

**IN THE NATIONAL GREEN TRIBUNAL,
SOUTHERN ZONE BENCH, CHENNAI**

IN

ORIGINAL APPLICATION NO. 17 of 2021 (SZ)

IN THE MATTER OF:-

Vipin Nath, A V & Sinu C Jacob

....Applicants

VERSUS

M/s. Bharat Petroleum Corporation Limited

and Others.

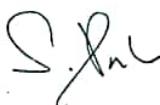
....Respondents

**AFFIDAVIT ON BEHALF OF RESPONDENT NO.2, MINISTRY OF
ENVIRONMENT, FOREST & CLIMATE CHANGE**

MOST RESPECTFULLY SHOWETH:-

I, Dr. S. Prabhu, working as Scientist "C" in the Integrated Regional Office of the Ministry of Environment, Forest & Climate Change (MoEF&CC), Government of India, at Bangalore, the deponent herein do hereby solemnly affirm and state on oath as under: -

1. That I am authorised to swear the present affidavit on behalf of Ministry of Environment, Forest & Climate Change hereinafter referred to as (MoEF&CC) and I am aware of the facts and circumstances of the case based on record.
2. I humbly submit that at the outset, I deny all the averments stated in the application except those that are specifically admitted hereunder and the Applicant is put to strict proof of the same.



Dr. S. Prabhu
Scientist "C"
Ministry of Environment, Forest & Climate Change
Regional Office, (Southern Zone),
Kendriya Sadan, Koramangala
Bangaluru-560034

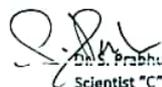
3. I say and submit that I am not replying to the present Application in parawise manner, however, I crave leave to file a detailed affidavit as and when necessary and required by this Hon'ble Tribunal.

4. It is submitted that present Applications relates to non - compliance of EC conditions by the Bharat Petroleum Corporation Limited (BPCL) (Respondent No. 1).

5. It is submitted that under the provisions of the EIA Notification, 2006, commencement of new projects or activities or the expansion or modernization of existing projects or activities listed in the Schedule to the said notification entailing capacity addition with change in process and/or technology shall be undertaken in any part of India, as applicable, only after receipt of the prior Environmental Clearance (EC) from the Central Government (for Category 'A' projects) or as the case may be, by the State Level Environment Impact Assessment Authority (SEIAA) (for Category 'B' projects).

6. It is submitted that setting up of Propylene Derivatives Petrochemical Project (PDPP), is listed at S.N. 5(c) under category 'A' to the EIA Notification, 2006 and all are categorized as Category 'A' projects requiring prior Environmental Clearance from the Ministry of Environment, Forest and Climate Change.

7. It is submitted that MoEF&CC, New Delhi vide EC No. J-11011/26/2013 - IA II(I) dated 15th May, 2015 accorded environmental clearance (EC) to M/s Bharat Petroleum Corporation Limited (BPCL) - Propylene Derivatives Petrochemical Project (PDPP), Kochi under the provisions of EIA Notification dated 14th September 2006 for the manufacturing of speciality petrochemical like Acrylic Acid,


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Regional Office, (Southern Zone),
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Bengaluru-560034

Oxo Alcohols and Acrylates subject to compliance of certain specific and general conditions which the Project Authority (PA) is required to comply with.

8. It is submitted that as per the available records, the project cited above was inspected by the Integrated Regional Office (IRO) of the Answering Respondent at Bangalore on 03rd November, 2020 and in the latest report of IRO it is observed that all major facilities have been completed and pre-commissioning activities and development of green belt are in progress. The operation is expected in a phased manner from December, 2020 to March, 2021. Overall compliance status of the conditions stipulated in the EC was found to be satisfactory except condition pertaining to greenbelt development. As per the EC condition, the PA was to develop greenbelt of 40 acres around the plant premises. It was observed during the visit that the PP has so far developed green belt of 25 acres with 13,166 plants. Further, the PA has assured that the greenbelt will be further increased after completion of landscape development works. The relevant part of the Report is reproduced herein below:

- A. As regards the green belt, PA has developed about 25 acres and assured that they will develop the remaining greenbelt gradually after completion of landscape development works.
- B. As regards the death of fishes in Natural water body, PA informed that the canal passes through HOCL prior to the entry into BPCL. No discharge is let into this canal by the BPCL.
- C. As regards, Air and Noise pollution, the PA has taken required abatement measures and carries out regular monitoring apart from online monitoring. The latest


Dr. S. Prabhu
Scientist "C"

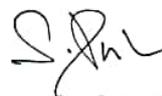
Ministry of Environment, Forest & Climate Change
Regional Office, (Southern Zone),
Kendriya Sadan, Koramangala
Bengaluru-560034

monitoring report reveals that all the parameters are within limit.

- D. As regards the Distance criteria, PA informed that all necessary approvals were obtained from statutory bodies before construction was started and relevant statutory guidelines like OISD, Petroleum rules etc. for distance criteria around the premises followed.
- E. As regards the alleged harmful effects/ anticipated gas leak due to Petrochemicals, PA has informed that Petrochemical complex is not producing or handling most of the compounds indicated as harmful in the complaint. Further, PA has taken required safety measures for handling of materials. The technology and associated safety features of the facility are at par with world class technology and associated safety features of the facility are at par with world standards and technically competent and trained personnel are handling the operation of the facilities. More over adequate safety systems are inbuilt in the design of all the facilities, which has gone through multiple rounds of safety reviews and safe operating practices are strictly followed across all facilities of BPCL.

A copy of the Inspection report and Monitoring Report is enclosed as **Annexure – I**.

9. It is submitted that the present counter reply may kindly be taken on record and into consideration and the Hon'ble Tribunal may pass appropriate Order(s), direction(s) as deemed fit and proper under the



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Ministry of Environment, Forest & Climate Change
Regional Office, (Southern Zone)
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Bengaluru-560034

facts and circumstances of the present case which the answering Respondent shall duly comply with.

10. That other/ancillary issues raised in the application under reply do not pertain to the answering respondent. The answering respondent seeks crave leave to make additional submissions, if required, during the course of the proceedings.



DEPONENT

Dr. S. Prabhu
Scientist "C"
Ministry of Environment, Forest & Climate Change
Regional Office, (Southern Zone),
Kendriya Sadan, Koramangala
Bengaluru-560034

VERIFICATION

Verified at Bangalore on this 4th day of March, 2021 that the contents of the above reply are true and correct, no part of it is false and nothing material has been concealed there from.

Attested by




DEPONENT

Dr. S. Prabhu
Scientist "C"
Ministry of Environment, Forest & Climate Change
Regional Office, (Southern Zone),
Kendriya Sadan, Koramangala
Bengaluru-560034

श्री विरुवाबन्करम्
Shri E. Virunavankar
वैज्ञानिक "E"
Scientist "E"
भारत सरकार/Government of India
जल एवं वनस्पति परिसर मंत्रालय
Environment, Forest & Climate Change
क्षेत्रीय कार्यालय (दक्षिण क्षेत्र)
Regional Office, (Southern Zone)
बंगलूरु/Bengaluru



भारत सरकार
Government of India
पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय
Ministry of Environment, Forest & Climate Change
एकीकृत क्षेत्रीय कार्यालय, बंगलुरु - 560 034
Integrated Regional Office, Bangalore - 560 034



4th Floor, E & F- Wings, Kendriya Sadan,
17th Main Road, II Block
Koramangala.

Tel. No. 080-25635901, E.mail: rosz.bng-mefcc@gov.in

Dated: 1st December, 2020

EP/12.1/1/2015-16/KER 918

To

Mr. Suresh John,
Chief General Manager (Engg. Projects and Contract Management),
M/s BPCL-Kochi Refinery,
Post Bag No -2, Ambalamugal,
Ernakulam District,
Kerala - 682 302.

Subject: Propylene Derivatives Petrochemical Project (PDPP) at village Puthencruz / Thiruvankulam, Kumathianadu Taluk, Erankulam District, Kerala by M/s BPCL-Kochi Refinery, Kerala - reg.

Ref. No: J-11011/26/2013-IA-II(I) dated 12th May, 2015.

Sir,

The above-mentioned project was inspected by this office on 3rd November, 2020 along with Shri. Dinesh. K. S., Environmental Engineer and Smt. Rameena, V.V., Assistant Environmental Engineer, Kerala State Pollution Control Board, District Office -2, Ernakulam, Kerala for verification of EC conditions.

2. During the visit, it was observed that M/s BPCL, Kochi has obtained EC from Ministry vide EC No J-11011/26/2013 -IA II(I) dated 15th May, 2015 for manufacturing specialty petrochemical like Acrylic Acid, Oxo Alcohols and Acrylates. During the visit, it was observed that all major facilities have been completed and pre-commissioning activities and development of green belt are in progress. PA has informed that the operation is expected in a phased manner from December, 2020 to March 2021 and awaiting support of Foreign National experts from Original Equipment Manufacturers (OEMs) and Technology licensors for start-up of the facility.

3. As per the EC conditions, Green belt to be developed at least in 40 Acres of land in and around the plant premises. During the visit, it is observed that PA has developed some greenery around the project area and according to the PA, green belt developed so far in about 25 acres with 13,166 plants like Mango, Mahogany, Neem etc., Further, you have assured that will develop greenbelt gradually after completion of landscape development works.

You are directed to take necessary action to comply with the above observation within 3 months and submit a report along with supporting documents/photographs for further necessary action in this regard.

These issues with approval of Competent Authority.

Yours faithfully.


(Dr. S. Prabhu) 1/12/20
Scientist - C

Copy to: The Chief Environmental Engineer, Kerala State Pollution Control Board, Gandhi Nagar, Ernakulam, Kerala- 682 020 - for information.

o/c

**Inspection report of BPCL - Propylene Derivatives Petrochemical Project,
Ambalamugal, Cochin, Kerala**

1. Preamble:

Mrs. Mathu Raveendran, Mamala post, Ernakulam, Kerala vide dated 8th October, 2020 and 24th October, 2020 sent a complaint regarding the non compliances of Environmental Clearance conditions by BPCL - Propylene Derivatives Petrochemicals project (PDPP), Kochi.

The complainant has stated that she is residing at about 20-30 feet from BPCL -Petrochemical project Cochin refinery and alleged that BPCL has established Petrochemical project in land acquired for development of green belt.

As per the direction of Competent Authority site visit to the project was conducted on 3rd November, 2020 along with Shri. Dinesh, K. S., Environmental Engineer and Smt. Rameena, V.V., Assistant Environmental Engineer, Kerala State Pollution Control Board, District Office -2, Ernakulam, Kerala for verification of EC conditions and point wise clarification of complaint. Mr. Suresh John, Chief General Manager (Engg, Projects and Contract Management), Mr. Sreeram, A. N., Chief General Manager (Project Technical & Petchem), Mr. Ravi, K., General Manager (Reliability), Mr. Praveen Kumar, General Manager (Projects - E&I), Mr. Mahendiran, A., General Manager (Petchem Commissioning), Mr. Balagangadharan, K., General Manager (Contract Mgmt & Administration), Mr. Sainath, C., Deputy General Manager (Environment), Mr. Bonu Lakshmana Rao, Deputy General Manager (Environment), Mr. Neelanjan Datta, Senior Manager (Petchem), Mr. Cijy, V., Senior Manager (Petchem), Mr. Anand, G., Manager (Environment) and other staff of the project were also present during the inspection.

2. Environmental clearance (EC):

BPCL is operating a Refinery at Kochi from 1963. As part of expansion it is setting up a specialty petrochemicals plant, based upon propylene that would be available from the ongoing capacity expansion project of the Refinery. The proposed specialty petrochemical are Acrylic Acid, Oxo Alchols and Acrylates. PA has obtained EC from Ministry vide EC No J-11011/26/2013 -IA II(I) dated 15th May, 2015.

3. Project status:

During the visit it is observed that all major facilities have been completed and pre-commissioning activities are in progress. The green belt development is in progress. PA has informed that the operation is expected in a phased manner from December, 2020 to March 2021 and awaiting support of foreign national experts from Original



Equipment Manufacturers (OEMs) and Technology licensors for startup of the facility.

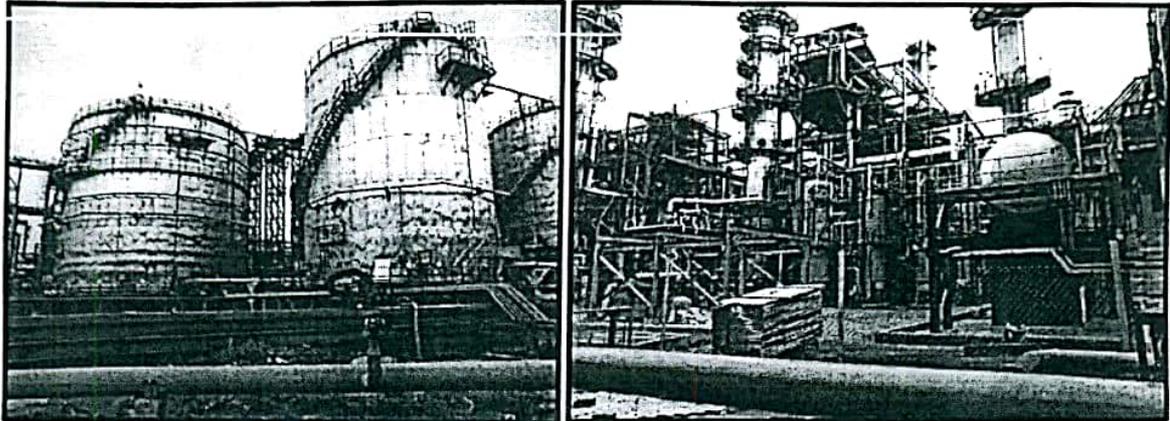


Fig.1. BPCL- PDPP plant area

4. Issues raised by the Complainant, response of by BPCL –PPDP and site observation:

4.1. *Petrochemical project Cochin refinery and alleged that BPCL has established Petrochemical project in land acquired for development of green belt.*

PA has informed that the land acquired for the Propylene Derivatives Petrochemical Project (PDPP) during the year 2013-14, was inclusive of all areas meant for the facilities including the green cover. At no instance has BPCL informed any resident that additional land would be taken for green-belt or any other purposes. The Plant has been constructed as per OISD / PESO guidelines and all distance criteria have been maintained. Also approvals have been obtained from statutory authorities followed by plant inspections at stipulated intervals.

4.2. *Death of fishes in Natural water body:*

As observed that a stretch of the Thodu/canal (natural water body) flowing inside BPCL premises. The canal passes through Hindustan Organic Chemicals Ltd (HOCL) prior to the entry in to BPCL. No discharge is let into this canal by the BPCL. It is reported that there was accidental discharge by HOCL which might have caused death of fishes.

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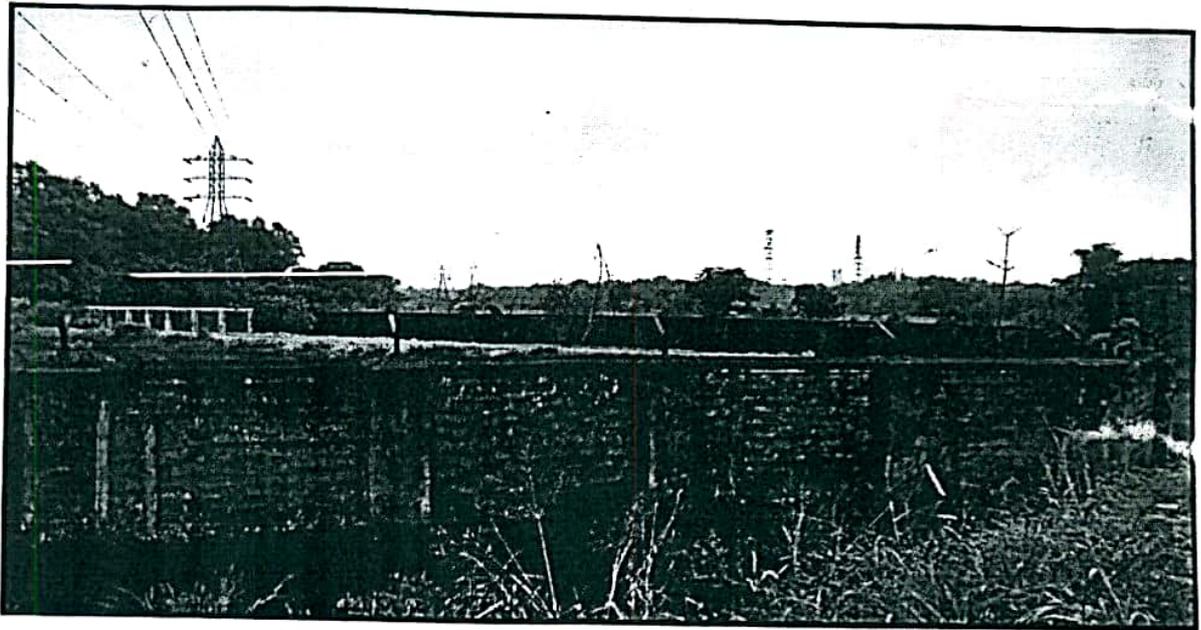


Fig.2. Effluent from HOCL near PDPP plant.

4.3. Black smoke emanating from stack of the plant:

During the visit, PA has informed that the incinerators for waste gases and waste liquids have stacks as per stipulated statutory norms and these incinerators and stacks are also yet to be commissioned.

Further, the other stacks in the refinery have been provided adequate stack height for heaters and furnaces along with online analyzers for four parameters via –So₂, Nox, CO & PM. The stack emission monitoring is being carried out regularly. The latest reports revealed that all the parameters are within the limit. Apart from these, the PA has installed online emission monitoring and connected to CPCB / SPCB server.

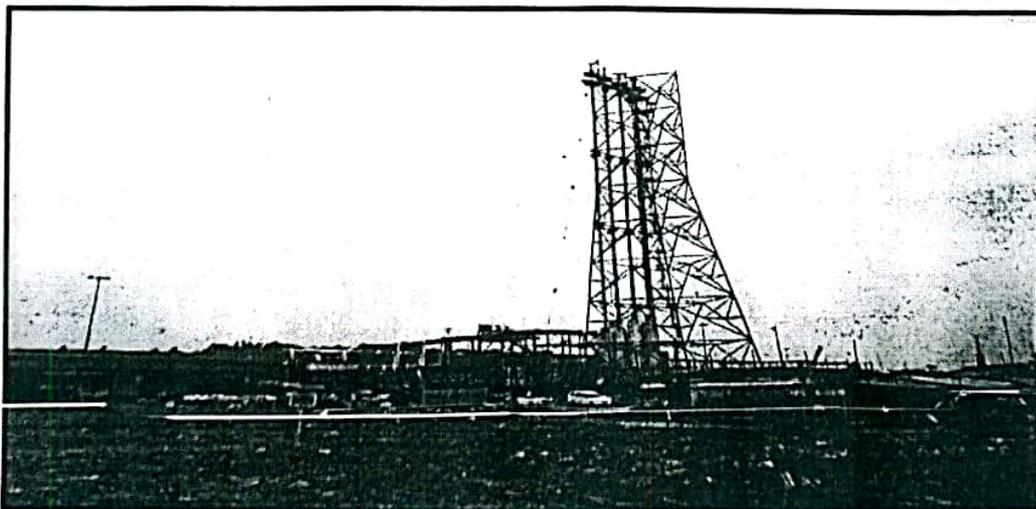


Fig.3. Stack of BPCL – PDPP plant.

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4.4. The Noise Pollution:

Regarding the control of noise pollution, PA informed that silences are provided control noise associated with the steam blowing activities and pipeline cleaning activities. Noise monitoring of facility and premises outside the facility was conducted by KSPCB officials based on other complaints and was confirmed to be within the stipulated norms.

The following additional precautions have been taken in the plant

- i. Fixing of silencers and Mufflers to reduce the sound levels
- ii. The blowing activities were stopped by late evening on all days
- iii. The commissioning activities of the compressor are being completed expeditiously with the help of OEM from Germany,
- iv. Sound levels at the boundary wall is being continuously monitored and ensured well within permitted limits.

4.5. Requirement of green belt as per EC conditions.

As per the EC conditions, Green belt to be developed at least in 40 Acres of land in and around the plant premises. During the visit, it is observed that PA has developed some greenery around the project area and according to the PA are of green belt is about 25 acres with 13,166 plants like Mango, Mahagony, Neem etc., Further, it was assured that they will develop greenbelt gradually after completion of landscape development works.

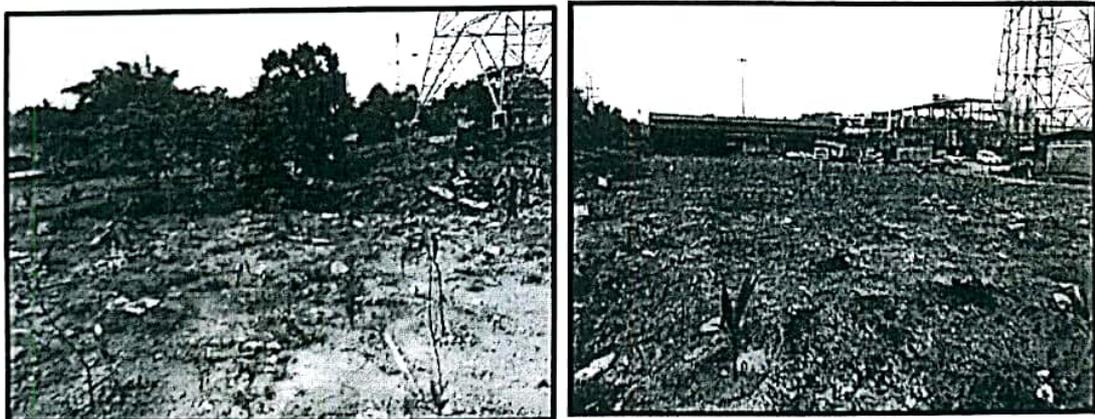


Fig.4. Green Belt at PDPP area.

4.6. Distance criteria:

PA informed that all necessary approvals are obtained from statutory bodies before construction was started and followed relevant statutory guidelines like OISD,

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Petroleum rules etc for distance criteria around the premises. Following are the OISD norms followed:

OISD Distance Norms to Boundary wall		
Sl. No	From	Distance in mts
1	Process Unit	60
2	Process control room	30
3	Class A Storage tank	0.5 D Min 20
4	Class B Storage tank	0.5 D Min 20
5	Pressured storage LPG	Max 90
6	Flare	90
7	POL Bulk Loading	Max 20
8	POL Bulk Loading LPG	30
9	Fire Station / First Aid Centre	12
10	Boiler House /Process Unit Heaters	50
11	Rail spur	30
12	Cooling tower	30
13	Electrical sub Station	15

4.7. KSEB 110 KV High tension line passing through the boundary.

The distance criteria as required under OISD /other statutory regulations are compiled in this aspect.

4.8. Harmful effects due to Petrochemicals.

PA has informed that Petrochemical complex is not producing or handling most of the compounds indicated as harmful in the complaint. PA has assured that the following major products being handled are Acrylic Acid, Butyl Acrylate, 2 Ethyl Hexyl Acrylate, Normal Butanol, Iso-Butanol and 2-Ethyl Hexanol. Further, the toxicity of petrochemical substances is only partly applicable to PDPP project. However, PA has taken following safety measures to prevent any such release from happening even at fugitive emission level.

- i. Special valve gland packing materials are used to reduce any fugitive emission
- ii. Seal less pumps are used in all VOC service fluids to reduce emission by design.
- iii. VOC monitoring meters are being installed at various high risk locations for continuous monitoring of any harmful substances even at ppm level.



- iv. Gas detectors are placed in and around plant premises, storage and loading areas.
- v. Ambient Air Quality Monitoring station is installed in the complex and display will be provided for public access of readings on a continuous basis.
- vi. Stack monitoring and ambient air monitoring stations are connected to KSPCB server.
- vii. All high COD effluent water streams and Gaseous waste streams are incinerated using most advanced Thermal oxidizer technology and Submerged & Conventional incineration technology.

Further, PA has informed that they will implement a fool proof Leak Detection and Repair Program (LDAR), in line with relevant Central Pollution Control Board (CPCB) guidelines and OISD guidelines (OISD-GDN-224) for VOC Monitoring as stipulated in EC clearance condition. This will be implemented after startup and stabilization of the complex.

4.9. Land acquisition.

Complaint has stated that the BPCL has assured to acquire the adjacent land for development of green belt however not yet acquired yet.

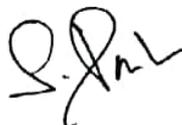
Not relevant to environmental issues

4.10. Reference to VIZAG GAS Leak Incident & Comparison of risks.

PA has informed that the BPCL the reference to Vizag gas leak (Hindustan Polyme) is irrelevant and stated that the technology, materials handled, products and process are entirely different then the Hindustan Polymer, Vizag. The technology and associated safety features of the facility are at par with world standards and technically competent and trained personnel are handling the operation of the facilities. More over adequate safety systems are inbuilt in the design of all the facilities, which has gone through multiple rounds of safety reviews and safe operating practices are strictly followed across all facilities of BPCL.

5. Conclusion:

- As regards the green belt, PA has developed in about 25 acres and assured that they will develop greenbelt gradually after completion of landscape development works.
- As regards the death of fishes in Natural water body, PA informed that the canal passes through HOCL prior to the entry in to BPCL. No discharge is let into this canal by the BPCL. It is reported that there was accidental discharge



by HOCL which might have caused death of fishes. Matter need to be taken up with HOCL.

- As regards, air and Noise pollution, the PA has taken required abatement measures and carrying out regular monitoring apart from online monitoring. The latest monitoring report reveals that that all the parameters are within the limit.
- As regards the Distance criteria, PA informed that all necessary approvals are obtained from statutory bodies before construction was started and followed relevant statutory guidelines like OISD, Petroleum rules etc for distance criteria around the premises.
- As regards the alleged harmful effects / anticipated gas leak due to Petrochemicals, PA has informed that Petrochemical complex is not producing or handling most of the compounds indicated as harmful in the complaint. Further, PA has taken required safety measures for handling of materials. The technology and associated safety features of the facility are at par with world standards and technically competent and trained personnel are handling the operation of the facilities. More over adequate safety systems are inbuilt in the design of all the facilities, which has gone through multiple rounds of safety reviews and safe operating practices are strictly followed across all facilities of BPCL.


(Dr. S. Prabhu)
Scientist - C

Government of India
Ministry of Environment, Forest and Climate Change
(Integrated Regional Office)
Bangalore-34

MONITORING REPORT

PART I

EP/12.1/1/2015-16/KER

- | | | |
|----|------------------------------------|--|
| 1. | Name of the Projects | Propylene Derivatives Petrochemical Project (PDPP) at village Puthencruz/Thiruvankulam, Kunnathanadu Taluk, Erankulam District, Kerala by M/s BPCL-Kochi Refinery, Kerala. |
| 2. | Clearance letters No.& date | No. J-11011/26/2013-IA-II(I) dated 12 th May, 2015 |
| 3. | Location: District & State/UT | Puthencruz/Thiruvankulam Village, Kunnathanadu Taluk, Erankulam District, Kerala. |
| 4. | Address for Correspondence: | Mr. Suresh John,
Chief General Manager (Engg, Projects and Contract Management),
M/s BPCL-Kochi Refinery,
Post Bag No -2, Ambalamugal,
Ernakulam District,
Kerala - 682 302. |
| 5. | Date of site visit for this report | 3 rd November, 2020 |
| 6. | Date of previous visit(s) if any | 18.04.2018 |

Brief report:

The above-mentioned project was inspected on 3rd November, 2020 along with Shri. Dinesh. K. S., Environmental Engineer and Smt. Rameena, V.V., Assistant Environmental Engineer, Kerala State Pollution Control Board, District Office -2, Ernakulam, Kerala for verification of EC conditions and point wise clarification of complaint. Mr. Suresh John, Chief General Manager (Engg, Projects and Contract Management), Mr. Sreeram, A.N., Chief General Manager (Project Technical & Petchem), Mr. Ravi. K., General Manager (Reliability), Mr. Praveen Kunnari, General Manager (Projects - E&I), Mr. Mahendiran, A., General Manager (Petchem Commissioning), Mr. Balagangadharan, K., General Manager (Contract Mgmt & Administration), Mr. Sainath, C., Deputy General Manager (Environment), Mr. Bonu Lakshmana Rao, Deputy General Manager (Environment), Mr. Neelanjan Datta, Senior Manager (Petchem), Mr. Cijy, V., Senior Manager (Petchem), Mr. Anand, G., Manager (Environment) and other staff of the project were also present during the inspection.

About the Project:

BPCL is operating a Refinery at Kochi from 1963. BPCL-Kochi Refinery has enhanced the refining capacity from 9.5 MMTPA to 15.5 MMTPA through Integrated Refinery Expansion Project (IREP). Associated Process units like Delayed Coke Unit,



Petro Fluidised Catalytic Cracking Unit, Vacuum Gas oil Hydrotreater, Diesel Hydrotreater, Sulfur Recovery Unit (SRU), Hydrogen Generation Unit (HGU), Sour water Stripper ect are included in the IREP project. As part of expansion, it is setting up a specialty petrochemicals plant, based upon propylene that would be available from the ongoing capacity expansion project of the Refinery.

- i. **Environmental Clearance:**The proposed specialty petrochemical are Acrylic Acid, Oxo Alcohols and Acrylates. PA has obtained EC from Ministry vide EC No J-11011/26/2013 –IA II(I) dated 15th May, 2015. During the visit, it was observed that all major facilities have been completed and pre-commissioning activities are in progress. The green belt development is in progress.
- ii. **Consent for Establishment and Operation:**PA has obtained Consent for Establishment from Kerala State Pollution Control Board vide No PCB/HO/EKM-2/ICE/02/2018 dated 17th May, 2018 and Consent for operation from Kerala State Pollution Control Board vide No PCB/HO/EKM-2/ICO/09/2019 dated 20th August, 2019 which is valid up to 28th February 2022.
- iii. **Water usage and Treatment:**Water requirement per day is around 493 m³/hr for the project purpose. Fresh water will be sourced from Periyar River. During the operation, wastewater generation expected per day will be around 35 m³/hr from process, 102.3 m³/hr from cooling tower blow down and 203 m³/hr from condensate. PA has informed that PDPP plant effluent will be treated in Refinery ETP and treated water will be reused within refinery / recycled to same plant hence there won't be any discharge [Zero effluent discharge concept].
- iv. **Ambient Air:**During the visit, it is noted that adequate stack have been provided for the disposal of emission from the incinerators for waste gases and waste liquids as per stipulated statutory norms and these incinerators are yet to be commissioned.
- v. **Noise Pollution Control Measures:** Regarding the control of noise pollution, PA informed that silencers are provided control noise associated with the steam blowing activities and pipeline cleaning activities. Noise monitoring of facility and premises outside the facility was conducted by KSPCB officials based on other complaints and was confirmed to be within the stipulated norms.

The following additional precautions have been taken in the plant

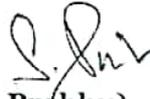
- Fixing of silencers and Mufflers to reduce the sound levels.
 - The blowing activities were stopped by late evening on all days.
 - The commissioning activities of the compressor are being completed expeditiously with the help of OEM from Germany.
 - Sound levels at the boundary wall is being continuously monitored and ensured well within permitted limits.
- vi. **Green Belt Development:**As per the EC conditions, Green belt to be developed at least in 40 Acres of land in and around the plant premises. **During the visit, it is observed that PA has developed some greenery around the project area and according to the PA, green belt developed so far in about 25 acres with 13,166 plants like Mango, Mahogany, Neem etc., Further, it**

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was assured that they will develop greenbelt gradually after completion of landscape development works.

During the visit it is observed that all major facilities have been completed and pre-commissioning activities are in progress. PA has informed that the operation is expected in a phased manner from December, 2020 to March 2021 and awaiting support of Foreign National experts from Original Equipment Manufacturers (OEMs) and Technology licensors for start-up of the facility.

This project is yet to commission the operation. Therefore, brief EC compliance report is prepared. In general, PA has taken steps for compliance of EC conditions and the status of compliance to the conditions stipulated in the environmental clearance is **Satisfactory except Green Belt Development.**


(Dr. S. Prabhu)
Scientist - C

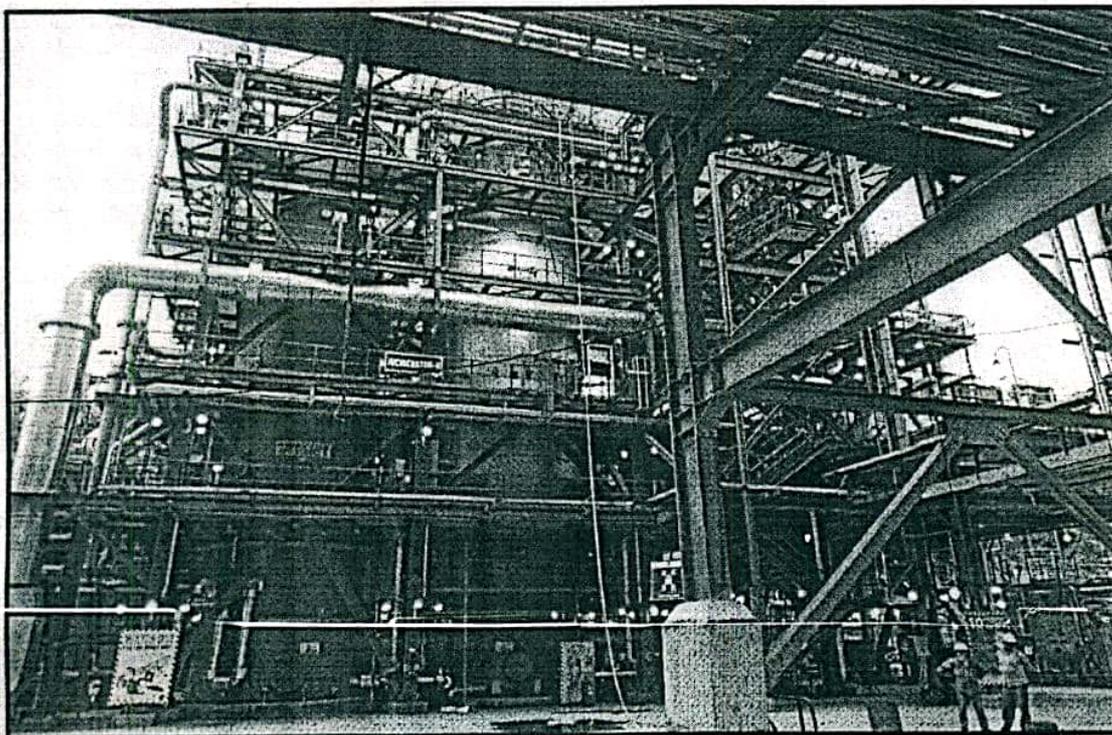


Fig.1. Incinerator II at PPDP plant.

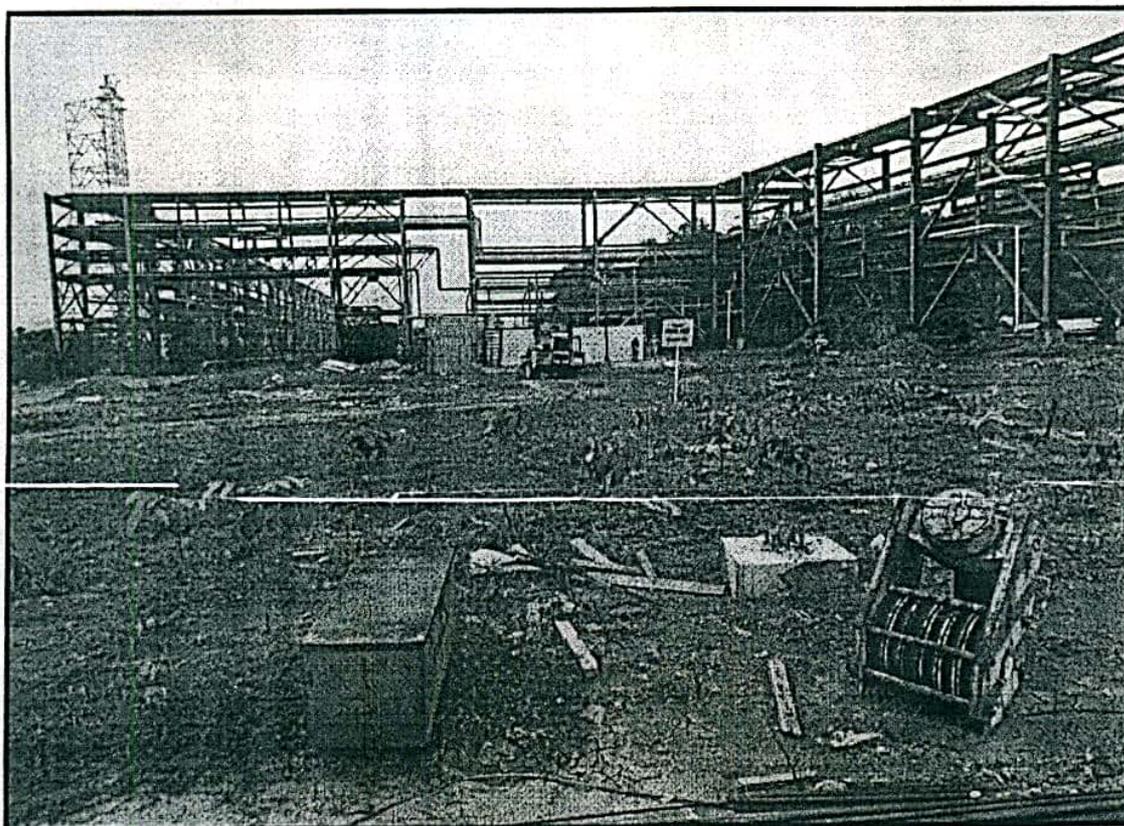


Fig. 2. Initial stage of Green Belt Developments at Project area.

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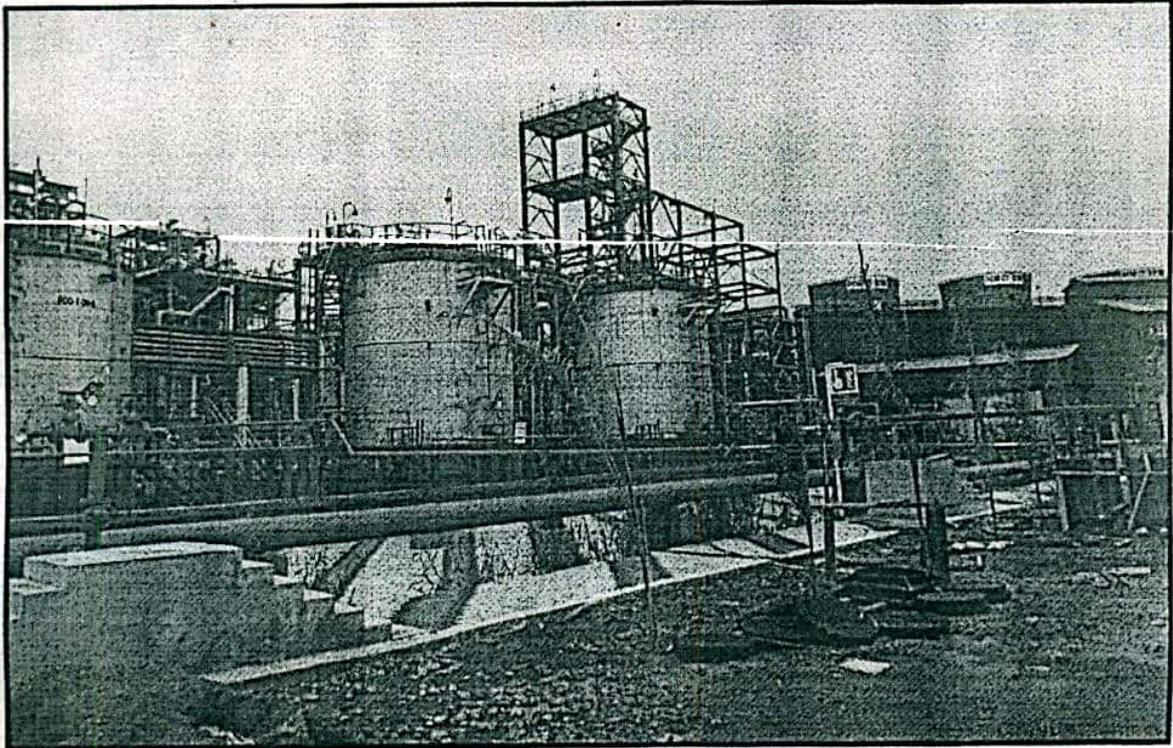


Fig. 3. PPDP plant area.

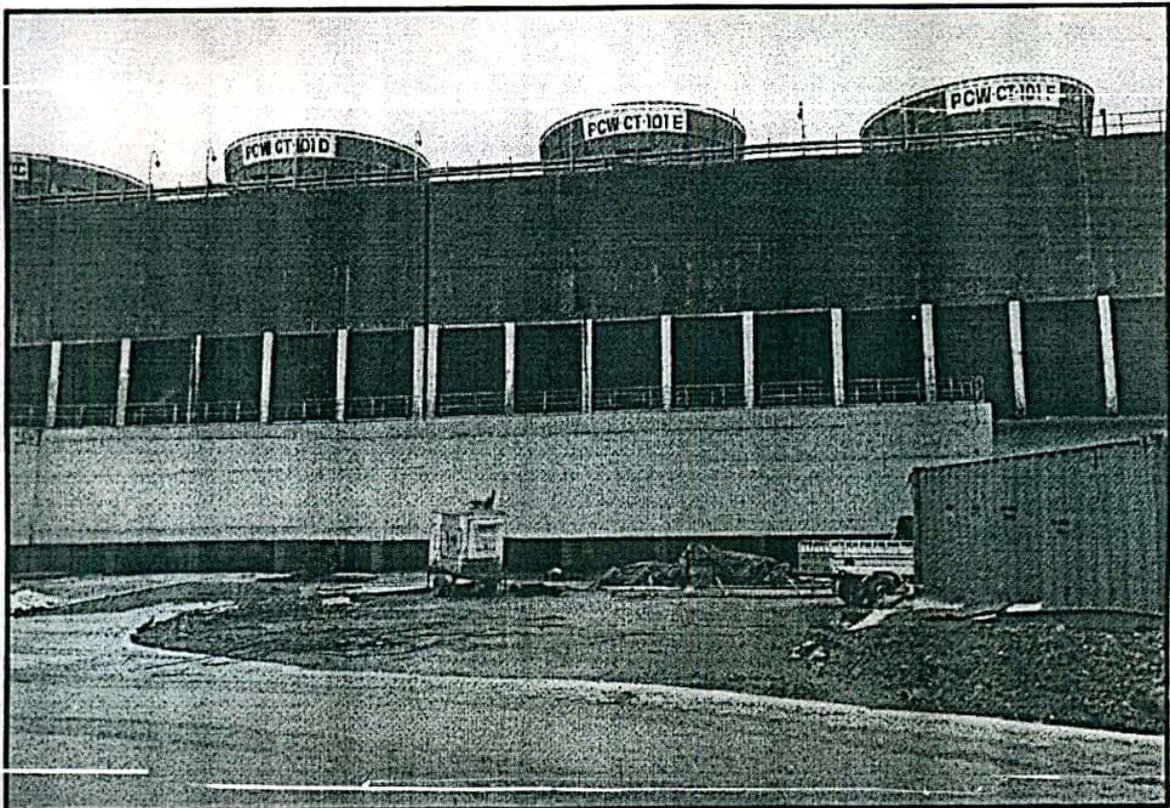


Fig.4. Cooling towers at PPDP plant.

S. Paul

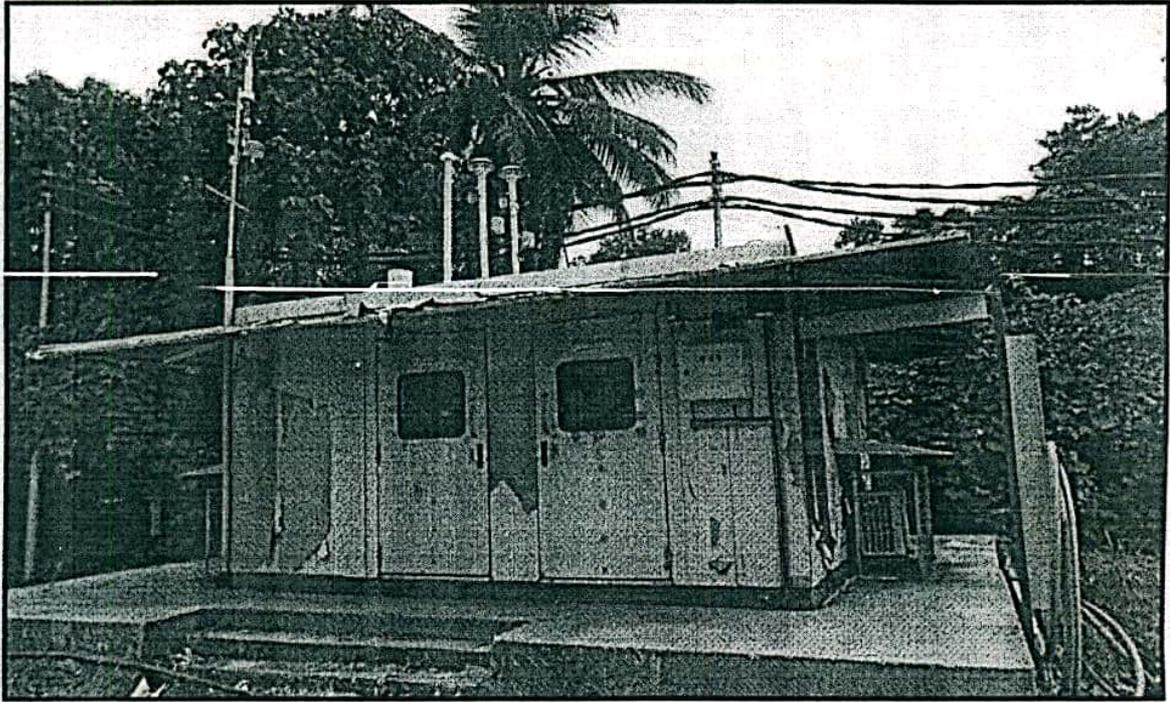


Fig. 5. Ambient Air Stations at PPDP plant.



Fig.6. Barricade near cooling tower at PPDP plant.

S. P. R.