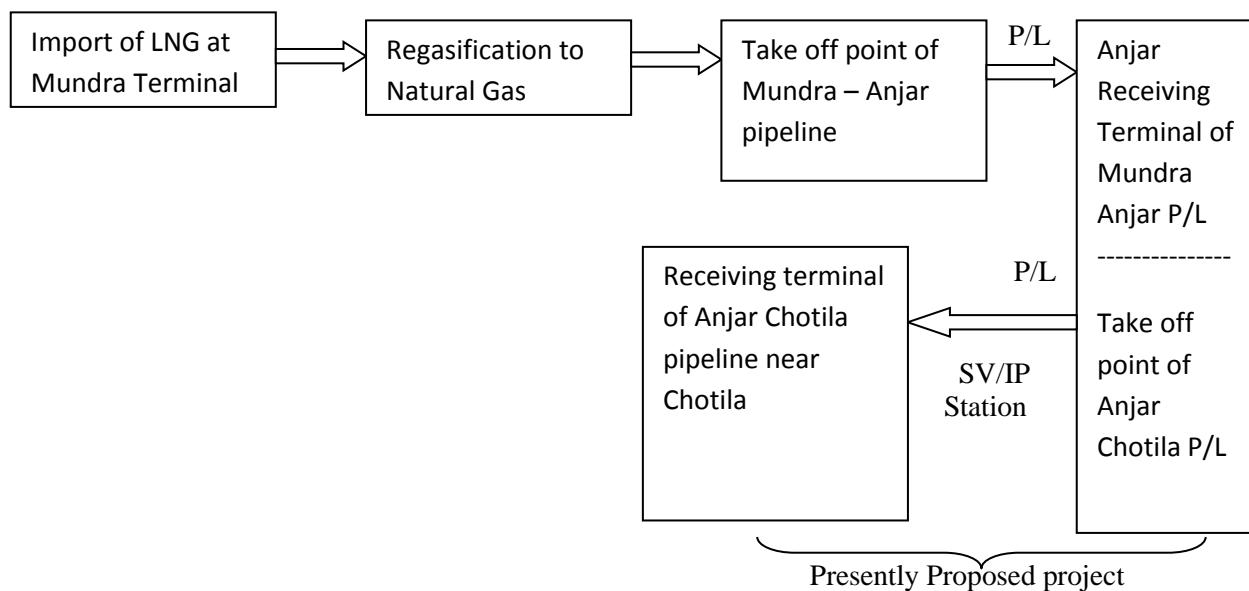
As per the route map shown in the **Fig. 1**, blue line shows the existing pipeline and Green line shows proposed Anjar Mundra pipeline for which GSPL has already obtained clearance from MoEF and NOC from the Gujarat State pollution Control Board. Attached as **Appendix A & Appendix B** respectively.

Now the present project is for proposed Anjar (Kachchh)– Chotila(Surendranagar) Natural Gas transportation pipeline project covering approx. length 196.14Km with Dia 36” including associated facilities i.e. 08 Nos. Sectionalized Valve (SV) Station, 02 No. Dispatch Terminal (DT)/ Receiving Terminal (RT) and 01 No. Intermediate pigging station. The route of proposed Anjar-Chotila pipeline is given in the Fig.1 as pink line.

The proposed project is interlinking the upstream source of gas supply from pipeline section of Mundra – Anjar pipeline which is proposed separately. The source of gas supply to Mundra Anjar pipeline will be from the outlet point of LNG Terminal at Mundra Port where LNG will be converted to Natural Gas and supplied through mentioned Mundra – Anjar pipeline, network.

Thus, Village Ratatalav near Anjar in Kutch district will be receiving terminal for Mundra – Anjar pipeline section for transportation of Natural Gas and also, for further flow of natural gas, the same will be dispatch terminal for proposed Anjar-Chotila pipeline section, whereas, receiving terminal for Anjar Chotila pipeline section will be at Ratanpar village near Chotila at district Surendranagar.

3. Project description with process details



4. Financial and Social benefits with special emphasis on the benefit to the local people including tribal population, if any, in the area

- The project will provide cleaner fuel stock for the industries in region, and is environment friendly fuel due to which adverse impacts on environment will be minimum.
- The project would enhance employment opportunities through contractors for the local people during construction phase.
- There will not be any adverse impact on communication and transportation

- Residential/Built up will not be acquired for the proposed project and hence there is no displacement of population. Moreover the project will also encourage the ancillary industries to come up and there will be more employment opportunities during the operational phase of the project to the local people depending on the skillness as per requirement.
- Transportation by pipeline is comparatively less expensive than the other modes of transport, both in the capital and operating costs. If a good network of pipelines is implemented throughout the country, this will ensure that the pipeline-transported products will be available to the consumers at a lower cost than alternate modes of transport.
- One of the additional advantages of pipeline transportation is that the scope of economic offences like theft / pilferage and adulteration of products would be almost negligible and the consumers will get immense benefit and value for money.

APPENDIX- A

No.J.11011/155/2007-IA II (I)
Government of India
Ministry of Environment & Forests
I.A. Division

Email: plahujarai@yahoo.com
Telefax: 24363973
Paryavaran Bhawan,
C.G.O. Complex, Lodi Road,
New Delhi - 110 003
Dated the March 31, 2007

To

Shri D.J. Pandian
Managing Director
M/s Gujarat State Petronet Limited
GSPC Bhavan, 5th Floor, Sector 11
Gandhinagar 382 011



Sub:

Laying of Underground gas pipeline from Bhadbhut- Rajkot by M/s Gujarat State Petronet Limited - Phase III of implementation for a length of about 815 km.

This has reference to your letter no.GSPL/E C/Phase-III-sub/2-6-07 dated 13th February, 2007 on the above mentioned subject regarding laying of underground natural gas pipeline for transportation of natural gas in the State of Gujarat.

Under the Environmental Impact Assessment Notification, 2006, the activity 6(a) in the schedule regarding oil and gas transportation pipeline (crude and refinery/petrochemical product(s) passing through National Parks/Sanctuaries/Coral reefs/ecologically sensitive areas including LNG terminal is included as Category A and will require prior environmental clearance from the Ministry of Environment and Forests.

Since laying of proposed underground natural gas pipeline does not pass through National Parks/sanctuaries/coral reefs/ecologically sensitive area including LNG terminal, it would not require environmental clearance under the provisions of the Environmental Impact Assessment Notification dated 14th September, 2006. However, it is noted the wild ass sanctuary is located within 1km radius of the pipeline. In this regard, you may obtain clearance under the Wildlife (Protection) Act, 1972 from the concerned authority.

This issues with the approval of the competent authority.

Yours faithfully,

(Dr. P.L. Ahujarai)
Director

MD
ADD
4/4
BD (TS)
Am (Rsp)

APPENDIX- B



GUJARAT POLLUTION CONTROL BOARD

Paryavaran Bhavan

Sector-10-A, Gandhinagar - 382 010.

Phone : 23222756, 23222095, 23222096

Gram : CLEANWATER Fax : (079) 23232156

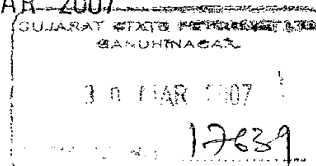
Website : www.gpcb.gov.in

"Consent to Establish (NOC)"

NO. GPCB/CCA-JMN-154(2)/ 8632

TO,
M/S GUJARAT STATE PETRONET LIMITED
6TH FLOOR,
GSPC BHAVAN,
SECTOR - 11,
GANDHINAGAR,
PIN : 382 011.

29 MAR 2007



SUB: Consent to Establish under Section 25 of Water Act 1974 and Section 21 Air Act 1981

REF: Your application No. NIL dt. 30/11/2006

Sir,

Without prejudice to the powers of this Board under the Water (Prevention and Control of Pollution) Act-1974, the Air Act-1981 and the Environment (Protection) Act 1986 and without reducing your responsibilities under the said Acts in any way, this is to inform you that this Board grants **Consent to Establish** to your laying Phase III pipeline network for transportation of natural gas through length of approximately 789 Km as per details tabulated below having carrying capacity of 14 MMSCMD

Sr. No.	Name of Pipeline	Size (Inch)	Length (Km)	Type of Pipe Line
1	Morbi - Mundra	18	181.3	Trunk Line
2	Mehsana - Palanpur	18	73.1	Trunk Line
3	Palanpur - Jaipur (Up to Gujarat Border)	18	44.5	Trunk Line
4	Palanpur - Ramgadh (Up to Gujarat Border)	18	54.8	Trunk Line
5	Godhra - Dahod	12	67.5	Trunk Line
6	Bhuj	8	23	Spur Line
7	IFFCO	8	20	Spur Line
8	Porbandar	12	72.5	Spur Line
9	Junagarh	12	72.5	Spur Line
10	Veraval	12	109.3	Spur Line
11	Rajpipla	12	70.4	Spur Line
TOTAL LENGTH			789 kms	

SPECIFIC CONDITIONS :

1. The Validity period of the order will be Five years from date of issue.
2. Unit shall not carry out any activity, which attracts the provisions of the EIA Notification dated 14/9/2006.



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3. Project proponent shall have to take prior approval of concerned Government agencies while carrying out blasting wherever required
4. Project proponent shall have to preserve topsoil dug and shall be restored to original condition on completion of the work.
5. Project proponent shall have to comply with the undertaking submitted by them on dt. 11/11/2006 that entire stretch of the proposed pipeline shall not pass through any National Parks / Sanctuaries / Coral Reefs of Ecologically sensitive area.
6. Project proponent shall have to obtain site notification from the Chief Inspector of Factories under the MSI Rules, and shall have to comply all the provisions of the said rule and copy of site notification shall be submitted to the Board within 15 days on receipt of the same.
7. Project proponent shall construct the pipeline and other infrastructure, and adopt safety Measures as per the standards & specification laid down by the concerned agencies from time to time.
8. Project proponent is required to comply with the Manufacturing, Storage and Import of Hazardous Chemicals Rules-1989 framed under the Environment (Protection) Act-1986.
9. Project proponent shall comply with the suggestions / recommendations as per the Rapid Risk Assessment and Disaster Management Plan (DMP) submitted by you.
10. Project proponent shall construct the pipeline and other infrastructure, and adopt safety measures as per the standards & specification laid down by the concerned agencies from time-to-time.
11. Project proponent shall comply with the provisions of the Environment Protection Act - 1986, Coastal Regulation Zone Notification 1991, Hazardous Waste (Management and Handling) Rules 1986 as amended in 2003, Forest (Conservation) Act 1980 and Rule 1981, The Petroleum and Minerals (Pipeline acquisition of right of user land) Act - 1962.
12. All Environmental parameters, commitments and approaches submitted in the EMP shall be adhered to and EMP shall be fully implemented before starting activities.
13. On completion of all temporary work structures, surplus materials and wastes shall be suitably disposed off.
14. An Onsite-Offsite Emergency plan shall be prepared & submitted to Disaster Management Authorities under intimation to GPCB.



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15. Project proponent shall have to obtain NOC for Booster / Compressor station from the Board after selection of site.
16. The applicant shall have to take due care to prevent corrosion of pipeline and appropriate checking and preventive maintenance measures shall be put in place and implemented.
17. The system shall also facilitate continuous monitoring of various parameters like pressure, temperature, flow of products, leakage detection and automatic / remote shut down of valves.
18. Project proponent should set up control room equipped with SCADA computers, wireless system, telephone system, emergency vehicle fire fighting equipment and should be maintained.
19. Inspection valves shall be provided on the pipeline for better monitoring & control of flow operation of the product.
20. Project proponent shall have to submit operational manual to GPCB.
21. The company shall interact with the concerned people, educate them & provide them necessary information in respect of Prevention of damages to utilities, and about safety and disaster plan.
22. The company shall submit regular reports to the GPCB & other concerned authorities regarding operation & maintenance of the network.
23. The company shall have to inform and get the permission of the concerned authorities in case any structure of archeological significance is coming across the pipeline route before laying pipeline.
24. The applicant shall have to take due care to prevent external corrosion of pipeline, leakage of gas from the network, pilferage and in removal of moisture from the gas.
25. The applicant shall have to adopt SCADA system to monitor the operation & health of the network and to ensure that there will not be any reduction of thickness of the pipeline in the long term.
26. Isolation valves shall be provided on the pipeline for better monitoring & control of gas flow operation.
27. Proposed pipeline should not obstruct the natural water flow through nallah, Rivers, canals, channels & drains.

CONDITIONS UNDER WATER ACT 1974:

1. There shall be no generation of any trade effluent from the operation.



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2. The quantity of the domestic wastewater (sewage) shall be NIL. However, if sewage is generated then shall be disposed of at each location using available local sewer and in absence of sewerage facility in the area, it shall be disposed of through septic tank / soak pit system

CONDITIONS UNDER AIR ACT 1981:

1. Generator set shall be run on Diesel and diesel shall be utilized as fuel in the Generator Set(s) at a rate of 50 lit/day, which is to be used for emergency purpose.
2. Project proponent shall have to comply with MoEF notification no. GSA / dated, 22nd December 1998 for installation of DG set
3. There shall be no process emission except emergency venting.
4. Stack monitoring facilities like porthole, platform/ladder etc., shall be provided with stacks/vents chimney in order to facilitate sampling of gases being emitted into the atmosphere.
5. Ambient air quality within the premises of the each installation shall conform to the following standards:

PARAMETERS	PERMISSIBLE LIMIT
Suspended Particulate Matter	200 Microgram/M ³
SO ₂	80 Microgram/M ³
NO _x	80 Microgram/M ³
RSPM	100 Microgram/M ³
Hydrocarbons	160 Microgram/M ³
6. All measures for the control of environmental pollution shall be provided before commissioning of pipeline.

CONDITIONS UNDER HAZARDOUS WASTE :

1. Applicant shall have to comply with provisions of Hazardous Waste (Management & Handling) Rule-1989 as amended from time to time.
2. The applicant shall obtain membership of common TSDF site for disposal of Haz. Waste as categorized in Hazardous Waste (Management & Handling) Rule-1989 as amended from time to time.
3. The applicant shall obtain membership of common Haz. Waste incinerator for disposal of incinerable waste.
4. The applicant shall provide temporary storage facilities for each type of Haz. Waste as per Hazardous Waste (Management & Handling) Rule-1989 as amended from time to time



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5. For the waste generated from the pigging and any other operation project proponent shall have to provide sludge collection storage and disposal facility complying EPA-1986 with Hazardous Waste (M & H) Rules 1989 amended further in 2000 and 2003 and rules made there under as amended from time to time.

GENERAL CONDITION :

1. Adequate plantation shall be carried out all along the periphery of the industrial premises in such a way that the density of plantation is atleast 1000 trees per acre of land and a green belt of 05 meters width is developed
2. The applicant shall have to submit the returns in prescribed form regarding water consumption and shall have to make payment of water cess to the Board under the Water Cess Act- 1977.
3. In case of change of ownership/management the name and address of the new owners/partners/directors/proprietor should immediately be intimated to the Board.
4. The applicant shall however, not without the prior consent of the Board bring into use any new or altered outlet for the discharge of effluent or gaseous emission or sewage waste from the proposed industrial plant. The applicant is required to make applications to this Board for this purpose in the prescribed forms under the provisions of the Water Act-1974, the Air Act-1981 and the Environment (Protection) Act-1986.
5. The applicant also comply with the General conditions as per Annexure - I attached herewith (No.1 to 38) (whichever applicable).
6. The concentration of Noise in ambient air within the premises of industrial unit shall not exceed following levels:

Between 6 A.M. and 10 P.M. : 75 dB(A)
Between 10 P.M. and 6 A.M. : 70 dB(A)
7. If it is established by any competent authority that the damage is caused due to your activities to any person or his property, in that case they are obliged to pay the compensation as determined by the competent authority.

FOR AND ON BEHALF OF
GUJARAT POLLUTION CONTROL BOARD

(J. K. VYAS)
ENVIRONMENTAL ENGINEER

GUJARAT POLLUTION CONTROL BOARD

GENERAL CONDITIONS (NOC - No. 1 to 38)

ANNEXURE - I

01. In case of any change either in products, its capacity or manufacturing process, the applicant shall have to obtain prior permission of this Board. The applicant shall not commence the production until consent under Water (Prevention and Control of Pollution) Act-1974, Air (Prevention and Control of Pollution) Act-1981 and authorisation under the Hazardous Waste (Management and Handling) Rules-1989 is obtained.
02. If the products/process falls in SCHEDULE-I or II of the Environmental Audit Scheme, as specified in the order dated 13/3/97 of Hon. High Court in MCA No. 326/97 in SCA No. 770/95, the applicant shall also abide by the said scheme.
03. The applicant shall have to register the unit under the provisions of the Factories Act-1948 and shall obtain the necessary factory licence.
04. The Environmental management unit/cell shall be set up to ensure implementation and monitoring of environmental safeguards and other conditions stipulated by statutory authorities. The Environmental Management cell/unit shall directly report to the Chief Executive of the organisation and shall work as a focal point for internalising environmental issues. These cells/units shall also co-ordinate the exercise of environmental audit and preparation of environmental statements.
05. The applicant shall have to obtain P. L. I. Policy as per P. L. I. Act-1991 and submit the copy of the same to the G. P. C. B.
06. The concentration of Noise on ambient air within the factory premises shall not exceed the following limit.
Between 6 AM to 9 PM : 75 dB (A)
Between 9 PM to 6 AM : 70 dB (A)
07. The unit shall, on establishing this plant.
 - a. Put up at the entrance and prominent places boards prominently displaying the name of the unit, particulars of the products/process and the names of the Proprietor / Partners/Directors of the unit, the electricity consumer number and the name of the electricity consumer as on the record of the GEB.
 - b. Make adequate lighting arrangements all around the Effluent Treatment Plants Pollution Control measures and also above the boards mentioned in the above clause.
08. The Environmental audit shall be carried out yearly and the environmental statements pertaining to previous year shall be submitted to this Board latest by 30th September every year.
09. The unit shall have and use only one outlet for the discharge of its effluent and no effluent shall be discharged without requisite treatment and without meeting with the GPCB norms. Such outlet shall be near the front gate/entrance of the unit. The unit shall not keep any bypass line or system or loose or flexible pipe for discharging effluent outside or even for transporting treated or untreated effluent within the factory premises, within effluent treatment plants or in the compound of the unit.
10. "Magnetic Flow Meters" should be installed at inlet and outlet of Effluent Treatment Plant (ETP thereafter).
11. All the chemicals and nutrients which are required to be added/

- dosed any where in the ETP should be so added by using "Metering Pumps" only.
12. The pipelines connecting various equipments or sumps of tanks of ETP should be minimum in number. Loose connections of hose pipes or temporary connections will not be permitted.
 13. In case of incinerators the unit shall provide the flow measuring devices for mother liquor, light diesel oil, air used for combustion and temperature measuring devices within incinerators at different points scrubber, outside the incinerator should be provided. The temperatures as well as flow should be recorded, every day.
 14. In case of plants involving Bio-mass Treatment. For each addition of bio-mass time and quantity, should be recorded. The uptake rate of Oxygen of the bio-mass in the aeration basin and other parameters of biological system should be recorded, every day.
 15. The printed log-books shall be maintained and get it certified for :
 - a. Energy /Fuel Consumption /Raw material Consumption and quantity of Products manufactured.
 - b. Waste water/gaseous flow at inlet & outlet of ETP and Air Pollution Control measures.
 - c. Quantity of sludge generated.
 - d. Laboratory analysis/reports for each of the specified parameters of liquid effluents, gaseous discharge and soil/sludge samples.
 16. The unit shall operate fully and efficiently all its effluent treatment plant/s and shall close down all its manufacturing/processing activities whenever the effluent treatment plant/s or any part thereof are fully or partly non-operational for any reason whatsoever (whether for maintenance/repairs/ electricity failure or otherwise) and shall not restart such activities unless and until all the effluent treatment plants of the unit are fully operational.
 17. The unit shall have and operate all the requisite equipments/facilities for prevention and control of air pollution and shall operate the same. The unit shall also have stack monitoring facilities. Whenever the equipments/facilities for prevention and control of air pollution are fully or partly nonfunctional, the unit shall close down all its manufacturing /processing activities and shall not restart its manufacturing/processing activities unless and until all its air pollution protection and control equipments and facilities including stack monitoring facilities are fully operational.
 18. The unit shall submit, before commencing the production to the GPCB any committee appointed by the court, the site plan of the unit indicating the location of manufacturing/processing plant as also the effluent treatment plants and also a separate plan indicating the channel through which water/effluent passes from different stages of manufacturing/processing and the effluent treatment process right upto the stage of its final outlet. Such plans shall also be displayed by the unit on a Board of adequate size within its compound and near its effluent treatment plant/s.
 19. The unit shall supply to the GPCB the figures of production and consumption of electricity and water for each day during the period of production, though such figures shall be supplied on weekly basis. The unit shall supply separate figures for consumption of electricity for running the effluent treatment plants by having a separate meter/submeter for such effluent treatment plants. The number of units consumed by operating the diesel generating sets, if any, shall also be supplied to the GPCB on weekly basis.
 20. The Unit shall also supply to the GPCB, within 1 week from the date of the starting production, the documents regarding monthly

production and consumption of electricity.

21. The unit shall permit the officers/employees of the GPCB/ Government Members of the committee of the court, Members of the Monitoring Committee of the Association of the Industries to enter the factory premises and to inspect and take samples from the unit at any time without any prior intimation. Any delay in giving any of the above persons entry into the factory premises or any plant thereof on effluent treatment plants shall entail closure of the unit. All the watchmen/security personnel of the unit shall be immediately appraised of the above.
22. It shall be open to the GPCB through general instruction of circulars and to the GPCB officers inspecting the unit to give all the support instructions regarding location of the outlet and/or any other appropriate directions regarding effluent treatment plants, their operation and processes and disposal channel and disposal system. The unit shall comply with all such instructions, whether general or special.
23. When electricity supply or water supply is disconnected in future on account of non-compliance with the GPCB norms or on account of the closure order, Which may be passed by the court or by the Govt./GPCB under any statutory provisions relating to environmental protection and prevention and control of pollution.
 - a. The unit shall not use any diesel generating set or any other alternative source of energy or water tankers from outside.
 - b. The unit shall pay wages to its workers regularly every month or at such shorter intervals as per the central/practice followed so far.
24. Adequate number of influent and effluent quality monitoring ~~stations should be set up in consultation with the Gujarat Pollution~~ Control Board. Regular Effluent Quality monitoring should be carried out for relevant parameters and the monitored data along with the statistical analysis and interpretation should be submitted to the Gujarat Pollution Control Board on monthly basis.
25. Guard ponds of sufficient holding capacity should be provided to cope with the effluent discharge during the process disturbances. In the event of failure or non functioning of the ETP, the respective units should be immediately put out of operation and should not be restarted until the control measures are rectified to achieve the desired efficiency. Guard pond should be provided with impervious lining and stability of the ponds with respect to leakages/cracks and other factors should be ensured.
26. The ground water quality around the guard ponds and landfill site should be monitored on a regular basis. The monitored data should be submitted to this Board once in six months.
27. The gaseous emission from the various process units should adhere to the air emission standards specified in this order. At no time the emission should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should be immediately put out of operation and should not be restarted until the control measures are rectified to achieve the desired efficiency.
28. a) Ambient air quality monitoring station should be set up in the down wind direction as well as at locations where maximum ground level concentrations are anticipated. These locations should be fixed in consultation with the GPCB. The number of air quality monitoring stations and frequency of monitoring should be selected on the basis of mathematical modeling to represent short term ground level concentrations, human settlements, sensitive targets etc.

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- b) Stack emissions from the boiler and heater should be monitored for SO_2 , NO_x , Hydro Carbon and SPM and record maintained. On line continuous stack monitoring equipments should be provided for measurement of SO_2 and NO_x .
 - c) Data on ambient air quality and stack emission from boiler and heater should be submitted to this Board once in a month along with the statistical analysis and interpretation.
 - d) Fugitive emissions should be controlled, regularly monitored and data recorded. The monitored data should be submitted to this Board once in a month.
29. Low NO_x burners should be provided to avoid excessive formulation of NO_x . Only LSHS will be used as fuel during the critical month to ensure that SO_2 levels in the ambient air is within the norm specified.
30. The unit shall make all the requisite arrangements for the safe storage and handling of solid waste including impervious flooring and leachate collection and the unit shall store and handle solid waste in accordance with the provisions of the relevant rules in their behalf.
31. A secured double lined landfill should be developed within the plant premises for disposal of solid waste by providing impervious liner and leachate collection system. The leachate shall be taken to the treatment plant for further treatment. In case of specified items or Napthalene based product and in the case of Pesticides waste, the leachate shall be totally incinerated after neutralisation and/or after detoxification treatment. The design of the landfill site should be submitted before commencing the production to this Board and Government.
32. Handling, manufacturing, storage and transport of hazardous chemicals should be in accordance with the Manufacture, Storage and Import of Hazardous chemicals Rules, 1989.
33. The hazardous wastes should be handled as per the Hazardous Waste (Management and Handling) Rules of the Environment (Protection) Act-1986.
34. On-site and off-site Emergency Plan as required under the Rules 13 and 14 of the Handling, Manufacture, Storage and Import of the Hazardous Chemicals Rules, 1989 should be prepared and approval from the Board should be obtained.
35. A community welfare scheme for improving the socio-economic environment should be worked out and report submitted to the Board and Government for review.
36. Periodical medical check up of the workers should be done and records maintained as a measure to provide occupational health service to the workers.
37. The project authorities should set up laboratory facilities for collection, analysis of samples under the supervision of competent technical personnel who will report to the Chief Executive.
38. The funds earmarked for the Environmental protection measures should not be diverted for any other purpose and yearwise expenditure should be reported to this Board and to the Government.