

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL  
SOUTHERN ZONE, CHENNAI**

**Original Application No 17 of 2021 (SZ)**

**IN THE MATTER OF:**

Vipin Nath A V & Sinu C Jacob

Applicant

Versus

M/s. Bharat Petroleum Corporation Ltd. and others

Respondent (s)

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**DEPONENT**

**Place: Bengaluru**

**Date: 08.03.2021**

**S. SURESH**  
REGIONAL DIRECTOR  
CENTRAL POLLUTION CONTROL BOARD  
REGIONAL DIRECTORATE (SOUTH)  
MIN. OF ENV, FORESTS & CC, GOVT. OF INDIA  
BENGALURU - 560 079. MOB : 9480672128



**BEFORE THE NATIONAL GREEN TRIBUNAL SOUTHERN BENCH  
CHENNAI**

**APPLICATION NO. 17 OF 2021 (SZ)**

**IN THE MATTER OF:**

**Vipin Nath A V & Sinu C Jacob**

**.....APPLICANTS**

**VERSUS**

**M/s. Bharat Petroleum Corporation Ltd. and others**

**..... RESPONDENTS**

**REPLY AFFIDAVIT ON BEHALF OF THE 3<sup>rd</sup> RESPONDENT CENTRAL  
POLLUTION CONTROL BOARD (CPCB)**

I, S. Suresh, S/o S. R. Sathyanarayana, aged about 58 years, working as Scientist 'E' and Regional Director in the Regional Directorate(South) Bengaluru, Central Pollution Control Board, do hereby solemnly affirm and declare as under:

That I am working as Scientist 'E' in the Central Pollution Control Board (CPCB). I am well conversant with the facts of the application from the records maintained by the offices of the CPCB. I am competent to swear this independent response on behalf of the CPCB.



*S Suresh*  
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That I have carefully perused a copy of the original application served on the CPCB and have understood the contents therein.

1) That, applicants are raising allegation on various violations during the commissioning stage of the Propylene Derivative Petrochemical Project (PDPP) unit under the Integrated Refinery Expansion Project (IREP) of M/s. Bharat Petroleum Corporation Ltd (BPCL), Ambalamugal, Kochi. Specific violations pointed out in this matter are that the project is under commissioning stage without developing proper greenbelt and buffer zone especially in the southern side (Kakkad Kara) of the project site. Applicants also highlighted the continuous air, water and noise pollution emanating from the project commissioning activities carried out during day and night, causing grave issues to the public living nearby. The applicants stated that, they are residing very near to the BPCL project site and the pollution emanating from the project site due to the violation of environmental clearance (EC) conditions is affecting the residents for the past several months.

It is humbly submitted that, the above issue was earlier referred to CPCB as public complaint / grievances registered in the Prime Minister Office-Public Grievance (PMOPG) against M/s. Bharat Petrochemical Limited (BPCL) Petro chemical Project, Ambalamugal, Kochi, Kerala. The complaints registered by Shri Vipin Nath A V (Reference Nos: PMOPG/E/2020/0727542 & PMOPG/E/2020/0727542) regarding the pollution and other issues with the PDPP project of M/s. BPCL, Kochi were forwarded to this office for follow up and for further necessary actions. On receipt of the grievances, the matter was referred to the Kerala State Pollution Control Board (KSPCB) on 25-09-2020 for factual report and to conduct a virtual meeting with the complainants, concerned officials of KSPCB, BPCL and CPCB representative due to COVID situation.



  
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Accordingly, the regional office, KSPCB, Ernakulam, convened a virtual meeting on 29-09-2020, 11.30 AM. In the virtual meeting, complainants explained the issues regarding the land acquisition happened in 2013-14 for the Integrated Refinery Expansion Project (IREP) and specific issues of air/ water pollution and noise issues from the project site, especially from the project commissioning activities. The complainants highlighted the lack of proper green belt in the project site and also claimed that the company representatives have not addressed their grievances properly. It was also brought to the notice that, high tension power lines were already erected in the area earmarked for green belt development. The complainants demanded that the company shall take up the affected people's land as they cannot live peacefully in the area due to the pollution and nuisance from the project site. In reply, BPCL representatives denied the allegations made by the complainants, stating that the project is still under commissioning and is not operational. However, the BPCL representative admitted that due to commissioning activities some sound and noise issues do exist. BPCL representative also claimed that 40 acres of land is earmarked for green belt and around 8000 tree saplings were planted. In reply to the complainant's demand to acquire their land, the BPCL representative stated that the land acquisition of 120 acres has already completed for the project and further land acquisition cannot be done. Detailed note on the outcome of virtual meeting held on 29-09-2020 is annexed as **ANNEXURE R3-1**.

It was decided in the virtual meeting to conduct a joint site inspection and hearing by CPCB and KSPCB in the presence of complainants. KSPCB coordinated with the complainants and BPCL authorities and site inspection was mutually decided on 23-10-2020. On the day of inspection, it was informed by the KSPCB officials that due to COVID issues, M/s. BPCL imposed certain restrictions and inspection of BPCL-IREP project site could not be carried out. Due to this, inspection/ hearing was conducted in the project periphery by CPCB officer in the presence of KSPCB officials on 23-10-2020. The inspection team interacted with local residents aggrieved by the issues



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related to BPCL and took stock of the ground realities in the periphery of the project site. The inspection report (**ANNEXURE R3-2**) summarized the following observations:

<p>Air, water and noise pollution from the project site.</p>	<p>Due to close proximity of residential areas to the BPCL-IREP project, local residents raised complaints against the commissioning activities which frequently results in noise and air pollution. However, the actual project commissioning activities could not be assessed, as project site inspection could not be carried out due to COVID restrictions imposed by BPCL on the day of inspection. It was observed that a water channel is flowing through the project site and flows along the southern boundary wall near Kakkad Kara. Locals alleged frequent fish kills in this water channel and an outlet from project site was observed in this location.</p>
<p>Green belt</p>	<p>It was evident from the inspection around the project site, proper green belt is not maintained around the project site. It was also observed that there are restrictions like high-tension power lines, inadequate space inside the project location, etc. From the satellite images, it is quite evident that, space available inside the project site is insufficient for green belt development as the process/storage installations are very close to the boundary walls. The claim of BPCL representative, that 40 acres of land has been earmarked for greenbelt and already 8000 tree saplings were planted could not be verified at the time of inspection. In the contrary, the relevant page of EIA report of the PDPP project (provided by the complainant) has put forth a commitment of 200 m wide green belt in the boundary of the project. The relevant page of EIA report of the PDPP project is enclosed as <b>ANNEXURE R3-3</b>. As per the EC clearance dated 12-05-2015, under specific condition (xxi) it is</p>



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	obligatory to develop green belt in at least 40 acres of land in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines. Copy of EC clearance is annexed as <b>ANNEXURE R3-4</b> .
Buffer zone	Another major allegation is that the project has been developed without earmarking adequate safety buffer zone around the project site. Since there are several residential zones around the project site, a setback area or buffer zone area is demanded by the local residents. In a location near to the Air Product's main gate, the pipelines and huge storage tanks are very close to the boundary wall and the residential buildings are separated from the boundary wall by a small road. A detailed safety audit/ safety adequacy assessment may throw light on the compliance with respect to safety distance criteria and buffer zone to be maintained in the project layout.
Land acquisition	Another main allegation regarding the IREP project is the land acquisition pattern as the project site has made several pockets of residential clusters around the project. The complainants alleged that BPCL land acquisition happened in certain pockets and they back-tracked from acquiring complainant's land. The locals also maintained that the during the initial stages, BPCL committed to acquire their land but back-tracked from the promises made and acquired agriculture/ paddy lands instead. The locals claimed that BPCL acquired land in certain areas and project site was developed in such a way that certain residential pockets were created. It is alleged that, the residence in these pockets are enduring hardships due to pollution and noise issues from the commissioning activities of the project. Locals claims that the unscientific land acquisition



  
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	with vested interest cramped the project site without proper buffer area and green belt. Some of the residential areas are surrounded by project site from two sides. In the virtual meeting, BPCL representative reiterated that they have already acquired 120 acres of land for the project and now they are unable to further acquire land due to the relevant state laws & guidelines. Now, the acquired land of 120 acres seems to be inadequate for developing green belt all around the project site. The matter may be examined by an appropriate committee headed by the District Magistrate.
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Based on the above observations, following recommendations were given in the CPCB inspection report:

S.No.	Recommendations
1	The allegations levelled against the unit regarding air, water and noise pollution from the project commissioning activities needs to be verified and assessed by a thorough inspection of project site and commissioning activities.
2	The absence of green belt around the project site is not in compliance with the specific EC condition regarding development of green belt and the matter has to be referred to the EC issuing authority for further necessary actions.
3	The layout of installations close to the public roads and residences suggests that buffer zone/ area is not maintained. Proper safety distance criteria from the project installations needs to be evaluated by a proper safety adequacy assessment in line with the various OISD standards and PESO guidelines. A proper safety assessment may be conducted with a committee comprising relevant regulatory authorities.



  
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4	The project area seems to be inadequate to develop a proper green belt around the project site as committed by the project proponent and to maintain proper buffer zone around the site. A detailed assessment of project area required with respect to green belt development/ buffer zone in line with the stipulated EC condition and relevant safety distance standards applicable to petroleum installations/ industries.
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2) It is humbly submitted that, land acquisition for the BPCL's project is one of the main allegation by the aggrieved locals in the vicinity of the project site. The land acquisition pattern indeed resulted in several pockets of residential clusters around the project site. The complainants alleged that BPCL land acquisition happened in certain pockets and claimed that, BPCL back-tracked from acquiring complainant's land. The allegations regarding improper land acquisition is not in the purview of CPCB and the allegations related to this may be examined by an appropriate committee headed by the District Magistrate.

3) During inspection/ hearing held on 23-10-2020, it was observed that a water channel is flowing through the project site and flows along the southern boundary wall near Kakkad Kara. Locals alleged frequent fish kills in this water channel and an outlet from project site was observed in this location. Detailed inspection/ investigation reports on the frequent fish kills and pollution issues in the above water channel may be called up from KSPCB.

4) CPCB has not conducted any monitoring so far regarding the stench/ odour issues from the project commissioning activities. Relevant information on this may be called up from KSPCB as they have conducted series of monitoring due to various public complaints against the BPCL's IREP project.



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5) Relevant information on noise pollution may be called up from KSPCB as they have conducted noise monitoring in the wake of public complaints against the BPCL's IREP project.

6) It is submitted that, during the inspection conducted on 23-10-2020, it was observed that, proper green belt is not maintained around the project site. At the time of inspection, it was informed by the KSPCB officials that industry representatives informed them that there are some restrictions on account of petroleum installation safety guidelines to develop proper green belt around the project site. In view of such claims by the BPCL officials, it has to be clarified that, being a petroleum/ petrochemical industry, BPCL project has to strictly comply the safety directive standards imposed by OISD/ PESO/ any other safety related authorities and also has to comply strictly with pollution mitigation/ environmental specific conditions like green belt development. Citing safety guidelines for not developing proper greenbelt cannot be justified as it leads to the apprehension that the project proponents has not considered or earmarked sufficient space for developing greenbelt after making provisions to comply with the applicable safety distance criteria. If safety criteria are reasoned for not developing green belt, then it can be presumed that there may be issues with proper project layout, proper placement of installations, inadequate consideration to environmental concerns and inadequate project land for complying both safety criteria & environmental safeguards like a proper green belt. From the satellite images, it is evident that the process/ storage installations are squeezed in to the available project land and there are no vacant slots available for the development of proper green belt in many locations. In a follow-up visit held on 29-12-2020, it was observed that several plant saplings were planted inside the project site in the available space. The observations of the follow-up visit are enclosed as **ANNEXURE R3-5**. Though the saplings seem to be planted recently, the area of plantations still may not fulfil the committed 200m green belt in the boundary of the project site.



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7) The applicants' question is based on the Environmental Guidelines for Industries available in the public domain at the following URL: [http://moef.gov.in/wp-content/uploads/2017/06/moef\\_gov\\_in\\_citizen\\_specinfo\\_enguin\\_html.pdf](http://moef.gov.in/wp-content/uploads/2017/06/moef_gov_in_citizen_specinfo_enguin_html.pdf) (accessed latest on 05-02-2021). The above guideline is about general siting criteria for industries. Further specific clarification on green belt may be obtained from the EC issuing/ granting authority.

8) Specific comments and clarification on the committed green belt of 200m width, made in the EIA report of PDPP project may be obtained from the EIA appraising/ EC issuing authority.

9) It is submitted that, CPCB official along with concerned KSPCB officers carried out inspection/ hearing on 23-10-2020. Due to COVID restrictions imposed by BPCL, the team could not verify the ground realities inside the project site. The team carried out inspection of project periphery and interacted with aggrieved public in the vicinity of the project site. The observations and recommendations of the inspection report are summarised above and the detailed inspection report prepared is submitted as **ANNEXURE R3-2**.

10) Based on the observation that, the project area seems to be inadequate to develop a proper green belt around the project site and to maintain proper buffer zone around the site; CPCB recommended to carry out a detailed assessment of project area with respect to green belt development/ buffer zone in line with the stipulated EC condition and relevant safety distance standards applicable to petroleum installations/ industries. Since, various authorities need to be involved in the above assessment, CPCB suggested KSPCB to constitute a committee to look into the matter.



  
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11) As per the satellite map accessed from Google Map & Google Earth, many storage installations are erected close to the boundary of the project site. In many locations the space available for developing green belt is also inadequate. The specific question regarding the distance criteria of storage tank (PDE-T-601) with respect to the boundary wall may be clarified with the relevant authorities concerned with safety distance criteria for petroleum installations.

12) The specific query is regarding the report submitted by MoEF&CC on the non-compliances of EC conditions by BPCL. Further clarifications may be sought from the respective authority on this matter.

13) Based on the satellite maps, there is gross inadequacy of space inside the project site to develop a 200m wide green belt as committed in the EIA report of the PDPP. There are restrictions like over-head, high-tension power lines in the southern side of the project site (Kakkad Kara) which may hinder the development of green belt owing to safety reasons. Moreover, the BPCL officials are highlighting that the safety criteria adopted in petrochemical unit is in conflict with green belt development, which give rise to the apprehension that the space available is inadequate to comply with safety distance criteria and green belt requirement. As per the EC clearance dated 12-05-2015, it is obligatory to develop green belt in at least 40 acres of land in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines.

14) No comments on the phased commissioning activity and start-up of the PDPP project of BPCL.

15) No comments on the reduction of green belt width of Numaligarh refinery Ltd in Assam by the EC issuing authority.



  
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16) No comments on the recommendations of M B Lal Committee to create a buffer zone around high hazard petroleum installations as the subject matter is not under the purview of CPCB.

### PRAYER

In view of above, it is respectfully prayed that this answering Respondent No. 3, the Central Pollution Control Board shall abide by any order/ direction passed by the Tribunal.



**DEPONENT**

**S. SURESH**  
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### VERIFICATION

It is verified that the content of this Reply Affidavit which is based on official record and information available in the office are true and correct. Nothing has been concealed therein.

Signed and verified on this 08<sup>th</sup> Day of March, 2021 at Bengaluru



**DEPONENT**

**COUNSEL FOR  
3<sup>rd</sup> RESPONDENT**

**S. SURESH**  
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**Item No.01:**

ANNEXURE R3-0

**BEFORE THE NATIONAL GREEN TRIBUNAL**

**SOUTHERN ZONE, CHENNAI**

**Original Application No. 17 of 2021 (SZ)**

*(Through Video Conference)*

**IN THE MATTER OF:**

Vipin Nath, A V & Sinu C Jacob

...Applicant(s)

**Verses**

M/s. Bharat Petroleum Corporation  
Limited and Others.

....Respondent(s)

**Date of hearing: 25.01.2021.**

**CORAM:**

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

**HON'BLE MR. SAIBAL DASGUPTA, EXPERT MEMBER**

**For Applicant(s):**

Mr. Vipin Nath *(Party-appeared-in-person)*

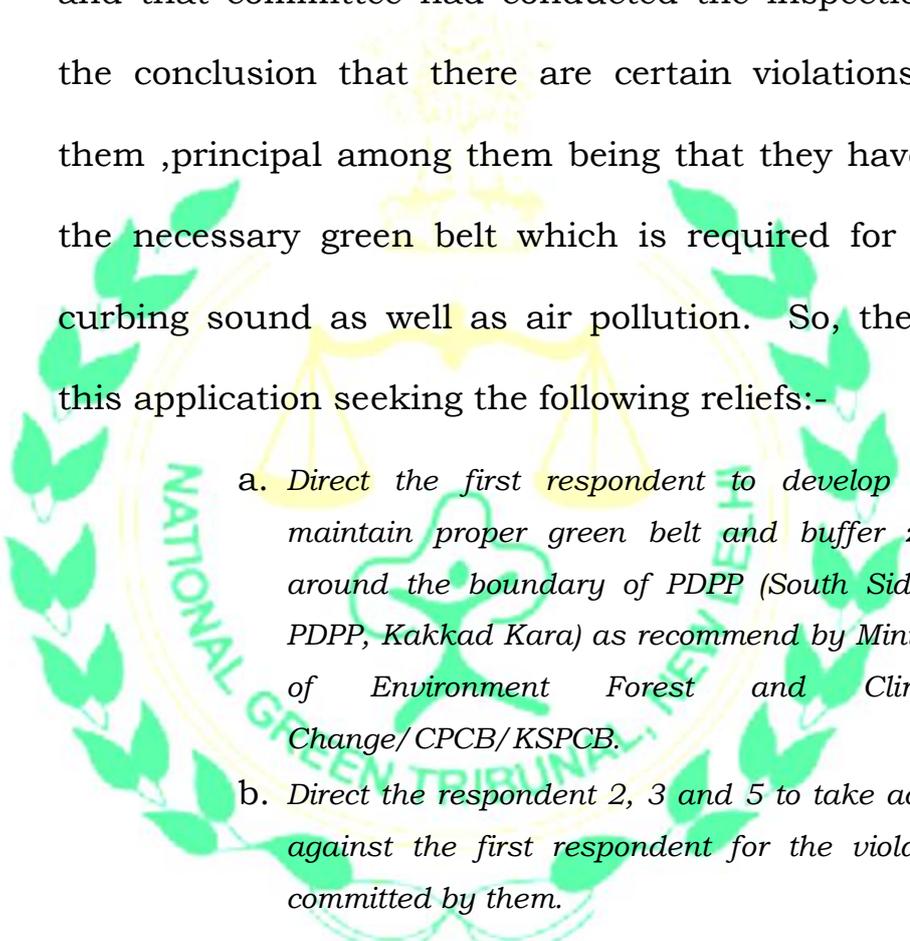
**For Respondent(s):**

Mr. M. Kumaresan for King & Patridge for  
R1  
Smt. V. K. Rema Smrithi through  
M/s. Nivedita S. Menon for R5

**ORDER**

1. The above case has been filed by the applicant, on the allegation that the first respondent Bharat Petroleum Corporation Limited (BPCL), has not complied with the conditions imposed by the 2<sup>nd</sup>

respondent in the Environmental Clearance granted for the purpose of starting their unit. On the basis of the complaint of the local people regarding the difficulties experienced by them on account of the operations of the 1<sup>st</sup> respondent unit in that area to the Prime Ministers' Office, some committee was constituted and that committee had conducted the inspection and come to the conclusion that there are certain violations committed by them ,principal among them being that they have not developed the necessary green belt which is required for the purpose of curbing sound as well as air pollution. So, the applicant filed this application seeking the following reliefs:-

- 
- a. *Direct the first respondent to develop and maintain proper green belt and buffer zone around the boundary of PDPP (South Side of PDPP, Kakkad Kara) as recommend by Ministry of Environment Forest and Climate Change/CPCB/KSPCB.*
  - b. *Direct the respondent 2, 3 and 5 to take action against the first respondent for the violation committed by them.*

2. When the matter came up for hearing for admission today through Video Conference, Sri. Vipin Nath A V, first applicant appeared in person. Sri. M. Kumaresan for King & Patridge represented first respondent and Smt. V. K. Rema Smrithi through Nivedita S. Menon represented 5<sup>th</sup> respondent.

3. On going through the allegations in the application, we are satisfied that there arises a substantial question of environment which requires the interference of this Tribunal for resolving the same.
4. In respect of the similar issue there was another case pending before this Tribunal in *O. A. No. 265 of 2017 (N. G. Soman Vs. Bharath Petroleum Corporation Limited, Kochi and 5 others)* and that case is posted to 09.03.2021 for considering the report submitted by the high level committee constituted on the basis of the compliant sent to Prime Minister's Office by the local residents which was forwarded for an enquiry. Since both these cases are related to the same institution in respect of the same issue, we feel that this matter can also be admitted and the same can be posted along with *O. A. No. 265 of 2017*. So the matter is admitted.
5. Issue notice to respondents by Registered post with acknowledgement due, by e-mail and also by dusthi, if possible and produce necessary proof of such service on them by filing an affidavit as per rules.
6. The applicant is also directed to serve copy of the application along with the documents produced to the standing counsel appearing for the first respondent as well as the fifth

respondent within a week and produce proof of such service by filing proper affidavit as per rules.

7. The applicant is also directed to produce necessary requisites along with postal cover and necessary postal stamps before this Tribunal within a week, so as to enable this Tribunal to send notice to all the respondents through Tribunal, to ensure service on them, so as to enable this Tribunal to proceed against them, if they did not appear in their absence in accordance with law

8. Since the committee's report is of recent origin, we feel it to better to wait for the action that has been proposed to be taken by the respective Departments on the basis of the findings by getting the responses of the official respondents as well as party respondents before taking steps of any further inspection etc., on the basis of the allegations made in the application as there is already a report of the high level committee constituted on the basis of the compliant received. If the applicant is not satisfied with the findings of the committee, unless they were able to establish that the findings are not in accordance with the ground reality, then there is nothing for this Tribunal to disbelieve the findings of the committee and rely on the same for further action.

9. Further, the prayer in the application is also based on the report of the committee only. The Tribunal in the earlier application had also passed order for getting the report of the committee mentioned above.

10. The parties are directed to submit their independent response regarding the allegations made in the application and also the official respondents are directed to submit their response regarding the action if any, proposed to be taken on the basis of the findings of the joint committee that has been appointed by them to enquire into the complaint received regarding the functioning and violations said to have been committed by the first respondent on or before 09.03.2021 by e-filing in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF along with necessary hard copies to be produced as per rules .

11. The Registry is directed to communicate this order to the members of the committee appointed by this Tribunal in *O. A. No. 256 of 2017* as well as the official respondent's along with the copy of the application immediately thorough e-mail, so as to enable them to comply with the direction for filing their independent response to the allegations made in the application and also for filing their independent report as directed by this Tribunal.

12. For appearance of parties and for counter statement regarding the allegations made and also for filing independent responses along with O.A. No. 256 of 2017, post on 09.03.2021.

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

.....E.M.  
**Shri. Saibal Dasgupta)**

**O. A. No.17/2021, (SZ)  
25<sup>th</sup> January, 2021. Sr.**



**Summary of virtual meeting with respect to the grievances registered at Prime Minister Office- Public Grievance (PMOPG) against BPCL Petro chemical Project, Ambalamugal, Cochin, Kerala.**

With respect to the communications received from CPCB H.O. regarding grievances registered in PMOPG portal (E/2020/0724861, E/2020/0727542 & E/2020/0837775), a letter was sent on 25-09-2020 to the Chairman, KSPCB to arrange an online meeting with the KSPCB officials, BPCL representatives and the complainants. Accordingly, the regional office of KSPCB at Kochi, convened a virtual meeting on 29-09-2020, 11.30 AM. Following participants attended the meeting.

- Shri M A Baiju, Chief Environmental Engineer (CEE), Regional Office, KSPCB, Kochi.
- Shri K S Dinesh, Environmental Engineer, Ernakulam District Office-2, KSPCB.
- Dr. V Deepesh, Scientist C, CPCB, Regional Directorate, Bengaluru.
- Shri Sainath C, BPCL, Kochi.
- Shri. Ramachandran M K. BPCL, Kochi.
- Shri. Vipin Nath A V, Complainant.
- Shri. Sinu Jacob, Local resident.
- Smt. Mathu Raveendran, Complainant.

The CEE of the regional office detailed the purpose of the virtual meeting and welcomed all the participants. The complainants were asked to explain their grievances and Shri. Vipin Nath A V, explained the issues starting from the land acquisition happened in 2013-14. He pointed out the dust pollution from the project site and stated that intensity of dust nuisance increased after commissioning. He explained on the water pollution in the canal and frequent fish kills. There is an apprehension on the quality of well water in the vicinity as this canal flows close to the residential area. He also stated that the reply from PMOPG says that the project is operational after complying relevant norms and guidelines. The complainants highlighted the lack of proper green belt in the project site and shown photographs and videos in support of their claims. It is also claimed that the company representatives have not addressed their grievances properly.

Another affected person Shri. Sinu Jacob stated that their residences are hardly 50m away from the industry and they are aggrieved by the noise, smell, odour nuisance and water pollution. He also pointed out the high tension power line in the area earmarked for green belt and asked how green belt would come up in such area. He stressed that the green belt development is included in the current project and the company cannot back track from developing a green belt as per the norms. He demanded that the company shall take up the affected peoples land as they cannot live peacefully in the area due to the pollution and nuisance from the project site. The CEE of the regional office of KSPCB explained the IREP (Integrated Refinery Expansion Project), related PDPP (Propylene Derivative Petrochemical Project) and the propylene plant and upcoming Polyol project of BPCL and other joint venture companies involved in the project. He also mentioned the related NGT case OA 265/2017 (SZ) and the related direction of tribunal to monitor compliance once the project is fully operational.

In reply, BPCL representatives denied the allegations made by the complainants, stating that the plants are still under commissioning and are not operational. The company representative stated that the project site may be inspected by the authorities for verifying the facts. However, the representative agreed that due to commissioning activities some sound and noise issues will be there. They also pointed out that the recommendations made by the chairman of KSPCB has been complied with. The noise from steam blowing is taken care with muzzlers and special enclosures and flaring of steam also is reduced. The allegation of explosion like sound from the unit on 6<sup>th</sup> August, 2020 was denied by the BPCL representatives on the ground that the plant is not commissioned yet. It was also clarified that 40 acres of land is earmarked for green belt and around 8000 tree saplings were planted. The company representatives also ruled out the possibility of pollution and fish kill as the plants are yet to be commissioned. In reply to the complainant's demand to acquire their land, the company representative stated that the land acquisition of 120 Acres has already completed and further acquisition cannot be done. It was also stated that the complainant's house is 27m away from the boundary wall. The company made 23m wide canal and 4 m wide road between the project boundary and the complainant's residence.

Shri. M K Vishwanathan, father of the complainant Shri Vipin Nath stated that the canal/ thodu made by the company does not have any natural flow and the entire volume of water is from the industry pipeline outlet. He also reiterated the promises made by the company to acquire their land and the assurance of job to the qualified persons from the affected families.

It was decided to conduct a joint site inspection and hearing by CPCB and KSPCB in the presence of complainants. The CEE of the regional office informed that a joint site inspection shall be done on a mutually convenient date. The BPCL authorities also welcomed such inspections and requested to limit the number of people in the wake of COVID spread. Therefore, a site inspection is planned and will be coordinated by KSPCB with due care on the COVID protocol and social distancing norms. The date of site inspection will be decided on mutually convenient date.

Bengaluru

29-09-2020



**CENTRAL POLLUTION CONTROL BOARD**

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार  
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

F. No. Tech/38/PC(Ker)/RDS/ 2020-21/Vol 2 / 918  
To

December 03, 2020

The Member Secretary  
Central Pollution Control Board  
Parivesh Bhawan, East Arjun Nagar  
Delhi-110032

(Kind attention: DH, IPC I, CPCB)

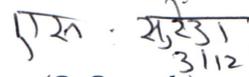
**Sub:** Grievances registered at Prime Minister Office-Public Grievance (PMOPG) against BPCL Petro chemical Project, Ambalamugal, Cochin, Kerala.

**Ref:** Grievance registrations PMOPG/E/2020/0724861, PMOPG/E/2020/0727542 & PMOPG/E/2020/0837775.

Sir,

Please refer to the grievance registered in the PMOPG against BPCL Petro chemical Project, Ambalamugal, Cochin, Kerala. The complaints registered by Shri Vipin Nath A V (PMOPG/E/2020/0727542 & PMOPG/E/2020/0727542) and Smt. Mathu Raveendran (PMOPG/E/2020/0837775) regarding the pollution and other issues have been referred to this office for further necessary actions. In this regard a virtual meeting was conducted with concerned officials of the Kerala Board along with representatives of BPCL and the complainants on 29-09-2020. In the virtual meeting, it was decided to conduct a site inspection & hearing on a mutually convenient date. Accordingly, CPCB official carried out site inspection & hearing in the presence of KSPCB officials on 23-10-2020. The preliminary inspection report prepared in this connection is submitted for further necessary actions and information.

Yours faithfully

  
31/12/2020

(S. Suresh)

Regional Director

9480672128/ [cpcbsuresh@gmail.com](mailto:cpcbsuresh@gmail.com)

Copy to:

1. The Regional Office, KSPCB, Ernakulam.
2. The District Office 2 (DO-2), KSPCB, Perumbavoor.
3. Shri. Vipin Nath A V, Complainant.
4. Smt. Mathu Raveendran, Complainant.
5. DH, IPC I, CPCB, H.O., Delhi

क्षेत्रीय निदेशालय (दक्षिण) : निसर्ग भवन, ए-ब्लॉक, प्रथम एवं द्वितीय तल, तिममय्या रोड, 7-डी मैन, शिवनगर, बेंगलूरु - ५६० ०७९.

**Regional Directorate (South)** : " Nisarga Bhawan ", A-Block, 1<sup>st</sup> & 2<sup>nd</sup> Floors, Thimmaiah Road, 7<sup>th</sup> D - Main, Shivanagar, Bengaluru - 560 079.

दूरभाष / Telephone : 080-23233739, 23233827, 23233996, 23233600, 23232559, 23226002, 23222539, Fax : 080-23234059

ई-मेल / E-mail : [cpcbszo@yahoo.com](mailto:cpcbszo@yahoo.com), [zobangalore.cpcb@nic.in](mailto:zobangalore.cpcb@nic.in)

प्रधान कार्यालय : परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली- ११० ०३२.

**Head Office** : Parivesh Bhawan, East Arjun Nagar, Delhi - 110 032.

दूरभाष / Telephone : 011-43102030, Fax : 22305793, 22307078, 22307079, 22301932, 22304948

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**REGIONAL DIRECTORATE (RD) BENGALURU**

**INSPECTION REPORT ON PUBLIC COMPLAINT REGISTERED  
IN PRIME MINISTER OFFICE-PUBLIC GRIEVANCE (PMOPG)  
AGAINST M/s. BPCL PETRO CHEMICAL PROJECT,  
AMBALAMUGAL, COCHIN, KERALA.**

**Background**

Three public complaint / grievances were registered in the Prime Minister Office-Public Grievance (PMOPG) against M/s. Bharath Petrochemical Limited (BPCL) Petro chemical Project, Ambalamugal, Cochin, Kerala. The complaints registered by Shri Vipin Nath A V (PMOPG/E/2020/0727542 & PMOPG/E/2020/0727542) and Smt. Mathu Raveendran (PMOPG/E/2020/0837775) regarding the pollution and other issues were forwarded to this office for follow up and for further necessary actions. In this regard, a letter was sent to the Kerala State Pollution Control Board (KSPCB) on 25-09-2020 for factual report and to conduct a virtual meeting with the complainants, KSPCB officials, CPCB representative and concerned BPCL officials. Accordingly, the regional office, KSPCB, Ernakulam, convened a virtual meeting on 29-09-2020, 11.30 AM with following participants:

- Shri M A Baiju, Chief Environmental Engineer (CEE), RO, KSPCB, Ernakulam.
- Shri K S Dinesh, Environmental Engineer, Ernakulam District Office-2, KSPCB.
- Dr. V Deepesh, Scientist C, CPCB, Regional Directorate, Bengaluru.
- Shri Sainath C, BPCL, Kochi.
- Shri. Ramachandran M K. BPCL, Kochi.
- Shri. Vipin Nath A V, Complainant.
- Shri. Sinu Jacob, Local resident.
- Smt. Mathu Raveendran, Complainant.

In the virtual meeting, complainants explained the issues regarding the land acquisition happened in 2013-14 for the Integrated Refinery Expansion Project (IREP) and specific issues of air/ water pollution and noise issues from the project site, especially from the project commissioning activities. The complainants highlighted the lack of proper green belt in the project site and also claimed that the company representatives have not addressed their grievances properly. It was also brought to the notice that, high tension power lines were already erected in the area earmarked for green belt. The complainants, demanded that the company shall take up the affected people's land as they cannot live peacefully in the area due to the pollution and nuisance from the project site.

In reply to complaints, BPCL representatives denied the allegations made by the complainants, stating that the plants are still under commissioning and are not operational. The company representative stated that the project site may be inspected by the authorities for verifying the facts. However, the BPCL representative agreed that due to commissioning activities some sound and noise issues do exist. Company representative also claimed that 40 acres of land is earmarked for green belt and around 8000 tree saplings were planted. In reply to the complainant's demand to acquire their land, the company representative stated that the land acquisition of 120 acres has already completed for the project and further acquisition cannot be done. It was also stated that the complainant's house is 27 m away from the boundary wall. The company made 23 m wide canal and 4 m wide road between the project boundary and the complainant's residence. Detailed note on the outcome of virtual meeting held on 29-09-2020 is annexed as ANNEXURE 1.

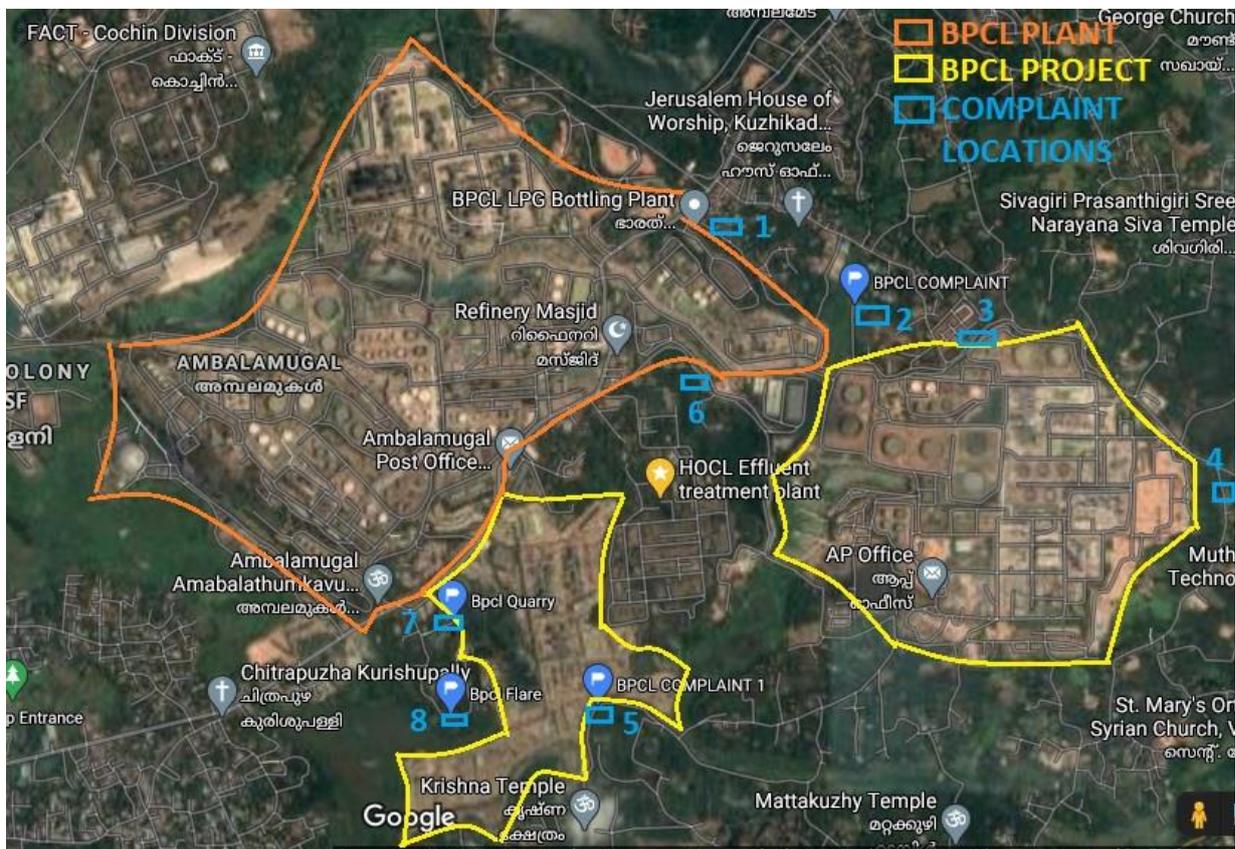
It was decided in the virtual meeting to conduct a joint site inspection and hearing by CPCB and KSPCB in the presence of complainants. The BPCL authorities welcomed inspections and requested to limit the number of people in the wake of COVID spread. KSPCB coordinated with the complainants and BPCL authorities and site inspection was mutually decided on 23-10-2020.

**Industry inspection:**

On the day of inspection, it was informed by the KSPCB officials that due to COVID issues, BPCL imposed certain restrictions and inspection of BPCL-IREP project site could not be carried out. Further dates for inspections were not communicated till date.

**Site inspection and hearing:**

Inspection/ hearing was conducted by CPCB official in the presence of KSPCB officials on 23-10-2020 and met several local residents aggrieved by the issues related to BPCL. The inspection team met a group of local residents at following location/ places around the BPCL project site.



*BPCL plant, project site and complainant hearing locations*

**Location 1:** The location is in the Aasramam road, Kuzhikkad, near to LPG bottling plant of BPC. The local residents, complained on the noise pollution and frequent gas leakages from bottling plant and the adjacent project site (Air Products division). They also raised serious apprehension on the minimum safety distance required for LPG

bottling plant and alleged that the plant boundary wall is just 10m away from the public road. Past gas leakage issues were highlighted by the public and complained on air and noise pollution from the plant. It was also highlighted that a Govt. school in this area was shifted to another location due to gas leakage accident in the past. Proper green belt was not observed in this region during the site visit. During inspection, there was a constant sound of gas cylinders being dropped from a height from the bottling plant.

**Location 2:** The inspection team visited a location in Kuzhikkad, which is around 125m away from Air Products division boundary. One of the resident in this location has already approached Honourable National Green Tribunal regarding issues with IREP project of BPCL. Green belt was not observed in the Air Product/ project campus.

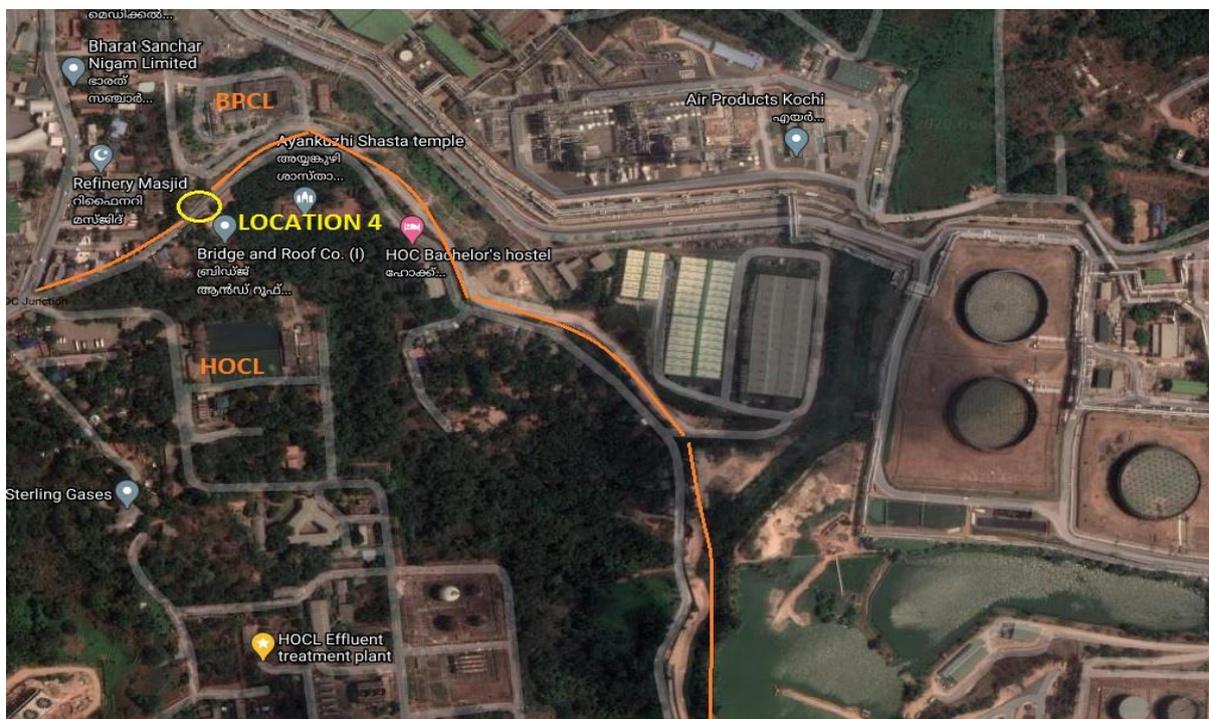


*Location 1, 2 & 3*

**Location 3:** The team visited the site along the BPCL boundary wall leading to Air Product's main gate from the Kuzhikkad-Puthenkurishu road. Here the local resident's houses are separated just by a road from the boundary wall and inside the

BPCL campus huge pipelines are laid within few meters all along the boundary. From the satellite image, it was found that this area contains several storage tanks. The ground reality suggest that these storage tanks are within 50 to 60m from the residence across the road and it has to be verified whether the layout of the project is as per the Oil Industry Safety Directorate (OISD) standards (OISD-STD-118) or as per other relevant safety guidelines of OISD or Petroleum and Explosives Safety Organisation (PESO), Nagpur. No green belt observed all along the boundary wall and it seems there is no sufficient buffer area/ set back maintained in this location as the pipelines are installed all along the boundary wall.

**Location 4:** The team was also intercepted by a group of locals residing in Ayyankuzhi, an area sandwiched between BPCL and HOCL (M/s. Hindustan Organic Chemicals Limited) and alleged that their plight of living between two petrochemical units are not addressed by either of the companies. There are no green belts and buffer zones in the BPCL side in this locality.



*Location 4*

**Location 5:** The team then visited the residence of complainant Shri Vipin Nath & Smt. Mathu Raveendran at Kakkad Kara, the southern side of the PDDP project complex.

The complaints house is across the road and drain flowing along the boundary of PDDP-BPCL project site. The house is 45-50m away from the boundary wall and there are no green belts in the area. Moreover, a high tension power line runs inside the project site close to the boundary. It is in this context; the local residents are raising apprehension on how green belt could be developed under high tension power lines.



Location 5, 6, 7 & 8

**Location 6:** The team visited a place called Neermel, adjacent to the sulphur plant of IREP project. The road and residences are on elevated area and the sulphur plant is approximately 125m away from the public road. Public gathered here complained about the dust and noise pollution from the project site. Patches of natural vegetation and trees were observed in the boundary of the project site and it was informed that the land was recently acquired by BPCL and it is not a green belt as prescribed in the EC conditions.

**Location 7 & 8:** Finally, the team visited some area in the western side of the PDDP project site and the BPCL water storage quarries. The locals claimed that the area has been enclosed by BPCL project site from three sides and in the event of emergencies, proper evacuations are not possible. In this area also, proper green belts are not evidenced and the flare stack in the project site is around 100-125m from the nearest residence.

#### **Observations:**

**Noise, air & water pollution:** Due to close proximity of residential areas to the BPCL-IREP project, local residents raised complaints against the commissioning activities which frequently results in noise and air pollution. Several video clippings recorded by the nearby residents were presented during the hearing. However, the actual project commissioning activities could not be assessed, as project site inspection could not be carried out due to restrictions imposed by BPCL on the day of inspection. It is observed that a water channel is flowing through the project site and flows along the southern boundary wall near location 5. Locals alleged frequent fish kills in this water channel and an outlet from project site was observed near location 5.

**Green belt around the plant:** It is evident from the inspection around the project site, proper green belt is not maintained around the project site. It is also observed that there are several restrictions like high-tension power lines, inadequate space inside the project location, etc. From the satellite images, it is quite evident that, there are grossly insufficient space for green belt development especially in locations 3, 5 & 8 as

the process/ storage installations are very close to the boundary walls. The claim of BPCL representative, that 40 acres of land has been earmarked for greenbelt and already 8000 tree saplings were planted could not be verified. It was informed by the KSPCB officials that industry representatives informed them that there are restrictions on account of petroleum installation safety guidelines to develop proper green belt. It is clarified that, being a petroleum/ petrochemical industry, BPCL project has to strictly comply the safety directive standards imposed by OISD/ PESO/ other safety related authorities and also has to comply strictly with pollution mitigation/ environmental specific conditions like green belt development. If the above safety restriction is quoted for not developing a green belt, then it has to be presumed that there may be issues with proper project layout, proper placement of installations, inadequate weightage to environmental concerns over safety and inadequate project land for complying both safety & environmental concerns. From the satellite images, it is evident that the process/ storage installations are squeezed in to the available project land and there are no vacant slots available for the developed as green belt in many locations. In the contrary, the EIA report has put forth a commitment of 200m green belt in the boundary of the project. As per the EC clearance dated 12-05-2015, under specific condition (xxi) it is obligatory to develop green belt in at least 40 acres of land in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines.

***Buffer zone and safe distance criteria:*** Another major allegation is that the project has been developed without earmarking adequate safety buffer zone around the project site. Since there are several residential zones around the project site, a setback area or buffer zone area is demanded by the local residents. In location 3, the process pipelines and huge storage tanks are very close to the boundary wall and the residential buildings are separated from the boundary wall by a small road. However, the stipulated safety distance criteria for the petroleum/ petrochemical installations are coming under the purview of PESO/ OISD standards. A detailed safety audit/ safety adequacy assessment may throw light on the compliance with respect to safety distance criteria and buffer zone to be maintained in the project layout.

**Land acquisition:** Main allegation regarding the IREP project is the land acquisition pattern as the project site has made several pockets of residential clusters around the project. The complainants alleged that BPCL land acquisition happened in certain pockets and they back tracked from acquiring complainant's land. The locals also maintained that the during the initial stages, BPCL committed to acquire their land but back tracked and acquired agriculture/ paddy lands. The locals claimed that BPCL acquired land in certain areas and project site was developed in such a way that certain residential pockets were created. It is alleged that, the residence in these pockets are enduring hardships due to pollution and noise issues from the commissioning activities in the project site. Locals claims that the unscientific land acquisition with vested interest cramped the project site without proper buffer area and green belt. Some of the areas in location 5 & 8, are surrounded by project site from two sides. In the virtual meeting, BPCL representative reiterated that they have already acquired 120 acres of land for the project and now they are unable to further acquire land due to the relevant laws & guidelines. Now, the acquired land of 120 acres seems to be inadequate for developing green belt around the project site. The matter may be examined by an appropriate committee headed by the District Magistrate.

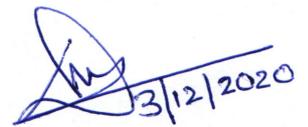
**Recommendations:**

1. The allegations levelled against the unit regarding air, water and noise pollution from the project commissioning activities needs to be verified and assessed by a thorough inspection of project site and commissioning activities.
2. The absence of green belt around the project site is not in compliance with the specific EC condition regarding development of green belt and the matter has to be referred to the EC issuing authority for further necessary actions.
3. The layout of installations close to the public roads and residences suggests that buffer zone/ area is not maintained. Proper safety distance criteria from the

project installations needs to be evaluated by a proper safety adequacy assessment in line with the various OISD standards and PESO guidelines. A proper safety assessment may be conducted with a committee comprising relevant regulatory authorities.

4. The project area seems to be inadequate to develop a proper green belt around the project site as committed by the project proponent and to maintain proper buffer zone around the site. A detailed assessment of project area required with respect to green belt development/ buffer zone in line with the stipulated EC condition and relevant safety distance standards applicable to petroleum installations/ industries.

Date of inspection: 23-10-2020



3/12/2020

Dr. Deepesh V

Scientist 'C'

**Summary of virtual meeting with respect to the grievances registered at Prime Minister Office- Public Grievance (PMOPG) against BPCL Petro chemical Project, Ambalamugal, Cochin, Kerala.**

With respect to the communications received from CPCB H.O. regarding grievances registered in PMOPG portal (E/2020/0724861, E/2020/0727542 & E/2020/0837775), a letter was sent on 25-09-2020 to the Chairman, KSPCB to arrange an online meeting with the KSPCB officials, BPCL representatives and the complainants. Accordingly, the regional office of KSPCB at Kochi, convened a virtual meeting on 29-09-2020, 11.30 AM. Following participants attended the meeting.

- Shri M A Baiju, Chief Environmental Engineer (CEE), Regional Office, KSPCB, Kochi.
- Shri K S Dinesh, Environmental Engineer, Ernakulam District Office-2, KSPCB.
- Dr. V Deepesh, Scientist C, CPCB, Regional Directorate, Bengaluru.
- Shri Sainath C, BPCL, Kochi.
- Shri. Ramachandran M K. BPCL, Kochi.
- Shri. Vipin Nath A V, Complainant.
- Shri. Sinu Jacob, Local resident.
- Smt. Mathu Raveendran, Complainant.

The CEE of the regional office detailed the purpose of the virtual meeting and welcomed all the participants. The complainants were asked to explain their grievances and Shri. Vipin Nath A V, explained the issues starting from the land acquisition happened in 2013-14. He pointed out the dust pollution from the project site and stated that intensity of dust nuisance increased after commissioning. He explained on the water pollution in the canal and frequent fish kills. There is an apprehension on the quality of well water in the vicinity as this canal flows close to the residential area. He also stated that the reply from PMOPG says that the project is operational after complying relevant norms and guidelines. The complainants highlighted the lack of proper green belt in the project site and shown photographs and videos in support of their claims. It is also claimed that the company representatives have not addressed their grievances properly.

Another affected person Shri. Sinu Jacob stated that their residences are hardly 50m away from the industry and they are aggrieved by the noise, smell, odour nuisance and water pollution. He also pointed out the high tension power line in the area earmarked for green belt and asked how green belt would come up in such area. He stressed that the green belt development is included in the current project and the company cannot back track from developing a green belt as per the norms. He demanded that the company shall take up the affected peoples land as they cannot live peacefully in the area due to the pollution and nuisance from the project site. The CEE of the regional office of KSPCB explained the IREP (Integrated Refinery Expansion Project), related PDPP (Propylene Derivative Petrochemical Project) and the propylene plant and upcoming Polyol project of BPCL and other joint venture companies involved in the project. He also mentioned the related NGT case OA 265/2017 (SZ) and the related direction of tribunal to monitor compliance once the project is fully operational.

In reply, BPCL representatives denied the allegations made by the complainants, stating that the plants are still under commissioning and are not operational. The company representative stated that the project site may be inspected by the authorities for verifying the facts. However, the representative agreed that due to commissioning activities some sound and noise issues will be there. They also pointed out that the recommendations made by the chairman of KSPCB has been complied with. The noise from steam blowing is taken care with muzzlers and special enclosures and flaring of steam also is reduced. The allegation of explosion like sound from the unit on 6<sup>th</sup> August, 2020 was denied by the BPCL representatives on the ground that the plant is not commissioned yet. It was also clarified that 40 acres of land is earmarked for green belt and around 8000 tree saplings were planted. The company representatives also ruled out the possibility of pollution and fish kill as the plants are yet to be commissioned. In reply to the complainant's demand to acquire their land, the company representative stated that the land acquisition of 120 Acres has already completed and further acquisition cannot be done. It was also stated that the complainant's house is 27m away from the boundary wall. The company made 23m wide canal and 4 m wide road between the project boundary and the complainant's residence.

Shri. M K Vishwanathan, father of the complainant Shri Vipin Nath stated that the canal/ thodu made by the company does not have any natural flow and the entire volume of water is from the industry pipeline outlet. He also reiterated the promises made by the company to acquire their land and the assurance of job to the qualified persons from the affected families.

It was decided to conduct a joint site inspection and hearing by CPCB and KSPCB in the presence of complainants. The CEE of the regional office informed that a joint site inspection shall be done on a mutually convenient date. The BPCL authorities also welcomed such inspections and requested to limit the number of people in the wake of COVID spread. Therefore, a site inspection is planned and will be coordinated by KSPCB with due care on the COVID protocol and social distancing norms. The date of site inspection will be decided on mutually convenient date.

Bengaluru

29-09-2020

Sl. No.	Binomial name	Family	Type of planting
28.	<i>Murraya paniculata</i>	Rutaceae	Township
29.	<i>Phyllanthus emblica</i>	Euphorbiaceae	All areas
30.	<i>Tectona grandis</i>	Verbenaceae	Avenue trees
31.	<i>Cassia siamea</i>	Caesalpiniaceae	Avenue trees
32.	<i>Cassia fistula</i>	Caesalpiniaceae	Township

The species suggested here are commonly seen in and around the project area, fast growing and drought resistant. Seedlings / saplings of these species can be easily procured from local nurseries. The selection of plant species for the **green** belt development depends on various factors such as climate, elevation and soil. The plants suggested for **green** belt were selected based on the following desirable characteristics.

- Fast growing and providing optimum penetrability.
- Ever**green** with minimal litter fall.
- Wind-firm and deep rooted.
- The species will form a dense canopy.
- Indigenous and locally available species.
- Trees with high foliage density, larger of leaf sizes and hairy on surfaces.
- Ability to withstand conditions like inundation and drought.
- Soil improving plants, such as nitrogen fixing plants, rapidly decomposable leaf litter.
- Attractive appearance with good flowering and fruit bearing.
- Bird and insect attracting plant species.
- Sustainable **green** cover with minimal maintenance
- Species which can trap/sequester carbon

In addition, a lawn and floral garden with the varieties of small flowering plants may be developed near the office site for aesthetic value of the entire complex.

For other buildings and sites which are away from the reactor at a distance of 50 meters, suitable sector belts on area available towards BPCL Project may be developed with the same conceptual species placements.

The above mentioned trees are recommended towards the boundary of BPCL site for **green** belt of 200 m width.

F. No. J-11011/26/2013- IA II (I)  
**Government of India**  
**Ministry of Environment, Forests and Climate Change**  
**(I.A. Division)**

Indira Paryavaran Bhawan  
 Aliganj, Jorbagh Road,  
 New Delhi -110003

E-mail : [Ik.bokolia@nic.in](mailto:Ik.bokolia@nic.in)  
 Telefax : 011: 24695313  
 Date: 12<sup>th</sup> May, 2015

To,  
 Shri George Paul (Dy. General Manager)  
 M/s BPCL-Kochi Refinery.  
 Post Bag No. 2 Ernakulam District  
 Ambalamugal -682 302, Kerala

E-mail: [georgepaul@bharatpetroleum.in](mailto:georgepaul@bharatpetroleum.in) ; Fax No.: 0484-2822006

Subject: Propylene Derivatives Petrochemical Project (PDPP) at Village Puthencruz/Thiruvankulam, Tehsil Kunnathanadu, District Ernakulam, Kerala by M/s BPCL-Kochi Refinery- Environmental Clearance reg.

Ref. : Your letter no. BPCL-KR-PC7 dated 9<sup>th</sup> January, 2012.

Sir,

This has reference to your letter dated 9<sup>th</sup> January, 2012 alongwith project documents including Form 1, Prefeasibility Report, Draft Terms of References, EIA/EMP report, Public Hearing report and your subsequent letter no. 26-PT-54 dated 19<sup>th</sup> March, 2015 on the above mentioned subject.

2.0 The Ministry of Environment, Forests and Climate Change has examined the application. It is noted that the proposal is for setting up of Propylene Derivatives Petrochemical Project (PDPP) at Village Puthencruz/Thiruvankulam, Tehsil Kunnathanadu, District Ernakulam, Kerala. Total cost of the project is Rs. 4588 Crore. Plant area is 132.4 Acres of which area earmarked for greenbelt is 40 acres. Polymer grade propylene (250 TMT) will be supplied by the BPCL-Kochi Refinery after implementation of the integrated refinery expansion project (IREP) at Kochi, Kerala. Chitrapuzha River (1.0 Km), Panar (1.6 Km) and KaitapuzhaKoyal (5.7 Km) are located within 10 Km distance. It is reported that no national park/wildlife sanctuary/reserve/protected forests are located within 10 km distance. Following products will be manufactured:

Products:	
Ester Grade Acrylic Acid	: 47,000 Metric Tonnes per Annum
Butyl Acrylate	: 180,000 Metric Tonnes per Annum
2 Ethyl Hexyl Acrylate	: 10,000 Metric Tonnes per Annum
Normal Butanol	: 38,000 Metric Tonnes per Annum
2 Ethyl Hexanol	: 47,000 Metric Tonnes per Annum

Iso Butanol	:	7,000 Metric Tonnes per Annum
<b>Plant Capacities:</b>		
Acrylic Acid Unit	:	160,000 Metric Tonnes per Annum
Acrylate Unit	:	190,000 Metric Tonnes per Annum
Oxo Alcohols Unit	:	212,000 Metric Tonnes per Annum

3.0 Off gases and other waste gases generated from the process units will be routed to waste incineration unit for treatment. Low NOx burners will be provided. Online analyzers / Gas monitors will be provided to monitor emissions / leaks. Smokeless flare of adequate height will be provided for safe disposal of gases during emergencies. Total SO<sub>2</sub> emissions from PDPP will be 43.4 Kg/hr. Total SO<sub>2</sub> emissions after implementation of PDPP alongwith the existing Integrated Refinery Expansion Project (IREP) of Kochi Refinery will be 1561.4 Kg/hr. It is reported that total fresh water requirement from Pariyar River will be 493 m<sup>3</sup>/hr. for which BPCL – Kochi Refinery has consent from the Govt. of Kerala for drawing water from Periyar River upto 3083.3 m<sup>3</sup>/hr. Effluent generation will be 35 m<sup>3</sup>/hr from process, 102.3 m<sup>3</sup>/hr from cooling tower blow down and 203 m<sup>3</sup>/hr from condensate. Low COD effluent from process will be treated in combine effluent treatment plant of IREP. High COD effluent will be routed to waste incinerator. Cooling tower blow down will be treated in RO. DM plant and treated effluent will be recycled /reused for cooling tower make up. Condensate will be reused in the IREP project of Refinery. Domestic sewage will be treated in sewage treatment plant (STP). Rain water from PDPP complex will be routed to an oil water separator and will be reused. Oxidation catalyst, Feed purification absorbent and Polymer residue will be sent to the Authorized recycler/re-processors.

4.0 All petro-chemical complexes are listed at S.N. 5(c) under category 'A' and appraised at Central level.

5.0 Public hearing/consultation was conducted by the State Pollution Control Board on 23<sup>rd</sup> December, 2014.

6.0 The proposal was considered by the Expert Appraisal Committee (Industry) in its meetings held during 5<sup>th</sup>-7<sup>th</sup> March, 2013, 28<sup>th</sup> to 30<sup>th</sup> April 2014 and 17<sup>th</sup>-19<sup>th</sup> February, 2015 respectively. Project Proponent and the EIA Consultant namely Engineers India Ltd., have presented EIA / EMP report as per the TOR. EAC has found the EIA / EMP Report and additional information to be satisfactory and in full consonance with the presented TORs. The Committee recommended the proposal for environmental clearance.

7.0 Based on the information submitted by the project proponent, the Ministry of Environment and Forests hereby accords environmental clearance to above project under the provisions of EIA Notification dated 14<sup>th</sup> September 2006, subject to the compliance of the following Specific and General Conditions:

**A. SPECIFIC CONDITIONS :**

- i. M/s BPCL shall comply with new standards/norms for Oil Refinery Industry and petrochemical industry notified under the Environment (Protection) Rules, 1986.
- ii. Continuous on-line stack monitoring for SO<sub>2</sub>, NOx and CO of all the stacks shall be carried out. Low NOx burners shall be installed.

- iii. The emission standards prescribed by the MoEF under Environment (Protection) Act for petrochemical industry shall be strictly followed. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Stack emissions shall be monitored regularly.
- iv. Leak Detection and Repair programme shall be prepared and implemented to control HC/VOC emissions. Focus shall be given to prevent fugitive emissions for which preventive maintenance of pumps, valves, pipelines are required. Proper maintenance of mechanical seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to. Fugitive emissions of HC from product storage tank yards etc. must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations.
- v. Total SO<sub>2</sub> emissions after implementation of PDPP including IREP shall not exceed 1561.4 Kg/hr.
- vi. Continuous monitoring system for VOCs at all important places/areas shall be ensured. When monitoring results indicate above the permissible limits, effective measures shall be taken immediately.
- vii. Ambient air quality monitoring stations, [PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, H<sub>2</sub>S, mercaptan, non-methane-HC and Benzene] shall be set up in the complex in consultation with Kerala State Pollution Control Board, based on occurrence of maximum ground level concentration and down-wind direction of wind. The monitoring network must be decided based on modeling exercise to represent short term GLCs.
- viii. Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry on 16<sup>th</sup> November, 2009 and trend analysis w.r.t past monitoring results shall also be carried out. Adequate measures based on the trend analysis shall be taken to improve the ambient air quality in the project area.
- ix. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Besides, acoustic enclosure /silencer shall be installed wherever noise levels exceed the limit.
- x. Total fresh water requirement from Kochi Refinery for PDPP shall not exceed 493 m<sup>3</sup>/hr and prior permission shall be obtained from the concerned agency. No ground water shall be used.
- xi. Industrial effluent shall be treated in the effluent treatment plant. Treated effluent shall be recycled/reused in the existing cooling tower. As proposed, high COD effluent shall be incinerated. Water quality of treated effluent shall be monitored regularly. Online water monitoring system shall be installed for important parameters.
- xii. Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.
- xiii. Incinerator designed shall be as per CPCB guidelines.

- xiv. The Company should strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 and January, 2000. Hazardous waste should be disposed of as per Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and amended time to time.
- xv. Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.
- xvi. The company shall strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).
- xvii. To prevent fire and explosion at oil and gas facility, potential ignition sources shall be kept to a minimum and adequate separation distance between potential ignition sources and flammable materials shall be in place.
- xviii. All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.
- xix. All the issues raised and commitment made during the public hearing/consultation meeting held on 23<sup>rd</sup> December, 2014 shall be satisfactorily implemented. Accordingly, provision of budget to be kept.
- xx. At least 2 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.
- xxi. Green belt shall be developed at least in 40 acres of land in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Thick greenbelt with suitable plant species shall be developed around unit. Selection of plant species shall be as per the CPCB guidelines.
- xxii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

**B. GENERAL CONDITIONS:**

- i. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), State Government and any other statutory authority.
- ii. No further expansion or modification in the project shall be carried out without prior approval of the Ministry of Environment & Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.

- iii. The project authorities must strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 2000 as amended subsequently. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate etc. must be obtained, wherever applicable.
- iv. The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).
- v. A separate Environmental Management Cell equipped with full fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.
- vi. Adequate funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures and shall be used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government alongwith the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purposes.
- vii. The Regional Office of this Ministry/Central Pollution Control Board/State Pollution Control Board will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.
- viii. A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.
- ix. The project proponent shall upload the status of compliance of the stipulated environment clearance 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 the MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, HC (Methane & Non-methane), VOCs (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- x. The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry / CPCB / SPCB shall monitor the stipulated conditions.
- xi. The environmental statement for each financial year ending 31<sup>st</sup> 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 alongwith the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.

xii. The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office.

xiii. Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

8.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

9.0 The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

10.0 The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.

11.0 Environment Clearance is issued to M/s BPCL-Kochi Refinery for Propylene Derivatives Petrochemical Project (PDPP) at Village Puthencruz/Thiruvankulam, Tehsil Kunnathanadu, District Ernakulam, Kerala.

  
(Lalit Bokolia)  
Additional Director

Copy to :-

1. Principal Secretary, Department of Environment & Forest, Govt. of Kerala, Secretariat Annex Building, Room - 604, C Block, 6th Floor, Government Secretariat, Thiruvananthapuram.
2. Chairman, Kerala State Pollution Control Board, Pattom P.O., Thiruvananthapuram
3. Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 110032.
4. The Chief Conservator of Forests, Regional Office (Southern Zone, Bangalore) Kendriya Sadan, 4th Floor, E&F Wing, II Block Koramangala, Bangalore-560034.
5. Monitoring Cell, Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhawan, Jor Bagh, New Delhi-110003.
6. Guard File/Record File.

  
(Lalit Bokolia)  
Additional Director



**REGIONAL DIRECTORATE (RD) BENGALURU**  
**FOLLOW-UP REPORT ON PUBLIC COMPLAINT REGISTERED**  
**IN PRIME MINISTER OFFICE-PUBLIC GRIEVANCE (PMOPG)**  
**AGAINST M/s. BPCL PETRO CHEMICAL PROJECT,**  
**AMBALAMUGAL, COCHIN, KERALA.**

### **1.0 Background**

Three public complaint / grievances were registered in the Prime Minister Office-Public Grievance (PMOPG) against M/s. Bharath Petrochemical Limited (BPCL) Petro chemical Project, Ambalamugal, Cochin, Kerala. The complaints registered by Shri Vipin Nath A V (PMOPG/E/2020/0727542 & PMOPG/E/2020/0727542) and Smt. Mathu Raveendran (PMOPG/E/2020/0837775) regarding the pollution and other issues were forwarded to this office for follow up and for further necessary actions. In this regard, a report was submitted by CPCB on 23-10-2020 and during the inspection, the team could not inspect the project premises as BPCL imposed restrictions due to COVID. Later, M/s. BPCL informed through the Kerala State Pollution Control Board (KSPCB), to inspect green belt development in the project site. Accordingly, CPCB official along with KSPCB officers visited the project site on 29th December, 2020.

The objective of the visit was to verify the claims of M/s. BPCL regarding green belt development in the project site. It was claimed that 40 acres of land is earmarked for green belt and around 8000 tree saplings were planted.

### **2.0 Industry visit:**

On the day of inspection, the team comprising following officials visited the project site and took stock of the green belt development activities happening in the southeast corner, southern side and the southwest corners of the project premise.

- Shri M A Baiju, Chief Env. Engineer (CEE), RO, KSPCB, Ernakulam.

- Smt. Rameena V V, Asst. Env. Engineer, Ernakulam District Office-2, KSPCB.
- Dr. V Deepesh, Scientist C, CPCB, Regional Directorate, Bengaluru.



*Saplings planted near to the flare stack*



*Tree saplings planted near the south-eastern boundary*



*The water channel inside the project site and the hi-tension power lines*

### **Observations:**

It was evident from the inspection carried out during 23-10-2020, there is no proper green belt around the project site. It is also observed that there are several restrictions like high-tension power lines, inadequate space inside the project location, etc. From the satellite images, it is evident that the process/ storage installations are squeezed in to the available project land and there are no vacant slots available for the developed as green belt in many locations.

The project proponents have committed 200m wide green belt in the boundary of the project as per the EIA report. According to the EC clearance dated 12-05-2015, under specific condition numbered (xxi), it is obligatory to develop green belt in at least 40 acres of land in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines.

On the southeast, southern and southwest sides of the project site, it was observed that the unit has planted tree saplings in the empty spaces. It is presumed from the sapling condition; the sapling nursery was a recent activity. The earth levelling works

for planting saplings were also done without complete removal of scraps and other materials stored in the premise. The materials/ scraps were still found scattered among the planted area. The sapling nurseries are in the nascent stage and will take 2-3 years to develop as a green belt. Any activities to clear up left over scraps and materials may adversely affect the saplings planted in those areas.

Though, the unit has taken up activities related to green belt development, the extent of area envisaged under green belt may not be adequate to comply with the committed 200 m wide green belt. The south-eastern extension of project land is approximately 250 x 450 m plot and it houses the flare stacks. In this plot, it is not possible to develop a green belt of 200 m in all three sides after complying safety distance criteria. Similarly, the minimum distance from the explosion proof control room and the southern compound wall near to complainants' house is approximately 360 m. With all the process/ storage installations in-between and overhead high tension power lines, it is practically not possible to develop a fully-fledged, 200m wide green belt. The irregular shape of the project plot with protruding extensions at south-eastern and southwest corner make it difficult to develop a uniform green belt with committed specification around the project land.

Date of visit: 29-12-2020



Dr. Deepesh V  
Scientist 'C'