

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH AT NEW DELHI**

APPEAL NO. 79 OF 2018

IN THE MATTER OF;-

LAXMI CHOUHAN

... APPELLANT

VERSUS

UNION OF INDIA AND ORS

... RESPONDENTS

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**BRIEF SUMMARY OF ARGUMENTS ON BEHALF OF THE APPELLANT DATED
07.08.2020**

1. The Present Appeal has been filed challenging the Environmental Clearance ("EC") dated 21.02.2018 granted by the MoEF&CC to the South Eastern Coalfields Ltd. for the expansion of Gevra Open Case Coal Mines from 41 to 45 MTPA. The subject matter of the Appeal is the grant of Environmental clearance for the expansion of the open cast coal mine in Chhattisgarh. The Appellant has filed the Appeal No. 79 of 2018 challenging the Environmental Clearance dated 20.02.2018 granted for expansion of of Dipka Open Case Coal Mines from 31 to 35 MTPA. (**Impugned EC is at pg- 82**)
2. That Appellant's main contention is that the grant of environmental clearance by the Ministry of Environment, Forest and Climate change is illegal, improper and irregular. It reflects gross impropriety on the part of the both the Ministry of Environment, Forest and Climate Change as a Regulatory Agency and the Expert Appraisal Committee. Under the EIA Notification, 2006, it is the duty of the Expert Appraisal Committee to undertake 'a detailed scrutiny' of the EIA Report and other documents including public hearing proceedings before grant of Environmental Clearance. In the present case, the EAC was aware of the fact that an OM cannot supplant the law and permitted the expansion to take place without the mandatory Public Hearing. It is also well settled that the provisions of the EIA Notification are mandatory in nature which has been ignored by the EAC while permitting the present expansion.
3. In ***Electrotherm (India) Ltd. vs. Patel Vipulkumar Ramjibhai and Others, (2016) 9 SCC 300 (pg. 13)***) it has been made clear by the Hon'ble Supreme Court that even in case of expansion project, Public Hearing is mandatory. The MoEF&CC/EAC cannot rely on an OM to exempt Public Hearing for expansion project. The EC is liable to be quashed on this ground only.

4. The Forest (Conservation) Act, 1980 requires Final Order by State Government under Section 2 of the Forest (Conservation) Act, 1980. However, the entire mining has been done in blatant violation of the provisions of Forest (Conservation) Act, 1980 by undertaking mining on the strength of Stage-I Forest Clearance which is annexed by the Project Proponent with it's Reply. This is an admitted case of violation of the Forest (Conservation) Act, 1980 and Order dated 12.12.1996 passed by the Hon'ble Supreme Court in ***T.N Godavraman Thirumulpad Versus Union of India 1997 (1) SCC 267.***
5. The project has undertaken mining in 1016.412 Ha of Forest Land in violation of the Forest (Conservation) Act, 1980. Yet, the very same EAC not only overlooked the violation of the Forest (Conservation) Act, 1980 but also allowed the project to expand illegally from 31 MTPA to 35 MTPA Such as act is also in violation of the order of 12. 12. 1996 of the Supreme Court in T.N Godavraman Thirumulpad Versus Union of India 1997 (1) SCC 267. The Project Proponent, The Forest Department of the State of Chattisgarh and the Ministry of Environment, Forest and Climate Change are jointly responsible for allowing the mining to not only continue but also expand despite such blatant violation of the law. It is submitted that environmental law compliance is mandatory and not discretionary. The project proponents along with the government agencies have exhibited a blatant disregard towards the Rule of Law. In addition to the violation of the Forest (Conservation) Act, 1980, despite being aware that the Mining in Gevra is adjoining two other large mines – Kusmunda and Dipka, no comprehensive cumulative impact assessment has been done. The EAC turned a blind eye to the fact that SECL had not complied with the previous Environmental Clearance condition and approved the project for expansion.
6. It is submitted that the need to extract coal cannot undermine the Rule of Law; the Right to Life under Article 21 of the Constitution and the fundamental duty of the State to project the life of citizens and protect the environment. The approval granted violates the Public Trust Doctrine; the precautionary principle and principles of sustainable development. A project cannot be termed as 'sustainable development' if the approval of the same is contrary to the law of the land.

Repeated use of Office Memorandums (OMs) for Expansion without Public Hearing

7. Last Public Hearing was conducted on 22.08.2008
 - The Mine has been expanded 3 times without Public Hearing (from 35 to 45 MTPA)
 - From 25 to 35 MTPA – EC dated 03.06.2009

- From 35 to 40 MTPA – EC dated 31.01.2014 (through OM dated 19.12.2012)
- From 40 to 41 MTPA – EC dated 06.02.2015 (through OM dated 02.09.2014)
- From 41 to 45 MTPA – Impugned EC dated 21.02.2018 (through OM dated 15.09.2017)

[The relevant case laws with regard to these Office Memorandums relied on by the Appellant have been reproduced in the present Brief Summary]

8. That the Environmental Clearance dated 20.02.2018 granting expansion from 31 to 35 MTPA can be termed as illegal in the absence of public consultation or public hearing as mandatorily provided by EIA Notifications, 2006 as held in ***Electrotherm (India) Ltd. vs. Patel Vipulkumar Ramjibhai and Others, (2016) 9 SCC 300 (pg.13)*** wherein the Hon'ble Supreme Court in it's paras 15, 16 and 20 have held:-

15. Public consultation/Public hearing is one of the important stages while considering the matter for grant of environmental clearance. The minutes of the meetings held on 9-2-2009 to 11-2-2009 show that the request of the appellant for exemption from the requirement of public hearing was accepted by the Committee. The observations of the Committee suggest that there would be no additional land requirement, groundwater drawal and certain other features. However, the water requirement, which is a community resource, was definitely going to be of greater order in addition to the fact that the expansion of the project would have entailed additional pollution load.

16. It must be stated here that after the EIA Notification of 2006, a draft Notification was issued on 9-1-2009 wherein an amendment was suggested in Para 7(ii) of the EIA Notification dated 14-9-2006 to the effect that in cases of expansion of projects involving enhancement by more than 50% holding of public consultation/public hearing was essential; implying thereby that in cases where expansion was less than 50% public consultation/public hearing could be exempted. Without going into the question whether public consultation/public hearing could be so exempted, it is relevant to note that this idea in the draft Notification was not accepted, after a Committee constituted to advise in the matter had given its report on 30-10-2009 to the contrary. As a result, the final Notification dated 1-12-2009 did not carry or contain the amendment that was suggested by way of draft notification. Consequently, no exemption on that count could be given when the environmental clearance came to be issued on 27-1-2010.

...

19. In terms of the principles as laid down by this Court in Lafarge [Lafarge Umiam Mining (P) Ltd. v. Union of India, (2011) 7 SCC 338] , we find that the decision-making process in doing away with or in granting exemption from public consultation/public hearing, was not based on correct principles and as such the decision was invalid and improper.

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20. At the same time, we cannot lose sight of the fact that in pursuance of environmental clearance dated 27-1-2010, the expansion of the project has been undertaken and as reported by CPCB in its affidavit filed on 7-7-2014, most of the recommendations made by CPCB are complied with. In our considered view, the interest of justice would be subserved if that part of the decision exempting public consultation/public hearing is set aside and the matter is relegated back to the authorities concerned to effectuate public consultation/public hearing. However, since the expansion has been undertaken and the industry has been functioning, we do not deem it appropriate to order closure of the entire plant as directed by the High Court. If the public consultation/public hearing results in a negative mandate against the expansion of the project, the authorities would do well to direct and ensure scaling down of the activities to the level that was permitted by environmental clearance dated 20-2-2008. If public consultation/public hearing reflects in favour of the expansion of the project, environmental clearance dated 27-1-2010 would hold good and be fully operative. In other words, at this length of time when the expansion has already been undertaken, in the peculiar facts of this case and in order to meet ends of justice, we deem it appropriate to change the nature of requirement of public consultation/public hearing from pre-decisional to post-decisional. The public consultation/public hearing shall be organised by the authorities concerned in three months from today.

(Emphasis supplied)

9. That the Appellant also relies upon ***Lafarge Umium Mining (P) Ltd. vs. Union of India, (2011) 7 SCC 338*** which states to the effect that public consultation/public hearing is a mandatory requirement of the Environmental Clearance process. It is stated that Environmental Clearance dated 21.02.2018 granting expansion from 41 to 45 MTPA can be termed as illegal in the absence of Public Hearing process.
10. That this Hon'ble Tribunal in ***S.P.Muthuraman vs. Union of India, Original Application no. 37 of 2015 and Original application no. 213 of 2014 (pg. 26)*** has been categorically held that an Office Memorandum cannot supplant the EIA Notification of 2006 but only be supplemental to it **(Para 80)**. It was also held that the provisions of the EIA Notification, 2006 are mandatory in nature **(Para 120)**. It is stated that in view of the Judgment of this Hon'ble Tribunal in ***S.P.Muthuraman vs. Union of India*** the Official Memorandum dated 15.09.2017 cannot override over Statutory provision and a process as provided in the EIA Notification, 2006 and therefore, is illegal and non-est.
11. **Project does not fulfil the criteria of Office Memorandum dated 15.09.2017**
 - The OM dated 15.09.2017 (pg. 47) states that all conditions of previous ECs should be complied with for the exemption from Public Hearing.

- The Monitoring Report dated 04.11.2016 (pg. 49) shows that the conditions of the previous Environmental Clearance have not been complied with, and this is also reflected in the minutes of the Expert Appraisal Committee (pg. 59)

12. Large number of Project Affected Families (PAFs) have not been considered

- The earlier EC dated 31.01.2014 states that - "*xiii. There is no R & R involved. No of PAFs is 2420.*"
- However in the impugned EC (at pg. 84), it is stated that - "*(xxv) Rehabilitation and resettlement is involved in the project. There are 3428 PAFs*".
- Therefore there are clearly a very high number of PAFs. Even if the number 3428 reflects the total number of PAFs from the mine, the additional number of PAFs from the present expansion (1008) is still a very high number, and therefore the decision to exempt Public Hearing is not justifiable.

13. No Forest Clearance has been obtained

- The Project Proponent has not produced the final State Government order for Forest Clearance for any of the project land being utilised by it for non-forest purpose.
- This Hon'ble Tribunal in ***Vimal Bhai & Anr. v. Union of India & Ors., 2012 SCC OnLine NGT 77*** and ***Prafulla Samantara v. Union of India & Ors., 2014 SCC OnLine NGT 892*** has clarified that no non-forest activity can be carried out before the final State Government order.
- The present Project is utilising 409.056 Ha of the Forest Land which was later revised to 409.149 Ha of Forest Land.
- The Project Proponent has not produced the final State Government order for Forest Clearance for any of the project land being utilised by it for non-forest purpose.
- The EAC was very much aware that the Project Proponent only had the Stage-1 FC clearance. (Pgs. 73)
- The Project Proponent in it's Reply 25.08.2018 has categorically admitted in para 22-23 at page 127 of the paper-book:-

"22-23.It is submitted that only Stage-1, Forestry Clearance is required for EC"
- That the above contention that "only Stage-1, Forestry Clearance is required for EC" is against the mandate of law as laid down by the this Hon'ble Tribunal in ***Vimal Bhai & anr. V. Union of India & ors., 2012 SCC Online NGT 77*** and ***Prafulla Samantara v. Union of India & Ors., 2014 SCC Online NGT 892*** has clarified to the effect that No Non-forest activity can be carried out before granting of the final state government Order under Section 2 of the Forest (Conservation) Act, 1980 and that both Stage I (in Principle) and Stage II

are not Forest Clearance under the law. Non Forest use of forest land is permitted only after an order is issued by the State Government under Section 2 of the FC Act, 1980.

- This Hon'ble Tribunal in ***Vimal Bhai & Anr. v. Union of India & Ors., 2012 SCC OnLine NGT 77 (pg 37)***

“30. However, a party cannot be remediless, a person who is aggrieved by the Approval/Clearance granted by the Central Government has to avail an opportunity to assail the same. In the aforesaid scenario it can safely be concluded that after receiving a Stage - I and/or Stage - II Clearance, thereby granting a consent to permit use of forest land for non-forest purposes, from the Central Government, it is incumbent upon the State Government to pass a reasoned order transferring and/or allowing the land in question for being used for non forest purpose. **It is needless to be said that bereft or such order no forest lands can be put to use for non-forest purpose. Further, all activities done without such orders would be ab initio void.** An Appeal can be filed against the said order of the State Government under Section 2(A) of FC Act and/or under Section 16(e) of the NGT Act. In the event such an Appeal is filed it would be open for the person aggrieved, to assail the order/Clearances granted by the Central Government under Section 2 of the Act which forms an integral part and sole basis of the order passed by the State Government.”

(Emphasis supplied)

- This Hon'ble Tribunal in ***Prafulla Samantara v. Union of India & Ors., 2014 SCC OnLine NGT 892 (pg 34)*** has clarified that no non-forest activity can be carried out before the final State Government order-

“This question also came for consideration before a Bench of this Tribunal in the case of *Vimal Bhai v. Union of India* in Appeal No. 7 of 2012 dated 7th November, 2012.

In addition to the aforestated, we do concur with the Judgment of Bench of this Tribunal in *Vimal Bhai v. Union of India (supra)* to the extent that the State Government is obliged to pass an Order then alone non forest activity can be carried on in the forest area in terms of section 2 of the Act of 1980.

The Learned Counsel appearing for the parties have also brought to our notice a reply in the form of information to a RTI query raised under Right to Information Act, 2005. In this it is recorded that the State Government does not pass any order under Section 2 of the Act of 1980. This reply is contrary to the requirements of law and we, therefore, specifically set-aside such view and direct that all State Governments shall pass an appropriate order in accordance with law in terms of Section 2 of the Act of 1980.

Having answered the above question, nothing survives in this application and accordingly Original Application No. 123 of 2013 is disposed of. The Respondent No. 3 (Project Proponent) is at liberty

to approach the State Government for appropriate Orders in accordance with law.

Till such Order is passed by the Competent Authority, Respondent No. 9 would not carry on tree cutting/felling in the forest area."

(Emphasis supplied)

Suggested Action:-

- (i) Direct for complete stoppage of all mining activity in Forest Land;
- (ii) Direct for an appointment of an Expert Committee to ascertain the extent to damage caused due to illegal mining by SECL and direct for environmental compensation in accordance with the 'polluter pay principle'
- (iii) Direct the MoEF&CC to file Complaint under the Forest (Conservation) Act, 1980 and direct disciplinary action to be taken against officials of State Forest Department and SECL and submit a time bound action taken report to this Hon'ble Tribunal.

14. Project location is already a severely polluted area

Korba (CEPI Score of 69.11) is a severely polluted area. Air quality data collected by the Appellant shows the consistent severe air quality of the region. (pg. 94)

Expert Appraisal Committee has blindly accepted the submission of SECL and stated that the PM₁₀ data was varying between 93-27 ug/m3. (pg. 100)

The Environmental Monitoring Report annexed by the Project Proponent (pg. 133) shows that PM₁₀ readings are far higher than 97 ug/m3. (pgs.

15. Cumulative Impact Assessment Study and Carrying Capacity Study have not been done

- That it is stated that no Cumulative Impact Assessment was done in this case, despite the mandatory requirement under Paragraph 9 of Form-1 of Appendix 1 of the EIA Notification, 2006. That this Hon'ble Tribunal observed the meaning and scope of the term Cumulative Impact Assessment Study in it's Judgment dated 10th November, 2014 in Appeal no. 50 of 2012 in **T. Muruganandam & Ors. vs. Ministry of Environment & Forests & Ors.** as follows:-

"41.....This Cumulative Impact as the term indicates is not the impact of any project in isolation but it is a total impact resulting from the interaction of the project with other project activities around it- past, present and those to come up in the future. It is a comprehensive view of the impacts resulting from all the projects- past, present or planned ones, on the environment. Cumulative Impact may be same or different and those arising out of individual activities and tend to be larger, long lasting and spread over a greater area within the individual impact. Such studies are therefore commonly expected to:

- i. Assess effects over a larger area that may cross jurisdiction boundaries.
 - ii. Assess effects during a longer period of time into the past and future.
 - iii. Consider effects on other eco-system components due to interactions with other actions, and not just the effect of the single action under review.
 - iv. Include other past, existing and future (reasonably foreseeable) action, and
 - v. Evaluate significant effect in consideration of other than just local and direct effects."
- In **Vimal Bhai v. Ministry of Environment &, 2011 SCC OnLine NGT 16** which was an Appeal filed against the forest clearance granted for diversion 80.507 ha of forest land for the construction of a 65m dam across the river Alakhnanda in Uttarakhand, the Hon'ble NGT delved into detail and to what would cumulative effects would entail. It has stated that cumulative effects are those that -

"(i) are caused by the aggregate of past, present, and future actions; (ii) are the total effect, including both direct and indirect effects, on a given resource, ecosystem, and human community of all actions taken, no matter who has taken the actions; (iii) need to be analysed in terms of the specific resource, ecosystem, and human community being affected; (iv) cannot be practically analysed beyond a reasonable boundary; the list of environmental effects must focus on those that are meaningful; (v) rarely correspond to political or administrative boundaries; (vi) may result from the accumulation of similar effects or the synergistic interaction of different effects; (vii) may last for many years beyond the life of the project that caused the effects; and (viii) should be assessed in terms of the capacity of the affected resource, ecosystem, and/or human community to accommodate additional effects."

- At this juncture, it is pertinent to note contents of the EIA Guidance Manual for Thermal Power Plants prepared for the MoEF, Government of India, by IL & FS Ecosmart Ltd., In the said Guidance Manual for thermal power plants Cumulative Impacts have been defined as follows:

"2.8.3 Cumulative Impacts

Cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIA together with other projects in the same vicinity causing related impacts. These impacts occur when the incremental impact of the project is combined with the cumulative effects of other past, present and reasonably foreseeable future projects.."

- That in this context it is important to look at the judgment of this Hon'ble Tribunal in dated 12.09.2011 in **Sarpanch, Grampanchayat Tiroda v. The**

Ministry of Environment and Forests (Appeal No. 3 of 2011). This case involved the grant of an EC to the project proponent for conducting mining operations at Tiroda. Here the cumulative effect of four proposed projects was not properly considered. The Hon'ble Tribunal expressed the importance of a Cumulative Impact assessment as follows:

*"Unfortunately, the cumulative effect of these four proposed projects was not considered to be of significant in causing environmental pollution in a small area. It appears an impression is sought to be created that there was only one application of Tiroda mine and at that time the Redi mine was not in operation. When number of mines are sought to be considered in a small area of Sawantwadi Taluk, **the EAC was expected to examine various aspects such as the cumulative impact of Air, Water, Noise Flora, Fauna and Socio-economic aspects in view of large number of transport vehicles, plants and machinery, etc. that would be operating in the area.** It would have been appropriate, if a cumulative impact study was undertaken to take care of all existing/proposed mines within 10 km of the present project site apart from Redi mine, if any. Therefore, we are of the opinion that these aspects were not properly assessed and examined scientifically and therefore, the EIA report requires to be re-examined afresh. Thus, the EIA report suffers from incorrect and insufficient data which pertains to a period much prior to grant of TOR, therefore, the EIA report cannot be said to be sufficient for the purpose of recommending grant of EC."*

- The importance of a cumulative impact assessment was also reiterated by the Hon'ble Supreme Court in the case of **Alaknanda Hydro Power Company Ltd. v. Anuj Joshi and Ors.** reported in **(2014) 1 SCC 769 Para 50.**
- The aforementioned judgments indicate that the obligation to conduct cumulative impact assessments is a well-established precept of Indian environmental and conservation jurisprudence. Given that the Cumulative Impact Assessment study was hurried and was not carried out adhering to universally accepted scientific parameters, and the same was accepted by the EAC without any application of mind, vitiates the grant of the EC's by the MoEF&CC.
- In view of the already high levels of pollution, several coal mines and thermal power plants already existing in the region, both Cumulative Impact Assessment Study and Carrying Capacity Study are very necessary before further expansion.
- Condition 4(ix) of the impugned Environmental Clearance (at **pg. 86**) mandates that Carrying Capacity study is to be carried out. The Project Proponent has only produced correspondences with CMPDIL (at **pg. 194**), but no actual study has been produced.

Suggested Action:-

- (i) Direct that a fresh Cumulative Impact Assessment Study be conducted for all parameters as per International best practices by an Independent multidisciplinary committee taking into consideration-a One year-all season data;
- (ii) There should be opportunity for public participation in the cumulative impact assessment
- (iii) Direct that no proposal for expansion of coal mines will be entertained/ considered till a cumulative impact assessment is done

16. Violations/non-compliances of the previous Environmental Clearances

The EAC failed to consider that the OM dated 15.09.2017 granting exemption to the project from Public Hearing is not at all applicable in this case since there were violations/non-compliances of the previous Environmental Clearances as is clearly mentioned in EAC minutes which fact has been overlooked by the EAC which has recommended the Project. (pg 49, 59)

17. Non compliance of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

- Para 4.1 (a) (iv) of the impugned EC (at pg. 86 mandates compliance with the Forest Rights Act, 2006.
- The Project Proponent has not put on record any of the documents required to show compliance of the Forest Rights Act, 2006, such as resolutions showing the consents of all the concerned Gram Sabhas and a certificate from the Collector certifying that the rights of all forest dwellers within the project area have been settled.

Relevant paragraphs of additional case laws with regard to Office Memorandums relied upon by the Appellant

- ***State of Orissa v. Mamata Mohanty, (2011) 3 SCC 436***

"Order bad in inception

37. It is a settled legal proposition that if an order is bad in its inception, it does not get sanctified at a later stage. A subsequent action/development cannot validate an action which was not lawful at its inception, for the reason that the illegality strikes at the root of the order. It would be beyond the competence of any authority to validate such an order. It would be ironic to permit a person to rely upon a law, in violation of which he has obtained the benefits. If an order at the initial stage is bad in law, then all further proceedings consequent thereto will be non est and have to be necessarily set aside. A right in law exists only and only when it has a lawful origin. (Vide Upen Chandra Gogoi v. State of Assam [(1998) 3 SCC 381 : 1998 SCC (L&S) 872 : AIR

1998 SC 1289] , Mangal Prasad Tamoli v. Narvadeshwar Mishra [(2005) 3 SCC 422 : AIR 2005 SC 1964] and Ritesh Tewari v. State of U.P. [(2010) 10 SCC 677 : (2010) 4 SCC (Civ) 315 : AIR 2010 SC 3823])

.....

62. It is a matter of common experience that a large number of orders/letters/circulars, issued by the State/statutory authorities, are filed in court for placing reliance and acting upon it. However, some of them are definitely found to be not in conformity with law. There may be certain such orders/circulars which are violative of the mandatory provisions of the Constitution of India. While dealing with such a situation, this Court in Ram Ganesh Tripathiv. State of U.P. [(1997) 1 SCC 621 : 1997 SCC (L&S) 186 : AIR 1997 SC 1446] came across with an illegal order passed by the statutory authority violating the provisions of Articles 14 and 16 of the Constitution. This Court simply brushed aside the same without placing any reliance on it observing as under: (SCC p. 625, para 9)

"9. ... The said order was not challenged in the writ petition as it had not come to the notice of the appellants. It has been filed in this Court along with the counter-affidavit.... This order [is also deserved] to be quashed as it is not consistent with the statutory rules. It appears to have been passed by the Government to oblige the respondents...."

(emphasis added)"

- ***Akhil Bhartiya Upbhokta Congress v. State of M.P., (2011) 5 SCC 29***

"**65 [Ed.: Paras 65, 66 and 68 corrected vide Official Corrigendum No. F.3/Ed.B.J./23/2011 dated 3-5-2011 and para 67 corrected vide Official Corrigendum No. F.3/Ed.B.J./28/2011 dated 7-5-2011.]** .What needs to be emphasised is that the State and/or its agencies/instrumentalities cannot give largesse to any person according to the sweet will and whims of the political entities and/or officers of the State. Every action/decision of the State and/or its agencies/instrumentalities to give largesse or confer benefit must be founded on a sound, transparent, discernible and well-defined policy, which shall be made known to the public by publication in the Official Gazette and other recognised modes of publicity and such policy must be implemented/executed by adopting a non-discriminatory and non-arbitrary method irrespective of the class or category of persons proposed to be benefited by the policy. The distribution of largesse like allotment of land, grant of quota, permit licence, etc. by the State and its agencies/instrumentalities should always be done in a fair and equitable manner and the element of favouritism or nepotism shall not influence the exercise of discretion, if any, conferred upon the particular functionary or officer of the State."

- ***Bangalore Medical Trust v. B.S. Muddappa, (1991) 4 SCC 54 at page 92***

"**52.** Section 65 the overall power reserved in government to give such directions to the Authority as it considers expedient for carrying out any purpose of the Act was another provision relied to support an order which is otherwise insupportable. An exercise of power which is ultra vires the provisions in the statute cannot be attempted to be resuscitated on general powers reserved in a statute for its proper and

effective implementation. The section authorises the government to issue directions to ensure that the provisions of law are obeyed and not to empower it itself to proceed contrary to law. What is not permitted by the Act to be done by the Authority cannot be assumed to be done by State Government to render it legal. An illegality cannot be cured only because it was undertaken by the government. The section authorises the government to issue directions to carry out purposes of the Act. That is the legislative mandate should be carried out. And not that the provision of law can be disregarded and ignored because what was done was being done by State Government and not the Authority. An illegality or any action contrary to law does not become in accordance with law because it is done at the behest of the Chief Executive of the State. No one is above law. In a democracy what prevails is law and rule and not the height of the person exercising the power."

- ***State of Orissa v. Brundaban Sharma, 1995 Supp (3) SCC 249***

"18. Under these circumstances, it cannot be said that the Board of Revenue exercised the power under Section 38-B after an unreasonable lapse of time, though from the date of the grant of patta by the Tehsildar is of 27 years. It is true that from the date of the alleged grant of patta 27 years did pass. But its authenticity and correctness was shrouded with suspicious features. The records of the Tehsildar were destroyed. Who is to get the benefit? Who was responsible for it? The reasons are not far to seek. They are self-evident. So we hold that the exercise of revisional power under Section 38-B by the Board of Revenue was legal and valid and it brooked no delay, after it had come to the Board's knowledge. That apart as held by the Board of Revenue, the order passed by the Tehsildar without confirmation by the Board is non est. A non est order is a void order and it confers no title and its validity can be questioned or invalidity be set up in any proceeding or at any stage."

Suggested Direction:-

Action including disciplinary proceedings be initiated against the concerned officials of SECL and State Government for allowing extraction beyond the permissible limit.

In view of the abovementioned facts and circumstances the prayers made in Appeal No. 79/2018 may very kindly be allowed.



(Ritwick Dutta) & (Saurabh Sharma)

Advocates

13

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SUPREME COURT CASES

(2016) 9 SCC

(2016) 9 Supreme Court Cases 300

(BEFORE DR T.S. THAKUR, C.J. AND R. BANUMATHI AND UDAY U. LALIT, JJ.)
ELECTROTHERM (INDIA) LIMITED .. Appellant;

a

Versus

PATEL VIPULKUMAR RAMJIBHAI
AND OTHERS .. Respondents.

Civil Appeal No. 7222 of 2016[†], decided on August 2, 2016

Environment Law — Environmental Clearance/NOC/Environment Impact Assessment — Environmental Clearance — Public consultation/public hearing being mandatory requirement of environmental clearance process — EIA Noti. dt. 27-1-1994 r/w EIA Noti. dt. 14-9-2006, Paras 2, 4 and 7 — Considering peculiar facts of case, nature of requirement of public consultation/public hearing changed from pre-decisional to post-decisional process

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— Appellant set up steel plant after State Pollution Control Board issued authorisation — Appellant applied for environmental clearance from Ministry of Environment and Forests and it was given in 2008 — Thereafter, appellant thought of expanding its plant and hence again sought for environmental clearance — It was contended by appellant before Expert Committee that it was not using any extra land for expansion and therefore public hearing may be dispensed with as public hearing had already taken place in 2007 — Expert Committee and Ministry of Environment and Forests dispensed with public hearing — Later, appellant was granted environmental clearance — R-1 approached High Court and it was ordered that entire appellant's unit be closed — Legality of

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— Held, after expansion, capacity of plant would increase threefold and figures indicated that there was tremendous increase in capacity of plant — Consequently, pollution load would also be more than what was contemplated in 2007 public hearing — Public have stake in pollution load and water requirement — Decision-making process in exempting from public consultation/public hearing was not based on correct principles — Such decision was invalid and improper — Hence, decision to exempt from public consultation/public hearing was set aside — Matter remanded to authorities for fresh public hearing — During hearing before Supreme Court, it was submitted that expansion activity had already been undertaken — CPCB pointed out that appellant complied with most of recommendations — Considering peculiar facts and circumstances of case, held, if public hearing result is negative against expansion, authorities to scale down activities of appellant — Nature of public consultation/public hearing changed from pre-decisional to post-decisional, in view of special facts of case — If public hearing result is positive in favour of expansion then environmental clearance granted in 2010 would be valid —

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[†] Arising out of SLP (C) No. 16860 of 2012. From the Judgment and Order dated 11-5-2012 of the High Court of Gujarat at Ahmedabad in Special Civil Application No. 5986 of 2010

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a Authorities directed to organise public consultation/public hearing within three months from date of order — Environment (Protection) Act, 1986 — Ss. 3(1) and 3(2)(v) — Environment (Protection) Rules, 1986, R. 5(3)(d)

b The appellant set up a steel plant for manufacture of various products after receiving no-objection certificate from the State Pollution Control Board. Thereafter, the Board gave authorisation order dated 10-11-2005. The appellant applied for environmental clearance through its letter dated 30-11-2007. On 20-2-2008, the Ministry of Environment and Forests, Government of India, granted environmental clearance.

c Thereafter, the appellant applied for environmental clearance for expansion of steel plant. It was contended by the appellant that public hearing for earlier clearance was held on 12-6-2007 and accordingly earlier environmental clearance was granted on 20-8-2008. Hence, the appellant sought for exemption from public hearing as it was not using extra land for its expansion activity. Considering the report of the Expert Committee, the Ministry of Environment and Forests granted environmental clearance to the appellant without holding public hearing.

d Respondent 1 filed a writ petition in public interest before the High Court and prayed for revocation of environmental clearance granted to the appellant for expansion of its plant. After hearing the parties, the High Court was pleased to allow the writ petition and passed orders for closure of the entire unit. Hence, this appeal.

Disposing of the appeal, the Supreme Court

Held :

e Public consultation/public hearing is a mandatory requirement of the environmental clearance process. The decision-making process in doing away with or in granting exemption from public consultation/public hearing, is not based on correct principles and any decision arising out of such process would be invalid. (Paras 17 and 19)

Lafarge Umiam Mining (P) Ltd. v. Union of India, (2011) 7 SCC 338, *applied*

f The facts on record are clear that while granting environmental clearance on 20-2-2008, public consultation/public hearing was undertaken on 12-6-2007. As on that date, the status of the project was that the capacity of pig iron plant was to be 350 TPD, power plant to be 24 MW, the total cost of the project was Rs 90.00 crores and the total water requirement was 650 m³/day. The High Court was absolutely right that after expansion the capacity of the plant was to increase threefold. The tabular chart given in environmental clearance dated 27-1-2010 itself shows the tremendous increase in the capacity. Consequently, the pollution load would naturally be of greater order than the one which was contemplated when the earlier public consultation/public hearing was undertaken on 12-8-2007. Further, the water requirement had also risen from 650 m³/day to 2165 m³/day. The increase in pollution load and water requirement were certainly matters where public in general and those living in the vicinity in particular had and continue to have a stake. (Para 14)

g Public consultation/Public hearing is one of the important stages while considering the matter for grant of environmental clearance. The minutes of the

meetings held on 9-2-2009 to 11-2-2009 show that the request of the appellant for exemption from the requirement of public hearing was accepted by the Committee. The observations of the Committee suggest that there would be no additional land requirement, groundwater drawal and certain other features. However, the water requirement, which is a community resource, was definitely going to be of greater order in addition to the fact that the expansion of the project would have entailed additional pollution load. (Para 15)

It must be stated here that after the EIA Notification of 2006 a draft Notification was issued on 9-1-2009 wherein an amendment was suggested in Para 7(ii) of the EIA Notification dated 14-9-2006 to the effect that in cases of expansion of projects involving enhancement by more than 50% holding of public consultation/public hearing was essential; implying thereby that in cases where expansion was less than 50% public consultation/public hearing could be exempted. Without going into the question whether public consultation/public hearing could be so exempted, it is relevant to note that this idea in the draft Notification was not accepted, after a Committee constituted to advise in the matter had given its report on 30-10-2009 to the contrary. As a result, the final Notification dated 1-12-2009 did not carry or contain the amendment that was suggested by way of draft Notification. Consequently, no exemption on that count could be given when the environmental clearance came to be issued on 27-1-2010. (Para 16)

At the same time, it cannot be lost sight of the fact that in pursuance of environmental clearance dated 27-1-2010, the expansion of the project had been undertaken and as reported by CPCB in its affidavit filed on 7-7-2014, most of the recommendations made by CPCB were complied with. Hence, the interest of justice would be subserved if that part of the decision exempting public consultation/public hearing was set aside and the matter was relegated back to the authorities concerned to effectuate public consultation/public hearing. However, since the expansion has been undertaken and the industry has been functioning, it is not deemed appropriate to order closure of the entire plant as directed by the High Court. If the public consultation/public hearing results in a negative mandate against the expansion of the project, the authorities would do well to direct and ensure scaling down of the activities to the level that was permitted by environmental clearance dated 20-2-2008. If public consultation/public hearing reflects in favour of the expansion of the project, environmental clearance dated 27-1-2010 would hold good and be fully operative. In other words, at this length of time when the expansion has already been undertaken, in the peculiar facts of this case and in order to meet ends of justice, it is deemed appropriate to change the nature of requirement of public consultation/public hearing from pre-decisional to post-decisional. The public consultation/public hearing shall be organised by the authorities concerned in three months from today. (Para 20)

Patel Vipulkumar Ramjibhai v. Union of India, 2012 SCC OnLine Guj 3408 : (2012) 3 Guj LR 2312, modified

Electrothem (India) Ltd. v. Patel Vipulkumar Ramjibhai, SLP (C) No. 16860 of 2012, order dated 15-5-2012 (SC); *Electrothem (India) Ltd. v. Patel Vipulkumar Ramjibhai*, SLP (C) No. 16860 of 2012, order dated 18-5-2012 (SC); *Electrothem (India) Ltd. v. Patel Vipulkumar Ramjibhai*, SLP (C) No. 16860 of 2012, order dated 22-4-2014 (SC), cited

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Advocates who appeared in this case :

- a** Dr A.M. Singhvi, Senior Advocate (Nakul Mohta, Mahesh Agarwal, Ankur Saigal, Rishabh Parikh, Abhinav Agarwal and E.C. Agrawala, Advocates) for the Appellant; Huzefa Ahmadi, Senior Advocate [Vijay Panjwani, S. Udaya Kr. Sagar, Ms Bina Madhavan, Mrityunjai Singh (M/s Lawyer's Knit & Co.), Ms Jesal Wahi, Ms Hemantika Wahi, S.N. Terdal, S.A. Haseeb and B. Krishna Prasad, Advocates] for the Respondents.

Chronological list of cases cited

- | | | <i>on page(s)</i> |
|----------|--|-----------------------------|
| b | 1. SLP (C) No. 16860 of 2012, order dated 22-4-2014 (SC), <i>Electrothem (India) Ltd. v. Patel Vipulkumar Ramjibhai</i> | 310a-b, 310e |
| | 2. 2012 SCC OnLine Guj 3408 : (2012) 3 Guj LR 2312, <i>Patel Vipulkumar Ramjibhai v. Union of India</i> | 303d, 308d, 308d-e |
| | 3. SLP (C) No. 16860 of 2012, order dated 18-5-2012 (SC), <i>Electrothem (India) Ltd. v. Patel Vipulkumar Ramjibhai</i> | 309d-e |
| c | 4. SLP (C) No. 16860 of 2012, order dated 15-5-2012 (SC), <i>Electrothem (India) Ltd. v. Patel Vipulkumar Ramjibhai</i> | 309d |
| | 5. (2011) 7 SCC 338, <i>Lafarge Umiam Mining (P) Ltd. v. Union of India</i> | 309c, 311f, 312a, 312c-d |

The Judgment of the Court was delivered by

- d** **UDAY U. LALIT, J.**— Leave granted. This appeal challenges the judgment and order dated 11-5-2012¹ passed by the High Court of Gujarat allowing Special Civil Application No. 5986 of 2010 setting aside the environmental clearance dated 27-1-2010 and directing that the operations of the entire plant of the appellant be stopped and that the operations could be continued only after fresh environmental clearance was accorded in its favour by the Ministry of Environment and Forests and the Union of India.

- e** 2. The Environment Impact Assessment Notification dated 27-1-1994 issued by the Central Government in exercise of powers conferred by sub-section (1) and clause (v) of sub-section (2) of Section 3 of the Environment (Protection) Act, 1986 read with clause (d) of sub-rule (3) of Rule 5 of the Environment (Protection) Rules, 1986 stipulated, inter alia, that in case of expansion or modernisation of any activity, if pollution load exceeded the existing one or the new project was listed in Schedule I to the said Notification, such activity would not be undertaken unless the environmental clearance was accorded by the Central Government. Same thought was carried and finds expressly stipulated in the Notification dated 14-9-2006 issued by the Central Government in supersession of the Notification dated 27-1-1994.
- f** The Notification dated 14-9-2006 directed that the required construction of new projects or activities or the expansion or modernisation of existing projects or activities listed in the Schedule to the notification entailing capacity addition with change in process and or technology would be undertaken only after prior environmental clearance from the Central Government or as the case may be by the State Level Environment Impact Assessment Authority. Clauses 2 and

- g**
- h** 1 *Patel Vipulkumar Ramjibhai v. Union of India*, 2012 SCC OnLine Guj 3408 : (2012) 3 Guj LR 2312

4 of the Notification deal with requirements of prior environmental clearance and categorisation of projects and activities respectively. Under Clause 7, environmental clearance process comprises of four stages in sequential order, namely, (1) Screening, (2) Scoping, (3) Public Consultation, and (4) Appraisal. a

3. The appellant set up a steel plant at Village Samakhiali, for manufacturing various products after having received no-objection certificate from Gujarat Pollution Control Board ("GPCB", for short) on 25-2-2005, which thereafter granted consent vide Authorisation Order dated 10-11-2005 for manufacture of pig iron, steel billets/slabs, steel bars and rods, etc. b

4. The appellant had set up the plant and begun manufacturing process and later by its letter dated 30-11-2007 applied for environmental clearance. On 20-2-2008, the Government of India, Ministry of Environment and Forests granted environmental clearance, the relevant portions of the Clearance being:

"2.0. The Ministry of Environment and Forests has examined the application. It is noted that M/s Electrotherm (India) Ltd. have proposed expansion of Pig Iron Plant (150 to 350 TPD) with Captive Lignite/Coal char based Power Plant (24 MW) and WHRB (6 MW) at Samakhiali, Bhachhu, Kutch, Gujarat. Total project area is 100.6276 ha and expansion will be carried out in 20.79 ha. No national park of wildlife sanctuary is located within 10 km ... Total cost of project is Rs 90.00 crores.... c

3.0. Iron ore will be reduced in a blast furnace. ESP dust collectors, venture scrubbers, bag letters will be provided to control are emissions from WHRB, AFBSC, boiler, crusher house, etc. Gas will be cleaned in GCP. Total water requirement of 650 m³/day will be supplied by Gujarat Water Supply and Sewage Board (GWSSB), zero discharge will be adopted. Fine particles of coke, iron ore and ETP sludge will be recycled and reused in the process. BF slag will be sold to cement manufacturers to be used for road construction. Fly ash will be used in the captive brick manufacturing plant. Char from the sponge iron plant will be 100% utilised in the FBC boiler. d

4.0. Public hearing/Public consultation meeting was held on 12-6-2007. e

5.0. The Ministry of Environment and Forests hereby accords environmental clearance to the above project under EIA Notification dated 14-9-2006 subject to strict compliance of the following conditions...." f

The environmental clearance then sets out certain specific conditions and general conditions. g

5. The appellant thereafter, applied for expansion of steel plant. The matter was dealt with in the Ninety-first Meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 9-2-2009 to 11-2-2009. The appellant had informed that public hearing for the previous project was held on 12-6-2007 and that the proposed expansion would be within the existing h

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a industrial premises and no extra land would be required. The matter was dealt with by the Committee and the relevant minutes were:

“PAs vide letter dated 29-12-2008 informed that public hearing for the previous project was held on 12-6-2007, for which, environmental clearance was accorded vide Ministry’s Letter No. J-11011/503/2006/IA-II(I) dated 20-2-2008. It is also informed that proposed expansion will be within the existing industrial premises and no extra land will be required.

b M/s Electrotherm (India) Ltd. have proposed for the expansion of steel plant at Milestone No. 310 of NH No. 8A, Village Samkhiyali, Taluka Bhachau, Kutch, Gujarat. PAs have mentioned that sponge iron, DI pipes, steel rolling mill, induction furnace are existing after getting ‘NOC’ from GPCB. Environment clearance for pig iron plant and CPP (30 MW) is accorded vide letter dated 20-2-2008. Expansion will be carried out in 20.24 ha within the existing industrial premises of 100.62 ha. No national park/wildlife sanctuary/reserve forest is located within 10 km radius of the project site. Total cost of the project is Rs 274.00 crores. Rs 5.89 crores and Rs 0.40 crores will be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures. ...

c Iron ore (65,400 MTPM), limestone (8856 MTPM), manganese ore (465 MTPM), quartzite (1068 MTPM), dolomite (2471 MTPM) and lime dolofines (968 MTPM) will be used as raw material.

d Sponge iron will be produced using DRI method. Iron oxide will be chemically reduced to “hot metal” in blast furnace. Sinter plant will use iron ore fines, mill scales and flue dust. Sinter produced will be used in BF billets from steel melt shop (SMS) will be put into billet in reheating furnace. Reheated billets will be used to manufacture TMT bars. Pig iron will be heated in induction furnace (IF) to prepare duct iron pipes. Scrap and sponge iron will be changed to IF and then poured to ladle refining furnace (LRF) and then molten material will be changed to continuous casting machine (CCM) to produce billets, rods and bars. Waste gases from DRI will be used in WHRB. No AFBC is proposed during expansion.

e ESP will be provided to WHRB. Waste gases will be used in waste heat recovery boiler (WHRB) before disposing of through stack. Fugitive emissions will be controlled by dust suppression measures. Gas cleaning system will be provided to BF. Bag filters/wet cleaning system will be provided to BF. Bag house will be provided to pig iron plant. ESP will be provided to sinter plant. Multi-cyclone will be provided to re-heating furnace. Bag filters will be provided to product handling and transfer points. Dust suppression system i.e. water sprinkling will be provided to conveyer, transfer points, loading and unloading areas.

f Total water requirement from Gujarat Water Infrastructure Ltd. (GWIL) will be 2165 m³/day. PAs submitted the water allotment letter dated 22-10-2008 from GWIL. Air-cooled condenser will be provided to WHRB. The waste water from power plant will be treated in neutralisation plant. Treated waste water will be used for water sprinkling during dust

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suppression and green belt development. Sewage will be disposed of through septic tank and soak pit.

Fly ash (2820 MTPM), bed ash (600 MTPM) will be used in captive brick manufacturing plant and additionally have a tie up with cement manufacturing units. Coal char (5400 MTPM) will be used in existing power plant. Slag (5124 MTPM) will be sold to cement/brick manufacturing units. Iron ore fines, mill scale, flue dust, etc. will be used in sinter plant. BF slag will be granulated and provided to cement manufacturers. Used/Spent oil will be sold to authorised recyclers.

Out of total 100.62 ha, green belt is earmarked for 8 ha in existing and 5.47 ha in proposed expansion. Thus, total 13.47 ha is proposed for the green belt development. Coke, coal and waste heat from DRI will be used as fuel....”

6. After setting out the details of the proposed expansion of the project as aforesaid, the decision of the Expert Committee was as under:

“The Expert Committee (Industry) decided that PAs may be communicated the above ‘TORs’ for the preparation of EIA/EMP. As soon as the draft EIA/EMP Report is prepared as per the ‘General Structure of EIA’ given in Appendices III and III-A in the EIA Notification, 2006, the same may be submitted by the PAs to MoEF for prior environmental clearance. PAs informed to the Committee that environment clearance has been accorded to M/s Electrotherm India Ltd. for the existing plant vide letter dated 20-2-2008 with public hearing on 12-6-2007 and requested for the exemption. The Committee considered the request and exempted from the public hearing as per Para 7(ii) of the EIA Notification, 2006 due to no additional land requirement, groundwater drawal, utilisation of DR and BF gases in WHRB & char in AFBC boiler, fly ash and BF slag to cement manufacturers, etc.”

7. The matter was thereafter considered for grant of environmental clearance which came to be granted by the Government of India, Ministry of Environment and Forests by communication dated 27-1-2010, relevant portion of which was:

“The Ministry of Environment and Forests has examined the application. It is noted that proposal is for the expansion of Steel Plant at Milestone No. 310 of NH No. 8A, Village Samkhiyali, Taluka Bhachau, Kutch, Gujarat by M/s Electrotherm India Ltd. Expansion will be carried out in 21.43 ha within the existing industrial premises of 11.46 ha. No national park/wildlife sanctuary/reserve forest is located within 10 km radius of the project site. Total cost of the project is Rs 274.00 crores. Sponge iron, DI pipes, steel rolling mill, induction furnace are existing after getting “no-objection certificate” from Gujarat Pollution Control Board (GPCB). “Consent to establish” is also obtained from GPCB vide Consent No. PC/CCA/KUTCH-294/28080 dated 13-9-2006 and PC/CCA-KUTCH-294(3)13208 dated 30-4-2008. Environmental clearance for the existing plant (Pig Iron Plant and Captive Power Plant)

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(30 MW) is accorded vide Ministry's Letter No. J-11011/503/2006-IA-II(I) dated 20-2-2008. Following are the details of the existing and proposed facilities:

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| Sl. No. | Products | Production Capacity (MTPM) | | |
|---------|----------------------------|----------------------------|----------|---------|
| | | Existing | Proposed | Total |
| 1. | Sponge iron | 6000 | 18,000 | 24,000 |
| 2. | DI pipes | 4000 | 12,000 | 16,000 |
| b | Captive power | 30 MW | 15 MW | 45 MW |
| | WHRB | 6 MW | 15 MW | 21 MW |
| | FBC | 24 MW | | 24 MW |
| 4. | Pig iron (blast furnace) | 4500 | 18,600 | 23,100 |
| 5. | Sinter plant | — | 32,400 | 32,400 |
| 6. | Steel rolling mill | 5833 | 10,500 | 16,333 |
| c | MS billets/bars | 5833 | 30,000 | 35,833 |
| | Stainless steel billets | 25,000 | — | 25,000 |
| 9. | Alloy nickel | 416 | — | 416 |
| 10. | Induction furnaces | 17 sets/month | — | 17 sets |
| 11. | Electric cycle and vehicle | 83 sets/month | — | 83 sets |

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3.0. Sponge iron will be produced using DRI method. Iron oxide will be chemically reduced to "hot metal" in blast furnace (BF). Sinter plant will use iron ore fines, mill scales and flue dust. Sinter produced will be used in BF. Pig iron will be heated in induction furnace (IF) to prepare duct iron pipes. Scrap and sponge iron will be charged to IF and then poured to ladle refining furnace (LRF) and then molten material will be changed to continuous casting machine (CCM) to produce billets, rods and bars. Billets from steel melt shop (SMS) will be put into reheating furnace to manufacture TMT bars. Waste gases from DRI will be used in WHRB. No AFBC is proposed during expansion since it already exists.

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4.0. Electrostatic precipitator (ESP), dust settling chamber (DSC), after burning chamber (ABC), gas cleaning system with bag house, bag filters, multi-cyclones, dust collectors, stack of adequate height, dust suppression and extraction system will be provided to control air emissions. Total water requirement from Gujarat Water Infrastructure Ltd. (GWIL) will be 2165 m³/day and water is allotted vide letter dated 22-10-2008. No groundwater will be utilised. Air-cooled condenser will be provided to WHRB. No waste water will be discharged from sponge iron plant, pig iron plant, sinter plant, WHRB power plant, TMT bar plant, BI pipe and induction/arc furnace. The waste water from power plant will be treated and used for dust suppression and green belt development. Coal char will be used in existing power plant, coal dust in the boiler, iron ore fines, mill scales, flue dust, etc. in sinter plant. Fly ash will be used in captive brick manufacturing plant and also provided to cement manufacturing units.

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Slag will be sold to cement/brick manufacturing units. Bed ash will be disposed off in secured landfills.

5.0. Public hearing for the existing plant was held on 12-6-2007 and is exempted for the proposed exemption as per Para 7(ii) of the EIA Notification, 2006.”

8. On or about 10-5-2010, Respondent 1 herein filed Special Civil Application No. 5986 of 2010 in the High Court of Gujarat, in public interest, seeking revocation of environment clearance granted to the appellant for expansion of its plant. It was submitted inter alia that as a result of expansion, the proposed capacity and activities of the appellant were to increase substantially and that the environmental clearance granted for expansion of plant was not in conformity with the EIA Notification of 2006. The appellant which was Respondent 3 in the High Court, in its reply submitted inter alia that the petition was not in public interest and Respondent 1 was set up by the business rivals of the appellant and that the appellant had complied with all the norms and requirements and was rightly granted environment clearance for expansion of the plant. The responses filed on behalf of the Ministry of Environment and Forests, Government of India and Gujarat Pollution Control Board also submitted that the environmental clearance was rightly granted and that the activities of the appellant were periodically and regularly being monitored to ensure that stipulated environmental safeguards were complied with.

9. After hearing rival submissions, the High Court by its judgment and order dated 11-5-2012¹ allowed Special Civil Application No. 5986 of 2010 principally on the ground that the environmental clearance dated 27-1-2010 was granted without there being public consultation or public hearing which was a mandatory requirement under the 2006 Notification. The observations of the High Court in that behalf were as under: (*Patel Vipulkumar case*¹, SCC OnLine Guj paras 18-19)

“18. The facts to a certain extent have disturbed us for the simple reason that Respondent 3 set up its unit of steel plant in the year 2005 and started operating the same full-fledgedly. However, till 2008 they had no environmental clearance and it is only for the first time vide order dated 20-2-2008 that environmental clearance was granted and that too for expansion. Subsequently, once again in 2009, they applied for environmental clearance as they proposed to increase the production capacity almost three times the existing capacity, for which also environmental clearance was granted but without giving any public hearing or public consultation.

19. Thus, the only question for our consideration is as to whether the environmental clearance dated 27-1-2010 can be termed as illegal in the absence of public consultation or public hearing as mandatorily provided by Notifications dated 2006. We agree with the learned counsel Mr Oza that there is a basic flaw in the environmental clearance granted in favour of Respondent 3. It is apparent that when public hearing took place in the year 2007, the same was on the basis of the first application which Respondent 3

¹ *Patel Vipulkumar Ramjibhai v. Union of India*, 2012 SCC OnLine Guj 3408 : (2012) 3 Guj LR 2312

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a had preferred for expansion of the steel plant. Objections were raised by the persons concerned. However, when environmental clearance came to be granted vide order dated 27-1-2010 pursuant to the second application dated 8-6-2009 preferred by Respondent 3 for enhancing the production capacity, the requirement of public hearing/public consultation was waived by the authority on the assumption that in the year 2007 public hearing was already undertaken. It is undisputed that in the year 2007 when the public hearing was given, the objections and suggestions were taken into consideration by the authority and environmental clearance was accorded in the year 2008 but, thereafter, when the second application was preferred dated 8-6-2009 for enhancing the production capacity by more than double, people were not made aware of this proposal of Respondent 3 and the authority proceeded to accord environmental clearance waiving public hearing.”

c The High Court also placed reliance on the pronouncement of this Court in *Lafarge Umiam Mining (P) Ltd. v. Union of India*². The High Court thus set aside environmental clearance dated 27-1-2010 and directed the appellant to stop operations of the entire plant and further directed that the operations could be restarted only after fresh environmental clearance was accorded in its favour by the Ministry of Environment and Forests and the Union of India. The decision of the High Court is presently under challenge.

d **10.** In this appeal by special leave, this Court issued notice on 15-5-2012³ and by further order dated 18-5-2012⁴ stayed the operation of the judgment and order of the High Court. It also directed the Central Pollution Control Board to file status report in respect of plant and compliance with statutory requirements

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2 (2011) 7 SCC 338
3 *Electrothem (India) Ltd. v. Patel Vipulkumar Ramjibhai*, SLP (C) No. 16860 of 2012, order dated 15-5-2012 (SC), wherein it was directed:

f “Issue notice. Ms Bina Madhavan, Advocate accepts notice on behalf of Respondent 1. Respondents 2, 3 & 4 may be served dasti returnable on Friday, 18-5-2012. In addition, learned Standing Counsel may also be served. Required notices may be given to the learned counsel for the petitioner today itself.”

g 4 *Electrothem (India) Ltd. v. Patel Vipulkumar Ramjibhai*, SLP (C) No. 16860 of 2012, order dated 18-5-2012 (SC), wherein it was directed:

h “The learned counsel for the parties have exchanged the affidavit. List this matter in the 3rd week of July 2012. In the meanwhile, the parties may file additional documents, if any. In the meantime, the order passed by the High Court dated 11-5-2012 in Special Civil Application No. 5986 of 2010 to the extent that the establishment should be closed is stayed for the time being and the declaration that the environmental clearance dated 27-1-2010 is illegal and not tenable in law is kept in abeyance. This order is being passed on the undertaking given by the Union of India and the Central Pollution Control Board that they would monitor and ensure the compliance of the statutory requirements to curb the menace of pollution. The Central Pollution Control Board shall file the status report in this regard by the 2nd week of July 2012.”

by the appellant. On 18-7-2012, an affidavit was filed on behalf of CPCB stating that during its visit half of the plant was not in operation and as such actual compliance with the statutory requirements could not be ascertained. It further stated that the industry of the appellant was non-compliant with pollution standards in one or the other area and made certain recommendations.

11. The matter was thereafter taken up on 22-4-2014⁵ when the following order was passed by this Court:

“The matter has been almost fully heard. Having regard to the submissions of the learned Senior Counsel and the Notifications of 1994 and 2006, it has become necessary to get the joint inspection done of the petitioner’s project from the Gujarat Pollution Control Board and Central Pollution Control Board (CPCB) and report submitted to this Court whether the petitioner has complied with the recommendations of the Central Pollution Control Board which are specified in Para 7 of the affidavit of Mr R.K. Purohit, Senior Executive Director of the petitioner in response to the affidavit of Central Pollution Control Board dated 18-7-2012.

We, accordingly, direct the Central Pollution Control Board and Gujarat Pollution Control Board to make a joint inspection of the petitioner’s project in the 3rd week of June, 2014 and report about the compliance with the recommendations as set out in the above affidavit. The report shall be submitted on or before 5-7-2014. We make it clear that if from the report it transpires that the petitioner has not yet complied fully with the recommendations specified in the affidavit noted above, the special leave petition shall have to be dismissed. On the other hand, if the full compliance with the above recommendations is found to have been made, the impugned order of the High Court will be set aside....”

12. In the affidavit filed on 7-7-2014, on behalf of CPCB, it was stated inter alia that pursuant to the order dated 22-4-2014⁵ passed by this Court, a joint inspection was carried out as directed and that the industry of the appellant had complied with most of the recommendations, though there were still certain shortcomings.

13. The matter was thereafter taken up for hearing. Appearing in support of the appeal Dr A.M. Singhvi, learned Senior Advocate submitted that most of the recommendations made in the affidavit dated 18-7-2012 having been complied with, the matter now stood in a narrow compass. Mr Huzefa Ahmadi, learned Senior Advocate appearing for Respondent 1, however, submitted that the infirmity on account of absence of public hearing/public consultation which is a mandatory requirement under the EIA Notification of 2006, rendered the environmental clearance dated 27-1-2010 invalid and illegal.

14. The facts on record are clear that while granting environmental clearance on 20-2-2008, public consultation/public hearing was undertaken on 12-6-2007. As on that date the status of the project was that the capacity of pig iron plant was to be 350 TPD, power plant to be 24 MW, the total

⁵ *Electrothem (India) Ltd. v. Patel Vipulkumar Ramjibhai*, SLP (C) No. 16860 of 2012, order dated 22-4-2014 (SC)

ELECTROTHERM (INDIA) LTD. v. PATEL
VIPULKUMAR RAMJIBHAI (*U.U. Lalit, J.*)

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a cost of the project was Rs 90.00 crores and the total water requirement was 650 m³/day. The High Court was absolutely right that after expansion the capacity of the plant was to increase threefold. The tabular chart given in environmental clearance dated 27-1-2010 itself shows the tremendous increase in the capacity. Consequently, the pollution load would naturally be of greater order than the one which was contemplated when the earlier public consultation/public hearing was undertaken on 12-8-2007. Further, the water requirement had also risen from 650 m³/day to 2165 m³/day. The increase in pollution load and water requirement were certainly matters where public in general and those living in the vicinity in particular had and continue to have a stake.

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15. Public consultation/Public hearing is one of the important stages while considering the matter for grant of environmental clearance. The minutes of the meetings held on 9-2-2009 to 11-2-2009 show that the request of the appellant for exemption from the requirement of public hearing was accepted by the Committee. The observations of the Committee suggest that there would be no additional land requirement, groundwater drawal and certain other features. However, the water requirement, which is a community resource, was definitely going to be of greater order in addition to the fact that the expansion of the project would have entailed additional pollution load.

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16. It must be stated here that after the EIA Notification of 2006, a draft Notification was issued on 9-1-2009 wherein an amendment was suggested in Para 7(ii) of the EIA Notification dated 14-9-2006 to the effect that in cases of expansion of projects involving enhancement by more than 50% holding of public consultation/public hearing was essential; implying thereby that in cases where expansion was less than 50% public consultation/public hearing could be exempted. Without going into the question whether public consultation/public hearing could be so exempted, it is relevant to note that this idea in the draft Notification was not accepted, after a Committee constituted to advise in the matter had given its report on 30-10-2009 to the contrary. As a result, the final Notification dated 1-12-2009 did not carry or contain the amendment that was suggested by way of draft notification. Consequently, no exemption on that count could be given when the environmental clearance came to be issued on 27-1-2010.

17. In *Lafarge*² public consultation/public hearing was considered and found to be mandatory requirement of the environmental clearance process by this Court. In its conclusions culled out in para 122(xiv) as regards public consultation/public hearing, it was observed by this Court: (SCC p. 384)

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"122. ... (xiv) The public consultation or public hearing as it is commonly known, is a mandatory requirement of the environment clearance process and provides an effective forum for any person aggrieved by any aspect of any project to register and seek redressal of his/her grievances."

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2 *Lafarge Umiam Mining (P) Ltd. v. Union of India*, (2011) 7 SCC 338

18. At the same time, the observations by this Court² while summing up the discussion in para 119 are quite eloquent: (*Lafarge case*², SCC p. 380)

“119. ... It cannot be gainsaid that utilisation of the environment and its natural resources has to be in a way that is consistent with principles of sustainable development and intergenerational equity, but balancing of these equities may entail policy choices. In the circumstances, barring exceptions, decisions relating to utilisation of natural resources have to be tested on the anvil of the well-recognised principles of judicial review. Have all the relevant factors been taken into account? Have any extraneous factors influenced the decision? Is the decision strictly in accordance with the legislative policy underlying the law (if any) that governs the field? Is the decision consistent with the principles of sustainable development in the sense that has the decision-maker taken into account the said principle and, on the basis of relevant considerations, arrived at a balanced decision? Thus, the Court should review the decision-making process to ensure that the decision of MoEF is fair and fully informed, based on the correct principles, and free from any bias or restraint.”

19. In terms of the principles as laid down by this Court in *Lafarge*², we find that the decision-making process in doing away with or in granting exemption from public consultation/public hearing, was not based on correct principles and as such the decision was invalid and improper.

20. At the same time, we cannot lose sight of the fact that in pursuance of environmental clearance dated 27-1-2010, the expansion of the project has been undertaken and as reported by CPCB in its affidavit filed on 7-7-2014, most of the recommendations made by CPCB are complied with. In our considered view, the interest of justice would be subserved if that part of the decision exempting public consultation/public hearing is set aside and the matter is relegated back to the authorities concerned to effectuate public consultation/public hearing. However, since the expansion has been undertaken and the industry has been functioning, we do not deem it appropriate to order closure of the entire plant as directed by the High Court. If the public consultation/public hearing results in a negative mandate against the expansion of the project, the authorities would do well to direct and ensure scaling down of the activities to the level that was permitted by environmental clearance dated 20-2-2008. If public consultation/public hearing reflects in favour of the expansion of the project, environmental clearance dated 27-1-2010 would hold good and be fully operative. In other words, at this length of time when the expansion has already been undertaken, in the peculiar facts of this case and in order to meet ends of justice, we deem it appropriate to change the nature of requirement of public consultation/public hearing from pre-decisional to post-decisional. The public consultation/public hearing shall be organised by the authorities concerned in three months from today.

21. This appeal, therefore, stands disposed of with the aforesaid modifications. No order as to costs.

² *Lafarge Umiam Mining (P) Ltd. v. Union of India*, (2011) 7 SCC 338

2015 SCC OnLine NGT 169

Before the National Green Tribunal Principal Bench, New Delhi
(BEFORE SWATANTER KUMAR, CHAIRPERSON, U.D. SALVI, J.M., DR. D.K. AGRAWAL, E.M.,
PROF. A.R. YOUSUF, E.M. AND BIKRAM SINGH SAJWAN, E.M.)

Original Application No. 37 of 2015
(M.A. No. 291, 293 & 294 of 2015)

AND

Original Application No. 213 of 2014
(M.A. 755 of 2014 & M.A. No. 177 of 2015)

In the Matter of:

S.P. Muthuraman S/o. Ponnusamy, No. 204, Railway Feeder Road,
Sankar Nagar Post-627357 Tirunelveli Distict. ... Applicant;

Versus

1. Union of India Rep. by the Secretary to Government, Ministry of Environment and Forests, Government of India, Paryavaran Bhavan, New Delhi-110003
2. The State of Tamil Nadu Rep. by the Secretary to Government, Ministry of Environment and Forests, Government of Tamil Nadu, Fort St. George, Chennai-600003 ... Respondents.

AND

In the Matter of:

Manoj Mishra Convener, Yamuna Jiye Abhiyaan, 178-F, Pocket-4,
Mayur Vihar, Phase-I, Delhi-110091. ... Applicant;

Versus

Union of India Through the Secretary, Ministry of Environment,
Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh
Road, New Delhi-110003. ... Respondent.

Original Application No. 37 of 2015, M.A. No. 291, 293 & 294 of 2015, Original
Application No. 213 of 2014 and M.A. 755 of 2014 & M.A. No. 177 of 2015

Decided on July 7, 2015, [Hearing on: 29th April, 2015]

Original Application No. 37 of 2015

Counsel for Applicant:

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Mr. Shyamal Anand, Mr. R. Jawahar Lal and Mr. Sarvanna Kumar, Advocates for

undertaken at the site in question. The impugned Office Memoranda do not even take note of this aspect and suffer from the infirmity of non-application of mind. Furthermore, the impugned Office Memoranda also offend the doctrine of "*Expressio unius est exclusio alterius*". Since the law provides performance of acts in a particular manner, the impugned Office Memoranda under the garb of 'guidelines', cannot be permitted to alter the same completely; being prejudicial to the principal law.

79. The impugned Office Memoranda do not even advert themselves to how the interest of the environment would be protected in cases where the projects have substantially progressed. It does not even refer as to how detrimental effects on environment would be taken care of, if the Project Proponent is permitted to file an application and claim Environmental Clearance after the project is at a very advanced stage of completion.

80. The impugned orders have been titled as 'Office Memorandum' and content of the orders captioned as 'guidelines' but in fact, are Office Memoranda which directly vary the substantive law in force. This has been adopted by the Ministry as a *via-media* to bypass the statutory requirements of law or for truncating the prescribed process of environmental protection, in terms of Notification of 2006. These Office Memoranda not only substantially amend or alter its application but even frustrate the requirements of the existing law. The impugned Office Memoranda vest in the authorities an unguided and unfettered discretion, both in regard to processing of application and in condonation of violation already committed by the Project Proponent. It is a very pertinent defect in terms of administrative law jurisprudence. An unguided and unreasonable discretion is bound to result in arbitrary exercise of powers. The MoEF being the controlling Ministry, all the expert bodies under it would be duty bound to carry out its directives even if it is unreasonable and unjustifiable. The expression 'serious violations', which will entitle the Ministry to outrightly reject an application, has neither been defined nor explained in the Office Memoranda. It is left in the absolute discretion of the Ministry as to which cases would be permitted as cases of serious violations and exclude others. The foundation of these Office Memoranda being that projects which are already under way and even have substantially progressed, can file an application for grant of Environmental Clearance, which has to be considered in accordance with these Office Memoranda, is an approach which is completely prohibited in terms of the Notification of 2006. The reservation of such unguided and absolute right by the Ministry in itself would necessarily have an element of discrimination and arbitrariness. The Office Memoranda do not spell out any rational or proper differential criteria for condonation or otherwise of the violations stated to have been committed by the Project Proponent.

81. The MoEF has issued three Office Memoranda dated 16th November, 2010, 12th December, 2012 and 27th June, 2013. All these Office Memoranda have the same feature, that is, instances of project commencement and their construction without obtaining Environmental Clearance, have been brought to the notice of the Ministry. There is no reason, much less a plausible justification recorded in any of these Office Memoranda, as to why such violations have been continued year after year. If the intention was to make it a one-time settlement, to serve the economic and public interest, then MoEF ought not to have issued any further extension to the Office Memorandum of 2010. Repetitive condonation of violation of law would only aim at encouraging violators to flout the law repeatedly. At this stage, we may also deal with the submission made on behalf of the Respondents that issuance of these Office Memoranda was justifiable on the basis of the doctrine of necessity or implied power. This submission is entirely ill-founded. Firstly, we fail to understand as to why the Ministry should take a step for condoning violation of law which was not within its jurisdiction and secondly why should it prescribe a methodology contrary to law.

Doctrine of necessity does not operate on the axis of illegality and violations. Even if the doctrine of necessity could have any application on the facts of the present case then, the necessity could be at best a onetime scheme rather than providing a regulatory and parallel mechanism in violation of the law in force, which would negate the substantive provisions of the law in fact. It is a settled canon of law that Government cannot issue directions which would encourage violation of law on the one hand and frustrate the object of law on the other. Mandatory principle of proper governance and even the law is that the authorities must enforce the law and ensure that the public respects the law. This is the fundamental essence of the Rule of Law. Even on this count, the Office Memoranda would amount to improper use of power, whether administrative or executive.

82. Upon proper analysis of the language of these Office Memoranda and the law (referred herein after), these Office Memoranda whether they be issued as administrative orders or issued in exercise of executive power, are not clarificatory or supplementary to the Notification of 2006. On the contrary, under no uncertain terms, they are supplanting the Notification of 2006 and are in complete derogation to the laws in force.

83. The Office Memoranda have been issued without proper application of mind, where casualty is the Notification of 2006 and the environment. The authorities have not even ventured to examine that these Office Memoranda which allegedly take recourse to the Notification of 2006 are incapable of complying with the procedure of Screening, Scoping, Public Consultation and Appraisal even substantially. For instance, site selection itself is a part of this process and if the construction has already been completed substantially or otherwise, this criteria and other relevant considerations would be rendered irrelevant. Similarly the purpose of public hearing is to hear objections of the public at large in relation to all facets of the proposed project including site selection, its impact on environment, on their way of life and what directions are required to be issued to protect the environment and adjacent inhabitation or agricultural activities if any before any activity of the project is undertaken. All these requirements would be rendered otiose and irrelevant. Thus, even if the two most important aspects of the Notification of 2006 would not be complied with still the Office Memoranda would contemplate issuance of Environmental Clearance to these projects. This brings to the surface that the Ministry has not exercised its jurisdiction, even if vested in it, in accordance with law. The above are the few patent and serious infirmities in the Office Memoranda. An attempt is made to save them and their legality under the shelter of exercise of executive power. Certainly, the executive power of the Government is very wide. We have already dealt with the executive power by the State at some length above. Even if these instructions or orders are deemed to have been issued in exercise of executive power, even then, they have to be supplemental to and not to supplant, the law.

84. In the case of *Union of India (UOI) v. K.P. Joseph*, AIR 1978 SC 303, dealing with the question whether Respondent No. 1 in that case was entitled to the benefit of ex-military personnel on re-employment, in view of the administrative instructions that had been issued in absence of rules framed under Article 309 of the Constitution, the Supreme Court while confirming the judgment of the High Court of Mysore held as under:

"9. Generally speaking, an administrative Order confers no justiciable right, but this rule, like all other general rules, is subject to exceptions. This Court has held in *Sant Ram Sharma v. State of Rajasthan*, (1968) II LLJ 830 SC that although Government cannot supersede statutory rules by administrative instructions, yet, if the rules framed under Article 309 of the Constitution are silent on any particular point, the Government can fill up gaps and supplement the rules and issue instructions not inconsistent with the rules already framed and these instructions

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will govern the conditions of service.”

85. The Supreme Court had also taken a similar view in the case of *Sant Ram Sharma v. State of Rajasthan*, AIR 1967 SC 1910, where the Court clearly held that Government cannot amend or supersede statutory rules by administrative instructions, but, if the rules are silent on any particular point, the Government can fill up the gaps and supplement the rules and issue instructions not inconsistent with the rules already framed. Similarly, in the case of *M. Srinivasa Prasad v. The Comptroller and Auditor General of India*, (2007) 10 SCC 246, the Supreme Court held that if the statutory rules in force are absent or are silent on an particular aspect, then, executive orders can fill up such lacunas. The administrative instructions would normally have no force of law and would relate to matters procedural in nature, without affecting substantive rights or obligations.

86. The executive instructions too cannot go beyond the executive power, which can also not be beyond the statutory provisions under which they are exercised. Furthermore, such instructions should not be vague or uncertain and must provide proper guidelines. By executive instructions, the authority issuing them cannot open new heads. The executive instructions within these confines should be issued only when there are no statutory provisions on the subject. They would also be issued to supplement statutory provisions, to ensure their proper application. In the case of *Indra Sawhney etc. v. Union of India, etc.*, 1992 Supp (3) SCC 217, Supreme Court mandated that such propositions are unexceptionable and executive instructions which go contrary to statutory provisions or the rules under Article 309 or any other statutory rules, shall not be operative to the extent they are contrary to the statutory provisions or rules. In the case of *M.C. Mehta v. Union of India (UOI)*, (Supra), not only that the Court reiterated these principles but even questioned MoEF's intent to legalise the commencement or continuance of mining activity without compliance to the stipulations of the Notification of 2006. However, it was observed that in any case, a statutory notification cannot be notified by issuance of circular. Such actions demonstrate non-sensitivity of MoEF to the principles of sustainable development and the object behind the issuance of the notification.

These principles would be equally applicable to the exercise of administrative power either by issuance of guidelines or Office Memoranda. A Bench of this Tribunal while dealing somewhat similar situation in the case of *Himmat Singh Shekhawat v. State of Rajasthan*, 2015 All (I) NGT Reporter (1) (Delhi) 44 held as under:

“58. This power to issue guidelines is not a general power but is a specific power with inbuilt limitations. The limitations are that, such guidelines would alone be for the purposes of categorizing upon scrutiny of applications, projects that would fall under Category B1' and 'B2' respectively with specific exclusion of the projects specified under Item 8(b) of the Schedule. Restrictive power to issue guidelines, is further illustrated, by the fact that Clause 2 of the Notification of 2006 does not contemplate any such categorization except projects falling under Category 'A' and 'B' only. The purpose appears to be that the power of State Level Appraisal Committees to bifurcate projects into 'B1' and 'B2' categories respectively should not be unguided and unchecked. Prescription of such guidelines could be done by issuance of appropriate Office Memorandum or orders as the power to issue such guidelines has been vested in MoEF under the statutory provisions. But the greater part of such Office Order or Office Memorandum should be such that it would not vary the content or be contrary to the statutory provisions which are in place by virtue of enacting such provisions either by primarily legislative or delegated legislative power.

59. It is a settled principle that legislature can only delegate to an outside body subordinate or ancillary legislative power for carrying out a policy of the act. The

body to whom such power is delegated is required to act strictly within the framework of such delegated powers. Such power is incidental to the exercise of all powers in as much as it is necessary to delegate for the proper discharge of all the public duties. It is because the body constituted should act in the manner indicated in law and should exercise its discretion by following the procedure therein itself or by such delegation as is permissible. Unlike the situation the judges are not allowed to surrender their judgments to others. The legislature and executive can delegate powers within the framework of law. It is an axiom of Constitutional law that representative legislative bodies are given the legislative powers because the representative Government vested in the persons chosen to exercise the power of voting taxes and enacting laws which is the most important and sacred trust known to civil Government. The Delegation has its own restrictions. For instance, the legislature cannot delegate its functions of laying down legislative policy in respect of a measure and its formulation as a rule of conduct. A memorandum which is nothing but administrative order or instruction cannot amend or supersede the Statutory Rules adding something therein which would specifically alter the content and character of the Notification itself. It has been consistently reiterated with approval by the Hon'ble Supreme Court that administrative practice/administrative order cannot supersede or override the statutory rule of Notification and it is stated to be a well settled proposition of law.

The delegated power is primarily for carrying out the purposes of the Act and this power could hardly be exercised to bring into existence a substantive right or obligation or disabilities not contemplated by the provisions of the Act or the primary Notification. A Constitution Bench of the Hon'ble Supreme Court in the case of *Sant Ram v. State of Rajasthan*, AIR 1965 SC 1910, while dealing with the scope of executive instructions held that instructions can be issued only to supplement the statutory rules and not to supplant it. Such instructions should be subservient to the statutory provisions. They would have a binding effect provided the same has been issued to fill up the gaps between the statutory provisions and are not inconsistent with the said provisions. (Reference in regard to the above can be made *In Re: The Delhi Laws Act, 1912*, AIR 1951 SC 332, *P.D. Aggarwal v. State of U.P.*, (1987) 3 SCC 622, *Ram Sharma v. State of Rajasthan*, (1968) 1 ILLJ 830 SC, *Mahender Lal Jaine v. State of Uttar Pradesh*, (1963) Supp. 1 SCR 912, *Naga People's Movement of Human Rights v. Union of India*, AIR 1998 SC 431).

60. In the case before the Tribunal, specific challenge has been raised to the Office Memorandum dated 24th December, 2013 on the ground that it violates the above stated principles, in as much as by an Office Memorandum, guidelines for 'B1', 'B2' categories cannot be provided and thus, it runs contra to the statutory provisions. We may also notice here that vide this memorandum, besides providing guidelines for categorization of B1', 'B2' projects under Clause (iii) of paragraph 2, MoEF has taken a decision that river sand mining project with mine lease area of less than 5 hectares may not be considered for grant of Environmental Clearance and river sand mining projects with mining lease areas of equal or more than 5 hectares but less than 25 hectares will be categorized 'B2', that too subject to the restrictions stated in that Office Memorandum. Though, the Applicants have primarily raised a challenge in regard to the former only, but bare reading of the Notification has brought before us the question in regard to the latter as well. Dealing with the former challenge afore-noticed, it is clear that Clause 7 of the Notification of 2006 provides for further categorization of projects falling under Category 'B' into 'B1' and 'B2'. Though Clause 2 of the said Notification does not contemplate any classification other than 'A' and 'B', but, there is no challenge raised before us to the Notification of 2006 and we see no reason to go into that aspect. The Notification of 2006 *ex facie* permits classification of Category 'B' projects and that

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discretion has been vested in State Level Expert Appraisal Committee, which, upon scrutiny of the applications has to take the decision. This discretion vested in the Committee is ought to be controlled by the issuance of guidelines by MoEF. MoEF had issued two guidelines, one on 24th June, 2013 and the other on 24th December, 2013 in relation to further classification and criteria which is to be adopted in that regard. Since the Office Memorandum dated 24th June, 2013, only relates to brick earth and ordinary earth and as per that Office Memorandum, such projects where the excavation area was less than 5 hectares were to be categorized as 'B2' projects, subject to the guidelines stated therein they were to be screened in accordance with the Notification of 2006. Under Paragraph 4(b) of this Memorandum, restrictions were laid down prohibiting any excavation of brick earth or ordinary earth within one km of national parks and wild life sanctuaries as well as it intended to elaborate the cluster situation. If the periphery of one borrow area is less than 500 m from the periphery of another borrow area and the total borrow area equals or exceeds 5 hectares, the activity shall become Category 'B1' project in terms of the Notification of 2006 and such activity will be permitted only if the Environmental Clearance has been obtained in respect of the cluster. If we examine these two Office Memoranda in the light of the well settled legal principles that we have referred above, partially both these Office Memoranda cannot stand scrutiny of law. As far as guidelines or instructions in relation to classification of projects falling under Category 'B' into B1' and 'B2' is concerned, the exercise of such power would be saved on the strength of Clause 7(1) of the Notification of 2006 because it is an Office Memorandum which provides guidelines for exercise of discretion by the State Level Expert Committee for such categorization. Thus, it is an exercise of executive power contemplated under the Notification of 2006. Hence the contention of the Applicant on that behalf cannot be accepted and deserves to be rejected. However, in so far as the Office Memorandum dated 24th June, 2013 placing a prohibition under paragraph 4(b)(i) is concerned, it apparently is beyond the scope of such guidelines. Prohibition of carrying on of mining activity or excavation activity which is otherwise permitted by the Notification of 2006 cannot be done by an Office Order, because it would apparently run contra to the provisions of Notification of 2006. In other words, such restriction is not only beyond the scope of the power vested in MoEF but in fact imposition of absolute restriction in exercise of delegated power is not permissible. Similarly, the Office Memorandum dated 24th December, 2013 in so far as it declares that river sand mining of a lease area of less than 5 hectares would not be considered for grant of Environmental Clearance is again violative of the above settled principles. No such restriction has been placed under the Notification of 2006 or under the provisions of the Act and the Rules of 1986. The executive therefore, cannot take away the right which is impermissible under the principle or subordinate legislation. Of course, part of the same Paragraph 2(iii), in so far as it categorizes 'B2' projects, covering the mine lease area equal to or more than 5 hectares but less than 25 hectares is concerned, the same cannot be faulted in view of the fact that it only provides a criteria or a guiding factor for determining the categorization of projects. It neither vests any substantive right, nor any obligation in relation to any matter that is not squarely or effectively covered under the Notification. This only furthers the cause of fair classification of projects, which is the primary purpose of the Notification. For these reasons, we quash paragraph 4(b)(i) of the Office Memorandum dated 24th June 2013 and part of paragraph 2(iii) in so far as it prohibits grant of Environmental Clearance to the mine area of less than 5 hectares as being violative of the Notification of 2006 and the Rules of 1986. The MoEF has no jurisdiction in exercise of its executive power to issue such prohibitions, impose restrictions and/or create substantive rights and

obligations. It *ex facie* is not only in excess of powers conferred upon them, but, is also in violation of the Notification of 2006. As already noticed, this Notification has been issued by MoEF in exercise of powers conferred upon it under Clause 5 of sub section 2 of section 3 of the Act of 1986 read with sub rule 4 of rule 5 of the Rules of 1986. Vide this Notification, the Central Government substituted item no. 1(a) and entries relating thereto. A Clause stating that the projects relating to non-coal mine lease and where the mining area was less than 50 hectares equal or more than 5 hectares was to be treated as Category 'B' projects, in addition to that, the minor mineral lease projects, where the mine lease area was less than 50 hectares, were also to be treated as Category 'B' projects, also, the general conditions with provisos were also substituted. It is significant to note here that the Notification of 2006 had been amended by the Central Government by issuing a Notification dated 1st December, 2009 in exercise of its delegated legislative powers. While issuing this Notification, the Central Government had followed the procedure prescribed under Sub Rule 2 and 3 of Rule 5 of Rules of 1986. It had invited objections from the public and considered those objections as is evident from the very recital of the Notification where it recorded "and where as all objection and suggestions received in response to above mentioned draft Notification have been duly considered by the Central Government....." and then it published the final Notification. Vide the Notification dated 1st December, 2009, the Central Government had substituted item no. 1(a) and the entries relating thereto of the Schedule to the Notification of 2006 besides making other amendments as well in different entries. However, while making further amendments vide Notification dated 9th September, 2013, the Central Government did not follow the prescribed procedure under Rule 5. On the contrary it substantially altered, and in fact substituted, as well as made additions of a substantial nature in Clause 4 and Clause 5 of the Notification of 2006, where, for the first time, it added minor mineral mine leases of less than 50 hectares, and also added 'general conditions to apply except for the projects where the area was less than 5 hectares in relation to minor mineral lease' and provisos thereto. The period for applying for renewal of mine lease of one year was changed to two years under the Notification dated 9th September, 2013."

87. There could be a case of executive instructions being derogatory to the principal statute or a statutory notification, still there could be cases of executive instructions being *ultra vires* or violative of the statutory notification and still further there could be cases of conflict between the two. In either of them, the Court have not tilted in favour of sustaining such executive instructions. In the case of *D.D.A. v. Joginder S. Monga*, (2004) 2 SCC 297, the Supreme Court held that only in a case where a conflict arises between a statute and an executive instruction, indisputably, the former will prevail over the latter. Executive instructions can supplement a statute, but they cannot run contrary to statutory provisions or whittle down their effect. In other words, executive instruction which is in conflict of and which whittles down the effect of the main Act would be liable to be struck down. When an executive instruction is beyond the power of the authority issuing the same, it would be *ultra vires* and whenever the instruction is found to be beyond the inherent jurisdiction, it would be wholly void. The delegatee can act only within the scope of delegation. The limitations are all with regard to the substance, procedure and form.

88. Another contention raised on behalf of the Respondent while relying upon the judgment of Supreme Court in the case of *Vineet Narain v. Union of India (UOI)*, (1998) 1 SCC 226 and other cases, is that executive instructions are enforceable if they do not change the essentials of law. This contention cannot be accepted for reasons that are recorded in this part of the Judgment. By whatever nomenclature it is addressed, whether as executive instructions, policy decision or merely Office

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Memoranda issued in exercise of administrative power, their infirmities and lacunas of law would not alter. Favour of constitutionality is to be construed for such executive instructions. It is also the contention that these instructions do not dilute the effect of law but make it more rigorous. Furthermore, it being a policy decision of the MoEF, the Tribunal should not interfere in it. We are also unable to appreciate as to how these Office Memoranda fill up the gaps in the Notification of 2006. An instrument which provides for disobedience of law and indiscriminately condones the violations of the substantive law in force, it cannot be termed as an instrument made to fill up the gaps. It would be an administrative order contrary to the statutory provisions. In fact, issuance of such kind of orders received judicial causticism and was deprecated by the Supreme Court in the case of *M.C. Mehta* (supra).

89. The impugned Office Memoranda are not only in conflict with the Notification of 2006, but in fact run contra thereto. What is not only intended but in fact is prohibited to be done, is being permitted by the impugned Office Memoranda. They have been issued without reference to any power or source of law and are neither pronounced nor authenticated in the name of the prescribed executive authority. Besides this, we have already noticed in great detail the various infirmities and defects from which these Office Memoranda suffer in fact and in law. This being the position of law in relation to issuance of executive instructions in exercise of executive power or delegated legislation, these Office Memoranda having been issued in exercise of administrative power, in any case, cannot withstand the legal scrutiny and resultantly, would be liable to be quashed.

Discussion on Issue No. 3:

3. Whether this Tribunal has no jurisdiction to quash both the impugned Office Memoranda?

90. Except the intervener Applicants namely M/s SPR and RG Constructions and M/s Dugar, none of the Respondents have raised any objection to the jurisdiction of the Tribunal and competence of the Tribunal to deal with impugned Office Memoranda in accordance with law. According to these Project Proponents, this Tribunal has no power or jurisdiction to quash the Office Memoranda; they having been issued in exercise of the Executive Power of the Union and forming a part of a policy decision. In support of their contention, they relied upon the judgment of the Supreme Court in the case of *Madras Bar Association v. Union of India*, (2014) 10 SCC 1 and *Union of India (UOI) v. R. Gandhi, President, Madras Bar Association*, (2010) 11 SCC 1. On the other hand, the Applicants have primarily contended in the main application that the impugned Office Memoranda are administrative orders and would be subject to merit review by the Tribunal and such a situation would not alter even if it was in exercise of Executive Power of the Union/State. This Tribunal has been vested with Original, Appellate and Special jurisdiction in regard to directing payment of compensation for damage to and for restitution and restoration of the environment. The legislature in its wisdom worded the provisions relating to the jurisdiction of the Tribunal (Sections 14 to 17 of the Act of 2010) very widely, and with a clear intent to provide this Tribunal with jurisdiction of a very wide magnitude. Upon reading the various provisions of the Act of 2010 cumulatively and in light of the underlying scheme of the Act of 2010, including the definition of 'environment' in terms of Section 2(c) of the Act of 2010, it is quite clear that this Tribunal is having all the trappings of a Court and is conferred with the twin powers of judicial as well as merit review. There is no provision in the Act of 2010 which curtails the jurisdiction of the Tribunal to examine the validity and correctness of a delegated legislation and/or administrative or executive order passed by the Government including any of its instrumentalities or authorities. The fundamental principle for invoking the jurisdiction of this Tribunal is that, the question raised should be a substantial question relating to environment and should arise out of the implementation of the enactments specified in Schedule I of the Act of 2010. It

2014 SCC OnLine NGT 892**Before the National Green Tribunal, Principal Bench, New Delhi**(BEFORE SWATANTER KUMAR, CHAIRPERSON AND U.D. SALVI, J.M. AND D.K. AGRAWAL, E.M.,
P.C. MISHRA, E.M. AND R.C. TRIVEDI, E.M.)

Prafulla Samantara

Versus

Union of India & Ors.

Original Application No. 123 of 2013
Decided on January 24, 2014

Present:

Applicant: Mr. Raj Panjwani, Sr. Advocate & Mr. Rahul Chaudhary, Advocate
Respondent No. 1: Ms. Neelam Rathore Advocate along with Ms. Syed Amber,
Advocate.

Respondent No. 2: Mr. Shibashish Misra and Mr. Suvinay Dash, Advocates.

Respondent No. 3: Mr. Pinaki Mishra, Sr. Advocate, Ms. Sangeeta Mandal Advocate,
Mr. Ramnesh Jerath, Advocate and Ms. Vineeta Bhardwaj, Advocate.**ORDERS OF THE TRIBUNAL**

We have heard the Learned Counsel appearing for the parties at some length.

The applicant has filed this application with the only prayer that prohibitory orders be issued against the Respondents to stop work, including tree felling in the forest land until the provisions of the Forest (Conservation) Act, 1980 (for short the 'Act of 1980') are complied with and appropriate order in that regard is issued by the State Governments.

It is not necessary for us to notice the facts in any greater detail in view of the order we propose to pass and the only prayer made in this application. The short question that needs to be answered by this Bench is whether the order contemplated under Section 2 of the Act of 1980 is to be passed by the State Government or not.

Section 2 of the Act of 1980 reads as under:—

Restriction on the de reservation of forests or use of forest land for non forest purpose:— "Notwithstanding anything contained in any other law for the time being in force in a State, no State Government or other authority shall make, except with the prior approval of the Central Government, any Order directing, :—

- (i) That any reserved forest (within the meaning of the expression "reserved forest" in any law for the time being in force in that State) or any portion thereof, shall cease to be reserved; or any portion thereof, shall cease to be reserved;
- (ii) That any forest land or any portion thereof may be used for any non-forest purpose;
- (iii) That any forest land or any portion thereof may be assigned by way of lease or otherwise to any private person or to any authority, corporation, agency or any other organization not owned, managed or controlled by Government;
- (iv) That any forest land or any portion thereof may be cleared of trees which have grown naturally in that land or portion, for the purpose of using it for reafforestation.

Explanation:— For the purposes of this section "non-forest purpose" means the breaking up or clearing of any forest land or portion thereof for-

- (a) The cultivation of tea, coffee, spices, rubber, palms, oil-bearing plants, horticulture crops or medicinal plants;
- (b) Any purpose other than reforestation, but does not include any work relating or ancillary to conservation, development and management of forests and wild-life, namely, the establishment of check-posts, fire lines, wireless communications and construction of fencing, bridges and culverts, dams, waterholes, trench marks, boundary marks, pipelines or other like purposes.

The above provisions of the Act of 1980 are to be read in conjunction with Section 2 (A) of the Act of 1980. Section 2(A) empowers any person aggrieved, by an order or decision of the State Government or other authority made under Section 2 of the Act of 1980, to file an appeal before the Tribunal. It is thus, only the order of the State Government passed under Section 2 of the Act of 1980 or the decision of the authority of the State Government that becomes appealable under Section 2(A) of the Act. The words 'other authority' have to be construed *ejusdem generis* to the expression, 'State Government'. The other authority thus would be an authority appointed by the State to discharge such functions as spelled out under Section 2 of the Act of 1980. Such authority would have to necessarily be a part of the State.

The only embargo that the Legislature has placed upon the exercise of such power by the State Government is that this order must essentially be preceded by a prior approval of the Central Government. The expression 'prior approval' clearly connotes that the Central Government must accord its approval which must then be followed by an appropriate order of the State Government in terms of Section 2 of the Act of 1980, permitting any of the activities to be carried on in the forest area as stated in that provision.

Approval of the Central Government is a *sine qua non* to the passing of an order by the State Government. It is only when the State Government passes a reasoned order or an authority appointed by the State takes a reasoned decision allowing the activities of non-forest nature in the forest area or declares reserved forest as non-reserved forest, that an order as required under Section 2 of the Act of 1980 comes into existence. On the cumulative reading of these provisions it appears to us that the approval granted by the Central Government is neither an order nor a decision as contemplated under Section 2 of the Act of 1980 nor is it appealable under Section 2 (A) of the Act. The State Government is expected to apply its mind and examine its original proposal sent to the Central Government in light of the approval granted and then pass an order which has to be implemented in terms of the provisions of the Act. The approval granted by the Central Government merges into the final order by the State Government. According of approval by the Central Government to the initial proposal submitted by the State Government would include variations, addition or subtraction of conditions stated in the said proposal. That approval then must convert itself into a final order to be passed by the State Government. Due application of mind by the State Government is contemplated under the legislative scheme of the Act. It can pass an appropriate order in terms of the approval granted by the Central Government. The State Government can further impose conditions or vary the same but without changing in any way the structure and spectrum of the essence of the approval granted by the Central Government. The State Government would be well within its jurisdiction in referring the matter back to the Central Government if in the considered opinion of the State Government the conditions imposed with the approval granted unreasonable. The are not approval acceptable granted by and/or the are Central Government technically loses its independent existence upon passing of an order under Section 2 of the Act of 1980. However, the legality and correctness of the order passed by the State Government under Section 2 of the Act of 1980 can always be examined by the appropriate forum. Approval by the Central Government is not an order in fact and/or in law as contemplated under Section 2 of the Act of 1980. Every

State Government is obliged and essentially must pass an order under Section 2 of the Act of 1980 and which must be a proper administrative order in terms of requirements of the provisions of the Act.

This question also came for consideration before a Bench of this Tribunal in the case of *Vimal Bhai v. Union of India* in Appeal No. 7 of 2012 dated 7th November, 2012.

In addition to the aforestated, we do concur with the Judgment of Bench of this Tribunal in *Vimal Bhai v. Union of India* (supra) to the extent that the State Government is obliged to pass an Order then alone non forest activity can be carried on in the forest area in terms of section 2 of the Act of 1980.

The Learned Counsel appearing for the parties have also brought to our notice a reply in the form of information to a RTI query raised under Right to Information Act, 2005. In this it is recorded that the State Government does not pass any order under Section 2 of the Act of 1980. This reply is contrary to the requirements of law and we, therefore, specifically set-aside such view and direct that all State Governments shall pass an appropriate order in accordance with law in terms of Section 2 of the Act of 1980.

Having answered the above question, nothing survives in this application and accordingly Original Application No. 123 of 2013 is disposed of. The Respondent No. 3 (Project Proponent) is at liberty to approach the State Government for appropriate Orders in accordance with law.

Till such Order is passed by the Competent Authority, Respondent No. 9 would not carry on tree cutting/felling in the forest area.

In view of our above Order we consider it unnecessary to go into any other questions raised in this application, which are specifically kept open.

Copy of this order be sent to Secretary MoEF and all Chief Secretaries of the States for compliance.

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2012 SCC OnLine NGT 77**National Green Tribunal New Delhi
(Principal Bench)**

(BEFORE A.S. NAIDU, A.C. AND G.K. PANDEY, E.M.)

1. Vimal Bhai Convener, Matu Jansangthan D-334/10 Ganesh Nagar, Pandav Nagar Complex, Delhi - 110092
2. Bharat Jhunjhunwala Lakshmolli, PO Maletha, Via Kirti Nagar, District Tehri, Uttrakhand - 249161 ... Appellants;

Versus

1. Union of India Through the Secretary Ministry of Environment and Forests Government of India Paryavaran Bhawan, C.G.O. Complex, Lodhi Road, New Delhi - 110003
2. State of Uttrakhand Through the Principal Secretary (Forests) Civil Secretariat, Dehradun - 248001, Uttrakhand
3. GMR Energy Limited Through Managing Director Mira Corporate Suites Block D, Second Floor, Plot 1 & 2, Ishwar Nagar, New Delhi - 110065 ... Respondents.

Appeal No. 7/2012

Decided on November 7, 2012

Counsel for Appellants:

Shri Ritwick Dutta, Advocate along with
Shri Rahul Chaudhary, Advocate

Counsel for Respondents:

Ms. Neelam Rathore, Advocate for R. 1 (MoEF)
Mr. Abhishek Atrey, Advocate for R. 2 (State of Uttarakhand)
Mr. A.D.N. Rao, Advocate for R. 3 (GMR (Badrinath) Hydro Power Generation Pvt. Ltd.)**JUDGMENT**

A.S. NAIDU, (Acting Chairperson) DR. G.K. PANDEY, (Expert Member):— Shri Vimal Bhai claiming to be the convener of a social organization called Matu Jansangthan and a social activist working for decades on environment and social issues in the middle of Himalaya region has approached this Tribunal, along with another, invoking jurisdiction under Section 16(e) of the National Green Tribunal Act, 2010 (hereinafter called as **NGT Act**) and seeks to assail the communication dated 8th November, 2011 issued by the Government of India, Ministry of Environment and Forests (MoEF) according, Stage-I approval under Section 2 of the Forest Conservation Act, 1980 (hereinafter called as **FC Act**) for diversion of 60.513 hac. of forest land in favour of GMR Energy Limited for construction of Alaknanda Badrinath Hydro Electric Project in Chamoli District of Uttrakhand, subject to fulfilling of certain conditions of environmental safeguards. The said letter (Annexure A - 1) was addressed to the Principal Secretary (Forests) Government of Uttrakhand, Dehradun. According to the Appellants, the Stage-I Forest Clearance granted by the MoEF is palpable, illegal and suffers from following infirmities:—

- (i) The approval was granted without taking into consideration the recommendations of the Forest Advisory Committee (FAC). It is averred that the Forest Advisory Committee after considering all the facts and circumstances had

came to the conclusion that prior approval under Section 2 of the FC Act, 1980 should not be accorded in favour of the project for use of forest lands for non-forest purpose.

(ii) Relying upon the report submitted by the Wildlife Institute of India (WII), it is averred that the diversion of forest land in the proposed site, would lead to severe fragmentation and degradation of the important wildlife habitats as well as habitats of RET species. The WII report it is stated reveals that the project in question is located in the buffer zone of the Nanda Devi Biosphere Reserve and the same will seriously hamper the movement of RET species like Snow Leopard and Brown Bear existing in the vicinity. The project shall also pose adverse effect on the ecology and bio-diversity and would cause irreparable and irreversible impact on the environment.

2. It appears that Appellants are aggrieved by the fact that the MoEF relied upon an interim report submitted by H.N.B. Garhwal, University, which was prepared at the instance of the project proponent so as to suit its purpose. It is averred that the said report was prepared by the expenses paid by the company and was in the nature of a critic to the report submitted by the WII.

3. In course of hearing a further affidavit was filed indicating that in the meanwhile the WII has submitted its final report recommending therein for exclusion of the forest lands from the project mainly on the ground that the same are located within Alaknanda III sub-basin and the habitats of more than 250 birds including Indian white-backed vulture would be affected. Further, case of the Appellant is that the report prepared by the EIA Consultant Group of HNB Garhwal University and the report of IIT was not sent to the Forest Advisory Committee by the MoEF, thereby causing a dent in the decision making process. In short, according to the Appellants the decision to grant Forest Clearance without seeking any opinion from the Forest Advisory Committee is a clear case of bias and exhibits arbitrariness on the part of the MoEF.

4. After receiving notice, Respondents filed their replies, strongly repudiating the allegations made in the Memorandum of Appeal. In the respective replies the Respondent took the stand that the provision of the FC Act and Rules framed thereunder were sacrosanctly followed by the MoEF and submissions made to the contrary are unfounded. According to the Respondent the MoEF is the final authority to grant or refuse approval. The Forest Advisory Committee, as the name itself indicates, is required to advise the MoEF, which may be agreed or disagreed by the latter. It is submitted that the report submitted by WII was only an interim report. The said report as well as the subsequent report submitted by WII has not been accepted by the MoEF as yet and as such it has not attained finality. Respondents further submits that the decision was taken by the MoEF after due consideration of the prevalent circumstances and topography, thus the allegations made contrary are without any basis and deserves no consideration.

5. The last but not the least contentions raised by the Respondents, is that the present Appeal is not maintainable under Section 16(e) of the NGT Act and on that ground alone the same should be dismissed. A prayer is also made to consider the question of maintainability of the Appeal at the first instance, before going to the merits.

6. Heard Learned Counsel for the parties at length. As we propose to dispose of this case on the question of maintainability we refrain from entering into the merits of controversies raised by different parties and leave it open for the parties to raise the same if contingency arises.

Before entering into the arena of controversy, it would be proper to discuss relevant provisions of law on the point. Realising that rampant and indiscriminate deforestation, was the cause for ecological imbalances and the same would lead to

environmental deterioration, the Legislature in order to check further deforestation promulgated FC Act, 1980. Section 2 of the said Act imposes restrictions on diversion of forest and restricts use of forest land for non-forest purposes. The said Section reads as follows:

Section 2: "Restriction on the de-reservation of forests or use forest land for non-forest purpose.

Notwithstanding anything contained in any other law for the time being in force in a State, no State Government or other authority shall make, except with the prior approval of the central Government, any order directing-

- (i) that any reserved forest (within the meaning of the expression "reserved forest" in any law for the time being in force in that State) or any portion thereof, shall cease to be reserved;*
- (ii) that any forest land or any portion thereof may be used for any non-forest purpose;*
- (iii) that any forest-land or any portion thereof may be assigned by way of lease or otherwise to any private person or to any authority, corporation, agency or any other organisation not owned, managed or controlled by Government;*
- (iv) that any forest-land or any portion thereof may be cleared of trees which have grown naturally in that land or portion, for the purpose of using it for reforestation. Explanation - For the purpose of this section, "non-forest purpose" means the breaking up or clearing of any forest land or portion thereof for-
 - (a) the cultivation of tea, coffee, spices, rubber, palms, oil-bearing plants, horticultural crops or medicinal plant;*
 - (b) any purpose other than reforestation;**

but does not include any work relating or ancillary to conservation, development and management of forests and wildlife, namely, the establishment of check-posts, fire lines, wireless communications and constructions of fencing, bridges and culverts, dams, waterholes, trench marks, boundary marks, pipelines or other like purposes".

It is evident that the FC Act, 1980, imposes a strict restriction upon deforestation and use of Forest lands for non-forest activities. It mandates that no State Government shall accord permission for use of any forest land for non-forest purpose without obtaining prior permission of the Central Government.

7. In the event a Project Proponent desires to use any forest lands for non-forest purpose, he has to file an application before the concerned State Government.

The said proposals are disposed of as under:—

- (i) All proposals involving diversion/de-reservation of forest land up to 40 hectares and proposals for clearing of naturally grown trees in forest area or portion thereof shall be sent by the concerned State/UT Government to the concerned Regional Officer of MoEF.*
- (ii) Chief Conservator of Forests of the concerned Regional office shall be competent to finally dispose of all proposals (including decision regarding violation of Act) involving diversion/de-reservation for forest land up to 5 hectare, except in respect of proposals for regularization of encroachments and mining (including renewal of mining leases). Similarly, proposals involving clearing of naturally grown trees in forest area or portion thereof for reforestation shall also be finally disposed of by the Chief Conservator of Forests of the concerned Regional Office, subject to guidelines/instructions issued in this regard (refer to para 1.8) and any other instructions issued from time to time.*
- (iii) In the absence of Chief Conservator of Forests, these powers shall be exercised*

- by the concerned Conservator of Forests of the Regional Office in case the post of Chief Conservator of Forests is vacant due to transfer, long leave, etc.
- (iv) A list of cases finally disposed of and a list of cases rejected along with reasons thereof for rejection would be required to be sent every month to the MoEF by the Regional Office.
- (v)(a) In respect of proposals involving diversion of forest area above 5 hectares and up to 40 hectares and all proposals for regularization of encroachments and mining up to 40 ha., the proposals shall be examined by the Regional Chief Conservator of Forests/Conservator of Forests in consultation with the Advisory Group consisting of representatives of the State Government from Revenue Department, Forest Department, Planning and/or Finance Department and concerned Department whose proposal is being examined. The views of the Advisory Group shall be recorded by the Regional Chief Conservator of Forests and along with the same, the proposal shall be sent to Secretary, MoEF for consideration and final decisions. It is to be clarified that views of this Advisory Group in no way shall be binding while deciding the proposal. The meeting of the Advisory Group may be held at the State Capital. The proposal will not be deferred for want of quorum.
- (b) The meeting of the State Advisory Group (SAG) will normally be held once in a month at concerned State Capital. The Regional Chief Conservator of Forests shall act as Chairman of the Advisory Group and Nodal Officer may be nominated to work as Member Secretary of the State Advisory Group.
- (c) State Government may take immediate steps to nominate representatives of the State Government not below the rank of Joint Secretary for the Advisory Group. Nodal Officer may be nominated to work as Member Secretary of the State Advisory Group.
- (d) The details of the officers along with addresses, telephone number, etc. may be directly communicated to the concerned Regional Chief Conservator of Forests under intimation to this Ministry to facilitate early processing of the proposals by the Advisory Group.

Forestry clearance will be given in two Stages. In 1st Stage, proposal shall be agreed to in-principle in which usually the conditions relating to transfer, mutation and declaration as RF/PF under the Indian Forest Act, 1927 of equivalent non-forest land for compensatory afforestation and funds for raising compensatory afforestation thereof are stipulated and after receipt of compliance report from the State Government in respect of the stipulated conditions, formal approval under the Act shall issued."

The decision for granting approval by the Central Government are taken in exercise of the powers conferred under Section 2 of the FC Act.

8. Section 2(A) of the NGT Act stipulates that if any person aggrieved, by an order or decision of the State Government or other authority made under Section 2, on or after the commencement of the NGT Act, 2010 (19 of 2010), has an option to file an appeal before the National Green Tribunal established under Section 3 of the NGT Act, 2010 (19 of 2010), in accordance with the provisions of that Act".

9. The parameteria provision to Section 2(A) of FC Act is Section 16(e) of the NGT Act. The said section stipulates that any person aggrieved by an order or decision, made, on or after the commencement of NGT Act, 2010 by the **State Government or other authorities** under Section 2 of the FC Act, 1980, may within a period of 30 days from the date on which the order or decision or direction or determination is **communicated to him** prefer an appeal to the Tribunal.

The sole contention raised by the Respondents in the case in hand is that the impugned order dated 08th November, 2011 having not being passed by the State

Government nor by any authority cannot be assailed in this Appeal.

10. Perusal of the impugned order reveals that after careful consideration of the proposal of the State Government of Uttarakhand, the Central Government by order dated 08th November, 2011, accorded in-principle Stage-I approval under the FC Act, 1980 for diversion for 60.513 hac. of forest land in favour of GMR Energy Limited, for construction of Alaknanda Badrinath Hydro-Electric Project at Chamoli District of Uttarakhand subject to fulfillment of other conditions stipulated in the order.

In the aforesaid scenario of facts the mute question which arises for consideration is, as to whether an Appeal lies against the order of the MoEF granting Stage - I Forest Clearance, under Section 2(A) of FC Act or Section 16(e) of the NGT Act.

11. Mr. A.D.N. Rao, learned Counsel appearing for Respondent No. 3 drew attention of this Tribunal to Section 2(A) of the FC Act, 1980 as well as Section 16(e) of the NGT Act, 2010 and submitted that an Appeal is prescribed under those two Acts only against an order or decision passed by the State Government or other authority. Expanding his arguments Mr. Rao submitted that under the provision of the aforesaid two Acts, a person aggrieved by the order passed under Section 2 of FC Act by the State Government or any other authority can file an Appeal. Further according to Mr. Rao neither Section 16(e) of the NGT Act, 2010, nor Section 2(A) of the FC Act, 1980 provide for or contemplates an Appeal against an order passed by the Central Government. The Legislature on its wisdom having consciously and specifically omitted the word "Central Government" in both the Sections i.e. Section 2(A) of FC Act and 16 (e) of NGT Act, 2010 and such intention of the Legislature being clear and unambiguous, no contrary view can be taken by this Tribunal which is a creature under the Statute.

12. A cogent reading of NGT Act as well as FC Act, reveals that the word "Central Government", "State Government" and "other authority" has been distinctly used in different Sections. Thus the words Central Government cannot include within the words '**Authority**'. Relying upon G.S.R. 94(e) dated 3.2.2004, Mr. Rao submitted that sub-rule 2 clauses (c)(d) under Rule 6 (III) of G.S.R. contemplates that '**or the other authority**' should be substituted by words '**or the Union Territory Administration**' as and where required. In the light of the above Rule, it is submitted that the word '**other authority**' used in Section 16(e) of the NGT Act and Section 2(A) of the FC Act, 1980 can be referred or substituted by words "Union Territory Administration". In short according to Mr. Rao both Sections 16(e) of the NGT Act and FC Act, 1980 provide for an Appeal to the Tribunal only against an order passed by the State Government or Union Territory Administration and thus no Appeal is contemplated by the Legislature against any order passed by the Central Government or MoEF. The order impugned, having not been passed either by the State Government or the Union Territory Administration, the same cannot be assailed by filing an Appeal before this Tribunal and this Appeal is liable to be dismissed as not maintainable, on that ground alone.

13. Provisions of Indian Forest Act and FC Act, 1980 read together leads an irresistible conclusion that the permission for carrying out any of the activities mentioned in Sections 5 and 26 of the Indian Forest Act can be granted by the State Government only upon the formulation of Rules contemplated under Section 32 of the Indian Forest Act. Though the activities mentioned in Section 2 of the FC Act, 1980 can be carried only after obtaining prior permission of the Central Government, the authority for granting such permission still continues to be the State Government and not the Central Government. That apart a cause of action accrues upon an aggrieved party only when the necessary orders to transfer forest lands are issued by the State Government and not before that, Thus, according to Mr. Rao an Appeal under Section 2(A) of the FC or Section 16(e) of NGT Act can be filed before this Tribunal only

against an order passed by the State Government and not against the order granting in-principal approval, which is commonly called as Stage - I approval, granted by the Central Government or Stage - II approval granted after compliance of the conditions imposed in Stage - I approval. In other words the Central Government is only a sanctioning authority, whereas the actual power to accord approval for conversion of Forest lands for non-forest purpose still lies with the respective State Government.

14. Ms. Neelam Rathore, learned Counsel appearing for the MoEF supported the stand taken by Respondent No. 3. According to her the provisions of Section 2 of the FC Act makes it clear that the role of the Central Government is limited only to granting a prior approval/permission. The Legislature has clearly defined the role of the Central Government and as there is no provision to assail any order passed by the Central Government by filing an Appeal before this Tribunal, the present Appeal cannot be entertained. In other words, according to Ms. Rathore, Section 2(A) of the FC Act cannot be interpreted to include "Central Government" within its ambit and scope and that the words other authorities do not engulf the Central Government within its scope and ambit. Section 16 of the NGT Act more particularly Section 16(e) also envisages and grants opportunity to any person aggrieved by an order passed under Section 2 of the FC Act by the State Government or other authorities, to file an Appeal before this Tribunal. The said Section excludes the sanctions/approvals granted by the Central Government from the purview of Appeal. The approval of the Central Government under Section 2 of the FC Act, 1980 is precursor to passing of an order by the State Government or other Authority and if a person is aggrieved by the said latter order, he can approach this Tribunal either under Section 16(e) of the NGT Act or Section 2(A) of the FC Act, 1980.

15. Repudiating the contentions raised by the MoEF and Respondent No. 3, Mr. Ritwick Dutta, learned Counsel appearing for the Appellant submitted that under the provisions of FC Act the only decision making authority is the Central Government. Bereft of an order of approval passed by the Central Government, granting forest clearance, no diversion of forest land can be made. It is submitted by Mr. Dutta, that the powers of the State Government is limited to submission of proposals only, whereas the, decision making power for granting forest clearance completely lies with the Central Government and therefore the State Government or other authority cannot be called as the decision making body within the meaning of Section 2 of the FC Act and an Appeal under Section 2(A) can only be filed against the decision of the Central Government permitting diversion of forest land, the intention of the Legislature cannot be otherwise.

16. Further, according to Mr. Dutta the Courts have the power to iron out the creases and to remove ambiguity and give full effect to the intention of the Legislature. In support of such submission he relied upon the decision of the Supreme Court in the case of *Nathi Devi v. Radha Devi Gupta*, (2005) 2 SCC 271. In the said decision the Hon'ble Supreme Court observed as follows:

"The interpretative function of the Court is to discover the true legislative intent. It is trite that in interpreting a Statute the Court must, if the words are clear, plain, unambiguous and reasonably susceptible to only one meaning, give to the words that meaning, irrespective for the consequences. Those words must be expounded in their natural ordinary sense. When a language is plain and unambiguous and admits of only one meaning no question of construction of statute arises, for the Act speaks for itself. Courts are not concerned with the policy involved or that the results are injurious or otherwise, which may follow from giving effect to the language used. If the words used are capable of one construction only then it would not be open to the Courts to adopt any other hypothetical construction on the ground that such construction is more consistent with the alleged object and policy of the Act. In considering whether there is ambiguity, the Court must look at the

statute as a whole and consider the appropriateness of the meaning in a particular context avoiding absurdity and inconsistencies or unreasonableness which may render the statute unconditional."

17. In the case in hand, the Legislature has used the phrase "State Government and any other authority" in Section 16(e) of NGT Act and Section 2(A) of the FC Act, for the purpose of providing an Appeal against the diversion of forest land for non forest uses. According to Mr. Dutta since the decision to divert forest land has to be taken by the Central Government, on the basis of the recommendation of the Forest Advisory Committee, the purpose of the said Section would become nugatory if the appeal is confined only to the orders passed by the State Government which are more less ministerial in nature and are consequential to the orders passed by Central Government. Further, the State Government has the power only to make a proposal to the Central Government for diversion of forest land and cannot take a decision under Section 2 of the FC Act, the permission granted or clearance accorded by the Central Government would be binding upon the State Government, thus, the decision that has to be assailed is that of the Central Government and not of the State Government. In other words according to Mr. Dutta the State Government is only a recommending authority whereas the Central Government is the authority vested with the power to accord approval, as such if the final order granting approval by the Central Government is not assailed the purpose of the Act would be frustrated.

18. The NGT Act, according to Mr. Dutta was constituted to provide a full-fledged redressal to a person who is aggrieved by any Act, commission or omission of the authorities by which the environment is effected. Diversion of forest land for non forest uses has severe effect on the ecology/bio-diversity and the environment, therefore, the Legislature has provided the remedy of an Appeal against an order passed under Section 2 of the FC Act, dealing with diversion of forest land. Since the Central Government is the primary decision making authority, under no stretch of imagination it can be argued that against the decision taken by the Central Government no Appeal lies. Such an argument according to Mr. Dutta would not only be contrary to the letter and spirit of the NGT Act and FC Act, but also contrary to the interest of general public. Such a narrow construction would also render the decision or orders passed by the Central Government, virtually non assailable thereby vesting an unbridled power upon the said Respondent.

19. We have heard learned Counsel for parties at length. We have also perused different provisions of NGT Act and FC Act meticulously. We have considered the pleading of the parties consciously. It is well settled law that while interpreting a Statute effort should be made to give effect to each and every word used by the Legislature. It should be always presumed that the Legislature inserted every word in the Statute for a purpose and legislative intention is that every part of the Statute should have a meaningful effect. A construction which attributes redundancy to the Legislation should not be expected, except for compelling reasons such as obvious drafting errors (see *State of U.P. v. Vijay Anand Maharaj*: AIR 1963 SC 946)

20. In the case of *P.K. Unni v. Nirmala Industries* (1990) 2 SCC 378, the Hon'ble Supreme Court held:—

"Where the language of the Statute leads to manifest contradiction of the apparent purpose of the enactment, the Court can, of course, adopt a construction which will carry out the obvious intention of the Legislature. In doing so "a judge must not alter the material of which the Act is woven, but he can and should iron out the creases".

On the touchstone of the legal position enunciated above and admitted facts, we proposed to answer the question posed, i.e. whether an Appeal lies against the impugned order passed by the MoEF granting in principle Stage - I Forest Clearance.

Right of appeal is statutory and no one inherits it. When conferred by statute it becomes a vested right. In this regard there is essential distinction between right of appeal and right to suit. Where there is inherent right in every person to file a suit and for its maintainability it requires no authority of law, appeal requires so.

21. Section 2(A) of the FC Act as well as Section 16(e) of the NGT Act clearly stipulates that an order or decision made by the **State Government** or **other authority** passed under Section 2 of the FC Act 1980 can be assailed by filing an Appeal before this Tribunal.

Section 2 of the FC Act, 1980 deals with restrictions or de-reservation of forest or use of forest land for non-forestry purpose. The said section starts with a non-obstante clause and stipulates that notwithstanding anything contained in any other law no State Government or other authority shall pass, except with the prior approval of the Central Government, any order directing de-reservation of any forest land for any non forest purpose, lease out any forest land to a person or authority, corporation, agency etc. and/or permit deforestation of any forest land for the purpose of using it for cultivation of tea, coffee, spices, rubber etc. or for any other purpose other than reafforestation. The said Section therefore curtails the power of the State Government from leasing out or otherwise permitting use of forest land for non forest purpose, without obtaining prior permission of the Central Government.

22. The questions now arises as to whether the approval granted by the Central Government under Section 2 of the FC Act granting in-principle sanction can be assailed by filing an Appeal, the said order not being the final allotment order. The language of the Section stipulates that before permitting user of forest land for non-forest purposes, the State Government has to obtained prior approval of the Central Government, thus there is no ambiguity that the State Government is the authority to grant permission for use of forest land for non-forest purpose, but then such permission can be granted only after the Central Government accords approval. Further a right to use the forest land for non-forest purpose accrues only after the State Government passes the order and not from the date of granting Stage - I or Stage - II Clearance.

There is no ambiguity in the proposition that a person aggrieved by any action of the instrumentalities of the State or Central Government should have a right to assail the same before competent forum.

23. It is no more *res-integra* that an Appeal is a creation of a Statute and it cannot be created by acquiescence of the parties or by the order of the Court. The findings of a Court or a Tribunal becomes irrelevant and unforceable/inexecutable once the Forum is found to have no jurisdiction, as doctrine of nullity will come into operation (see *State of Gujrata v. Rajesh Chiman Kal Barat* (1996) 5 SCC 477. Further, there is also no quarrel to the legal proposition that right to Appeal is neither an absolute nor an ingredient of natural justice and the Legislature can put conditions for maintaining the same. In the case of *Vijay Prakash D. Mehta & Jawahar D. Mehta v. Collector of Customs (Preventive), Bombay*, (1988) 4 SCC 402 : AIR 1988 SC 2010, the Apex Court held as under:—

"Right to appeal is neither an absolute right nor an ingredient of natural justice, the principles of which must be followed in all judicial or quasi-judicial adjudications. The right to appeal is a statutory right and it can be circumscribed by the conditions in the grant.....The purpose of the Section is to act in terrorem to make the people comply with the provisions of law".

24. In the case of *Nand Lal v. State of Haryana* 1980 Supp SCC 574 : AIR 1980 SC 2097, it was held that *"right of appeal is a creature of Statute and there is no reason why the Legislature, while granting the right, cannot impose conditions for the exercise of such right so long as the conditions are not so onerous as to amount to*

Legislature. "An intention to produce an unreasonable result", said *Danackwerts, L.J. in Artemiou v. Procopiou* (1966, 1 QB 878), "is not to be imputed to a statute if there is some other construction available".

28. "Appeal", is defined in the *Oxford Dictionary*, volume I, page 398, as the transference of a case from an inferior to a higher Court or tribunal in the hope of reversing or modifying the decision of the former. In the *Law Dictionary* by Sweet, the term "appeal" is defined as a proceeding taken to rectify an erroneous decision of a Court by submitting the question to a higher Court or Court of appeal and it is added that the term, therefore, includes, in addition to the proceedings specifically so called, the cases stated for the opinion of the Queen's Bench Division and the Court of Crown Cases reserved and proceedings in error. In the *Law Dictionary* by Bouvier an appeal is defined as the removal of a case from a Court of inferior to one of superior jurisdiction for the purpose of obtaining a review and re-trial and it is explained that in its technical sense it differs from a writ of error in this, that it subjects both the law and the facts to a review and re-trial, while the latter is a Common Law process which involves matter of law only for re-examination; it is added, however, that the term "appeal" is used in a comprehensive sense so as to include both what is described technically as an appeal and also the common law writ of error. (See - *Shiv Shakti Coop. Housing Society v. Swaraj Developers* (2003) 6 SCC 659)

The discussions made above leaves no doubt in our mind that an Appeal flows from a Statute and if the Statute does not provide an Appeal against a specific order, no Appeal can be entertained.

29. Cumulative reading of Section 2(A) of the FC Act and 16(e) of the NGT Act, leads to an irresistible conclusion that under the said Sections an Appeal is provided for only against an order passed by the **State Government or other authorities**. In other words, the Legislature in its wisdom has kept the order of approval/clearance passed by the Central Government under FC Act beyond the scope of Appeal.

30. However, a party cannot be remediless, a person who is aggrieved by the Approval/Clearance granted by the Central Government has to avail an opportunity to assail the same. In the aforesaid scenario it can safely be concluded that after receiving a Stage - I and/or Stage - II Clearance, thereby granting a consent to permit use of forest land for non-forest purposes, from the Central Government, it is incumbent upon the State Government to pass a reasoned order transferring and/or allowing the land in question for being used for non forest purpose. It is needless to be said that bereft or such order no forest lands can be put to use for non-forest purpose. Further, all activities done without such orders would be *ab initio void*. An Appeal can be filed against the said order of the State Government under Section 2(A) of FC Act and/or under Section 16(e) of the NGT Act. In the event such an Appeal is filed it would be open for the person aggrieved, to assail the order/Clearances granted by the Central Government under Section 2 of the Act which forms an integral part and sole basis of the order passed by the State Government.

31. We are surprised to find that most of the State Governments do not pass separate orders in the light of the basic requirement of Section 2 of the FC Act as explained above thereby creating an embargo and depriving a person aggrieved from filing an Appeal. Section 2 of the FC Act, mandates that as and when the State Government decides to permit use of the Forest land for non forest purpose, it has to pass order to that effect. The said order along with the conditions imposed by the Central Government according Stage - I and Stage - II Clearance is mandatorily required to be displayed in the website. A copy of the order should also be sent to the MoEF forthwith. After receiving the copy of the order MoEF is also required to upload the same in its website so as to make the entire transactions transparent and bring it to public domain or Government portal and to enable any person aggrieved by the

order passed under the provision of Section 2 of the FC Act, to approach this Tribunal in consonance with Section 2(A) for FC Act or Section 16(e) of the NGT Act.

32. Apart from the said action the State Government should also insist that the Project Proponent should publish the entire forest clearances granted in verbatim along with the conditions and safe-guards imposed by the Central Government in Stage - I Forest Clearance in two widely circulated daily newspapers one in vernacular language and the other in English language so as to make people aware of the permission granted to the Project Proponent for use of forest land for non-forest purposes. The cause of action for filing an Appeal would commence only from the date when such publication is made in the newspapers, as well as from the date when the forest clearance and permission to use the Forest land for non-forest purpose is displayed in the website of the concerned State Government or the MoEF, as the case may be. The copies of the Forest Clearance should also be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

33. In view of the discussions made above and reasons assigned we come to the conclusion that the order dated 08th November, 2011 (Annexure A/1), according Stage - I Forest Clearance cannot be assailed by filing an Appeal at this stage and as such the present Appeal is premature and has to be dismissed. Liberty is however granted to the Appellants to prefer an Appeal as and when the State Government passes the final order, permitting the Project Proponent to use the Forest land for non-forest purpose, if they feel aggrieved. In the event such an Appeal is filed, it would be open for the said Appellants to raise all the points which have been raised in the present Appeal and also other points which would be available to them in law and also bring to the notice the infirmities/omissions and commissions committed by the MoEF (Central Government) while granting Stage - I and Stage - II forest clearances.

34. The MoEF is directed to issue necessary Notification, stream lining the procedure to be adopted by the State Government and other Authorities for passing orders/decision for granting Forest Clearance under Section 2 of the FC Act, as well as the modalities for communicating the said order in the Public domain on Government portal.

With the directions and observations made in the preceding paragraphs the Appeal stands disposed of. Parties to bear their own cost.

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F. No.J-11015/224/2015-IA.II
Government of India
Ministry of Environment, Forest and Climate Change
(IA-II Section)

Indira Paryavaran Bhawan,
Jorbagh Road, N Delhi - 3
Dated: 15th September, 2017

Office Memorandum

**Sub: Environmental Clearance for expansion of Coal Mining Projects -
Exemption from Public hearing - reg.**

In order to facilitate grant of Environmental Clearance (EC) to the expansion projects of coal mines, Office Memorandums have been issued by this Ministry from time to time providing exemption from public hearing.

2. Ministry of Coal in order to allow rapid expansion in coal production has made request for further dispensation in public hearing to expedite Environmental Clearances.

3. The request of Ministry of Coal was considered by the Expert Appraisal Committee (EAC) in the Ministry constituted for appraisal of projects relating to Thermal and Coal sectors. The Committee has recommended for exemption from public hearing while considering grant of environmental clearances to the expansion projects of coal mines, involving increase in production capacity up to 40% in 2-3 phases after the due diligence and subject to fulfilment of certain requirements as under:-

- (i) Predicted air quality parameters are within the prescribed norms.
- (ii) Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads.
- (iii) Coal mining is done through deployment of surface miners, replacing three dust generating operations of the conventional mining system namely drilling, blasting and crushing in one go.
- (iv) Public hearing already conducted for the total mine lease area involved and no more area is required for the proposed expansion.
- (v) Compliance status of EC conditions monitored by the concerned Regional Office of this Ministry is found to be satisfactory.
- (vi) Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, etc are satisfactorily fulfilled.

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4. In view of the aforesaid recommendations by EAC, the Ministry has decided to consider the proposals for grant of EC to the expansion of coal mining projects providing exemption from public hearing, in the manner and/or subject to the conditions as under:-

- (a) The proposed expansion can go up to a maximum of 40% of capacity, wherein the last public hearing was conducted.
- (b) There is no increase in area for the proposed expansion vis-a-vis the area in EC, wherein last public hearing was conducted.
- (c) Coal transport is through conveyor system up to the silo and loading to railway wagons, and not by road.
- (d) The EAC shall carry out the due diligence on all the parameters mentioned in para 3 above, and make its recommendations accordingly.
- (e) EAC may consider the need for a third party study through an expert agency in a time bound manner, after grant of EC.

5. This OM shall be in supersession of the earlier OMs issued by the Ministry as under:

- (i) OM No. J-11015/30/2004-IA.II (M) dated 19th December, 2012
- (ii) OM No. J-11015/30/2004-IA.II (M) dated 7th January, 2014
- (iii) OM No. J-11015/30/2004-IA.II (M), dated 30th May, 2014
- (iv) OM No. J-11015/30/2004-IA.II (M) dated 28th July, 2014
- (v) OM No. J-11015/30/2004-IA.II (M) dated 2nd September, 2014.

6. This issues with approval of the competent authority.


15/9/2017
(S.K. Srivastava)
Scientist E

T. G




सत्यमेव जयते

भारत सरकार
GOVERNMENT OF INDIA
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
MINISTRY OF ENVIRONMENT, FORESTS
& CLIMATE CHANGE

Regional Office (WCZ)
Ground Floor, East Wing
New Secretariat Building
Civil Lines, Nagpur - 440001
apccfcentral-ngp-mef@gov.in

Dated: 4th November, 2016

F. No: 3-28/2014 (Env)

To

✓ The Scientist 'E'
IA Division (Coal Mining),
Ministry of Environment, Forest & Climate Change
Vayu Wing, 3rd Floor, Indira Paryavaran Bhawan,
Aliganj, Jorbagh Road,
New Delhi-110003

(Kind Attention: Shri S. K. Srivastava)

Sub: A report on the status of compliance of conditions stipulated in the environment clearance dated 31.01.2014 read with letter dated 6.02.2015 accorded to Gevra OC of the SECL in Korba District in the State of Chhattisgarh –regarding.

Ref: Project proponent's letter no. SECL/Mh. Pra/Gey Kshey/Paryavaran/2016 dated 16.08.2016

Sir,

I am directed to refer to the above subject and letter under reference above wherein the project proponent has requested this office to issue a certificate on the monitoring of the compliance of conditions stipulated in Environment Clearance dated 31.01.2014 read with letter dated 6.02.2015 accorded by the MoEF&CC to Gevra Expansion OC of the SECL in Korba District in the State of Chhattisgarh and to say that monitoring of the conditions stipulated in the EC was carried out by the undersigned on 11.09.2016. A monitoring report in the matter is enclosed. Following observations were made during the site inspection:

1. Specific Conditions no.(i)-(v), (ix)-(xiii), (xv)-(xix), (xxi)-(xxii), (xxiv)-(xxvii), (xxix)-(xxxii) and (xxxv)-(xxxvii) and all general conditions stipulated in the environment clearance dated 6.05.2015 are being complied with by the Project proponent in accordance with the stipulations made in the environment clearance towards the conservation, protection and development of environment in the lease area as well as area surrounding coal mine.
2. Specific Conditions no. (xiv), (xx), and (xxxiii) and (xxxiv) are being complied with partially by the PP as the measures taken by the PP needs to be further strengthen to ensure complete compliance of the conditions.
3. Specific conditions no. (vi), (v), (vi), (vii), (viii), (xxiii), and (xxviii) were observed to be not complied with by the PP as the PP has not accomplished the compliance as per stipulations made in these conditions.
4. Court case and Show cause notices; PP has submitted that following court cases are pending against the SECL:

P.T.O.

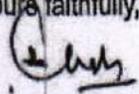
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- i. Case No. 1217/2007 in the matter of Regional Officer, Chhattisgarh Environment Conservation Board, Korba Vs. Gevra and CGM, Dipka area for increase of coal production without EC and year of violation was 2001-02. Case is pending in the Court of JMC, Class-I, Korba.
 - ii. Case No. CRMP 613/2007 in the matter of Chhattisgarh Environment Conservation Board, Korba vs. Shri Debasis Chaterjee, CGM Dipka area. The appeal has been filed in High Court against the order for increase in coal production without EC and year of violation was 2007-08.
5. The PP has submitted and declaration stating that no show notices issued by the Chhattisgarh State Environment Conservation Board are pending against the Dipka Expansion Project, Dipka area of South Eastern Coalfields Limited till 2.10.2016.

This issues with the approval of the Addl. PCCF (Central), Regional Office (West Central Zone) MoEF&CC, Nagpur.

Encl: as above

Yours faithfully,


Charan Jeet Singh
Scientist 'C'

Copy to:

1. Director RO HQ, Ministry of Environment, Forest & Climate Change, Government of India, 1st Floor Agni Wing, Indira Paryavaran Bhawan, Jorbagh Road, New Delhi- 110 003.
2. Member Secretary, State Level Environment Impact Assessment Authority & Secretary, Housing and Environment Department, Government of Chhattisgarh, Mantralay Mahanadi Bhavan, New Raipur, Chhattisgarh
3. Director (Monitoring Cell), Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Aliganj, Jorbagh Road, New Delhi-110003
4. General Manger, Gevra Area, SECIL, Korba, Chhattisgarh.
5. Guard File.

-sd -
Charan Jeet Singh
Scientist 'C'

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Minutes of the 4th meeting of the EAC held on 30th - 31st January, 2017 for Thermal & Coal Mining Sector projects

A. The 4th meeting of the Expert Appraisal Committee (EAC) for Thermal & Coal mining projects was held on **30-31 January, 2017** in the Ministry to consider the proposals relating to coal mining sector. The list of participants and the project proponents are at Annexure-I & II respectively.

B. Details of the proposals considered during the meeting, deliberations made and the recommendations of the Committee, are explained in the respective agenda items as under:-

Agenda 4.1

Expansion of of 'Parsa East and Kanta Basan' Opencast Coal Mine from 10 MTPA to 15 MTPA and expansion of Pit Head Coal Washery from 10 MTPA to 15 MTPA of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd, located in Hasdeo-Arand Coalfields in District Sarguja (Chhattisgarh) - For Consideration of EC

4.1.1 The proposal is for grant of environmental clearance to the expansion project of Parsa East and Kanta Basan Opencast Coal Mine from 10 MTPA to 15 MTPA and expansion of Pit Head Coal Washery from 10 MTPA to 15 MTPA, promoted by M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd, in a total area of 2711.034 ha located in Hasdeo-Arand Coalfields in District Sarguja (Chhattisgarh).

4.1.2 The details of the project, as per the documents submitted by the project proponent, and also as presented during the meeting, are as under:-

(i) The Environment Clearance for the Parsa East Kanta Basan OCP of 10 MTPA was accorded vide letter dated 21st December, 2011, which was further revalidated/amended vide letters dated 25th June, 2015 and 29th December, 2015.

(ii) EC amendment for permission to set up interim washery was granted on 4th March, 2013.

(iii) The Terms of Reference (ToR) for the proposed expansion of the OCP and the washery was granted by MoEFCC vide letter dated 10th September, 2014.

(iv) The latitude and longitude of the project site are 22° 47'39" and 22°51'12" N and 82° 46'38" and 82°50'51" E respectively.

(v) Joint Venture: no joint venture

(vi) Coal Linkage :

| SI. No. | Name of specified end use plant | Units | Capacity |
|---------|---|--------------------------|----------|
| 1. | Chhabra TPP Unit -3 to 6, District- Baran, Rajasthan | 2 x 250 MW 2 x 660 MW | 1820 MW |
| 2. | Kalisindh TPP Unit - 1 & 2, District- Jhalawar, Rajasthan | 2 x 600 MW | 1200 MW |
| 3. | Suratgarh Supercritical TPP, Unit- 7 & 8, District- Shriganganagar, Rajasthan | 2 x 660 MW | 1320 MW |

(vii) Employment generated/to be generated: About 1805 persons will get direct employment in various services till 5th year of mine operation (target achieving year), which will develop due to the project and the persons employed in the project

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- Black topping of all the internal roads within in the washery area
 - Green belt covering 3.2 ha will be developed using local species all along the periphery of the site, along the roads and in vacant space and transfer and loading points.

(v) The location of the proposed Tasra coal washery is at the abandoned site of Bihar State Superphosphate Factory (BSSF), and lies in the Sindri Industrial area, which is about 26 km south of the Dhanbad town. The 132 KV Sub-station is located adjacent to proposed washery site in the southern side. Whereas the BIT Sindri and Patherdih Township are located in South-East and North-West direction respectively. The expected air quality at these receptor locations have been predicted through Air Quality Modelling studies.

4.4.4 The EAC, after detailed deliberations, found the clarifications to the earlier observations as satisfactory, and recommended the proposal for grant of Environmental clearance to the proposed **Pit Head Coking Coal Washery of 3.5 MTPA in Tasra Coal Block of M/s Steel Authority of India Ltd. located in Jharia Coalfields, District Dhanbad (Jharkhand)**, subject to the compliance of all generic conditions applicable for washery as well as fulfillment of other conditions as under:

- The technology so chosen for the washery should conform to 'Zero Liquid Discharge'.
- Thick green belt of 30-45 m width to be provided around the washery to mitigate/check the dust pollution. A 3-tier avenue plantation should also be developed along vacant areas, storage yards, loading/transfer points, and also along internal roads/main approach roads.
- Washery shall be as per project report submitted and presented to the EAC.
- Transport of raw coal, clean coal, middling and rejects by rail with wagon loading through silo.
- Disposal of washery rejects shall be in accordance with the extant policy and guidelines, and environment friendly.

Agenda 4.5

Expansion of Dipka Opencast Coal Mine from 31 MTPA to 35 MTPA in an ML area 1999.293 ha of M/s South Eastern Coalfields Limited in District Korba (Chhatishgarh) - For consideration of TOR

4.5.1 The proposal is for grant of Terms of Reference for Dipka Opencast expansion Project from 31.00 MTPA to 35.00 MTPA in an ML area 1999.293 Ha of M/s South Eastern Coalfield Limited at district Korba (Chhatishgarh).

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

- (i) The project was earlier accorded EC vide letter no. J-11015/487/2007-IA.II (M) dated 06.02.2015 for the expansion from 25 MTPA to 30 MTPA in an Area of 1999.293 ha under 7(ii) of EIA Notification, 2006.
- (ii) The project was accorded amendment to the EC vide letter no. J-11015/487/2007-IA.II (M) dated 06.02.2015 for incremental difference in the production capacity i.e. from 30 MTPA to 31 MTPA in accordance to the OM J-11015/30/2004-IA.II (M) dated 19th December, 2012 which inter-alia stipulated an upper limit of 5 MTPA, was further amended vide OM J-11015/30/2004-IA.II (M) dated 2nd September, 2014.
- (iii) The latitude and longitude of the project are 22018'59" to 22019'43" N and 82030'47" to 82033'34"

E respectively.

- (iv) Joint Venture: no Joint Venture
 (v) Coal Linkage : NTPC Seepat & various other power plants
 (vi) Employment generated / to be generated: 2594 persons
 (vii) Benefits of the project: Project will considerably improve the socio-economic status of the adjoining areas. This will result in following benefits:

- Contribution to the Exchequer
- Meet energy requirement
- Post-mining Enhancement of Green Cover

- (viii) The land usage of the project will be as follows:

Pre-Mining:

| Activity | Types of land are (Ha) | | | Total Area (Ha) |
|----------|------------------------|-----------------------|---------|-----------------|
| | Forest | Tenancy/ Agricultural | Govt. | |
| Nil | 409.056 | 1409.244 | 180.993 | 1999.293 |

Post- Mining:

| S No | Pattern of utilization | Area (ha) |
|------|---|-----------------|
| 1. | Reclaimed External and Internal dumps | 986.00 |
| 2. | Green belt | 23.000 |
| 3. | Final void /Water body | 222.053 |
| 4. | Built up area (Infrastructure, colony, roads, R & R site) | 633.874 |
| 5. | Safety zone: Undisturbed area | 130.366 |
| 6. | Roads | 4.00 |
| | Total | 1999.293 |

Core area :

| SN | Particulars | Forest Land | Tenancy Land | Government Land | Grand Total |
|----|--|----------------|-----------------|-----------------|-----------------|
| | | | | others | |
| 1 | *Quarry Area | 52.889 | 858.314 | 90.850 | 1002.053 |
| 2 | External OB Dump | 54.718 | 125.212 | 26.070 | 206.00 |
| 3 | Infrastructure, workshop, administrative building etc. | 279.242 | 313.518 | 41.114 | 633.874 |
| 4 | Safety Zone | 22.207 | 85.200 | 22.959 | 130.366 |
| 5 | Green belt | | 23.00 | | 23.00 |
| 6 | roads | | 4.00 | | 4.00 |
| | Total land already Acquired | 409.056 | 1409.244 | 180.993 | 1999.293 |

(ix) The total geological reserve is 617 MT. The mineable reserve 359.19 MT, extractable reserve is 359.19 MT. The per cent of extraction would be 100 %.

(x) The coal grade is E / G10. The stripping ratio is 1:20 Cum/tonne. The average Gradient is 3.37-6.34 degree. There will be 03 seams with thickness ranging (E&F Seam- 12.70- 19.05 m; Upper Kusmunda-

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24.69- 35.82 m; Lower Kusmunda (Top Split) - 34.70-44.85 m; Lower Kusmunda (Bottom Split) - 2.19-24.50 m).

(xi) The total estimated water requirement is 4360 m³/day. The level of ground water ranges (CGM Office- Avg 8.275 m; Pragati Nagar- Shallow Avg-3.125 m & Deep Avg-19.17 m).

(xii) The Method of mining would be Open cast mining.

(xiii) There is 03 external OB dump with Quantity of 81.00 Mbcm in an area of 206.00 ha with height of 50 meters above the surface level and 03 internal dump with Quantity of 534.00 Mbcm in an area of 780.00 ha.

(xiv) The final mine void would be in 222.053 Ha with depth 80m and the total quarry area is 1001.929. Backfilled quarry area of 187.00 Ha shall be reclaimed with plantation. A void of 222.053 ha with depth upto 80 m which is proposed to be converted into a water body

(xv) The life of mine is 11 Years.

(xvi) Transportation: Coal transportation From face to In pit crusher: By Trucks. Surface to siding: By Trucks ; Siding to Consumer : Rail

(xvii) There is R & R involved. There are 1660 PAFs.

(xviii) Total capital cost of the project is Rs. 1950.86 Crores. CSR Cost According to New CSR policy, the fund for the CSR should be allocated based on 2% of the average net profit of the Company for the three immediate preceding financial years or Rs. 2.00 per tonne of coal production of previous year whichever is higher. R&R Cost Rs. 51.49 Crores. Environmental Management Cost Rs. 11749220.00 for the FY (2015-16).

(xix) Hasdeo river about 8.00Kms, Lilagarh Nadi , Kholar Nalla & small channels joining Hasdeo river.

(xx) Ground water clearance issued on 25.03.2004. Board's approval obtained on 13.05.16. Mining plan has been approved on 13.05.16. Mine closure plan is an integral part of mining plan.

(xxi) There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.

(xxii) Total forest land 409.056 ha, Status of Forest clearance: In process. Stage-1 FC available for 409.056Ha of forest land

(xxiii) Total afforestation plan shall be implemented covering an area of 248.51ha at the end of mining including green Belt over an area of 23 ha. Density of tree plantation 2500 trees/ ha of plants.

(xxiv) There are court cases/violation pending with the project proponent as per the following details:-

| Case No. | Court | Parties | Brief | Present status |
|-----------|---|---|-----------------------------------|--|
| 1217/2007 | Judicial Magistrate Class I, Korba transferred to Bilaspur HC, criminal revision in the year 2010 | Regional Officer, CGEPB Vs Gevra & CGM Dipka Area | Increase of production without EC | Pending |
| 26/2009 | 1) JMFC, Katghora Case no.-26/2009 | CGEPB, Korba Vs Debasis Chatterjee, Ex CGM Dipka. | Increase of production without EC | Case disposed. Appeal preferred by CECB, Korba against order in Bilaspur High Court. Case No. CRMP 859/2009 |

4.5.4 During deliberations, the EAC noted the following:-

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(i) The proposal is for grant of ToR to the expansion project of Dipka opencast coal mine from 31 to 35 MTPA in the existing mine lease area of 1999.293 ha. Out of the total forest land of 409.149 ha, Stage-I forest clearance has been obtained for total forest land of 409.056 ha. For diversion of the remaining forest land of 0.093 ha, request has been made.

(ii) Earlier, the EC was issued for expansion of Dipka opencast coal mine from 25 to 30 MTPA vide letter dated 12th February, 2013 with the exemption from public hearing as provided under the Ministry's OM dated July, 2014. The capacity of the coal mine was further enhanced to 31 MTPA, and the fresh EC was issued on 6th February, 2015, again exempting from public hearing in terms of the subsequent OM dated 2nd September, 2014.

(iii) In addition to the request for grant of ToR to the above expansion project, the project proponent has also requested for grant of EC to the said project without any ToR and fresh public hearing. The Committee, in the first instance, observed the proposal not admissible in terms of the extant provision contained in this Ministry's OMs in this regard.

(iv) The compliance status of earlier EC conditions was not much satisfactory as many of these conditions were reported as being complied, partially complied or not complied (formation Wildlife Conservation Plan).

(v) Ambient air quality values for PM₁₀, SO₂ and NO_x at the monitored locations were within the prescribed norms with adequate mitigative measures put in place.

(vi) Different works taken up under the CSR during last three years were satisfactory:-

4.5.5 The EAC, after deliberations, recommended the proposal for grant of ToR to the expansion of Dipka opencast coal mine from 31 to 35 MTPA, and for preparation of EIA/EMP reports with public consultation subject to compliance of all conditions as specified and notified in the standard ToR applicable for coal mining projects.

While considering the request for grant of EC to the project without the requirement of fresh ToR and the public hearing, the EAC suggested for a third party assessment of baseline environmental parameters and the prediction of likely impacts including socio-economic, due to the said expansion. The same may be undertaken through NEERI or any other expert agency identified by the Ministry.

Agenda 4.6

Expansion of Gevra Opencast Coal mine from 41 MTPA to 45 MTPA in ML area of 4184.486 ha of M/s South Eastern Coalfields Limited at district Korba (Chhatishgarh)- For consideration of TOR

4.6.1 The proposal is for grant of Terms of Reference for expansion of Gevra Opencast coal mine project from 41 MTPA to 45 MTPA in ML area of 4781.788 ha of M/s South Eastern Coalfields Limited in District Korba (Chhatishgarh)

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

- (i) Earlier, the expansion project of Ghevra open cast from 35 MTPA to 40 MTPA was accorded EC vide letter no. J-11015/85/2010-IA.II (M) dated 31.01.2014 for the expansion from 35 MTPA to 40 MTPA in terms of para 7(ii) of EIA Notification, 2006 and subsequent OM issued to facilitate one time capacity expansion without public hearing.
- (ii) The project was accorded amendment in the EC vide letter No. J-11015/85/2010-IA.II (M) dated 06.02.2015 for incremental difference in the production capacity from 40 MTPA to 41 MTPA as provided in the OM dated 2nd September, 2014.
- (iii) The Gevra OC project is a running project currently producing 41 MTPA but has the potential to produce and dispatch 45 MTPA with the existing infrastructure. Hence, expansion has been planned for 45.
- (iv) The latitude and longitude of the project site are 22° 18'00" to 22° 21'42" N and 82° 32'00" to 82° 39' 30" E respectively.
- (v) Joint Venture: no
- (vi) Coal Linkage : NTPC & Various thermal power plants
- (vii) Employment generated / to be generated: 4391 Persons
- (viii) Benefits of the project: Project will considerably improve the socio-economic status of the adjoining areas. This will result in benefits such as Improvements in Physical Infrastructure; Improvements in Social Infrastructure; Increase in Employment Potential; Contribution to the Exchequer; Meet energy requirement ; Post-mining Enhancement of Green Cover.
- (ix) The land usage of the project will be as follows:

Pre-Mining:

| SR. NO. | LAND USE | WITHIN ML AREA (Ha.) | OUTSIDE ML AREA (Ha.) | TOTAL (Ha.) |
|---------|---|----------------------|-----------------------|-------------|
| | | ALREADY ACQUIRED | ALREADY ACQUIRED | |
| 1 | Agricultural land | 1273.426 | 1247.145 | 2520.571 |
| 2 | Forest land | 441.410 | 575.002 | 1016.412 |
| 3 | Waste Land | 0.000 | 0.000 | 0.000 |
| 4 | Grazing Land | 0.000 | 0.000 | 0.000 |
| 5 | Surface Water Bodies | 7.000 | 0.000 | 7.000 |
| 6 | Settlements | 0.000 | 0.000 | 0.000 |
| 7 | Others (Specify) Govt. Land (Including Waste Land & Grazing Land) | 315.414 | 325.089 | 640.503 |
| TOTAL | | 2037.250 | 2147.236 | 4184.486 |

Post- Mining:

| S No | Pattern of utilization | Area (ha) |
|------|---|-----------|
| 1. | Reclaimed External and Internal dumps | 1858.00 |
| 2. | Green belt | 5.670 |
| 3. | Final void /Water body | 659.250 |
| 4. | Built up area (Infrastructure, colony, roads, R & R site) | 1243.392 |

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| | | |
|----|-------------------------------|-----------------|
| 5. | Safety zone: Undisturbed area | 418.174 |
| | Total | 4184.486 |

Core area :

| S N | Particulars | Tenancy land (ha) | Forest land (ha) | Government Land (ha) | | | | | Grand Total (ha) |
|--------|-----------------------------------|----------------------|---------------------|----------------------|---------------|---------------|----------------|----------------|------------------------|
| | | | | Grazing land | Waste land | Water body | Others | Total | |
| 1 | Quarry area | 1285.888 | 441.410 | 0.000 | 0.000 | 7.000 | 297.952 | 304.952 | 2032.250 |
| 2 | Area for Top Soil in quarry | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 5.000 | 5.000 | 5.000 |
| 3 | External dump | 291.310 | 0.000 | 0.000 | 0.000 | 0.000 | 188.690 | 188.690 | 480.000 |
| 4 | Infrastructur e, etc | 504.509 | 509.434 | 0.000 | 0.000 | 0.000 | 88.839 | 88.839 | 1102.782 |
| 5 | Roads | 6.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 6.000 |
| 6 | Residential Colony | 65.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 65.000 |
| 7 | R & R site | 69.280 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 69.280 |
| 8 | Explosive magazine | 0.000 | 6.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 6.000 |
| 9 | Nala Diversion, if any | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 10 | Safety Zone | 311.046 | 59.568 | 0.000 | 0.000 | 0.000 | 47.560 | 47.560 | 418.174 |
| | Total Land (in ha) | 2533.033 | 1016.412 | 0.000 | 0.000 | 7.000 | 628.041 | 635.041 | 4184.486 |

(x) Total geological reserve is 1378.22 MT, the mineable reserve 1240.40 MT and extractable reserve is 1240.40 MT. The per cent of extraction would thus be 90%.

(xi) The coal grade is G10, the stripping ratio is 1.30 Cum/tonne. The average gradient is 1 in 6 to 1 in 12 having 6 seams with thickness ranging 3.14 m to 57.86 m.

(xii) Total estimated water requirement is 26000 KL/day. The level of ground water ranges from 2.31 m to 9.90 m.

(xiii) The method of mining would be Opencast.

(xiv) There are 7 external OB dumps with quantity of 147.60 Mbcm in an area of 480 ha with height of 90 m above the ground level, and 8 internal dumps with quantity of 1119.40 Mbcm in an area of 1378 ha.

(xv) The final mine void would be in 659.250 ha with depth 40 m which is proposed to be converted into a water body. Backfilled quarry area of 376.60 ha shall be reclaimed with plantation. A void of 659.250 ha with depth of 40 m.

(xvi) The life of mine is 12 Years.

(xvii) Transportation of coal: From face to In pit crusher by trucks. In pit belt conveyor is under construction & will be completed within Dec.'2016; Surface to siding: By Conveyor System through Silo; siding at loading by Rail & MGR

(xviii) There is R & R involved. There are 2420 PAFs.

(xix) Total capital cost of the project is Rs. 11816.40 Crores. CSR Cost According to New CSR policy, the fund for the CSR should be allocated based on 2% of the average net profit of the Company for the three immediate preceding financial years or Rs. 2.00 per tonne of coal production of previous year whichever is higher. R&R Cost Rs. 564.44 Crores (as per approved PR of 70.00 MTPA). Environmental Management Cost Rs. 184.38 Crores.

(xx) Hasdeo river is the main drainage of the area. The study area includes a number of seasonal nallah & tributaries of Hasdeo river like Ahiran, Kholar nallah. Lilagar river also flows through the study area of project.

(xxi) Ground water clearance obtained on 18.06.2004. Mining plan has been for the intended capacity of 45 MTPA was approved by the Board of SECL on 25th July, 2016. Mine closure plan is an integral part of mining plan.

(xxii) There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.

(xxiii) Total forest area involved 1016.412 ha, the status of diversion of forest land for non - forestry purposes is as under:-

| Area (in ha) | Registration/Stage-1 /Final FC issued vide letter no. & date | Status and Validity period of FC |
|--------------|---|---|
| 100.898 | vide MoEF Clearance L no.8-33/2005-FC Dtd.: 05.05.2008 | Status: Final/Stage-II Forestry Clearance obtained. Validity: Co-terminus with the Mining Lease or 20 years, whichever is less |
| 46.198 | vide MoEF Clearance L no.8-81/ 2006-FC Dtd : 20-04-2015 | |
| 192.046 | vide MoEF Clearance L no.8-77/2006 - FC,Dtd: 20-04-2015 | |
| 564.885 | vide MoEF Clearance L no.8-79/2006 - FC, Dtd : 20-04-2015 | |
| 904.027 | Total forest land for which final/Stage-II Forestry Clearance obtained | |
| 112.385 | On-line application was submitted on 11-06-2015. Registered vide Ref:FP/CG/MIN/13199/2015 | Stage 1 approval awaited |

(xxiv) Total afforestation plan shall be implemented covering an area of 2438.672 ha at the end of mining. Green Belt over an area of 5.670 ha. Density of tree plantation 2500 trees/ ha of plants.

(xxv) There are court cases/violation pending with the project proponent as per the following details:-

| Sl No | Year of Violation | Production | Cas e No | Court | Parties | Brief | Present Status |
|-------|--------------------|------------------|------------|------------------------|--|--|---|
| 1 | 2001-02 to 2004-05 | More than 10 MTY | 1217 /2007 | J.M.C , Class I, Korba | CECB, Korba. Vs. CGM Dipka Extension Gevra area SECL | Regarding Cr. Complaint filed under Sec.15 & 17 of EP Act. | Pending for examination of proposed accused |

2500 trees/ha

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| | | | | | | | |
|---|---------------|--|--------------|--------------|---|--|---------|
| 2 | 31.7.20 00 | Consent not renewed and capacity expanded from 10 MTY | 613/ 2007 | HC of BSP | CECB, Korba. Vs. SECL Gevra Project | Regarding Cr. Complaint filed under Sec.15 & 17 of EP, 1986. Criminal revision. | Pending |
|---|---------------|--|--------------|--------------|---|--|---------|

(xxvi) **Certified EC Compliance Report:** The Regional Office of MoEF&CC at Nagpur has carried out the site inspection on 11th November, 2016 to verify the status of compliance of EC conditions for Gevra opencast expansion project from 35 MTPA to 40 MTPA, and then 41.00 MTPA. The monitoring report was forwarded to this Ministry vide their letter No. 3-28/2014(Env) dated 4th November, 2016, which was deliberated in the EAC meeting. The project proponent presented the action taken on each of the observations made by Regional Office during the site visit.

4.6.3 During deliberations, the EAC noted the following:-

(i) The proposal is for grant of ToR to the expansion project of Gevra opencast coal mine from 41 to 45 MTPA in the existing mine lease area of 4184.486 ha. Out of the total forest land of 1016.412 ha, Stage-II forest clearance has been obtained for 904.027 ha. For diversion of the remaining forest land of 112.385 ha, request has also been made.

(ii) Earlier, the EC was issued for expansion of Gevra opencast coal mine from 35 to 40 MTPA vide letter dated 31st January, 2014 with the exemption from public hearing as provided under the Ministry's OM dated July, 2014. The capacity of the coal mine was further enhanced to 41 MTPA, and the fresh EC was issued on 6th February, 2015, again exempting from public hearing in terms of the subsequent OM dated 2nd September, 2014.

(iii) In addition to the request for grant of ToR to the above expansion project, the project proponent has also requested for grant of EC to the said project without any ToR and fresh public hearing. The Committee, in the first instance, observed the proposal not admissible in terms of the extant provisions contained in this Ministry's OMs in this regard.

(iv) The compliance status of earlier EC conditions was not much satisfactory as many of these conditions were reported as being complied, partially complied or not complied.

(v) Ambient air quality values for PM₁₀, SO₂ and NO_x at the monitored locations were within the prescribed norms with adequate mitigative measures put in place.

(vi) Different works taken up under the CSR during last three years were satisfactory:-

4.6.5 The EAC, after deliberations, recommended the proposal for grant of ToR to the expansion of Gevra opencast coal mine from 41 to 45 MTPA, and for preparation of EIA/EMP reports with public consultation

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subject to compliance of all conditions as specified and notified in the standard ToR applicable for coal mining projects.

While considering the request for grant of EC to the project without the requirement of fresh ToR and the public hearing, the EAC suggested for a third party assessment of baseline environmental parameters and the prediction of likely impacts, including socio-economic, due to the said expansion. The same may be undertaken through NEERI or any other expert agency identified by the Ministry.

Agenda 4.7

Expansion of Bermo Coal Mine Project from 0.4 MTPA to 2.62 MTPA of M/s Damodar Valley Corporation in a total area of 269.094 ha located in District Bokaro (Jharkhand) - For further consideration of TOR)

4.7.1 The proposal is for grant of Terms of Reference for expansion of Bermo Coal Mine Project from 0.4 MTPA to 2.62 MTPA of M/s Damodar Valley Corporation (DVC) in a total area of 269.094 ha located in District Bokaro (Jharkhand).

4.7.2 The proposal was last considered in the 58th EAC meeting held for 23-24 June, 2016, wherein observations of the Committee were as under:-

- (i) The proposed OB dump area of 100 ha is at a distance of nearly 5 km (in non-coal bearing area) from the coal mine which may not be economically and/or environmentally sustainable.
- (ii) The nearby coal mine of M/s Central Coalfields Ltd may be utilized for dumping of OB, and the option needs to be explored.
- (iii) In case this option not found/feasible, the project proponent may go for restricting their expansion, and explore the possibility for OB dumping within the existing mine lease area with reduction in production.

4.7.3 In response to the above observations of EAC, the details submitted by the project proponent and/or as informed during the earlier meeting, are as under:-

- (i) The transportation and dumping of OB to nearly 5 km away not being economically and/or environmentally sustainable, studies were undertaken for other viable options.
- (ii) DVC had approached Central Coalfield Limited (CCL) requesting them to identify areas which could be given to them for OB dumping. M/s CCL carried out an exercise for the same and informed the DVC that no area could be made available to DVC for the OB dumping.
- (iii) The permutations and combinations of excavation and dumping were carried out for accommodating the OB within the existing ML area, but not found feasible to accommodate the OB within the ML area by multiple re-handling of the OB. A total of 101.75 Mcum (B) of overburden is estimated to be generated during life of mine. Out of this, 15.53 Mcum (equivalent to about initial 3 and half years) OB generated from the NE corner of area will be accommodated (temporary dump) over the SW corner of the X-X area within the ML. The OB from 2nd half of 4th year onwards will be disposed off (in temporary dump) over Y-Y area

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Minutes of the 11th meeting of the EAC held on 30th -31st May, 2017 for Thermal & Coal Mining Sector projects

A. The 9th meeting of the Expert Appraisal Committee (EAC) for Thermal & Coal mining projects was held on 27-28 April, 2017 in the Ministry to consider the proposals relating to coal mining sector. The list of participants and the project proponents are at Annexure-I & II respectively.

B. Confirmation of minutes

The Committee confirmed minutes of the 9th meeting held on 27-28 April, 2017.

C. Details of the proposals considered during the meeting, deliberations made and the recommendations of the Committee, are explained in the respective agenda items as under:-

Agenda 11.1

Coal Washery of 2.5 MTPA in an area of 6.50 ha by M/s Hind Energy and Coal Beneficiation (India) Limited at Kirarama village Lakhanpur Tehsil, Jharsuguda District (Odisha) – For consideration for TOR

11.1.1 The proposal is for grant of TOR to Coal Washery of 2.5 MTPA in an area of 6.50 ha by M/s Hind Energy and Coal Beneficiation (India) Limited at Kirarama village Lakhanpur Tehsil, Jharsuguda District (Odisha).

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

- (i) It is a green field project.
- (ii) The latitude and longitude of the project site are :

| Point No. | Latitude | Longitude |
|-----------|---------------|---------------|
| 1. | 21°45'55.23"N | 83°52'11.39"E |
| 2. | 21°45'54.10"N | 83°52'21.30"E |
| 3. | 21°45'46.55"N | 83°52'17.97"E |
| 4. | 21°45'46.87"N | 83°52'9.88"E |

- (iii) Joint Venture: There is no Joint Venture.
- (iv) Coal Linkage: Coal will be sourced from Mahanadi Coalfields Ltd.
- (v) Employment generated / to be generated: Direct employment - 75 nos. Indirect employment - 150 nos.
- (vi) Benefits of the project: The management is committed to uplift the standards of living of the villagers by providing employment to local people & taking up CSR activities in consultation with local gram panchayat based on need based assessment to be carried out with village panchayat.

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|---|----------------|---|--|
| 2 | Point No 3(ii) | The latitude and longitude of the project site are 23° 12' 40" to 23° 14' 10" N and 81° 40' 20" to 81° 43' 20" E respectively | Latitude 23°12'10" to 23°14'10" North Longitude 81°41'28" to 81°43'20" East |
|---|----------------|---|--|

11.10.3 The EAC, after deliberations, recommended for amendment in the TOR as requested by the project proponent in respect of S. No.2 above. For the entry at S. No.1, it was desired not to allow the coal transportation by road (trucks/tippers), and thus there may be no change in the earlier recommendations in this regard. All other terms and conditions stipulated therein remaining unchanged.

Agenda 11.11

Expansion of Dipka Opencast Coal Mine from 31 MTPA to 35 MTPA in an ML area 1999.293 ha of M/s South Eastern Coalfields Limited in District Korba (Chhattisgarh) – Amendment in ToR

11.11.1 Ministry granted TOR to the above proposal on 28th February, 2017. Project proponent vide letter no.SECL/BSP/ENVT/Dipka OC/17/6611 dated 8th March, 2017 requested for correction/amendment in the TOR.

11.11.2 During the meeting, the project proponent requested for amendment/correction in certain conditions stipulated in the TOR dated 8th March, 2017 as per the following details:-

| S. No. | Para No. | As per ToR | Request for Amendment in the ToR |
|--------|----------|---|---|
| 1. | Subject | Expansion of Dipka Opencast Coal Mine from 31 MTPA to 35 MTPA in an ML area 1999.293 ha of M/s South Eastern Coalfields Limited in District Korba (Chhattisgarh) – TOR reg. | Expansion of Dipka Opencast Coal Mine from 31 MTPA to 35 MTPA in an ML area 1999.417 ha of M/s South Eastern Coalfields Limited in District Korba (Chhattisgarh) - ToR reg. Justification: After submission of Form-1 the total land area has under gone a slight change and has been modified as 1999.417 Ha. This fact has been brought out in the Basic Information/ Check list and Presentation made by SECL during EAC meeting on 31.01.2017. |
| 2. | 2 | The Ministry of Environment, Forest and Climate Change has considered the application. It is noted that the proposal is for grant of Terms of | The Ministry of Environment, Forest and Climate Change has considered the application. It is noted that the proposal is for grant of Terms of Reference to the project for expansion of Dipka Opencast Coal Mine from 31 MTPA to 35 MTPA of M/s South Eastern Coalfields Limited in ML |

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|----|---------|---|---|
| | | Reference to the project for expansion of Dipka Opencast Coal Mine from 31 MTPA to 35 MTPA of M/s South Eastern Coalfields Limited in ML area of 1999.293 ha in District Korba (Chhattisgarh) | area of 1999.417 ha in District Korba (Chhattisgarh) Justification: After submission of Form-1 the total land area has under gone a slight change and has been modified as 1999.417 Ha. This fact has been brought out in the Basic Information/ Check list and Presentation made by SECL during EAC meeting on 31.01.2017. |
| 3. | 3(i) | The proposal is for grant of terms of reference to the expansion of Dipka Opencast Coal Mine from 31 MTPA to 35 MTPA in mine lease area of 1999.293 ha | The proposal is for grant of terms of reference to the expansion of Dipka Opencast Coal Mine from 31 MTPA to 35 MTPA in mine lease area of 1999.417 ha Justification: After submission of Form-1 the total land area has under gone a slight change and has been modified as 1999.417 Ha. This fact has been brought out in the Basic Information/ Check list and Presentation made by SECL during EAC meeting on 31.01.2017. |
| 4. | 3(xi) | The coal gade is E / G10. The stripping ratio is 1:20 Cum/tonne. The average Gradient is 3.37-6.34 degree. There will be 03 seams with thickness ranging (E&F Seam- 12.70- 19.05 m; Upper Kusmubda- 24.69- 35.82 m; Lower Kusmunda (Top Split) - 34.70-44.85 m; Lower Kusmunda (Bottom Split) - 2.19-24.50 m) | The coal gade is G-10/11. The stripping ratio is 1.20Cum/tonne. The average Gradient is 3.37-6.34 degree. There will be 03 seams with thickness ranging (E&F Seam- 12.70- 19.05 m; Upper Kusmubda- 24.69- 35.82 m; Lower Kusmunda (Top Split) - 34.70-44.85 m; Lower Kusmunda (Bottom Split) - 2.19-24.50 m) Justification: Typographical mistake. |
| 5. | 3(xiii) | The Method of-mining would be Open cast mining. There is 03 external OB dump with Quantity of 81.00 Mcum in an area of 206.00 ha with height of 50 meters above the surface level and 03 internal dump with Quantity of 534.00 Mcum in an area of 780.00 ha | The Method of-mining would be Open cast mining. There are 03 external OB dumps with Quantity of 81.00 Mcum. in an area of 206.00 ha with height of 90 meters above the surface level and 03 internal dumps with Quantity of 534.00 Mcum in an area of 780.00 ha Justification: This fact has been brought out in the Basic Information/ Check list and Presentation made by SECL during EAC meeting on 31.01.2017. |

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|----|---------|--|--|
| 6. | 3(xiv) | The final mine void would be in 222.053 Ha with depth 80m and the total quarry area is 1001.929. Back filled quarry area of 187.00 Ha shall be reclaimed with plantation. A void of 222.053 ha with depth up to 80 m which is proposed to be converted into a water body | The final mine void would be in 222.053 Ha with depth 80m and the total quarry area is 1002.053 . Back filled quarry area of 780.00 Ha shall be reclaimed with plantation. A void of 222.053 ha with depth up to 80 m which is proposed to be converted into a water body. Justification: This fact has been brought out in the Basic Information/ Check list and Presentation made by SECL during EAC meeting on 31.01.2017. |
| 7. | 3(xxii) | Total forest land 409.056 ha, Status of Forest clearance: In process. Stage-I FC available for 409.056 ha of forest land | Total forest land 409.149ha , Status of Forest clearance: Stage-I FC available for 409.056 ha of forest land. For 0.093 ha of forest land registration has been done for Stage-I FC vide FC Registration No. 2013/028, dated- 04.04.2013 . Justification: After submission of Form-1 the total land area has under gone a slight change and has been modified as 1999.417 Ha. This fact has been brought out in the Basic Information/ Check list and Presentation made by SECL during EAC meeting on 31.01.2017. |
| 8. | 4 | The Expert Appraisal Committee in its meeting held on 30-31 January, 2017, has recommended the proposal for grant of Terms of References. Based on the recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords Terms of References to the project for expansion of Dipka Opencast Coal Mine from 31 MTPA to 35 MTPA of MIs South Eastern Coalfields Limited in mine lease area of 1999.293 ha in District Korba (Chhattisgarh) for preparation of EIA/EMP | The Expert Appraisal Committee in its meeting held on 30-31 January, 2017, has recommended the proposal for grant of Terms of References. Based on the recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords Terms of References to the project for expansion of Dipka Opencast Coal Mine from 31 MTPA to 35 MTPA of MIs South Eastern Coalfields Limited in mine lease area of 1999.417 ha in District Korba (Chhattisgarh) for preparation of EIA/EMP reports with public consultations, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto, subject to the compliance of the following terms and conditions and environmental safeguards mentioned below: Justification: After submission of Form-1 the total land area has under gone a slight change and has been modified as 1999.417 Ha. This fact has been |

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| | | | |
|----|-------|---|--|
| | | reports with public consultations, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/ circulars thereto, subject to the compliance of the following terms and conditions and environmental safeguards mentioned below: | brought out in the Basic Information/ Check list and Presentation made by SECL during EAC meeting on 31.01.2017. |
| 9. | 3(ix) | The land usage of the project will be as follows:** | The land usage of the project will be as follows:*** Justification: After submission of Form-1 the total land area has under gone a slight change and has been modified as 1999.417 Ha. This fact has been brought out in the Basic Information/ Check list and Presentation made by SECL during EAC meeting on 31.01.2017. |

** Point as written in ToR

| | | | | | |
|--|---|------------------------------|---------------------|--------------------------|--------------------|
| The land usage of the project will be as follows: | | | | | |
| i. Pre-mining : | | | | | |
| Activity | Types of land are (Ha) | | | Total land (Ha) | |
| | Forest | Tenancy/ Agricultural | Govt. | | |
| Nil | 409.056 | 1409.244 | 181.993 | 1999.293 | |
| ii. Post Mining: | | | | | |
| S.No | Pattern of utilization | | | Area (ha) | |
| 1. | Reclaimed External and Internal dumps | | | 986.00 | |
| 2. | Green belt | | | 23.000 | |
| 3. | Final void /Water body | | | 222.053 | |
| 4. | Built up area (Infrastructure, colony, roads, R&R site) | | | 633.874 | |
| 5. | Safety zone: Undisturbed area | | | 130.366 | |
| 6. | Roads | | | 4.00 | |
| | Total | | | 1999.293 | |
| iii. Core area: | | | | | |
| S. No. | Activity | Forest Land | Tenancy Land | Govt Land/ Others | Grand Total |
| 1. | *Quarry Area | 52.889 | 858.314 | 90.850 | 1002.053 |

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| | | | | | |
|------------------------------------|---------------------|----------------|-----------------|----------------|-----------------|
| 2. | External OB Dump | 54.718 | 125.212 | 26.070 | 206.00 |
| 3. | Infrastructure etc. | 279.242 | 313.518 | 41.114 | 633.874 |
| 4. | Safety Zone | 22.207 | 85.200 | 22.959 | 130.366 |
| 5. | Green belt | 0.000 | 23.000 | 0.000 | 23.000 |
| 6. | Roads | 0.000 | 4.000 | 0.000 | 4.000 |
| Total land already Acquired | | 409.056 | 1409.244 | 180.993 | 1999.293 |

Amendment requested in the ToR ***

The land usage of the project will be as follows:

i. Pre-mining:

| Activity | Types of land are (Ha) | | | Total land (Ha) |
|----------|------------------------|-----------------------|---------|-----------------|
| | Forest | Tenancy/ Agricultural | Govt. | |
| Nil | 409.149 | 1409.244 | 181.024 | 1999.417 |

ii. Post Mining:

| S.No | Pattern of utilization | Area (ha) |
|--------------|---|-----------------|
| 1. | Reclaimed External and Internal dumps | 986.124 |
| 2. | Green belt | 23.000 |
| 3. | Final void /Water body | 222.053 |
| 4. | Built up area (Infrastructure, colony, roads, R&R site) | 633.874 |
| 5. | Safety zone: Undisturbed area | 130.366 |
| 6. | Roads | 4.00 |
| Total | | 1999.417 |

iii. Core area:

| S.No | Activity | Forest Land | Tenancy Land | Govt Land/ Others | Grand Total |
|------|---------------------|-------------|--------------|-------------------|-------------|
| 1. | *Quarry Area | 52.858 | 858.314 | 90.881 | 1002.053 |
| 2. | External OB Dump | 54.718 | 125.212 | 26.070 | 206.00 |
| 3. | Infrastructure etc. | 279.242 | 313.518 | 41.114 | 633.874 |
| 4. | Safety Zone | 22.331 | 85.200 | 22.959 | 130.490 |
| 5. | Green belt | 0.000 | 23.000 | 0.000 | 23.000 |

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|-------------------|-------|----------------|-----------------|----------------|-----------------|
| 6. | Roads | 0.000 | 4.000 | 0.000 | 4.000 |
| Total land | | 409.149 | 1409.244 | 181.024 | 1999.417 |

11.11.3 The EAC, after deliberations, recommended for amendment in the TOR as requested by the project proponent on the above lines, with all other terms and conditions stipulated therein remaining unchanged.

Agenda 11.12

Expansion of Gevra Opencast Coal mine from 41.00 MTPA to 45.00 MTPA in ML area of 4184.486 ha in ML area of 4781.788 ha of M/s South Eastern Coalfields Limited at district Korba (Chhattisgarh) - Amendment in TOR

11.12.1 Ministry granted TOR to the above proposal on 28th February, 2017. Project proponent vide letter no. SECL/BSP/ENVT/Gevra OC_70/17/6610 dated 8th March, 2017 requested for correction/amendment in the TOR.

11.12.2 During the meeting, the project proponent requested for amendment/correction in certain conditions stipulated in the TOR dated 28th February, 2017 as per the following details:-

| S. No | Page/ Para | As per ToR | Request for Amendment in the ToR |
|-------|-----------------------|---|---|
| 1. | Subject | Expansion of Gevra Opencast Coal mine from 41 MTPA to 45 MTPA in ML area of 4184.486 ha of M/s South Eastern Coalfields Limited at district Korba (Chhattisgarh) - TOR reg. | Gevra OC Expansion project from 41.00 MTPA to 45.00 MTPA (Phase-1) in ML area of 4184.486 Ha and 70.00 MTPA (Phase-2) in ML area of 4781.788 Ha of M/s South Eastern Coalfields Limited, dist. Korba (Chhattisgarh). Justification: As per agenda item no. 4.6 of 4th EAC meeting dated 30/31.01.2017, our covering letter & uploaded Form-1. |
| 2. | Page-1; Para-1 | This has reference to your letter no. SECL/BSP/ENVTIDIPKA OC/16IEIA-EMP /6521 dated 08.11.2016 . along with online proposal No. IA/CG/CMIN /60267/2016 dated 21.11.2016 | This has reference to your letter no. SECL/BSP/ENVT/Gevra OC_70/16/ 6541 dated 28.11.2016 Online Proposal no. IA/CG/CMIN /60655/2016 dated 28.11.2016. Justification: <ul style="list-style-type: none"> • Our letter No. SECL/BSP/ ENVT /Gevra OC_70 /16 /6541 dated 28.11.2016 • Online Proposal no. IA/CG/ CMIN /60655/2016 dated 28.11.2016 |
| 3. | Page-1; Point no.- 2. | The Ministry of Environment, Forest and Climate Change has considered the application. It is noted that the proposal is for grant of Terms of Reference to the project for expansion of Gevra | The Ministry of Environment, Forest and Climate Change has considered the application. It is noted that the proposal is for grant of Terms of Reference to the project for expansion of Gevra Opencast Coal mine from 41 MTPA to 45 MTPA (Phase-1) in ML area of 4184.486 ha and 70.00 MTPA (Phase-2) in ML of 4781.788 ha of M/s South Eastern Coalfields Limited located in District Korba (Chhattisgarh). |

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|----|---------------------------|---|--|
| | | Opencast Coal mine from 41 MTPA to 45 MTPA of M/s South Eastern Coalfields Limited in ML area of 4184.486 ha located in District Korba (Chhatishgarh). | Justification: As per agenda item no. 4.6 of 4th EAC meeting dated 30/31.01.2017, our covering letter & uploaded Form-1. |
| 4. | Page-1; Point no. 3(i) | The proposal is for grant of terms of reference to the expansion of Dipka Opencast Coal Mine from 41 MTPA to 45 MTPA in mine lease area of 4184.486 ha. | The proposal is for grant of terms of reference to the expansion of Gevra Opencast Coal mine from 41 MTPA to 45 MTPA (Phase-1) in ML area of 4184.486 ha and 70.00 MTPA (Phase-2) in ML of 4781.788 ha. Justification: As per agenda item no. 4.6 of 4th EAC meeting dated 30/31.01.2017, our covering letter & uploaded Form-1. |
| 5. | Page-1; point no. 3(ii) | Earlier, the expansion project of Ghevra open cast from 35 MTPA to 40 MTPA was accorded EC vide letter no. J-1 1015/85/201 0-IA.11 (M) dated 31.01.2014 for the expansion from 35 MTPA to 40 MTPA in terms of para 7(ii) of EIA Notification, 2006 and subsequent OM issued to facilitate one time capacity expansion without public hearing. | Earlier, the expansion project of Gevra open cast from 35 MTPA to 40 MTPA was accorded EC vide letter no. J-1 1015/85/201 0-IA.11 (M) dated 31.01.2014 for the expansion from 35 MTPA to 40 MTPA in terms of para 7(ii) of EIA Notification, 2006 and subsequent OM issued to facilitate one time capacity expansion without public hearing. Justification: Proposal is for Gevra Opencast Coal mine. |
| 6. | Page-3; point no. 3(xvii) | Transportation of coal: <u>From face to In pit crusher by trucks. In pit belt conveyor is under construction & will be completed within Dec.'2016; Surface to siding: By Conveyor System through Silo; siding at loading by Rail & MGR</u> | .Transportation of coal: <u>From face to In pit crusher by trucks. In pit belt conveyor is under construction & will be completed by October17; Surface to siding: By Conveyor System through Silo; siding at loading by Rail & MGR</u> Justification: As per Basic information/Check list submitted to MoEF&CC point no. 36. |
| 7. | Page-3 point no 3(xviii) | There is R & R involved. There are 2420 PAFs | There is R & R involved. There are 3428 PAFs Justification: As per Basic information/Check list submitted to MoEF&CC point no. 35(vi) |

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|----|---|--|--|
| 8. | Page-4; Point no. 4 | The Expert Appraisal Committee in its meeting held on 30-31 January, 2017, has recommended the proposal for grant of Terms of References. Based on the recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords Terms of References to the project for expansion of Gevra Opencast Coal mine from 41 MTPA to 45 MTPA of M/s South Eastern Coalfields Limited in ML area of 4184.486 ha located in District Korba (Chhatisgarh) for preparation of EIAIEMP reports with public consultations, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto, subject to the compliance of the following terms and conditions and environmental, safeguards mentioned below: | The Expert Appraisal Committee in its meeting held on 30-31 January, 2017, has recommended the proposal for grant of Terms of References. Based on the recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords Terms of References to the project for expansion of Gevra Opencast Coal mine from 41 MTPA to 45 MTPA (Phase-1) in ML area of 4184.486 ha and 70.00 MTPA (Phase-2) in ML of 4781.788 ha located in District Korba (Chhatisgarh) for preparation of EIAIEMP reports with public consultations, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto, subject to the compliance of the following terms and conditions and environmental, safeguards mentioned below: Justification: As per agenda item no. 4.6 of 4th EAC meeting dated 30/31.01.2017, our covering letter & uploaded Form-1. |
| 9. | Page-3(ix); Table for Core area land use | Table as shown in the ToR is given below ** | Amendment requested in the ToR is given below *** Justification: As per Basic information/Check list submitted to MoEF&CC point no. 34(iii) |

**** Table as given in ToR letter: Core area:**

| S N. | Particulars | Tenancy land (Ha.) | Forest land (Ha.) | Government Land (Ha.) | | | | | Grand Total (Ha.) |
|------|-----------------------------|--------------------|-------------------|-----------------------|------------|------------|---------|---------|-------------------|
| | | | | Grazing land | Waste land | Water body | Others | Total | |
| 1 | Quarry area | 1285.888 | 441.410 | 0.000 | 0.000 | 7.000 | 297.952 | 304.952 | 2032.250 |
| 2 | Area for Top Soil in quarry | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 5.000 | 5.000 | 5.000 |
| 3 | External dump | 291.310 | 0.000 | 0.000 | 0.000 | 0.000 | 188.690 | 188.690 | 480.000 |
| 4 | Infrastructure, etc | 504.509 | 509.434 | 0.000 | 0.000 | 0.000 | 88.839 | 88.839 | 1102.782 |

| | | | | | | | | | |
|---------------------------|------------------------|-----------------|-----------------|--------------|--------------|--------------|----------------|----------------|-----------------|
| 5 | Roads | 6.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 6.000 |
| 6 | Residential Colony | 65.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 65.000 |
| 7 | R & R site | 69.280 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 69.280 |
| 8 | Explosive magazine | 0.000 | 6.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 6.000 |
| 9 | Nala Diversion, if any | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 10 | Safety Zone | 311.046 | 59.568 | 0.000 | 0.000 | 0.000 | 47.560 | 47.560 | 418.174 |
| Total Land (in Ha) | | 2533.033 | 1016.412 | 0.000 | 0.000 | 7.000 | 628.041 | 635.041 | 4184.486 |

***Amendment requested in the ToR ; Core area:

| S N. | Particulars | Tenancy land (Ha.) | Forest land (Ha.) | Government Land (Ha.) | | | | | Grand Total (Ha.) |
|---------------------------|-----------------------------|--------------------|-------------------|-----------------------|--------------|--------------|----------------|----------------|-------------------|
| | | | | Grazing land | Waste land | Water body | Others | Total | |
| 1 | Quarry area | 1285.888 | 441.410 | 0.000 | 0.000 | 7.000 | 297.952 | 304.952 | 2032.250 |
| 2 | Area for Top Soil in quarry | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 5.000 | 5.000 | 5.000 |
| 3 | External dump | 291.310 | 0.000 | 0.000 | 0.000 | 0.000 | 188.690 | 188.690 | 480.000 |
| 4 | Infrastructure, etc | 504.509 | 509.434 | 0.000 | 0.000 | 0.000 | 88.839 | 88.839 | 1102.782 |
| 5 | Roads | 6.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 6.000 |
| 6 | Residential Colony | 65.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 65.000 |
| 7 | R & R site | 69.280 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 69.280 |
| 8 | Explosive magazine | 0.000 | 6.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 6.000 |
| 9 | Nala Diversion, if any | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 10 | Safety Zone | 298.564 | 59.568 | 0.000 | 0.000 | 0.000 | 60.022 | 60.022 | 418.174 |
| Total Land (in Ha) | | 2520.571 | 1016.412 | 0.000 | 0.000 | 7.000 | 640.503 | 647.503 | 4184.486 |

11.12.3 The EAC, after deliberations, opined that the ToR was issued for the expansion project of Gevra OCP only from 41 to 45 MTPA, and as such amending the ToR for the proposed expansion in phase-I & II would not be logical and justified. The Committee recommended for amendment in the ToR in respect of S.No.2, 5, 6, 7 & 9 of the table at para 11.12.2 above, with all other terms and conditions stipulated therein remaining unchanged.

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Final minutes of the 22nd meeting of the EAC held on 27th November, 2017 for appraisal of Coal mining projects

A. The 22nd meeting of the Expert Appraisal Committee (EAC) for Thermal & Coal mining projects was held on 27th November, 2017 in the Ministry to consider the proposals relating to coal mining sector. The lists of participants and the project proponents are at Annexure-I & II respectively.

B. Confirmation of minutes

There being no comments from any of the members of the Committee, minutes of the 21st meeting of the EAC held on 27th October, 2017 were confirmed.

C. Details of the proposals considered during the meeting, deliberations made and the recommendations of the Committee, are explained in the respective agenda items as under:-

Agenda No.22.1

Amadand Open Cast Coal Mine expansion project from 2.15 MTPA to 5.4 MTPA in ML area of 1443.02 ha by M/s South Eastern Coalfields Limited located in District Anuppur (Madhya Pradesh) - For ToR

22.1.1 The proposal is for TOR for Amadand Open Cast Coal Mine expansion project from 2.15 MTPA to 4.0 MTPA Normative/5.4 MTPA Peak in a total land area 1443.02 ha (ML area 1382.22 ha) of by M/s South Eastern Coalfields Limited located in District Anuppur (Madhya Pradesh).

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

- (i) The project was accorded EC vide letter no. J-11015/46/2002-IA.II (M) dated 18th March, 2015 for 2.15 MTPA capacity for an area of 884.71 ha.
- (ii) The latitude and longitude of the project are 23° 07' 28" N to 23° 09' 46" N and 82° 02' 04" E to 82° 04' 53" E respectively.
- (iii) Joint Venture: There is no joint venture.
- (iv) Coal Linkage : Thermal Power Stations
- (v) Employment generated / to be generated: 244 Nos
- (vi) Benefits of the project: This coal Mine will go a long way in fulfilling the demand nation's electricity and other coal based industries, apart from earning revenue for the government. Opportunity of employment for the project affected villagers and allied industries.
- (vii) The total land area is 1443.02 ha ha. Mining lease area as per approved Mining Plan is 1382.22 ha.

(viii) The land usage of the project will be as follows:

| S.N | LAND USE | Within ML Area (ha.) | Outside ML Area (ha.) | Total (ha) |
|-----|-------------------|----------------------|-----------------------|------------|
| 1 | Agricultural Land | 1303.84 | 0 | 1303.84 |

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Regional Office of the Ministry at Bhopal has forwarded the monitoring report on compliance status of the conditions stipulated in the EC dated (based on the site visit carried out on 11th September, 2016), vide their letter dated 4th October, 2017. Consent to Operate for the Amadand Opencast coal mine at the production capacity of 2.15 MTPA has been obtained from the Madhya Pradesh Pollution Board. The same is presently valid up to 30th June, 2021.

Baseline air quality data has been generated /collected during the period April-June, 2017.

22.1.4 The EAC, after detailed deliberations, recommended the project for grant of ToR to the expansion of Amadand Opencast Coal Mine from 2.15 MTPA to 5.4 MTPA Peak in a total land area 1443.02 ha (ML area 1382.22 ha) of M/s South Eastern Coalfields Limited located in District Anuppur (Madhya Pradesh), and for preparation of EIA/EMP reports with public consultation subject to compliance of all conditions as specified/notified in the standard ToR applicable for opencast coal mines, along with the additional conditions as under:-

- For proper baseline air quality assessment, adequate monitoring stations as per the extant guidelines/norms, in the downwind areas need to be set up and included in the air quality modelling.
- Ecological restoration and mine reclamation plan to be prepared with local/native species found in the area.
- In-pit belt conveyor should be installed from the pit bottom up to the loading point//railway siding.
- The mine is proposed for an increase in production by over 150%. As such, to know the pollution load bearing capacity of the surrounding ecosystem, a study of IRR in its ecological dimension may be arranged through an expert institution.

Agenda No.22.2

Expansion of Gevra Opencast Coal Mine from 41 MTPA to 49 MTPA in ML area of 4184.486 ha of M/s South Eastern Coalfields Limited at district Korba (Chhattisgarh) - For EC

22.2.1 The proposal is for grant of EC for expansion of the project, Gevra Opencast coal mine from 41 MTPA to 49 MTPA in mining lease area of 4184.486 ha of M/s South Eastern Coalfields Limited in District Korba (Chhattisgarh).

22.2.2 The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported as under:-

(i) Earlier, the Environmental Clearance for Gevra Opencast coal mine granted by the Ministry vide letter no. J-11015/484/2007-IA.II (M) dated 3rd June, 2009 for expansion from 25 MTPA to 35 MTPA in leasehold area of 4184.486 ha, based on the public hearing held on 22nd August, 2008.

(ii) Further, EC for expansion from 35 MTPA to 40 MTPA was accorded vide letter no. J-11015/85/2010-IA.II (M) dated 31.01.2014 under clause 7(ii) of EIA Notification, 2006 (in accordance with OM J-11015/30/2004.IA.II(M) dated 19.12.2012) exempting public hearing.

(iii) In accordance to the OM J-11015/30/2004.IA.II (M) dated 2.9.2014 further, Ministry accorded amendment in the EC vide letter No. J-11015/85/2010-IA.II (M) dated 06.02.2015 for

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incremental difference in the production capacity from 40 MTPA to 41 MTPA
 (iv) Further to meet the country's demand of coal, a proposal was made for expansion of project from 41 MTPA to 45 MTPA within the existing infrastructure and leasehold area. for same the ToR was accorded vide letter No. J-11015/85/2010-IA.II(M) dated 28th February, 2017 and the revised ToR dated 05.07.2017.

(v) To verify the status of compliance of EC conditions for Gevra opencast expansion project 41 MTPA, the Regional Office of MoEF&CC, Nagpur has carried out the site inspection on 11th September, 2016. The compliance and monitoring reports forwarded to this Ministry vide their letter No. 3-28/2014(Env) dated 4th November, 2016, which was deliberated in the 4th EAC meeting held on 30/31.1.2017. The project proponent presented the action taken on each of the observations made by Regional Office during the site visit.

(vi) Meanwhile, MoEF&CC issued OM No.J-11015/224/2015-IA.II (M) dated 15.09.2107 for environmental clearance for expansion of coal mining projects up to 40% with exemption of public hearing. On the basis of same OM a fresh application has been submitted for expansion of Gevra Opencast coalmine project from 41 MTPA to 49 MTPA without public hearing in mining lease area of 4184.486 ha.

(vii) Project has the potential to produce and dispatch 49 MTPA of coal within existing mining lease area of 4184.486 ha and infrastructure.

(viii) Stage-1 Forest Clearance have been obtained for entire forest land, 1016.412 Ha involved in the mining lease area of 4184.486 ha.

(ix) Mining plan for 49 MTPA was approved by SECL Board in its 262nd meeting held on 10th/11th October 2017. Mine closure plan is an integral part of mining plan.

(x) The latitude and longitude of the project site are 22°18'00" to 22°21'42" N and 82°32'00" to 82°39' 30" E respectively.

(xi) Joint Venture: No

(xii) Coal Linkage : NTPC and various thermal power plants

(xiii) Employment generated / to be generated: 4391 Persons

(xiv) Benefits of the project: Project will considerably improve the socio-economic status of the adjoining areas. This will result in benefits such as improvements in physical infrastructure; improvements in social infrastructure, increase in employment potential, contribution to the exchequer, meet energy requirement and post-mining enhancement of green cover.

(xv) The land use pattern of the project will be as follows:

Pre-Mining:

| SN. | Land use | Within Mining lease area (ha) | Outside Mining lease area (ha) | Total (ha) |
|-----|--|-------------------------------|--------------------------------|-----------------|
| 1 | Agricultural land | 1273.426 | 1247.145 | 2520.571 |
| 2 | Forest land | 441.410 | 575.002 | 1016.412 |
| 3 | Waste Land | 0.000 | 0.000 | 0.000 |
| 4 | Grazing Land | 0.000 | 0.000 | 0.000 |
| 5 | Surface Water Bodies | 7.000 | 0.000 | 7.000 |
| 6 | Settlements | 0.000 | 0.000 | 0.000 |
| 7 | Others (Specify); Govt. Land (including Waste Land and Grazing Land) | 315.414 | 325.089 | 640.503 |
| | Total | 2037.250 | 2147.236 | 4184.486 |

Post- Mining:

| S No | Pattern of utilization | Area (ha) |
|--------------|---|-----------------|
| 1. | Reclaimed External and Internal dumps | 1858.00 |
| 2. | Green belt | 5.670 |
| 3. | Final void /Water body | 659.250 |
| 4. | Built up area (Infrastructure, colony, roads, R and R site) | 1243.392 |
| 5. | Safety zone: Undisturbed area | 418.174 |
| Total | | 4184.486 |

Core area :

| S N | Particulars | Tenancy land (Ha) | Forest land (Ha) | Government Land (Ha) | | | | | Grand Total (Ha) |
|--------------|-----------------------------|-------------------|------------------|----------------------|--------------|--------------|----------------|----------------|------------------|
| | | | | Grazing land | Waste land | Water body | Others | Total | |
| 1 | Quarry area | 1285.888 | 441.410 | 0.000 | 0.000 | 7.000 | 297.952 | 304.952 | 2032.250 |
| 2 | Area for Top Soil in quarry | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 5.000 | 5.000 | 5.000 |
| 3 | External dump | 291.310 | 0.000 | 0.000 | 0.000 | 0.000 | 188.690 | 188.690 | 480.000 |
| 4 | Infrastructure etc | 504.509 | 509.434 | 0.000 | 0.000 | 0.000 | 88.839 | 88.839 | 1102.782 |
| 5 | Roads | 6.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 6.000 |
| 6 | Residential Colony | 65.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 65.000 |
| 7 | R and R site | 69.280 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 69.280 |
| 8 | Explosive magazine | 0.000 | 6.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 6.000 |
| 9 | Nala Diversion, if any | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 10 | Safety Zone | 298.564 | 59.568 | 0.000 | 0.000 | 0.000 | 60.022 | 60.022 | 418.174 |
| Total | | 2520.571 | 1016.412 | 0.000 | 0.000 | 7.000 | 640.503 | 647.503 | 4184.486 |

(xvi) Total geological/ mineable reserve within mining lease area of 4184.486 ha is 528.93 MT and extractable reserve is 528.93 MT (as on 1.4.2017).

(xvii) The life of mine is 11 Years.

(xviii) The grade of the coal is G-10 and the stripping ratio is 1.30 m³/T. The average gradient varies from 1 in 6 to 1 in 12 having 6 seams with thickness ranging from 3.14 m to 57.86 m.

(xix) Total estimated water requirement of the project is 22,560 KL/day. The level of ground water ranges from 2.30 m to 11.98 m in post-monsoon and 5.56 m to 14.60 m in pre-monsoon season.

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- (xx) The method of mining would be opencast.
- (xxi) There are 7 external OB dumps in an area of 480 ha with quantity of 147.60 Mcum and height of 90 m above the ground level, and 8 internal dumps with quantity of 1119.40 Mcum in an area of 1378 ha.
- (xxii) The final mine void would be in 659.250 ha with depth of 40 m, which is proposed to be converted into water body.
- (xxiii) External OB dump area 480.00 ha and backfilled quarry area of 1378.00 ha shall be reclaimed with plantation.
- (xxiv) The transportation of coal from face to in-pit crusher is by trucks, from surface to siding is by conveyor system upto Silo and from siding by Rail and MGR. In-pit belt conveyor is under construction and will be completed within December 2017.
- (xxv) Rehabilitation and resettlement is involved in the project. There are 3428 PAFs.
- (xxvi) Total capital cost of the project is Rs. 11,816.40 Crores.
- (xxvii) The CSR cost: According to new CSR policy the fund for the CSR should be allocated, based on 2% of the average net profit of the Company for the three immediate preceding financial years or Rs. 2.00 per tonne of coal production of previous year, whichever is higher.
- (xxviii) R&R Cost Rs. 455.96 Crores and Environmental Management Cost Rs. 142.82 Crores.
- (xxix) Hasdeo river flows approximately at a distance of 8 km from the project site. There are number of seasonal nallah and tributaries of Hasdeo river like Ahiran, Kholar nallah and Lilagar river.
- (xxx) The ground water clearance has been obtained for the project on 18.06.2004.
- (xxxi) There are no national parks, wildlife sanctuary, biosphere reserves in the 10 km buffer zone of the study area.
- (xxxii) Total forest area involved is 1016.412 ha. The status of diversion of forest land for non-forestry purposes is as under:-

| Area (in ha) | Stage-1 /Final FC issued vide letter no. and date | Validity period of FC |
|-----------------|--|---|
| 100.898 | vide MoEF Clearance F no.8-33/2005-FC dated 05.05.2008 | Co-terminus with the mining lease or 20 years |
| 46.198 | vide MoEF Clearance F no.8-81/ 2006-FC dated 20-04-2015 | Co-terminus with the mining lease or 20 years |
| 192.046 | vide MoEF Clearance F no.8-77/2006 – FC, dated 20-04-2015 | Co-terminus with the mining lease or 20 years |
| 564.885 | vide MoEF Clearance, F no.8-79/2006 – FC, dated 20-04-2015 | Co-terminus with the mining lease or 20 years |
| 112.385 | vide MoEF&CC Clearance F.No. 8-41/2017-FC dated 27.09.2017. | Co-terminus with the mining lease |
| 1016.412 | Total forest land for which Stage-1 Forestry Clearance obtained | |

- (xxxiii) Afforestation plan shall be implemented covering an area of 2438.672 ha at the end of the mining. Density of tree plantation shall be 2500 trees/ ha of plants.
- (xxxiv) There are court cases / violation pending with the project proponent as per the following details:-

| S N | Year of Violation | Production | Case No | Court | Parties | Brief | Present Status |
|-----|-------------------|------------|---------|-------|---------|-------|----------------|
| | | | | | | | |

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|---|--------------------|---|-----------|-------------------|--|--|---|
| 1 | 31.7.2000 | Consent not renewed and capacity expanded from 10 MTY | 613/2007 | HC of CG, BSP | CECB, Korba. Vs. SECL Gevra Project | Regarding Cri. Complaint filed under Sec.15 and 17 of EP, 1986. Criminal revision. | Pending |
| 2 | 2001-02 to 2004-05 | More than 10 MTY | 1217/2007 | JMC Class-I Korba | CECB, Korba. Vs. CGM Dipka Extension Gevra area SECL | Regarding Cri. Complaint filed under Sec.15 and 17 of EP Act. | Pending for examination of proposed accused |

(xxxv) Status of the Compliance of OM dated 15.09.2017 vide F No. J-11015/224/2015-IA.II for expansion of coal mining projects upto 40% without public hearing. Details are as under:

| S. No. | Requirement of the OM | Compliance |
|--------|--|--|
| 1. | Predicted air quality parameters are within the prescribed norms | <p>Air quality impact prediction for incremental coal production (49 MTPA) was conducted in October 2017 and air quality parameters were found within the prescribed norms.</p> <p>Additional mitigation measures like</p> <ul style="list-style-type: none"> • Long range fogging system, • Sweeping machines to prevent accumulation of dust in the roads. • Wind shield/breaker attached with creeper (potential to arrest dust pollution), • 50 m wide greenbelt has also been taken into consideration. |
| 2. | Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads. | <ul style="list-style-type: none"> • The incremental coal production will be transported through conveyor system up to the silo and then loading into the railway wagons. |
| 3. | Coal mining is done through deployment of surface miners, replacing three dust generating operations of the conventional mining system namely drilling, blasting and crushing in one go. | <ul style="list-style-type: none"> • Coal production is by deployment of surface miners. • Incremental production will also be done through deployment of surface miner. |
| 4. | Public hearing already conducted for the total mine lease area involved and no more area is required for the | <ul style="list-style-type: none"> • Public hearing has been conducted for the entire land area of 4184.486 Ha. on 22-08-2008. • No additional land is required for proposed expansion. |

| | | |
|----|---|---|
| | proposed expansion. | <ul style="list-style-type: none"> The major concerns raised in public hearing were regarding employment, supply of drinking water to affected villages, education and healthcare services to affected people. All concerns have been addressed. |
| 5. | Compliance status of EC conditions monitored by the concerned Regional Office of this ministry is found to be satisfactory. | <ul style="list-style-type: none"> Compliance status of EC conditions monitored by the concerned Regional Office of Ministry has been found satisfactory. |
| 6. | Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, etc are satisfactorily fulfilled. | <p>Details of the statutory requirements such as Consent to Operate, Forest Clearance, CGWA Clearance, approved Mining Plan and Mine Closure Plan for 49 MTPA etc are as below:</p> <ul style="list-style-type: none"> Consents to operate issued by Chhattisgarh Environment Conservation Board, Raipur for 41 MTPA, which is valid upto 28.02.2018. Clearance of ground water from CGWA has been obtained. Mine plan and Mine closure plan has been approved by the SECL Board on 10/11.10.2017. Forest Clearances- Stage-1 Forest Clearance has been obtained for the entire forest land of 1016.412 ha involved in the project. |

22.2.3 During deliberations, the EAC noted the following:-

The proposal is for environmental clearance to the expansion project of Gevra Opencast coal mine from 41 MTPA to 49 MTPA in the existing area of 4184.486 ha of M/s South Eastern Coalfields Ltd located in District Korba (Chhattisgarh).

The total area includes 2037.250 ha of mine lease area and the area outside mine lease is 2147.236 ha. The total forest land involved is 1016.412 ha (441.410 ha within the mine lease and 575.002 ha outside the mine lease area). Stage-1 Forest Clearance for the entire forest land has been obtained in stages for its diversion for non-forestry purposes.

Mining plan for the proposed expansion from 41 to 49 MTPA has been approved by the Board of M/s SECL in its meeting held on 10-11 October, 2017. Mine Closure Plan is an integral part of the mine plan.

Earlier, Gevra Opencast coal mine for its expansion from 25 MTPA to 35 MTPA in mine lease area of 4184.486 ha was accorded environmental clearance vide letter dated 3rd June, 2009 based on the public hearing held on 22nd August, 2008. Later, the environmental clearance for expansion from 35 MTPA to 40 MTPA in mine lease area of 4058.145 ha (after excluding forest patch of 126.341 ha) was granted on 31st January, 2014, exempting the expansion project from the requirement of public hearing as per the provisions of this Ministry's OM dated 19th December,

2012. The said OM provided for 25% expansion in the production capacity subject to a ceiling of 5 MTPA if the transportation is proposed by means of a conveyor and/or rail transport.

The project was granted another expansion from 40 MTPA to 41 MTPA by the Ministry vide letter dated 6th February, 2015 without insisting for public hearing, but now in terms of the provisions of this Ministry's OM dated 2nd September, 2014 providing exemption from public hearing subject to the ceiling of additional production of 6 MTPA.

The present proposal for expansion from 41 MTPA to 49 MTPA seeks environmental clearance without conducting the public hearing in view of this Ministry's OM dated 15th September, 2017. The said OM provides for exemption from public hearing in cases where the expansion in production capacity up to 40% is envisaged in 2-3 phases, subject to fulfillment of certain parameters of environmental concern. In compliance of the said OM, the status is reported to be as under:

| S. No. | Requirement of the OM | Compliance |
|--------|--|---|
| 1. | Predicted air quality parameters are within the prescribed norms | Air quality impact prediction for incremental coal production (49 MTPA) was conducted in October 2017 and air quality parameters were found within the prescribed norms. Additional mitigation measures like <ul style="list-style-type: none"> • Long range fogging system, • Sweeping machines to prevent accumulation of dust in the roads. • Wind shield/breaker attached with creeper (potential to arrest dust pollution), • 50 m wide greenbelt has also been taken into consideration. |
| 2. | Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads. | <ul style="list-style-type: none"> • The incremental coal production will be transported through conveyor system up to the silo and then loading into the railway wagons. |
| 3. | Coal mining is done through deployment of surface miners, replacing three dust generating operations of the conventional mining system namely drilling, blasting and crushing in one go. | <ul style="list-style-type: none"> • Coal production is by deployment of surface miners. • Incremental production will also be done through deployment of surface miner. |
| 4. | Public hearing already conducted for the total mine lease area involved and no more area is required for the | Public hearing has been conducted for the entire land area of 4184.486 ha on 22-08-2008. No additional land is required for proposed expansion. |

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| | proposed expansion. | The major concerns raised in public hearing were regarding employment, supply of drinking water to affected villages, education and healthcare services to affected people. All concerns have been addressed. |
| 5. | Compliance status of EC conditions monitored by the concerned Regional Office of this ministry is found to be satisfactory. | Compliance status of EC conditions monitored by the concerned Regional Office of Ministry has been found satisfactory. |
| 6. | Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, etc are satisfactorily fulfilled. | <p>Details of the statutory requirements such as Consent to Operate, Forest Clearance, CGWA Clearance, approved Mining Plan and Mine Closure Plan for 49 MTPA etc are as below:</p> <p>Consents to operate issued by Chhattisgarh Environment Conservation Board, Raipur for 41 MTPA, which is valid upto 28.02.2018.</p> <p>Clearance of ground water from CGWA has been obtained.</p> <p>Mine plan and Mine closure plan has been approved by the SECL Board on 10/11.10.2017.</p> <p>Forest Clearances- Stage-1 Forest Clearance have been obtained for the entire forest land of 1016.412 ha involved in the project.</p> |

The ambient air quality data for PM₁₀ was found varying from 93-97 ug/m³ (98th percentile values) whereas the incremental concentration due to the proposed expansion was estimated to be between 0.96-12.91ug/m³. With the proposed additional measures to control particulate emissions, predicted GLCs would be in the range of 83.7- 87.3 ug/m³ and thus complying with the NAAQ standards in this regard. These additional control measures include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt (50 m wide), dust suppression arrangement at railway siding, etc.

Different works taken up under the CSR during last five years are as under:-

| Year | Expenditure incurred (in Rs.lakhs) | Major works |
|---------|------------------------------------|--|
| 2013-14 | 1487.59 | Construction of CC road at Dipka-Pali up to Dumarkachhar (22.40 Km). Construction of cultural munches at Darri, Batora and Navapara. |

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| | | |
|---------|---------|--|
| 2014-15 | 5152.98 | Construction of CC road at Ralia, Bhilaibazar, Bandha-khar and at Haldibazar. Community building at Bhatara, Khamaria and Katkidabri, Black topping of Nehru nagar approach road. |
| 2015-16 | 6332.70 | Construction of 476 nos. of toilets in 3 districts of Chhattisgarh namely Korba - 109, Mungeli - 199 Mahasamund - 168. New building of primary school at Gevra, Repair at 03 pre-tribal girls hostel at haldibazar. |
| 2016-17 | 6627.28 | Construction of open defecation free (ODF) toilets at 07 villages of 6 gram panchayat of Katghora block, korba. Renovation of 16 nos. hostel / ashrams at Korba. Construction of the Korba Overbridge at Korba |

Consent to Operate for the Gevra Opencast coal mine with its present production capacity of 41 MTPA has been obtained from the Chhattisgarh Environment Conservation Board. The same last renewed for a year, is presently valid up to 28th February, 2018.

The Regional Office of the Ministry at Nagpur has forwarded the monitoring report on compliance status of the conditions stipulated in the last EC dated 6th February, 2015 (based on the site visit carried out on 11th September, 2016), vide their letter dated 4th November, 2016. Many of the conditions were found to be 'being complied with' and/or 'partially complied'. The project proponent has informed the Committee about the actions taken in response to the observations of the Regional Office. The Committee desired the action taken report should have been submitted by the project proponent to the Regional Office for examination at their end, and then forwarded to the Ministry along with the comments.

22.2.4 The EAC expressed its deep concern over the base line air quality in the area especially, the higher PM₁₀ values, which are bound to increase with the proposed expansion of the project. The Committee further observed that with the different control measures presently in place, the air quality would not be meeting the prescribed standards. Instead, it is only after the proposed mitigative measures, the air quality is reported to be within the norms. Considering the same, the Committee preferred to allow the proposed expansion for a limited period only, and it is only after evaluating the efficacy and adequacy of the proposed control measures and its impact, the continuance of the project at the enhanced capacity may be allowed thereafter.

The EAC, after deliberations, recommended the project for grant of EC to the expansion of Gevra Opencast coal mine from 41 MTPA to 45 MTPA for the present, commensurate with the proposed production plan, of M/s South Eastern Coalfields Limited in an area of 4184.486 ha located in District Korba (Chhattisgarh), subject to the compliance of terms and conditions as applicable, and the additional conditions as under:-

- (i) The environmental clearance for the proposed increase in capacity shall be valid up to 31st March, 2019. The continuance of the project thereafter at the increased capacity, shall be based on evaluation of the proposed control measures and its impact on the ambient air quality by the EAC in later half of the FY 2018-19.
- (ii) To control the of dust generation at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.

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- (iii) Mitigative measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions as presented before the Committee, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at railway siding, etc.
- (iv) Efforts shall be made to explore the possibility of providing wind shield/breaker arrangement with creepers and climbers.
- (v) Thick green belt of 50 m width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution.
- (vi) Persons of nearby villages shall be given training for their livelihood and skill development.
- (vii) To ensure health and welfare of nearby villages, regular medical camps shall be organized at least once in six months.
- (viii) The predominant Sal species in the forest area shall be protected, and in case of coal mining operations inevitable therein, compensatory afforestation of these species shall be carried out in consultation with State Forest Department.
- (ix) In view of the mining potential of the area and the pollution concerns, carrying capacity of the eco-system shall be studied through some expert agencies to assess optimal mining operations with minimal impact on ecosystem services.
- (x) A sustainable mining practice shall be developed in the mine, catering to attributes of ecological, societal and economical dimensions.

Agenda No.22.3

Expansion of Dipka Opencast Coal Mine from 31 MTPA to 35 MTPA in an ML area 1999.293 ha of M/s South Eastern Coalfields Limited in District Korba (Chhattisgarh) - For EC

22.3.1 The proposal is for grant of EC for Dipka Opencast expansion Project from 31MTPA to 35 MTPA in Mining lease area of 1999.293 Ha of M/s South Eastern Coalfield Limited at district Korba (Chhattisgarh).

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

- (i) Earlier, the Environmental Clearance for Dipka Opencast coal mine granted by this Ministry vide letter no. J-11015/87/2003-IA.II(M) dated 04.10.2004 for production capacity of 20 MTPA in an area of 1461.51ha.
- (ii) Further, the project. was accorded Environmental Clearance vide letter no. J-11015/487/2007-IA.II (M) dated 03.06.2009 for expansion from 20 MTPA to 25 MTPA in lease areas of 2000.642 ha based on the public hearing held on 05.09.2008.
- (iii) Further, EC for expansion from from 25 MTPA to 30 MTPA in an area of 1999.293 was accorded vide letter no. J-11015/487/2007-IA.II (M) dated 12.02.2013 under clause 7(ii) of EIA Notification, 2006 (in accordance with OM J-11015/30/2004.IA.II(M) dated 19.12.2012) exempting public hearing.
- (iv) In accordance to the OM J-11015/30/2004.IA.II(M) dated 2.9.2014 further, Ministry accorded amendment in the EC vide letter No. J-11015/487/2007-IA.II (M) dated 06.02.2015 for incremental difference in the production capacity from 30 MTPA to 31 MTPA.
- (v) Further to meet the country's demand of coal, a proposal was made for expansion of

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No.J-11015/85/2010-IA.II (M)pt
Government of India
Ministry of Environment, Forest & Climate Change
IA-II (Coal Mining) Division

Indira Paryavaran Bhawan,
Jorbagh Road, N Delhi - 3
Dated: 21st February, 2018

To,
The General Manager (W B P & Environment)
M/s South Eastern Coalfields Ltd,
W B P & Environment Department,
Seepat Road, P B. No.60
Bilaspur - 495 006 (Chhattisgarh) Email: gmenvtsecl@gmail.com;

Sub: Expansion of Gevra Opencast Coal Mine from 41 MTPA to 45 MTPA of M/s South Eastern Coalfields Limited in an area of 4184.486 ha located in District Korba (Chhattisgarh) - Environmental Clearance-reg.

Sir,
This has reference to your letter No. SECL/BSP/ENVT/Gevra OC_49/17/6772 dated 20.10.2017, along with online proposal No. IA/CG/CMIN/70412/2017 dated 20th October, 2017 and subsequent letters dated 07.11.2017, 08.11.2017, 21.11.2018, 27.11.2017 25.01.2018 on the above-mentioned subject.

2. The Ministry of Environment, Forest and Climate Change has considered the proposal for environmental clearance to the project for expansion of Gevra Opencast Coal Mine from 41 MTPA to 45 MTPA of M/s South Eastern Coalfields Limited in an area of 4184.486 ha located in District Korba (Chhattisgarh).

3. The proposal was considered by the Expert Appraisal Committee (EAC) in the Ministry for Thermal & Coal Mining Sector in its 22nd meeting held on 27th November, 2017. The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

(i) Earlier, the Environmental Clearance for Gevra Opencast coal mine granted by the Ministry vide letter no. J-11015/484/2007-IA.II (M) dated 3rd June, 2009 for expansion from 25 MTPA to 35 MTPA in leasehold area of 4184.486 ha, based on the public hearing held on 22nd August, 2008.

(ii) Further, EC for expansion from 35 MTPA to 40 MTPA was accorded vide letter no. J-11015/85/2010-IA.II (M) dated 31.01.2014 under clause 7(ii) of EIA Notification, 2006 (in accordance with OM J-11015/30/2004.IA.II(M) dated 19.12.2012) exempting public hearing.

(iii) In accordance to the OM J-11015/30/2004.IA.II (M) dated 2.9.2014 further, Ministry accorded amendment in the EC vide letter No. J-11015/85/2010-IA.II (M) dated 06.02.2015 for incremental difference in the production capacity from 40 MTPA to 41 MTPA

(iv) Further to meet the country's demand of coal, a proposal was made for expansion of project from 41 MTPA to 45 MTPA within the existing infrastructure and leasehold area. for same the ToR was accorded vide letter No. J-11015/85/2010-IA.II(M) dated 28th February, 2017 and the revised ToR dated 05.07.2017.

(v) To verify the status of compliance of EC conditions for Gevra opencast expansion project 41 MTPA, the Regional Office of MoEF&CC, Nagpur has carried out the site inspection on 11th September, 2016. The compliance and monitoring reports forwarded to

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this Ministry vide their letter No. 3-28/2014(Env) dated 4th November, 2016, which was deliberated in the 4th EAC meeting held in January, 2017. The project proponent presented the action taken on each of the observations made by Regional Office during the site visit.

(vi) Meanwhile, MoEF&CC issued OM No.J-11015/224/2015-IA.II (M) dated 15.09.2107 for environmental clearance for expansion of coal mining projects up to 40% with exemption of public hearing. On the basis of same OM a fresh application has been submitted for expansion of Gevra Opencast coalmine project from 41 MTPA to 49 MTPA without public hearing in mining lease area of 4184.486 ha.

(vii) Project has the potential to produce and dispatch 49 MTPA of coal within existing mining lease area of 4184.486 ha and infrastructure.

(viii) Stage-1 Forest Clearance have been obtained for entire forest land, 1016.412 Ha involved in the mining lease area of 4184.486 ha.

(ix) Mining plan for 49 MTPA was approved by SECL Board in its 262nd meeting held on 10th/11th October 2017. Mine closure plan is an integral part of mining plan.

(x) The latitude and longitude of the project site are 22°18'00" to 22°21'42" N and 82°32'00" to 82°39' 30" E respectively.

(xi) Joint Venture: No

(xii) Coal Linkage : NTPC and various thermal power plants

(xiii) Employment generated / to be generated: 4391 Persons

(xiv) Benefits of the project: Project will considerably improve the socio-economic status of the adjoining areas. This will result in benefits such as improvements in physical infrastructure; improvements in social infrastructure, increase in employment potential, contribution to the exchequer, meet energy requirement and post-mining enhancement of green cover.

(xv) The land use pattern of the project will be as follows:

Pre-Mining:

| SN. | Land use | Within Mining lease area (ha) | Outside Mining lease area (ha) | Total (ha) |
|-----|--|-------------------------------|--------------------------------|-----------------|
| 1 | Agricultural land | 1273.426 | 1247.145 | 2520.571 |
| 2 | Forest land | 441.410 | 575.002 | 1016.412 |
| 3 | Waste Land | 0.000 | 0.000 | 0.000 |
| 4 | Grazing Land | 0.000 | 0.000 | 0.000 |
| 5 | Surface Water Bodies | 7.000 | 0.000 | 7.000 |
| 6 | Settlements | 0.000 | 0.000 | 0.000 |
| 7 | Others (Specify); Govt. Land (including Waste Land and Grazing Land) | 315.414 | 325.089 | 640.503 |
| | Total | 2037.250 | 2147.236 | 4184.486 |

Post-Mining:

| S No | Pattern of utilization | Area (ha) |
|------|---|-----------------|
| 1. | Reclaimed External and Internal dumps | 1858.00 |
| 2. | Green belt | 5.670 |
| 3. | Final void /Water body | 659.250 |
| 4. | Built up area (Infrastructure, colony, roads, R and R site) | 1243.392 |
| 5. | Safety zone: Undisturbed area | 418.174 |
| | Total | 4184.486 |

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Core area :

| S N | Particulars | Tenancy land (ha) | Forest land (ha) | Government Land (ha) | | | | | Grand Total (ha) |
|-----|-----------------------------|-------------------|------------------|----------------------|--------------|--------------|----------------|----------------|------------------|
| | | | | Grazing land | Waste land | Water body | Others | Total | |
| 1 | Quarry area | 1285.888 | 441.410 | 0.000 | 0.000 | 7.000 | 297.952 | 304.952 | 2032.250 |
| 2 | Area for Top Soil in quarry | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 5.000 | 5.000 | 5.000 |
| 3 | External dump | 291.310 | 0.000 | 0.000 | 0.000 | 0.000 | 188.690 | 188.690 | 480.000 |
| 4 | Infrastructure etc | 504.509 | 509.434 | 0.000 | 0.000 | 0.000 | 88.839 | 88.839 | 1102.782 |
| 5 | Roads | 6.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 6.000 |
| 6 | Residential Colony | 65.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 65.000 |
| | R and R site | 69.280 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 69.280 |
| 8 | Explosive magazine | 0.000 | 6.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 6.000 |
| 9 | Nala Diversion, if any | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 10 | Safety Zone | 298.564 | 59.568 | 0.000 | 0.000 | 0.000 | 60.022 | 60.022 | 418.174 |
| | Total | 2520.571 | 1016.412 | 0.000 | 0.000 | 7.000 | 640.503 | 647.503 | 4184.486 |

(xvi) Total geological/ mineable reserve within mining lease area of 4184.486 ha is 528.93 MT and extractable reserve is 528.93 MT (as on 1.4.2017).

(xvii) The life of mine is 11 Years.

(xviii) The grade of the coal is G-10 and the stripping ratio is 1.30 m³/T. The average gradient varies from 1 in 6 to 1 in 12 having 6 seams with thickness ranging from 3.14 m to 57.86 m.

(xix) Total estimated water requirement of the project is 22,560 KL/day. The level of ground water ranges from 2.30 m to 11.98 m in post-monsoon and 5.56 m to 14.60 m in pre-monsoon season.

(xx) The method of mining would be opencast.

(xxi) There are 7 external OB dumps in an area of 480 ha with quantity of 147.60 Mcum and height of 90 m above the ground level, and 8 internal dumps with quantity of 1119.40 Mcum in an area of 1378 ha.

(xxii) The final mine void would be in 659.250 ha with depth of 40 m, which is proposed to be converted into water body.

(xxiii) External OB dump area 480.00 ha and backfilled quarry area of 1378.00 ha shall be reclaimed with plantation.

(xxiv) The transportation of coal from face to in-pit crusher is by trucks, from surface to siding is by conveyor system upto Silo and from siding by Rail and MGR. In-pit belt conveyor is under construction and will be completed within December 2017.

(xxv) Rehabilitation and resettlement is involved in the project. There are 3428 PAFs.

(xxvi) Total capital cost of the project is Rs. 11,816.40 Crores.

(xxvii) The CSR cost: According to new CSR policy the fund for the CSR should be allocated, based on 2% of the average net profit of the Company for the three immediate preceding financial years or Rs. 2 per tonne of coal production of previous year, whichever is higher.

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(xxviii) R&R Cost Rs: 455.96 Crores and Environmental Management Cost Rs. 142.82 Crores.

(xxix) Hasdeo river flows approximately at a distance of 8 km from the project site. There are number of seasonal nallah and tributaries of Hasdeo river like Ahiran, Kholar nallah and Lilagar river.

(xxx) The ground water clearance has been obtained for the project on 18.06.2004.

(xxxi) There are no national parks, wildlife sanctuary, biosphere reserves in the 10 km buffer zone of the study area.

(xxxii) Total forest area involved is 1016.412 ha. The status of diversion of forest land for non-forestry purposes is as under:-

| Area (in ha) | Stage-1 /Final FC issued vide letter no. and date | Validity period of FC |
|-----------------|--|---|
| 100.898 | vide MoEF Clearance F no.8-33/2005-FC dated 05.05.2008 | Co-terminus with the mining lease or 20 years |
| 46.198 | vide MoEF Clearance F no.8-81/ 2006-FC dated 20-04-2015 | Co-terminus with the mining lease or 20 years |
| 192.046 | vide MoEF Clearance F no.8-77/2006 – FC, dated 20-04-2015 | Co-terminus with the mining lease or 20 years |
| 564.885 | vide MoEF Clearance F no.8-79/2006 – FC, dated 20-04-2015 | Co-terminus with the mining lease or 20 years |
| 112.385 | vide MoEF&CC Clearance F.No. 8-41/2017-FC dated 27.09.2017. | Co-terminus with the mining lease |
| 1016.412 | Total forest land for which Stage-1 Forestry Clearance obtained | |

(xxxiii) Afforestation plan shall be implemented covering an area of 2438.672 ha at the end of the mining. Density of tree plantation shall be 2500 trees/ ha of plants.

(xxxiv) There are court cases / violation pending with the project proponent as per the following details:-

| S N | Year of Violation | Production | Case No | Court | Parties | Brief | Present Status |
|-----|--------------------|---|-----------|-------------------|--|--|---|
| 1 | 31.7.2000 | Consent not renewed and capacity expanded from 10 MTY | 613/2007 | HC of CG, BSP | CECB, Korba. Vs. SECL Gevra Project | Regarding Cri. Complaint filed under Sec.15 and 17 of EP, 1986. Criminal revision. | Pending |
| 2 | 2001-02 to 2004-05 | More than 10 MTY | 1217/2007 | JMC Class-I Korba | CECB, Korba. Vs. CGM Dipka Extension Gevra area SECL | Regarding Cri. Complaint filed under Sec.15 and 17 of EP Act. | Pending for examination of proposed accused |

4. The Expert Appraisal Committee in its 22nd meeting held on 27th November, 2017 has recommended the proposal for grant of environmental clearance. Based on recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to the project for expansion of **Gevra Opencast coal mine from 41 MTPA to 45 MTPA for the present, commensurate with the proposed production plan, of M/s South Eastern Coalfields Limited in an area of 4184.486 ha located in District Korba (Chhattisgarh), under the provisions of the Environment Impact Assessment Notification, 2006**

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and subsequent amendments/circulars thereto subject to the compliance of the terms & conditions and environmental safeguards mentioned below:

- (i) The environmental clearance for the proposed increase in capacity shall be valid up to 31st March, 2019. The continuance of the project thereafter at the increased capacity, shall be based on evaluation of the proposed control measures and its impact on the ambient air quality by the EAC in later half of the FY 2018-19.
- (ii) To control the of dust generation at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.
- (iii) Mitigative measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions as presented before the Committee, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at railway siding, etc.
- (iv) Efforts shall be made to explore the possibility of providing wind shield/breaker arrangement with creepers and climbers.
- (v) Thick green belt of 50 m width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution.
- (vi) Persons of nearby villages shall be given training for their livelihood and skill development.
- (vii) To ensure health and welfare of nearby villages, regular medical camps shall be organized at least once in six months.
- (viii) The predominant Sal species in the forest area shall be protected, and in case of coal mining operations inevitable therein; compensatory afforestation of these species shall be carried out in consultation with State Forest Department.
- (ix) In view of the mining potential of the area and the pollution concerns, carrying capacity of the eco-system shall be studied through some expert agencies to assess optimal mining operations with minimal impact on ecosystem services.
- (x) A sustainable mining practice shall be developed in the mine, catering to attributes of ecological, societal and economical dimensions.

4.1 The grant of EC is further subject to compliance of the generic conditions as under:

(a) Mining

- (i) Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.
- (ii) No change in mining method i.e OC to UG, calendar programme and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forest and Climate Change (MoEFCC).
- (iii) Mining shall be carried out as per the approved mining plan(including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).
- (iv) No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980 and also adhering to The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 read with provisions of Indian Forest Act, 1927.

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(b) Land reclamation and water conservation

(i) Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale shall be submitted to Ministry of Environment, Forest and Climate Change/Regional Office (RO).

(ii) The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/Gol Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS.

(iii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be handed over to the respective state government as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.

(iv) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/"post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the Ministry of Environment, Forest and Climate Change/Regional Office on six monthly basis.

(v) The top soil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized for long. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office on six monthly basis.

(c) Emissions, effluents, and waste disposal

(i) Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM₁₀/PM_{2.5}) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.

(ii) Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area in a phased manner. The green belt comprising a mix of native species shall be developed all along the major approach/ coal transportation roads.

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(iii) The transportation of coal shall be carried out as per the provisions and route proposed in the approved Mining Plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.

(iv) Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.

(v) Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.

(vi) Coal handling plant shall be operated with effective control measures viz. bag filters/water or mist sprinkling system etc to check fugitive emissions from crushing operations, conveyor system, transfer points, etc.

(vii) Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.

(viii) Catch/garland drains and siltation ponds of appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilized for dust suppression measures and green belt development. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.

(ix) Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Oil and grease trap shall be installed and maintained fully functional with effluents discharge adhering to the norms. Sewage treatment plant of adequate capacity shall be installed for treatment of domestic waste.

(x) Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.

(d) Illumination, noise & vibration

(i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & its RO on six-monthly basis.

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(ii) Adequate measures shall be taken for control of noise levels below 85 dB(A) in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.

(iii) Controlled blasting techniques shall be practiced in order to mitigate ground vibrations and fly rocks as per the guidelines prescribed by the DGMS.

(iv) The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

(e) Occupational health & safety

(i) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the workers engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any.

(ii) Personnel (including outsourcing employees) working in dusty areas shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.

(iii) Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.

(f) Ecosystem and biodiversity conservation

(i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.

(g) Public hearing, R&R and CSR

(i) Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.

(ii) The project proponent shall ensure the expenditure towards socio-economic development in and around the mine, in every financial year in pursuance of the Corporate Social Responsibility Policy as per the provisions under Section 135 of the Companies Act, 2013.

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(iii) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.11 (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

(iv) The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

(h) Corporate environment responsibility

(i) The Company shall have a well laid down environment policy duly approved by Board of Directors. The environment policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions. Also, the company shall have a defined system of reporting of non-compliances/violations of environmental norms to the Board of Directors and/or shareholders/stakeholders.

(ii) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions should be displayed on website of the Company.

(iii) A separate environmental management cell both at the project and company headquarter level, with suitable qualified personnel shall be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.

(iv) Action plan for implementing EMP and environmental conditions shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

(v) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

(i) Statutory Obligations

(i) The environmental clearance shall be subject to orders of Hon'ble Supreme Court of India, Hon'ble High Court, NGT and any other Court of Law from time to time, and as applicable to the project.

(ii) This environmental clearance shall be subject to obtaining wildlife clearance, if applicable, from the Standing Committee of National Board for Wildlife.

(iii) The project proponent shall obtain Consent to Establish/Operate under the Air Act, 1981 and the Water Act, 1974 from the concerned State Pollution Control Board.

(iv) The project proponent shall obtain the necessary permission from the Central Ground Water Authority (CGWA).

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(j) Monitoring of project

- (i) Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.
- (ii) The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.
- (iii) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.
- (iv) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-IA.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
- (v) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to Ministry of Environment, Forest and Climate Change/Regional Office.
- (vi) Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
- (vii) The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental conditions to the Ministry of Environment, Forest and Climate Change/Regional Office. For half yearly monitoring reports, the data should be monitored for the period of April to September and October to March of the financial years.
- (viii) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

(k) Miscellaneous

- (i) Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy.

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- (ii) The project authorities shall inform to the Regional Office regarding commencement of mining operations.
- (iii) A copy of the environmental clearance shall be marked to concerned Panchayat. A copy of the same shall also be sent to the concerned State Pollution Control Board, Regional Office, District Industry Sector and Collector's Office/Tehsildar Office for information in public domain within 30 days.
- (iv) The EC shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain.
- (v) The project authorities shall advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment, Forest and Climate Change at www.environmentclearance.nic.in and a copy of the same shall be forwarded to the Regional Office.
- (vi) The environmental statement for each financial year ending 31 March in Form-V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the Company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF&CC by e-mail. Concerns raised during public hearing
- (vii) The Ministry may stipulate any further condition for environmental protection, if so required in due course of time.
- (viii) The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter.
5. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during presentation to the EAC. All the commitments made on the issues raised during public hearing shall also be implemented in letter and spirit.
6. The proponent shall obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection. The Ministry or any other competent authority may stipulate any further condition for environmental protection.
7. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
8. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010

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9. The coal company/project proponent shall be liable to pay the compensation against the illegal mining, if any, and as raised by the respective State Governments at any point of time, in terms of the orders dated 2nd August, 2017 of Hon'ble Supreme Court in WP (Civil) No.114/2014 in the matter of 'Common Cause Vs Union of India & others'.

10. The project proponent, without prejudice to this EC, shall be bound to comply with any other interpretation of the orders of Hon'ble Supreme Court also, in due course of time.

11. This EC supersedes the earlier EC granted vide letter No.J-11015/85/2010-IA.II (M) dated 31st January, 2014 for expansion from 35 to 40 MTPA, followed by amendment in the EC dated 6th February, 2015 for further expansion up to 41 MTPA.

S.K.
21/2/2018

(S. K. Srivastava)
Scientist E

Copy to:

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Secretary, Department of Environment & Forests, Government of Chhattisgarh, Secretariat, Raipur
3. The APCCF, Ministry of Environment Forest and Climate Change, Regional Office (Western Central Zone), Ground Floor, East Wing, New Secretariat Building Civil Lines, Nagpur (Maharashtra)
4. The Member Secretary, Chhattisgarh State Environment Conservation Board, 1-Tilak Nagar, Shiv Mandir Chowk, Main Road, Avanti Vihar, Raipur-Chhattisgarh- 492001
5. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
6. The Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
7. The District Collector, Korba, Government of Chhattisgarh.
8. Monitoring File 9. Guard File 10. Record File. 11. Notice Board

S.K.
21/2/2018

(S. K. Srivastava)
Scientist E

T.T.C.
A



ENVIS Centre on Control of Pollution Water, Air and Noise
 Hosted by Central Pollution Control Board
 Sponsored by Ministry of Environment and Forests, Govt of India



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| Last Updated: 24/06/2016

Industrial Pollution

Industrial Pollution

- Comprehensive Environmental Pollution Index (CEPI)
- Monitoring Protocol in Critically Polluted Areas
- Parameters for Monitoring Critically Polluted Industrial Clusters / Areas
- Revised Concept of Comprehensive Environmental Pollution Index (CEPI)
- Categorization of Industrial Sectors

Any form of pollution that can trace its immediate source to industrial practices is known as industrial pollution. Industrial pollution takes on many faces. It contaminates many sources of drinking water, releases unwanted toxins into the air and reduces the quality of soil all over the world.



Critically Polluted Industrial clusters / areas

The overall CEPI is presented in the alpha-numeric form stating the score along with the status of Air, Water and Land environment in terms of subscript as critical / severe / normal. A sub-index score of more than 60 shows a critical level of pollution in the respective environmental component, whereas a score between 50-60 shows a severe level of pollution with reference to the respective environmental component.

Note:

- Ac = Air critical ; As = Air severe ; An = Air normal
- Wc = Water critical ; Ws = Water severe ; Wn = Water normal
- Lc = Land critical ; Ls = Land severe ; Ln = Land normal

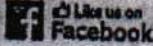
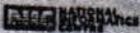
The State-wise list of 43 Critically Polluted Clusters / Areas:

| STATE | NO. OF CLUSTERS | INDUSTRIAL CLUSTERS / AREAS | AIR | WATER | LAND | CEPI | STATUS |
|----------------|-----------------|---|-------|-------|-------|-------|----------|
| Andhra Pradesh | 2 | Vishakhapatnam | 38.00 | 43.00 | 43.00 | 52.81 | As-Wn-Ln |
| | | Patancheru-Bollaram | 62.50 | 67.25 | 43.00 | 76.03 | As-Wc-Ln |
| Chhattisgarh | 1 | Korba | 59.50 | 47.00 | 50.50 | 69.11 | As-Wc-Ls |
| Delhi | 1 | Hazratnagar drain basin (including Anand Parvat, Naraina, Okhla and Wazirpur) | 56.88 | 57.50 | 60.50 | 73.42 | As-Wc-Lc |
| Gujarat | 6 | Ankleshwar | 67.50 | 68.75 | 57.75 | 80.98 | As-Wc-Ls |
| | | Vapi | 51.75 | 79.50 | 54.75 | 58.31 | As-Wc-Ls |
| | | Ahmedabad | 49.75 | 60.50 | 46.00 | 69.34 | As-Wc-Ls |
| | | Vatva | 43.00 | 80.00 | 40.00 | 63.44 | As-Wc-Ls |
| | | Bhavnagar | 30.75 | 57.50 | 40.50 | 62.79 | As-Wc-Ls |
| Haryana | 2 | Junagarh | 42.75 | 40.00 | 43.00 | 62.76 | As-Wc-Ls |
| | | Faridabad | 46.00 | 67.50 | 40.50 | 73.58 | As-Wc-Ls |
| | | Panipat | 48.25 | 76.00 | 45.50 | 61.27 | As-Wc-Ls |
| Jharkhand | 1 | Dhanbad | 80.50 | 47.00 | 63.00 | 71.78 | As-Wc-Lc |
| Karnataka | 2 | Mangalore | 54.75 | 58.25 | 41.00 | 67.62 | As-Wc-Ls |
| | | Bhadrawati | 37.38 | 35.50 | 35.50 | 48.27 | As-Wn-Ls |
| Kerala | 1 | Cochin, Greater | 48.00 | 45.50 | 42.00 | 57.94 | As-Wn-Ls |
| Madhya Pradesh | 1 | Indore | 65.00 | 70.50 | 43.00 | 78.75 | As-Wc-Ls |
| Maharashtra | 3 | Chandrapur | 51.75 | 50.50 | 75.50 | 61.80 | As-Wc-Lc |
| | | Dombivalli | 51.00 | 64.50 | 43.00 | 72.29 | As-Wc-Ls |
| | | Aurangabad | 56.75 | 55.50 | 50.50 | 68.97 | As-Wc-Ls |

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| | | | | | | | | | |
|---------------|---|-------------------|-------|---------|-------|-------|----------|-------|----------|
| | | Navi Mumbai | 47.00 | 66.00 | 43.00 | 72.97 | As-Wa-La | | |
| | | Tarapur | 55.00 | 63.00 | 48.00 | 73.50 | As-Wa-La | | |
| Orissa | 3 | Angul Talcher | 61.75 | 60.50 | 48.00 | 72.86 | As-Wa-La | | |
| | | B valley | 48.00 | 48.00 | 47.00 | 59.73 | As-Wa-La | | |
| | | Jharuguda | 65.00 | 50.50 | 47.00 | 73.31 | As-Wa-La | | |
| | | Ludhiana | 49.50 | 68.00 | 48.75 | 78.73 | As-Wa-La | | |
| Punjab | 2 | Mandi Gobind Garh | 55.00 | 67.00 | 60.50 | 77.98 | As-Wa-La | | |
| | | Rajasthan | 3 | Shiwadi | 62.75 | 46.00 | 46.00 | 70.63 | As-Wa-La |
| | | Jodhpur | 57.50 | 50.50 | 69.00 | 78.00 | As-Wa-La | | |
| Tamil Nadu | 4 | Pali | 54.00 | 72.50 | 68.75 | 82.71 | As-Wa-La | | |
| | | Vallure | 59.75 | 71.50 | 48.00 | 78.67 | As-Wa-La | | |
| | | Oudalere | 45.50 | 53.50 | 60.50 | 70.13 | As-Wa-La | | |
| | | Masuli | 58.50 | 69.00 | 48.00 | 77.86 | As-Wa-La | | |
| Uttar Pradesh | 6 | Colmatore | 32.38 | 48.00 | 30.50 | 53.14 | As-Wa-La | | |
| | | Ohariabad | 69.50 | 76.00 | 48.75 | 84.13 | As-Wa-La | | |
| | | Singrauli | 68.00 | 70.50 | 63.50 | 83.24 | As-Wa-La | | |
| | | Noida | 50.00 | 72.50 | 48.00 | 78.69 | As-Wa-La | | |
| | | Kanpur | 55.00 | 64.50 | 40.00 | 72.31 | As-Wa-La | | |
| | | Agra | 57.00 | 55.00 | 49.50 | 68.71 | As-Wa-La | | |
| West Bengal | 3 | Varanasi-Mirzapur | 44.00 | 47.00 | 42.50 | 56.91 | As-Wa-La | | |
| | | Haldia | 48.75 | 50.00 | 47.50 | 61.83 | As-Wa-La | | |
| | | Kewrah | 43.00 | 51.00 | 48.00 | 61.11 | As-Wa-La | | |
| | | Agansole | 47.38 | 40.50 | 40.50 | 56.01 | As-Wa-La | | |

Source : CPCB, Delhi



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| Sheet name | Device Name / Location | City | Device Number | PM2.5 | | | | | PM10 | | | | | AQI | | | | |
|------------|--------------------------|-------|---------------|--------|--------|-------|-------|--------|--------|---------|-------|--------|--------|--------|---------|-------|--------|--------|
| | | | | Avg | Max | Min | Mode | Stdev | Avg | Max | Min | Mode | Stdev | Avg | Max | Min | Mode | Stdev |
| 2 | Durpa Road | Korba | 1201180074 | 102.65 | 819.00 | 11.00 | 23.00 | 129.37 | 201.28 | 1572.00 | 36.00 | 106.00 | 176.81 | 207.27 | 1765.00 | 36.00 | 104.00 | 195.75 |
| 3 | Shanti Nagar | Korba | 1201180096 | 42.67 | 298.00 | 10.00 | 23.00 | 24.51 | 121.12 | 420.00 | 26.00 | 113.00 | 54.58 | 115.05 | 436.92 | 26.00 | 108.67 | 51.69 |
| 4 | sarwananga mandir | Korba | 1201180001 | 48.04 | 430.00 | 6.00 | 14.00 | 43.54 | 100.40 | 595.00 | 14.00 | 48.00 | 72.35 | 103.78 | 606.25 | 14.00 | 48.00 | 83.14 |
| 5 | Shiva Nagar | Korba | 1201180138 | 60.15 | 267.00 | 14.00 | 33.00 | 41.66 | 149.31 | 409.00 | 33.00 | 99.00 | 66.67 | 148.83 | 413.08 | 33.00 | 126.67 | 78.13 |
| 6 | T P Nagar | Korba | 1201180126 | 77.79 | 784.00 | 12.00 | 30.00 | 85.40 | 167.20 | 1117.00 | 32.00 | 110.00 | 108.77 | 166.92 | 1258.75 | 35.00 | 106.67 | 119.07 |
| 7 | Raul Shankar Shukta Naga | Korba | 1201180122 | 47.95 | 448.00 | 9.00 | 20.00 | 41.29 | 127.97 | 536.00 | 31.00 | 69.00 | 66.57 | 126.41 | 552.31 | 31.00 | 69.00 | 74.32 |
| 8 | Darti | Korba | 1201180019 | 73.93 | 664.00 | 11.00 | 32.00 | 73.38 | 192.45 | 1058.00 | 38.00 | 118.00 | 96.13 | 183.83 | 1185.00 | 38.00 | 186.62 | 106.71 |
| 9 | Kusmunda | Korba | 1201180067 | 125.07 | 770.00 | 11.00 | 28.00 | 47.11 | 371.31 | 1579.00 | 50.00 | 247.00 | 248.75 | 365.32 | 1836.25 | 50.00 | 196.67 | 284.07 |
| 10 | TP Nagar Road | Korba | 1201180030 | 63.29 | 370.00 | 15.00 | 39.00 | 47.11 | 171.85 | 470.00 | 40.00 | 117.00 | 75.21 | 162.02 | 492.31 | 40.00 | 111.33 | 79.07 |
| 11 | Rampur | Korba | 1201180062 | 41.01 | 218.00 | 8.00 | 23.00 | 28.55 | 121.88 | 345.00 | 21.00 | 89.00 | 54.45 | 116.47 | 375.38 | 21.00 | 89.00 | 54.92 |
| 12 | Gura Mines, Hardbazar | Korba | 1201180141 | 80.92 | 682.00 | 9.00 | 22.00 | 92.05 | 241.69 | 1476.00 | 35.00 | 236.00 | 174.96 | 228.59 | 1707.50 | 35.00 | 72.00 | 186.98 |
| 13 | S.S. Green | Korba | 1201180068 | 80.62 | 603.00 | 16.00 | 41.00 | 66.30 | 188.44 | 871.00 | 46.00 | 128.00 | 96.94 | 183.24 | 951.25 | 46.00 | 118.67 | 103.83 |
| 14 | Bako Ash Dyke, Lalghat | Korba | 1201180143 | 46.76 | 247.00 | 11.00 | 33.00 | 25.77 | 127.85 | 429.00 | 27.00 | 78.00 | 54.34 | 122.18 | 398.75 | 27.00 | 78.00 | 54.03 |
| 15 | Purana Bus stand, Korba | Korba | 1201180184 | 51.21 | 186.00 | 13.00 | 23.00 | 31.88 | 140.75 | 363.00 | 33.00 | 113.00 | 59.70 | 134.55 | 360.77 | 33.00 | 108.67 | 63.09 |

April 1st - April 30th

March 24th - April 2nd

| S.no | Location | City | Device Number | PM2.5 | | | PM10 | | | AQI | | | Count - No of Entries | Entries >100 | %age AQI >100 | %age AQI >100 |
|------|--------------------|-------|---------------|---------|--------|-------|---------|---------|-------|--------|--------|-------|-----------------------------|-----------------|------------------|------------------|
| | | | | Avg | Max | Min | Avg | Max | Min | Avg | Max | Min | | | | |
| 1 | Shanti Nagar | Korba | 1201180096 | 92.02 | 301 | 14 | 183.36 | 434 | 29 | 201.61 | 439.23 | 29 | 456 | 364 | 79.82% | 59.43% |
| 2 | S.S. Green | Korba | 1201180068 | 147.77 | 711 | 23 | 274.82 | 1079 | 46 | 285.34 | 1211.3 | 46 | 456 | 426 | 93.42% | 83.40% |
| 3 | Durpa Road | Korba | 1201180074 | 169.23 | 869 | 17 | 295.08 | 1591 | 36 | 317.16 | 1851.3 | 36 | 456 | 383 | 83.99% | 70.97% |
| 4 | Kusmunda | Korba | 1201180067 | 148.39 | 706 | 18 | 361 | 1419 | 51 | 353.04 | 1636.3 | 51 | 70 | 68 | 97.14% | 96.40% |
| 5 | Rampur | Korba | 1201180062 | #DIV/0! | 0 | 0 | #DIV/0! | 0 | 0 | 0 | 0 | 0 | 1126 | 0 | 0.00% | 57.64% |
| 6 | Darti | Korba | 1201180019 | 128.74 | 651 | 23 | 258.66 | 895 | 69 | 262.95 | 981.25 | 69 | 456 | 440 | 96.49% | 87.64% |
| 7 | Sarwananga Mandir | Korba | 1201180001 | 89.18 | 430 | 22 | 176.81 | 595 | 37 | 191.88 | 606.25 | 40 | 330 | 278 | 84.24% | 41.08% |
| 8 | TP Nagar Road | Korba | 1201180030 | 121.172 | 424 | 20 | 234.64 | 692 | 40 | 239.31 | 727.5 | 40 | 409 | 387 | 94.62% | 81.51% |
| 9 | Laxmi Ji's terrace | Korba | 63 | 294.1 | 848.34 | 12.45 | 339.28 | 1068.12 | 14.95 | 435.19 | 1197.7 | 20.75 | 135 | 131 | 97.04% | |
| 10 | Fuel Station | Korba | 67 | 176.01 | 505.5 | 48.8 | 186.86 | 566.6 | 48.8 | 310.57 | 596.54 | 81.33 | 16 | 14 | 87.50% | |

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| Count - No of Entries | AOI | %age AOI >100 |
|-----------------------|------|---------------|
| 1440 | 1022 | 70.97% |
| 1257 | 747 | 59.43% |
| 908 | 373 | 41.08% |
| 988 | 719 | 72.77% |
| 1440 | 1017 | 70.63% |
| 1350 | 776 | 57.48% |
| 1440 | 1262 | 87.64% |
| 1417 | 1365 | 96.40% |
| 1233 | 1005 | 81.51% |
| 805 | 464 | 57.64% |
| 1432 | 1168 | 81.56% |
| 1440 | 1201 | 83.40% |
| 1347 | 732 | 63.82% |
| 585 | 415 | 70.94% |

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Air Quality Data near Kumdanda Mines, Korba

| Date | Kumdanda | | |
|-----------|----------|-------|-----|
| | PM 2.5 | PM 10 | AQI |
| 01-Jan-19 | 379 | 877 | 429 |
| 02-Jan-19 | 273 | 598 | 411 |
| 03-Jan-19 | 151 | 374 | 330 |
| 10-Jan-19 | 198 | 529 | 407 |
| 11-Jan-19 | 209 | 519 | 406 |
| 12-Jan-19 | 240 | 537 | 407 |
| 16-Jan-19 | 199 | 625 | 413 |
| 17-Jan-19 | 188 | 504 | 405 |
| 18-Jan-19 | 132 | 377 | 334 |
| 19-Jan-19 | 155 | 421 | 388 |
| 20-Jan-19 | 173 | 473 | 403 |
| 21-Jan-19 | 136 | 377 | 333 |
| 22-Jan-19 | 147 | 393 | 354 |
| 23-Jan-19 | 164 | 428 | 397 |
| 24-Jan-19 | 217 | 547 | 408 |
| 25-Jan-19 | 98 | 229 | 223 |
| 26-Jan-19 | 125 | 284 | 303 |
| 27-Jan-19 | 119 | 286 | 296 |
| 29-Jan-19 | 103 | 293 | 243 |
| 30-Jan-19 | 126 | 356 | 307 |
| 31-Jan-19 | 180 | 452 | 402 |
| 01-Feb-19 | 185 | 472 | 403 |
| 02-Feb-19 | 150 | 380 | 337 |
| 03-Feb-19 | 157 | 392 | 351 |

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| | | | |
|-----------|-----|-----|-----|
| 04-Feb-19 | 166 | 415 | 381 |
| 05-Feb-19 | 139 | 388 | 347 |
| 06-Feb-19 | 150 | 421 | 388 |
| 07-Feb-19 | 128 | 351 | 350 |

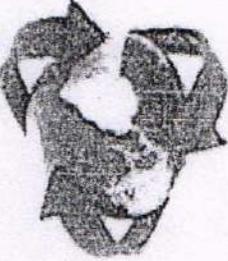
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Central Mine Planning & Design Institute Limited
Regional Institute - V, SECL Complex,
BILASPUR (C.G.)

(A Mini Ratna Company)

SOUTH EASTERN COALFIELDS LIMITED

MAY - 2017

 **Environmental Monitoring**

(GEVRA AREA)

ENVIRONMENTAL MONITORING REPORT
AIR, NOISE & EFFLUENT

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ENVIRONMENTAL MONITORING REPORT

GEVRA AREA - 'MAY' 2017

| CONTENTS | | |
|----------|------------------------------|----------------|
| Sl.No. | Name of Air Sampling Station | No. of samples |
| 1 | DETP/TA Office | 9 |
| 2 | Shakti Nagar | 9 |
| 3 | Urja Nagar | 9 |
| 4 | Dy.GM Office | 9 |
| 5 | Bhilai Bazar Village | 9 |
| 6 | Dhurena Village | 9 |
| 7 | Ganga Nagar Village | 9 |
| 8 | Ralia Village | 9 |
| | Total | 72 |

| Sl. No. | Name of Noise Sampling Station | No. of samples |
|---------|--------------------------------|----------------|
| 1 | DETP/TA Office | 2 |
| 2 | Shakti Nagar | 2 |
| 3 | Urja Nagar | 2 |
| 4 | Dy.GM Office | 2 |
| 5 | Bhilai Bazar Village | 2 |
| 6 | Dhurena Village | 2 |
| 7 | Ganga Nagar Village | 2 |
| 8 | Ralia Village | 2 |
| | Total | 16 |

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1621

| Sl. No. | Name of Effluent Sampling Station | No. of samples |
|---------|---|----------------|
| 1 | Mine water at discharge point | 2 |
| 2 | W/S effluent before treatment at O&G trap | 2 |
| 3 | Workshop effluent after treatment at O&G trap | 2 |
| 4 | Discharge of DETP, GEVRA Area | 2 |
| 5 | OB dump run-off & mine discharge water after treatment at settling pond | 2 |
| 6 | Upstream of Laxman Nalla | 2 |
| 7 | Downstream of Laxman Nala | 2 |
| 8 | Mine sump Water | 2 |
| | Total | 16 |



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AIR QUALITY REPORT

| | | | | | |
|-------|-----|------|-------|-----------|----------------|
| Month | MAY | Area | GEVRA | Report No | KUS/2017/05/03 |
|-------|-----|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 06.06.2017 |
| Name of the Project | GEVRA QC | Sample Reference No. | 1-2 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS 5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 1-DETP/TA Office | A-O | 02.05.2017 | 03.05.2017 | 531 | 280 | 51 | 29 | 22 |
| | | 05.05.2017 | 06.05.2017 | 559 | 293 | 53 | 26 | 23 |
| | | 08.05.2017 | 09.05.2017 | 533 | 277 | 54 | 24 | 26 |
| | | 11.05.2017 | 12.05.2017 | 574 | 291 | 45 | 26 | 25 |
| | | 15.05.2017 | 16.05.2017 | 566 | 275 | 44 | 25 | 26 |
| | | 18.05.2017 | 19.05.2017 | 537 | 274 | 45 | 24 | 23 |
| | | 22.05.2017 | 23.05.2017 | 562 | 291 | 53 | 26 | 26 |
| | | 25.05.2017 | 26.05.2017 | 565 | 283 | 49 | 27 | 23 |
| | | 29.05.2017 | 30.05.2017 | 571 | 283 | 44 | 24 | 23 |
| 2-Shakti Nagar | B | 02.05.2017 | 03.05.2017 | 186 | 88 | 30 | 24 | 20 |
| | | 05.05.2017 | 06.05.2017 | 193 | 82 | 28 | 17 | 18 |
| | | 08.05.2017 | 09.05.2017 | 178 | 87 | 24 | 24 | 20 |
| | | 11.05.2017 | 12.05.2017 | 180 | 83 | 26 | 18 | 18 |
| | | 15.05.2017 | 16.05.2017 | 165 | 84 | 35 | 18 | 20 |
| | | 18.05.2017 | 19.05.2017 | 183 | 83 | 29 | 18 | 22 |
| | | 22.05.2017 | 23.05.2017 | 176 | 82 | 25 | 23 | 18 |
| | | 25.05.2017 | 26.05.2017 | 167 | 87 | 33 | 24 | 19 |
| 29.05.2017 | 30.05.2017 | 176 | 84 | 31 | 24 | 16 | | |

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AIR QUALITY REPORT

| Month | MAY | Area | GEVRA | Report No | KUS/2017/05/03 | | | |
|--|--|--|---------------------|----------------------|-------------------|---------------------|---------------------|---------|
| Name of the Customer | | South Eastern Coalfields Ltd, Bilaspur | | Date of Issue | 06.05.2017 | | | |
| Name of the Project | | Gevra OC | | Sample Reference No. | 3-4 | | | |
| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
| | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | | A-O | 600 | 300 | - | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996) | | A-N | 500 | 250 | - | 120 | 120 |
| | | | B | 200 | 100 | 60 | 80 | 80 |
| Method of analysis | | | IS-5182 PART 4:2005 | IS 5182 PART 23:2006 | CPCB Vol. I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ±19.04 | | ±0.0687 | ±0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 3-Urja Nagar | B | 02.05.2017 | 03.05.2017 | 189 | 88 | 40 | 27 | 25 |
| | | 05.05.2017 | 06.05.2017 | 187 | 93 | 35 | 26 | 22 |
| | | 08.05.2017 | 09.05.2017 | 183 | 87 | 40 | 28 | 24 |
| | | 11.05.2017 | 12.05.2017 | 187 | 89 | 31 | 29 | 24 |
| | | 15.05.2017 | 16.05.2017 | 190 | 84 | 37 | 28 | 23 |
| | | 18.05.2017 | 19.05.2017 | 182 | 85 | 37 | 25 | 27 |
| | | 22.05.2017 | 23.05.2017 | 188 | 86 | 28 | 29 | 24 |
| | | 25.05.2017 | 26.05.2017 | 191 | 91 | 39 | 27 | 27 |
| | | 29.05.2017 | 30.05.2017 | 188 | 97 | 36 | 26 | 25 |
| 4-Dy GM Office | A-O | 02.05.2017 | 03.05.2017 | 558 | 277 | 50 | 25 | 24 |
| | | 05.05.2017 | 06.05.2017 | 568 | 284 | 53 | 24 | 28 |
| | | 08.05.2017 | 09.05.2017 | 545 | 274 | 55 | 29 | 28 |
| | | 11.05.2017 | 12.05.2017 | 589 | 290 | 53 | 29 | 26 |
| | | 15.05.2017 | 16.05.2017 | 547 | 271 | 51 | 24 | 26 |
| | | 18.05.2017 | 19.05.2017 | 554 | 285 | 54 | 29 | 24 |
| | | 22.05.2017 | 23.05.2017 | 565 | 278 | 48 | 23 | 25 |
| | | 25.05.2017 | 26.05.2017 | 545 | 293 | 53 | 23 | 25 |
| | | 29.05.2017 | 30.05.2017 | 550 | 279 | 55 | 28 | 26 |

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C. K. Jha
 Lab In charge



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AIR QUALITY REPORT

| | | | | | |
|----------------------|--|------|-------|----------------------|----------------|
| Month | MAY | Area | GEVRA | Report No | KUS/2017/05/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | Date of Issue | 06.06.2017 |
| Name of the Project | Gevra OC | | | Sample Reference No. | 5-6 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | A-O | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|------------------|------------------|---|----------------------|------------------|---------------------|---------------------|---------|
| | | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | 500 | 300 | - | 120 | |
| Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996) | -B | 200 | 100 | 60 | 80 | 80 | | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS 5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ±19.04 | | ±0.0687 | ±0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 5-Bhilai Bazar Village | B | 03.05.2017 | 04.05.2017 | 192 | 93 | 43 | 23 | 16 |
| | | 06.05.2017 | 07.05.2017 | 185 | 94 | 45 | 20 | 22 |
| | | 09.05.2017 | 10.05.2017 | 195 | 83 | 46 | 16 | 14 |
| | | 12.05.2017 | 13.05.2017 | 192 | 87 | 46 | 24 | 19 |
| | | 16.05.2017 | 17.05.2017 | 194 | 92 | 40 | 19 | 23 |
| | | 19.05.2017 | 20.05.2017 | 187 | 85 | 43 | 20 | 21 |
| | | 23.05.2017 | 24.05.2017 | 190 | 89 | 36 | 24 | 24 |
| | | 26.05.2017 | 27.05.2017 | 182 | 89 | 39 | 23 | 21 |
| | | 30.05.2017 | 31.05.2017 | 190 | 94 | 49 | 21 | 20 |
| 6-Dhurena Village | B | 03.05.2017 | 04.05.2017 | 179 | 85 | 34 | 17 | 16 |
| | | 06.05.2017 | 07.05.2017 | 172 | 80 | 29 | 16 | 15 |
| | | 09.05.2017 | 10.05.2017 | 173 | 87 | 28 | 14 | 19 |
| | | 12.05.2017 | 13.05.2017 | 181 | 81 | 33 | 16 | 16 |
| | | 16.05.2017 | 17.05.2017 | 184 | 86 | 29 | 17 | 14 |
| | | 19.05.2017 | 20.05.2017 | 185 | 84 | 33 | 17 | 19 |
| | | 23.05.2017 | 24.05.2017 | 180 | 88 | 30 | 19 | 19 |
| | | 26.05.2017 | 27.05.2017 | 172 | 82 | 34 | 15 | 16 |
| | | 30.05.2017 | 31.05.2017 | 183 | 83 | 34 | 14 | 14 |

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AIR QUALITY REPORT

| Month | MAY | Area | GEVRA | Report No | KUS/2017/05/03 | | | |
|--|--|---------------------------------------|---------------------|----------------------|-----------------|---------------------|---------------------|---------|
| Name of the Customer | | South Eastern Coalfields Ltd Bilaspur | | Date of Issue | | 06.06.2017 | | |
| Name of the Project | | Gevra OC | | Sample Reference No. | | 7-8 | | |
| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
| | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | | A-O | 600 | 300 | - | 120 | |
| | | | A-N | 500 | 250 | - | 120 | 120 |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996) | | B | 200 | 100 | 60 | 80 | 80 |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol I 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 7-Ganga Nagar Village | B | 03.05.2017 | 04.05.2017 | 180 | 77 | 23 | 18 | 21 |
| | | 06.05.2017 | 07.05.2017 | 176 | 72 | 26 | 18 | 15 |
| | | 09.05.2017 | 10.05.2017 | 178 | 75 | 29 | 21 | 14 |
| | | 12.05.2017 | 13.05.2017 | 171 | 85 | 25 | 18 | 17 |
| | | 16.05.2017 | 17.05.2017 | 183 | 75 | 29 | 16 | 15 |
| | | 19.05.2017 | 20.05.2017 | 176 | 86 | 22 | 17 | 21 |
| | | 23.05.2017 | 24.05.2017 | 180 | 83 | 25 | 16 | 20 |
| | | 26.05.2017 | 27.05.2017 | 172 | 77 | 28 | 21 | 20 |
| | | 30.05.2017 | 31.05.2017 | 170 | 73 | 26 | 21 | 16 |
| 8-Ralia Village | B | 03.05.2017 | 04.05.2017 | 185 | 87 | 34 | 25 | 19 |
| | | 06.05.2017 | 07.05.2017 | 184 | 88 | 41 | 18 | 25 |
| | | 09.05.2017 | 10.05.2017 | 192 | 82 | 36 | 18 | 21 |
| | | 12.05.2017 | 13.05.2017 | 196 | 88 | 39 | 23 | 22 |
| | | 16.05.2017 | 17.05.2017 | 190 | 93 | 43 | 24 | 22 |
| | | 19.05.2017 | 20.05.2017 | 193 | 85 | 44 | 22 | 21 |
| | | 23.05.2017 | 24.05.2017 | 183 | 87 | 32 | 18 | 26 |
| | | 26.05.2017 | 27.05.2017 | 192 | 83 | 33 | 20 | 26 |
| | | 30.05.2017 | 31.05.2017 | 193 | 94 | 40 | 21 | 22 |

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S. K. S.
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 website: www.cmpdi.co.in

*cmpdi**A Mini-Enter Company***NOISE QUALITY REPORT**

| | | | | | |
|-------|-----|------|-------|-----------|---------------|
| Month | MAY | Area | GEVRA | Report No | KSM/2017/05/3 |
|-------|-----|------|-------|-----------|---------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 05.06.2017 |
| Name of the Project | GEVRA OC | Sample Reference No. | N31-N38 |

| Limit (in dB(A)) Leq | Parameter | | The Noise Pollution (R & C) rules, 2000 | | Remarks |
|--|------------------|---------------------|---|----------------|---------|
| | | | Day Time | Night Time | |
| | Industrial area | A | 75 | 70 | |
| | Commercial area | B | 65 | 55 | |
| | Residential Area | C | 55 | 45 | |
| | Silence Zone | D | 50 | 40 | |
| Method of analysis: CPCB Protocol For Ambient Level Noise Monitoring | | | | | |
| Station (Code) Station Name | Station category | Date of measurement | Value in dB(A) | Value in dB(A) | |
| 1-DETP Control Room | A | 06.05.2017 | 65.6 | 54.0 | |
| | | 19.05.2017 | 68.1 | 57.9 | |
| 2-Shakti Nagar | C | 06.05.2017 | 49.6 | 38.3 | |
| | | 19.05.2017 | 48.3 | 41.2 | |
| 3-Urja Nagar | C | 06.05.2017 | 47.8 | 38.1 | |
| | | 19.05.2017 | 49.0 | 42.7 | |
| 4-Dy.GM Office | A | 06.05.2017 | 61.0 | 50.6 | |
| | | 19.05.2017 | 60.5 | 49.0 | |
| 5-Bhilai Bazar Village | C | 06.05.2017 | 51.4 | 39.3 | |
| | | 19.05.2017 | 52.1 | 42.5 | |
| 6-Dhurena Village | C | 06.05.2017 | 48.5 | 41.5 | |
| | | 19.05.2017 | 47.9 | 42.5 | |
| 7-Ganga Nagar Village | C | 06.05.2017 | 47.4 | 38.7 | |
| | | 19.05.2017 | 47.1 | 39.8 | |
| 8-Ralia Village | C | 06.05.2017 | 49.2 | 41.4 | |
| | | 19.05.2017 | 48.6 | 40.1 | |

B. S. H.
 Analyzed by

[Signature]
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EFFLUENT WATER TEST REPORT
 For the month of May 2017

Report No = 05

GEVRA AREA

| Name of the Customer | South Eastern Coalfields Ltd. Baleswar | | Date of Issue | 10 th June 2017 | |
|----------------------|--|--|------------------|----------------------------|----------------------------------|
| Name of the Project | GEVRA O/C | | Date of Sampling | Date of Analysis | |
| Name of the Stations | 1 | Mine water at discharge point | 1 st | 2 nd | |
| | 2 | Work shop effluent before treatment at O/C | 13.05.17 | 19.05.17 | 16.05 to 26.05 29.05 to 06.06 |
| | 3 | Work shop effluent after treatment at O/C trap | 13.05.17 | 19.05.17 | 16.05 to 26.05 29.05 to 06.06 |
| | 4 | Discharge of D/E ^o Gevra Area | 13.05.17 | 19.05.17 | 16.05 to 26.05 29.05 to 06.06 |
| | 5 | O/S dump run off and mine discharge water after treatment at settling pond | 13.05.17 | 19.05.17 | 16.05 to 26.05 29.05 to 06.06 |
| | 6 | Up-stream of Lakshman nala | 13.05.17 | 19.05.17 | 16.05 to 26.05 29.05 to 06.06 |
| | 7 | Down-stream of Lakshman nala | 13.05.17 | 19.05.17 | 16.05 to 26.05 29.05 to 06.06 |
| | 8 | Mine Sump water | 13.05.17 | 19.05.17 | 16.05 to 26.05 29.05 to 06.06 |

| Sl No | Parameter | Method of Analysis | Observed Value | | | | | | | | Lower Detection Limit | General Standards for Discharge of Environmental Pollution Part A Effluent as per Schedule II, Environment Protection Act, 1986 | Uncertainty of Measurement (at 95% C.I. & K=1.96) |
|-------|-----------------------------------|--|----------------|------|------|------|------|------|------|------|-----------------------|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| 1 | pH Value | IS 9020 (Part 1), 1983, 1986, Electronic Method | 7.45 | 6.66 | 6.80 | 6.75 | 6.73 | 6.70 | 6.66 | 6.65 | 6.65 | 5.0 to 9.0 | ±0.04 (20) at 4.025 |
| 2 | Total suspended solids, mg/l, max | IS 9023 (Part 1), 1984 & 1986, Gravimetric Method | 22 | 31 | 27 | 22.5 | 23 | 23.5 | 23.3 | 23.6 | 25.0 | 1000 | ±0.445 mg/l at 10.425 mg/l |
| 3 | C.O.D. mg/l, max | APHA, 17 th Edition, 5220B, open Reflux, Titration Method | 17 | 36 | 19 | 16 | 16 | 16.0 | 16 | 16 | 25.0 | 250.0 | ±0.6153 mg/l at 16.289 mg/l |
| 4 | Ox & Free Chlorine, mg/l, max | IS 9025 (Part 2), 1981, A 2001, Permanganate Method, Titrimetric | 0.2 | 0.2 | 0.5 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 2.0 | 10.0 | ±0.007 mg/l at 10.014 mg/l |
| 5 | 60 (6.5 days 20°C) mg/l, max | IS 1023 (Part 4), 1993, A 2003, 5 days incubation at 20°C | 0.2 | 0.2 | 0.5 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 2.0 | 10.0 | ±1.7596682 at 10.014 mg/l |

Scientific Asst

Checked By

Officer in-Charge

Note: 1) The results above relate to the samples tested as per report
 2) This report can not be reproduced in part or full without the written permission of the Director (MPPD) RE
 3) LDL indicates Lower Detection Limit & BDL indicates Below Detection Limit



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ENVIRONMENTAL MONITORING REPORT

AIR, NOISE & EFFLUENT

(GEVRA AREA)



Environmental Monitoring

JUNE - 2017

SOUTH EASTERN COALFIELDS LIMITED

(A Mini Ratna Company)

Central Mine Planning & Design Institute Limited
Regional Institute - V, SECL Complex,
BILASPUR (C.G.)



CENTRAL MINE PLANNING AND DESIGN INSTITUTE LIMITED
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 website: www.cmpdi.co.in

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AIR QUALITY REPORT

| | | | | | |
|-------|------|------|-------|-----------|----------------|
| Month | JUNE | Area | GEVRA | Report No | KUS/2017/06/03 |
|-------|------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 03.07.2017 |
| Name of the Project | GEVRA OC | Sample Reference No. | 1-2 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|---------------------|-------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 2:2006 | CPCB Vol- I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 1-DETP/TA Office | A-O | 01.06.2017 | 02.06.2017 | 533 | 261 | 52 | 28 | 24 |
| | | 05.06.2017 | 06.06.2017 | 560 | 274 | 47 | 27 | 24 |
| | | 08.06.2017 | 09.06.2017 | 534 | 285 | 54 | 25 | 22 |
| | | 12.06.2017 | 13.06.2017 | 559 | 287 | 53 | 22 | 26 |
| | | 15.06.2017 | 16.06.2017 | 540 | 272 | 49 | 22 | 23 |
| | | 19.06.2017 | 20.06.2017 | 546 | 269 | 55 | 28 | 25 |
| | | 22.06.2017 | 23.06.2017 | 537 | 286 | 47 | 24 | 24 |
| | | 27.06.2017 | 28.06.2017 | 536 | 287 | 47 | 26 | 26 |
| 2-Shakti Nagar | B | 01.06.2017 | 02.06.2017 | 178 | 85 | 23 | 19 | 21 |
| | | 05.06.2017 | 06.06.2017 | 181 | 79 | 26 | 19 | 17 |
| | | 08.06.2017 | 09.06.2017 | 181 | 85 | 24 | 23 | 16 |
| | | 12.06.2017 | 13.06.2017 | 190 | 86 | 31 | 18 | 20 |
| | | 15.06.2017 | 16.06.2017 | 182 | 86 | 27 | 23 | 21 |
| | | 19.06.2017 | 20.06.2017 | 167 | 84 | 25 | 17 | 20 |
| | | 22.06.2017 | 23.06.2017 | 178 | 78 | 27 | 22 | 19 |
| | | 27.06.2017 | 28.06.2017 | 176 | 85 | 24 | 19 | 17 |

D. Dasg
 Analyzed by

B. Dasg
 Checked by

C. K. Vd
 Lab In charge

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| Sl. No. | Name of Effluent Sampling Station | No. of samples |
|---------|---|----------------|
| 1 | Mine water at discharge point | 2 |
| 2 | W/S effluent before treatment at O&G trap | 2 |
| 3 | Workshop effluent after treatment at O&G trap | 2 |
| 4 | Discharge of DETP, GEVRA Area | 2 |
| 5 | OB dump run-off & mine discharge water after treatment at settling pond | 2 |
| 6 | Upstream of Laxman Nalla | 2 |
| 7 | Downstream of Laxman Nala | 2 |
| 8 | Mine sump Water | 2 |
| | Total | 16 |



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AIR QUALITY REPORT

| | | | | | |
|-------|------|------|-------|-----------|----------------|
| Month | JUNE | Area | GEVRA | Report No | KUS/2017/06/03 |
|-------|------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 03.07.2017 |
| Name of the Project | Gevra OC | Sample Reference No. | 3-4 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol. 1 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 10.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 3-Urja Nagar | B | 01.06.2017 | 02.06.2017 | 190 | 91 | 34 | 25 | 20 |
| | | 05.06.2017 | 06.06.2017 | 180 | 87 | 32 | 23 | 23 |
| | | 08.06.2017 | 09.06.2017 | 188 | 89 | 32 | 24 | 26 |
| | | 12.06.2017 | 13.06.2017 | 189 | 95 | 33 | 25 | 21 |
| | | 15.06.2017 | 16.06.2017 | 189 | 88 | 31 | 27 | 22 |
| | | 19.06.2017 | 20.06.2017 | 183 | 92 | 29 | 26 | 20 |
| | | 22.06.2017 | 23.06.2017 | 183 | 89 | 29 | 27 | 26 |
| | | 27.06.2017 | 28.06.2017 | 186 | 95 | 28 | 23 | 21 |
| 4-Dy GM Office | A-G | 01.06.2017 | 02.06.2017 | 580 | 279 | 44 | 24 | 27 |
| | | 05.06.2017 | 06.06.2017 | 547 | 271 | 48 | 23 | 22 |
| | | 08.06.2017 | 09.06.2017 | 548 | 266 | 51 | 27 | 27 |
| | | 12.06.2017 | 13.06.2017 | 551 | 268 | 53 | 23 | 25 |
| | | 15.06.2017 | 16.06.2017 | 567 | 283 | 47 | 22 | 24 |
| | | 19.06.2017 | 20.06.2017 | 562 | 277 | 52 | 25 | 27 |
| | | 22.06.2017 | 23.06.2017 | 575 | 279 | 46 | 27 | 24 |
| | | 27.06.2017 | 28.06.2017 | 557 | 268 | 54 | 25 | 22 |

Analyzed by *D. Das* Checked by *[Signature]* Lab in charge *[Signature]*



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AIR QUALITY REPORT

| | | | | | |
|----------------------|--|------|-------|----------------------|----------------|
| Month | JUNE | Area | GEVRA | Report No | KUS/2017/06/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | Date of Issue | 03.07.2017 |
| Name of the Project | Gevra OC | | | Sample Reference No. | 5-6 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-Q | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 21:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS 5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 5-Bhilai Bazar Village | B | 02.06.2017 | 03.06.2017 | 188 | 89 | 39 | 17 | 15 |
| | | 06.06.2017 | 07.06.2017 | 192 | 91 | 42 | 23 | 21 |
| | | 09.06.2017 | 10.06.2017 | 171 | 90 | 45 | 16 | 20 |
| | | 13.06.2017 | 14.06.2017 | 192 | 79 | 47 | 23 | 21 |
| | | 16.06.2017 | 17.06.2017 | 176 | 86 | 33 | 23 | 16 |
| | | 20.06.2017 | 21.06.2017 | 179 | 82 | 36 | 24 | 20 |
| | | 23.06.2017 | 24.06.2017 | 182 | 84 | 35 | 24 | 14 |
| | | 28.06.2017 | 29.06.2017 | 188 | 91 | 47 | 16 | 20 |
| 6-Dhurena Village | B | 02.06.2017 | 03.06.2017 | 183 | 78 | 33 | 17 | 20 |
| | | 06.06.2017 | 07.06.2017 | 186 | 79 | 34 | 14 | 20 |
| | | 09.06.2017 | 10.06.2017 | 186 | 85 | 32 | 17 | 17 |
| | | 13.06.2017 | 14.06.2017 | 175 | 79 | 28 | 15 | 18 |
| | | 16.06.2017 | 17.06.2017 | 180 | 85 | 26 | 18 | 20 |
| | | 20.06.2017 | 21.06.2017 | 174 | 78 | 28 | 15 | 18 |
| | | 23.06.2017 | 24.06.2017 | 172 | 82 | 30 | 15 | 15 |
| | | 28.06.2017 | 29.06.2017 | 174 | 82 | 34 | 18 | 19 |

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Analyzed by

B. Singh
Checked by

C. Singh
Lab In charge



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AIR QUALITY REPORT

| | | | | | |
|-------|------|------|-------|-----------|----------------|
| Month | June | Area | GEVRA | Report No | KUS/2017/06/03 |
|-------|------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 03.07.2017 |
| Name of the Project | Gevra OC | Sample Reference No. | 7-8 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO ₂ | NO ₂ | Remarks |
|--|---|--|---------------------|---------------------|------------------|---------------------|---------------------|---------|
| | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996) | A-O | A-N | B | | | |
| | | | 600 | 300 | - | 120 | 120 | |
| | | | 500 | 250 | - | 120 | 120 | |
| | | | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 1:2005 | IS-5182 PART 2:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 7-Ganga Nagar Village | B | 02.06.2017 | 03.06.2017 | 177 | 72 | 24 | 16 | 20 |
| | | 06.06.2017 | 07.06.2017 | 173 | 75 | 20 | 17 | 18 |
| | | 09.06.2017 | 10.06.2017 | 180 | 72 | 24 | 17 | 16 |
| | | 13.06.2017 | 14.06.2017 | 171 | 74 | 21 | 17 | 18 |
| | | 16.06.2017 | 17.06.2017 | 173 | 72 | 22 | 18 | 18 |
| | | 20.06.2017 | 21.06.2017 | 170 | 75 | 28 | 17 | 17 |
| | | 23.06.2017 | 24.06.2017 | 174 | 80 | 21 | 16 | 17 |
| | | 28.06.2017 | 29.06.2017 | 175 | 83 | 23 | 20 | 14 |
| 8-Ralia Village | B | 02.06.2017 | 03.06.2017 | 183 | 81 | 33 | 23 | 22 |
| | | 06.06.2017 | 07.06.2017 | 188 | 92 | 40 | 24 | 18 |
| | | 09.06.2017 | 10.06.2017 | 184 | 85 | 41 | 18 | 19 |
| | | 13.06.2017 | 14.06.2017 | 186 | 89 | 38 | 18 | 16 |
| | | 16.06.2017 | 17.06.2017 | 187 | 86 | 34 | 19 | 16 |
| | | 20.06.2017 | 21.06.2017 | 191 | 92 | 40 | 23 | 20 |
| | | 23.06.2017 | 24.06.2017 | 185 | 90 | 39 | 23 | 18 |
| | | 28.06.2017 | 29.06.2017 | 192 | 90 | 34 | 18 | 17 |

Analyzed by

Checked by

Lab in charge

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 website: www.cmpdi.co.in

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NOISE QUALITY REPORT

| | | | | | |
|-------|------|------|-------|-----------|---------------|
| Month | JUNE | Area | GEVRA | Report No | KSM/2017/06/3 |
|-------|------|------|-------|-----------|---------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 03.07.2017 |
| Name of the Project | GEVRA OC | Sample Reference No. | N31-N38 |

| Parameter | | | The Noise Pollution (R & C) rules, 2000 | | Remarks |
|-----------------------------|------------------|--|---|----------------|---------|
| Limit (in dB(A) Leq | | | Day Time | Night Time | |
| | Industrial area | A | 75 | 70 | |
| | Commercial area | B | 65 | 55 | |
| | Residential Area | C | 55 | 45 | |
| | Silence Zone | D | 50 | 40 | |
| Method of analysis | | CPCB Protocol For Ambient Level Noise Monitoring | | | |
| Station (Code) Station Name | Station category | Date of measurement | Value in dB(A) | Value in dB(A) | |
| 1-DETP Control Room | A | 13.06.2017 | 64.7 | 53.9 | |
| | | 28.06.2017 | 67.6 | 57.0 | |
| 2-Shakti Nagar | C | 13.06.2017 | 48.8 | 37.7 | |
| | | 28.06.2017 | 47.5 | 40.5 | |
| 3-Urja Nagar | C | 13.06.2017 | 47.3 | 37.2 | |
| | | 28.06.2017 | 48.1 | 42.6 | |
| 4-Dy.GM Office | A | 13.06.2017 | 66.2 | 50.0 | |
| | | 28.06.2017 | 64.0 | 48.1 | |
| 5-Bhillai Bazar Village | C | 13.06.2017 | 50.5 | 39.2 | |
| | | 28.06.2017 | 51.6 | 41.6 | |
| 6-Dhurena Village | C | 13.06.2017 | 47.6 | 41.4 | |
| | | 28.06.2017 | 47.4 | 41.6 | |
| 7-Ganga Nagar Village | C | 13.06.2017 | 47.3 | 37.8 | |
| | | 28.06.2017 | 46.3 | 39.2 | |
| 8-Ralia Village | C | 13.06.2017 | 48.3 | 41.3 | |
| | | 28.06.2017 | 47.7 | 40.0 | |

D. P. Singh
 Analyzed by

D. P. Singh
 Checked by

C. K. Verma
 Lab in charge

116 178



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EFFLUENT WATER TEST REPORT
 For the month of JUNE 2017

Report No - 06

GEVRA AREA

| | | | | |
|----------------------|--------------------------------------|--|------------------|------------------|
| Name of the Customer | South Eastern Coalfields Ltd. Ranchi | | Date of Issue | 15 July 2017 |
| Name of the Project | GEVRA O.T. | | Date of Sampling | Date of Analysis |
| Name of the Stations | 1 | Mine water at discharge point | 03.06.17 | 17.06.17 |
| | 2 | Work shop effluent before treatment at O&G trap | 03.06.17 | 17.06.17 |
| | 3 | Work shop effluent after treatment at O&G trap | 03.06.17 | 17.06.17 |
| | 4 | Discharge of O.T. Gevra Area | 03.06.17 | 17.06.17 |
| | 5 | O&G dump run off and mine discharge water after treatment at settling pond | 03.06.17 | 17.06.17 |
| | 6 | Discharge of O.T. Gevra Area | 03.06.17 | 17.06.17 |
| | 7 | Down stream of Lucknow area | 03.06.17 | 17.06.17 |
| | 8 | Mine dump water | 03.06.17 | 17.06.17 |

| Sl. No. | Parameter | Method of Analysis | Observed value | | | | | | | | Lower Detection Limit | General Standards for discharge of Environmental Pollutants as per Schedule VI of Environment Protection Rules | Uncertainty of Measurement (at 95% C & K = 1.96) | |
|---------|-----------------------------------|--|----------------|------|------|------|------|------|------|------|-----------------------|--|--|------------------------------|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| 1 | pH Value, unit | S 3025 (Part 11) 1982, R 1996 Electrometric Method | 6.66 | 6.91 | 6.92 | 6.97 | 6.96 | 7.00 | 7.04 | 7.00 | 7.00 | 7.00 | 0.01 | 50.884 (R) / 4.072 |
| 2 | Total suspended solids, mg/l, max | S 3025 (Part 11) 1982, R 1996 Gravimetric Method | 24 | 44 | 54 | 20.2 | 13.7 | 4.80 | 4.57 | 4.50 | 4.50 | 25.0 | 10.0 | 50.415 mg/l at 24.420 mg/l |
| 3 | T.D.S. mg/l, max | APHA, 20 th Edition, 8275B, open Reflux Titration Method S 3025 (Part 11) 1982, R 1996 | 58 | 40 | 28 | 25 | 16 | 14.0 | 12 | 12 | 12 | 40 | 250.0 | 0.61335 mg/l at 16.2882 mg/l |
| 4 | Chloride, mg/l, max | R 3025, Potentiometric Gravimetric Method Thermometric | 12.0 | 12.1 | 1.8 | 4.0 | 12.4 | 10.0 | 12.0 | 12.0 | 12.0 | 2.0 | 10.0 | 0.2697 mg/l at 17.114 mg/l |
| 5 | B.O.D. (5 days 20°C), mg/l, max | S 3021 (Part 14) 1995, R 2003 5 days incubator at 20°C | | | | | | | | | | 2.0 | 5.0 | 11.759662 at 782.4 mg/l |

[Signature]
 Scientific Asst

[Signature]
 Checked By

[Signature]
 Officer In-Charge

Note: 1) The results above relate to the samples tested as received.
 2) This report can not be reproduced in part or full without the written permission of the HOD (Env), CMPDI, RI-V.
 3) LDL indicates Lower Detection Limit & BDL indicates Below Detection Limit.



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ENVIRONMENTAL MONITORING REPORT
AIR, NOISE & EFFLUENT

(GEVRA AREA)



***Environmental
Monitoring***

JULY - 2017

SOUTH EASTERN COALFIELDS LIMITED

(A Mini Ratna Company)

Central Mine Planning & Design Institute Limited
Regional Institute - V, SECL Complex,
BILASPUR (C.G.)

118 120

| | Name of Effluent Sampling Station | No. of samples |
|---|---|----------------|
| 1 | Mine water at discharge point | 2 |
| 2 | W/S effluent before treatment at O&G trap | 2 |
| 3 | Workshop effluent after treatment at O&G trap | 2 |
| 4 | Discharge of DETP, GEVRA Area | 2 |
| 5 | OB dump run-off & mine discharge water after treatment at settling pond | 2 |
| 6 | Upstream of Laxman Nalla | 2 |
| 7 | Downstream of Laxman Nala | 2 |
| 8 | Mine sump Water | 2 |
| | Total | 16 |



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AIR QUALITY REPORT

| | | | | | |
|----------------------|--|------|-------|----------------------|----------------|
| Month | JULY | Area | GEVRA | Report No | KUS/2017/07/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | Date of Issue | 05.08.2017 |
| Name of the Project | GEVRA OC | | | Sample Reference No. | 1-2 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ±19.04 | | ±0.0687 | ±0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 1-DETP/TA Office | A-O | 01.07.2017 | 03.07.2017 | 541 | 255 | 37 | 24 | 26 |
| | | 04.07.2017 | 05.07.2017 | 524 | 232 | 46 | 22 | 22 |
| | | 07.07.2017 | 08.07.2017 | 533 | 242 | 41 | 27 | 22 |
| | | 10.07.2017 | 11.07.2017 | 549 | 243 | 48 | 26 | 26 |
| | | 13.07.2017 | 14.07.2017 | 525 | 237 | 39 | 26 | 24 |
| | | 17.07.2017 | 18.07.2017 | 534 | 236 | 40 | 27 | 26 |
| | | 21.07.2017 | 22.07.2017 | 538 | 241 | 48 | 27 | 24 |
| | | 24.07.2017 | 25.07.2017 | 526 | 238 | 42 | 25 | 26 |
| | | 28.07.2017 | 29.07.2017 | 537 | 257 | 43 | 28 | 25 |
| 2-Shakti Nagar | B | 01.07.2017 | 03.07.2017 | 170 | 75 | 20 | 14 | 19 |
| | | 04.07.2017 | 05.07.2017 | 166 | 68 | 21 | 14 | 18 |
| | | 07.07.2017 | 08.07.2017 | 171 | 67 | 20 | 14 | 19 |
| | | 10.07.2017 | 11.07.2017 | 168 | 70 | 21 | 17 | 14 |
| | | 13.07.2017 | 14.07.2017 | 173 | 74 | 19 | 16 | 18 |
| | | 17.07.2017 | 18.07.2017 | 169 | 70 | 23 | 16 | 16 |
| | | 21.07.2017 | 22.07.2017 | 167 | 72 | 26 | 19 | 17 |
| | | 24.07.2017 | 25.07.2017 | 173 | 70 | 19 | 17 | 18 |
| | | 28.07.2017 | 29.07.2017 | 171 | 73 | 20 | 16 | 15 |

D. Das
 Analyzed by

B. S. ...
 Checked by

C. ...
 Lab In charge



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AIR QUALITY REPORT

| | | | | | |
|-------|------|------|-------|-----------|----------------|
| Month | JULY | Area | GEVRA | Report No | KUS/2017/07/03 |
|-------|------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|---------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 05.08.2017 |
|----------------------|--|---------------|------------|

| | | | |
|---------------------|----------|----------------------|-----|
| Name of the Project | Gevra OC | Sample Reference No. | 3-4 |
|---------------------|----------|----------------------|-----|

| Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks | |
|--|--|---------------------|----------------------|------------------|---------------------|---------------------|---------|-----|
| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | | 120 |
| | | A-N | 500 | 250 | - | 120 | | 120 |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996) | B | 200 | 100 | 60 | 80 | | 80 |
| Method of analysis | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 3-Urja Nagar | B | 01.07.2017 | 03.07.2017 | 174 | 78 | 27 | 14 | 14 |
| | | 04.07.2017 | 05.07.2017 | 175 | 77 | 26 | 15 | 18 |
| | | 07.07.2017 | 08.07.2017 | 178 | 79 | 32 | 17 | 17 |
| | | 10.07.2017 | 11.07.2017 | 175 | 79 | 32 | 20 | 18 |
| | | 13.07.2017 | 14.07.2017 | 176 | 73 | 30 | 20 | 15 |
| | | 17.07.2017 | 18.07.2017 | 174 | 77 | 28 | 15 | 17 |
| | | 21.07.2017 | 22.07.2017 | 181 | 79 | 31 | 19 | 16 |
| | | 24.07.2017 | 25.07.2017 | 179 | 75 | 29 | 14 | 20 |
| | | 28.07.2017 | 29.07.2017 | 170 | 76 | 32 | 20 | 19 |
| 4-Dy GM Office | A-O | 01.07.2017 | 03.07.2017 | 510 | 242 | 38 | 23 | 21 |
| | | 04.07.2017 | 05.07.2017 | 535 | 261 | 41 | 24 | 25 |
| | | 07.07.2017 | 08.07.2017 | 527 | 236 | 40 | 25 | 24 |
| | | 10.07.2017 | 11.07.2017 | 547 | 259 | 43 | 23 | 21 |
| | | 13.07.2017 | 14.07.2017 | 549 | 241 | 37 | 21 | 21 |
| | | 17.07.2017 | 18.07.2017 | 551 | 233 | 36 | 24 | 22 |
| | | 21.07.2017 | 22.07.2017 | 553 | 264 | 40 | 22 | 25 |
| | | 24.07.2017 | 25.07.2017 | 546 | 241 | 41 | 25 | 23 |
| | | 28.07.2017 | 29.07.2017 | 546 | 250 | 43 | 22 | 25 |

P. Das
 Analyzed by

B. S. Sankar
 Checked by

C. K. V.
 Lab in charge



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AIR QUALITY REPORT

| Month | JULY | Area | GEVRA | Report No | KUS/2017/07/03 | | | |
|--|--|------------------|----------------------|----------------------|------------------|---------------------|---------------------|---------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | Date of Issue | 05.08.2017 | | | | |
| Name of the Project | Gevra OC | | Sample Reference No. | 5-6 | | | | |
| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
| | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | | A-D | 600 | 300 | - | 120 | |
| | | | A-N | 500 | 250 | - | 120 | 120 |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996) | | B | 200 | 100 | 60 | 80 | 80 |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 5-Bhilai Bazar Village | B | 03.07.2017 | 04.07.2017 | 173 | 84 | 35 | 19 | 18 |
| | | 05.07.2017 | 06.07.2017 | 181 | 78 | 42 | 16 | 20 |
| | | 08.07.2017 | 10.07.2017 | 176 | 83 | 34 | 19 | 19 |
| | | 11.07.2017 | 12.07.2017 | 180 | 87 | 34 | 17 | 14 |
| | | 14.07.2017 | 15.07.2017 | 184 | 80 | 31 | 19 | 19 |
| | | 18.07.2017 | 19.07.2017 | 176 | 79 | 35 | 17 | 20 |
| | | 22.07.2017 | 24.07.2017 | 182 | 77 | 33 | 19 | 19 |
| | | 25.07.2017 | 26.07.2017 | 178 | 79 | 34 | 15 | 16 |
| 6-Dhurena Village | B | 03.07.2017 | 04.07.2017 | 171 | 78 | 24 | 16 | 19 |
| | | 05.07.2017 | 06.07.2017 | 174 | 69 | 21 | 18 | 14 |
| | | 08.07.2017 | 10.07.2017 | 170 | 71 | 21 | 18 | 19 |
| | | 11.07.2017 | 12.07.2017 | 171 | 63 | 20 | 16 | 20 |
| | | 14.07.2017 | 15.07.2017 | 168 | 72 | 21 | 19 | 16 |
| | | 18.07.2017 | 19.07.2017 | 164 | 67 | 24 | 16 | 15 |
| | | 22.07.2017 | 24.07.2017 | 173 | 72 | 22 | 14 | 18 |
| | | 25.07.2017 | 26.07.2017 | 165 | 73 | 25 | 17 | 15 |
| 29.07.2017 | 30.07.2017 | 172 | 67 | 23 | 16 | 16 | | |

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C. K. Jha
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AIR QUALITY REPORT

| Month | JULY | Area | GEVRA | Report No | KUS/2017/07/03 | | | |
|--|--|------------------|----------------------|----------------------|------------------|---------------------|---------------------|-----|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | Date of Issue | 05.08.2017 | | | | |
| Name of the Project | Gevra OC | | Sample Reference No. | 7-8 | | | | |
| Limit (in $\mu\text{g}/\text{m}^3$ -24 hrs) | Parameter | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks | |
| | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | | 120 |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), April 02, 1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 7-Ganga Nagar Village | B | 03.07.2017 | 04.07.2017 | 168 | 67 | 26 | 20 | 17 |
| | | 05.07.2017 | 06.07.2017 | 166 | 70 | 23 | 14 | 16 |
| | | 08.07.2017 | 10.07.2017 | 175 | 70 | 23 | 18 | 15 |
| | | 11.07.2017 | 12.07.2017 | 168 | 76 | 22 | 17 | 18 |
| | | 14.07.2017 | 15.07.2017 | 175 | 65 | 21 | 20 | 14 |
| | | 18.07.2017 | 19.07.2017 | 170 | 71 | 24 | 14 | 17 |
| | | 22.07.2017 | 24.07.2017 | 175 | 72 | 22 | 19 | 14 |
| | | 25.07.2017 | 26.07.2017 | 170 | 70 | 20 | 19 | 19 |
| | | 29.07.2017 | 30.07.2017 | 176 | 73 | 20 | 14 | 16 |
| 8-Ralia Village | B | 03.07.2017 | 04.07.2017 | 165 | 78 | 32 | 19 | 17 |
| | | 05.07.2017 | 06.07.2017 | 175 | 76 | 26 | 17 | 19 |
| | | 08.07.2017 | 10.07.2017 | 164 | 71 | 22 | 18 | 15 |
| | | 11.07.2017 | 12.07.2017 | 171 | 74 | 24 | 17 | 18 |
| | | 14.07.2017 | 15.07.2017 | 177 | 65 | 25 | 18 | 16 |
| | | 18.07.2017 | 19.07.2017 | 174 | 75 | 25 | 17 | 18 |
| | | 22.07.2017 | 24.07.2017 | 173 | 68 | 27 | 18 | 14 |
| | | 25.07.2017 | 26.07.2017 | 175 | 74 | 24 | 18 | 19 |
| | | 29.07.2017 | 30.07.2017 | 176 | 71 | 25 | 17 | 19 |

D. Das
 Analyzed by

B. S. Sarker
 Checked by

C. K. Verma
 Lab In charge

Note: 1) The results above relate to the samples tested.



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NOISE QUALITY REPORT

| | | | | | |
|-------|------|------|-------|-----------|---------------|
| Month | JULY | Area | GEVRA | Report No | KSM/2017/07/3 |
|-------|------|------|-------|-----------|---------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 05.08.2017 |
| Name of the Project | GEVRA OC | Sample Reference No. | N31-N38 |

| Parameter | The Noise Pollution (R & C) rules, 2000 | | Remarks | | |
|-----------------------------|--|---------------------|----------------|----------------|--|
| | Day Time | Night Time | | | |
| Limit (in dB(A) Leq) | Industrial area A | 75 | 70 | | |
| | Commercial area B | 65 | 55 | | |
| | Residential Area C | 55 | 45 | | |
| | Silence Zone D | 50 | 40 | | |
| Method of analysis | CPCB Protocol For Ambient Level Noise Monitoring | | | | |
| Station (Code) Station Name | Station category | Date of measurement | Value in dB(A) | Value in dB(A) | |
| 1-DETP Control Room | A | 05.07.2017 | 64.9 | 52.6 | |
| | | 21.07.2017 | 67.0 | 57.0 | |
| 2-Shakti Nagar | C | 05.07.2017 | 48.9 | 36.9 | |
| | | 21.07.2017 | 47.2 | 39.7 | |
| 3-Urja Nagar | C | 05.07.2017 | 46.7 | 37.2 | |
| | | 21.07.2017 | 48.3 | 41.3 | |
| 4-Dy.GM Office | A | 05.07.2017 | 66.3 | 49.2 | |
| | | 21.07.2017 | 64.4 | 53.1 | |
| 5-Bhilai Bazar Village | C | 05.07.2017 | 50.7 | 37.9 | |
| | | 21.07.2017 | 51.0 | 41.6 | |
| 6-Dhurena Village | C | 05.07.2017 | 47.8 | 40.1 | |
| | | 21.07.2017 | 46.8 | 41.6 | |
| 7-Ganga Nagar Village | C | 05.07.2017 | 46.0 | 38.0 | |
| | | 21.07.2017 | 46.4 | 38.4 | |
| 8-Ralia Village | C | 05.07.2017 | 48.5 | 40.0 | |
| | | 21.07.2017 | 47.9 | 38.7 | |

O. Singh
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B. Soudhakar
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C. K. V
 Lab In charge



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124 136
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EFFLUENT WATER TEST REPORT
 For the month of JULY 2017

Report No = 07

GEVRA AREA

| | | | | | | |
|----------------------|--|--|------------------|----------|------------------------------|----------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | Date of Issue | | 13 th August 2017 | |
| Name of the Project | GEVRA O.C. | | Date of Sampling | | Date of Analysis | |
| Name of the Stations | 1 | Mine water at discharge point | 01.07.17 | 22.07.17 | 19.07 to 29.07 | 01.08 to 12.08 |
| | 2 | Work shop effluent before treatment at O&G trap | 01.07.17 | 22.07.17 | 19.07 to 29.07 | 01.08 to 12.08 |
| | 3 | Work shop effluent after treatment at O&G trap | 01.07.17 | 22.07.17 | 19.07 to 29.07 | 01.08 to 12.08 |
| | 4 | Discharge of DETP, Gevra Area | 01.07.17 | 22.07.17 | 19.07 to 29.07 | 01.08 to 12.08 |
| | 5 | OB dump run off and mine discharge water after treatment at settling pond. | 01.07.17 | 22.07.17 | 19.07 to 29.07 | 01.08 to 12.08 |
| | 6 | Up-stream of Laxman nala. | 01.07.17 | 22.07.17 | 19.07 to 29.07 | 01.08 to 12.08 |
| | 7 | Down-stream of Laxman nala. | 01.07.17 | 22.07.17 | 19.07 to 29.07 | 01.08 to 12.08 |
| | 8 | Mine sump water. | 01.07.17 | 22.07.17 | 19.07 to 29.07 | 01.08 to 12.08 |

| Sl. No | Parameter | Method of Analysis | Observed Value | | | | | | | | Lower Detection Limit | General Standards for Discharge of Environmental Pollution (Part A: Effluent) as per Schedule VI, Environment (Protection) Rules | Uncertainty of Measurement (at 95% C.L & K=1.96) |
|--------|-----------------------------------|--|----------------|------|------|-------|-------|-------|-------|-------|-----------------------|--|--|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| 1 | pH Value, LDL | IS 3025 (Part 1):1983, R: 1996, Electrometric Method | 7.49 | 6.91 | 6.88 | 6.91 | 7.52 | 7.39 | 7.55 | 6.89 | 0.01 | 5.5 to 9.0 | ±0.884321 at 4.075 |
| 2 | Total suspended Solids, mg/l, max | IS 3025 (Part 17):1984, R: 1996, Gravimetric Method | 29 | 59 | 37 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 25.0 | 100.0 | ±0.445mg/l at 24.429 mg/l |
| 3 | C.O.D, mg/l, max | APHA, 12 th Edition, 5220B, open Reflux, Titration Method | 12 | 32 | 20 | 16 | 20 | <4.0 | 12 | 16 | 4.0 | 250.0 | 0.61535782 at 16.2892 mg/l |
| 4 | Oil & Grease, mg/l, max | IS 3025 (Part 39):1991, R: 2003, Partition Gravimetric Method Thermometric | <2.0 | 12.8 | 4.4 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | 2.0 | 10.0 | ±0.207mg/l at 10.314 mg/l |
| 5 | B.O.D(3 days 27°C), mg/l, max | IS 3025 (Part 44):1993, R: 2003, 3days incubator at 27°C | - | - | - | 06.0 | - | - | - | - | 2.0 | 30.0 | 11.7596682 at 202.4 mg/l |

[Signature]
 Scientific Asst

[Signature]
 Checked By

[Signature]
 Officer In-Charge

Note: 1) The results above relate to the samples tested as received.
 2) This report can not be reproduced in part or full without the written permission of the HOD (Env), CMPDI, RI-V.
 3) LDL indicates Lower Detection Limit & BDL indicates Below Detection Limit



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ENVIRONMENTAL MONITORING REPORT
AIR, NOISE & EFFLUENT

(GEVRA AREA)



Environmental
Monitoring

AUGUST - 2017

SOUTH EASTERN COALFIELDS LIMITED

(A Mini Ratna Company)

Central Mine Planning & Design Institute Limited
Regional Institute - V, SECL Complex,
BILASPUR (C.G.)

126

| | Name of Effluent Sampling Station | No. of samples |
|---|---|----------------|
| 1 | Mine water at discharge point | 2 |
| 2 | W/S effluent before treatment at O&G trap | 2 |
| 3 | Workshop effluent after treatment at O&G trap | 2 |
| 4 | Discharge of DETP, GEVRA Area | 2 |
| 5 | OB dump run-off & mine discharge water after treatment at settling pond | 2 |
| 6 | Upstream of Laxman Nalla | 2 |
| 7 | Downstream of Laxman Nala | 2 |
| 8 | Mine sump Water | 2 |
| | Total | 16 |



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AIR QUALITY REPORT

| | | | | | |
|----------------------|--|------|-------|----------------------|----------------|
| Month | AUGUST | Area | GEVRA | Report No | KUS/2017/08/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | Date of Issue | 05.09.2017 |
| Name of the Project | GEVRA OC | | | Sample Reference No. | 1-2 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|---|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | | 120 | |
| | | A-N | 500 | 250 | | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), AUGUST 02, 1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis. | | | IS-5182 PART 4:2005 | IS-5182 PART 73:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 1-DETP/TA Office | A-O | 02.08.2017 | 03.08.2017 | 233 | 104 | 24 | 13 | 31 |
| | | 06.08.2017 | 07.08.2017 | 296 | 150 | 29 | 15 | 15 |
| | | 09.08.2017 | 09.08.2017 | 297 | 160 | 31 | 10 | 20 |
| | | 13.08.2017 | 14.08.2017 | 251 | 129 | 24 | 15 | 16 |
| | | 16.08.2017 | 17.08.2017 | 269 | 122 | 20 | 15 | 22 |
| | | 20.08.2017 | 21.08.2017 | 276 | 161 | 27 | 16 | 18 |
| | | 23.08.2017 | 24.08.2017 | 275 | 141 | 23 | 10 | 20 |
| | | 27.08.2017 | 28.08.2017 | 287 | 146 | 25 | 14 | 17 |
| | | 30.08.2017 | 31.08.2017 | 235 | 123 | 29 | 16 | 23 |
| 2-Shakti Nagar | B | 02.08.2017 | 03.08.2017 | 143 | 62 | 14 | 13 | 19 |
| | | 06.08.2017 | 07.08.2017 | 167 | 60 | 12 | 23 | 13 |
| | | 09.08.2017 | 09.08.2017 | 178 | 67 | 16 | 14 | 16 |
| | | 13.08.2017 | 14.08.2017 | 158 | 68 | 13 | 28 | 10 |
| | | 16.08.2017 | 17.08.2017 | 130 | 74 | 13 | 14 | 14 |
| | | 20.08.2017 | 21.08.2017 | 174 | 70 | 15 | 10 | 16 |
| | | 23.08.2017 | 24.08.2017 | 167 | 65 | 12 | 14 | 12 |
| | | 27.08.2017 | 28.08.2017 | 172 | 63 | 16 | 11 | 11 |
| | | 30.08.2017 | 31.08.2017 | 161 | 61 | 13 | 16 | 15 |

D. Das
 Analyzed by

Chid
 Checked by

C. K. V
 Lab In charge

Note: 1) This report is for information only and does not constitute a guarantee of the quality of the samples.
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AIR QUALITY REPORT

| | | | | | |
|----------------------|--|------|-------|----------------------|----------------|
| Month | AUGUST | Area | GLVRA | Report No | KUS/2017/08/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | Date of Issue | 05.09.2017 |
| Name of the Project | Gevra OC | | | Sample Reference No. | 3-4 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|---|---|---------------------|---------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), AUGUST 02, 1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 2:2006 | CPCB Vol I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 2:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | ±15.04 | ±15.04 | | ±0.0687 | ±0.4470 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | SPM | PM10 | PM2.5 | SO2 | NO2 |
| 3-Urja Nagar | B | 02.08.2017 | 03.08.2017 | 183 | 89 | 22 | 13 | 27 |
| | | 06.08.2017 | 07.08.2017 | 174 | 84 | 24 | 14 | 15 |
| | | 09.08.2017 | 09.08.2017 | 189 | 58 | 20 | 23 | 18 |
| | | 13.08.2017 | 14.08.2017 | 184 | 89 | 26 | 27 | 19 |
| | | 16.08.2017 | 17.08.2017 | 160 | 91 | 29 | 24 | 31 |
| | | 20.08.2017 | 21.08.2017 | 197 | 74 | 36 | 25 | 28 |
| | | 23.08.2017 | 24.08.2017 | 166 | 64 | 32 | 29 | 24 |
| | | 27.08.2017 | 28.08.2017 | 176 | 73 | 31 | 29 | 30 |
| | | 30.08.2017 | 31.08.2017 | 194 | 74 | 28 | 25 | 28 |
| | | 4-Dy GM Office | A-O | 03.08.2017 | 04.08.2017 | 333 | 168 | 24 |
| 07.08.2017 | 08.08.2017 | | | 286 | 145 | 29 | 20 | 14 |
| 10.08.2017 | 11.08.2017 | | | 336 | 166 | 22 | 32 | 25 |
| 17.08.2017 | 18.08.2017 | | | 302 | 138 | 36 | 15 | 23 |
| 19.08.2017 | 20.08.2017 | | | 341 | 159 | 29 | 19 | 17 |
| 21.08.2017 | 22.08.2017 | | | 204 | 123 | 30 | 20 | 28 |
| 24.08.2017 | 28.08.2017 | | | 342 | 170 | 27 | 14 | 25 |
| 28.08.2017 | 29.08.2017 | | | 294 | 153 | 29 | 16 | 21 |
| 30.08.2017 | 01.09.2017 | | | 289 | 141 | 31 | 18 | 25 |

Analyzed by *[Signature]* Checked by *[Signature]* Lab in charge *[Signature]*



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AIR QUALITY REPORT

| | | | | | |
|----------------------|--|------|-------|----------------------|----------------|
| Month | AUGUST | Area | GEVRA | Report No | KUS/2017/08/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | Date of Issue | 05.09.2017 |
| Name of the Project | Gevra OC | | | Sample Reference No. | 5-6 |

| Limit (in $\mu\text{g}/\text{m}^3$ -24 hrs) | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|---|---|---------------------|-----------------------|------------------|----------------------|----------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), AUGUST 02, 1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4 2005 | IS-5187 PART 23, 2006 | CPCB Vol-1, 2013 | IS-5182 PART 2, 2001 | IS-5182 PART 6, 2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| S-Bhilai Bazar Village | B | 01.08.2017 | 02.08.2017 | 183 | 92 | 36 | 10 | 31 |
| | | 04.08.2017 | 05.08.2017 | 184 | 97 | 31 | 11 | 25 |
| | | 08.08.2017 | 09.08.2017 | 194 | 87 | 32 | 26 | 35 |
| | | 11.08.2017 | 12.08.2017 | 181 | 75 | 24 | 13 | 25 |
| | | 16.08.2017 | 17.08.2017 | 183 | 77 | 22 | 18 | 32 |
| | | 28.08.2017 | 29.08.2017 | 226 | 96 | 29 | 16 | 25 |
| | | 22.08.2017 | 23.08.2017 | 198 | 82 | 27 | 28 | 30 |
| | | 25.08.2017 | 26.08.2017 | 190 | 77 | 30 | 26 | 22 |
| G-Dhurena Village | B | 29.08.2017 | 30.08.2017 | 177 | 91 | 24 | 22 | 32 |
| | | 03.08.2017 | 04.08.2017 | 173 | 62 | 29 | 18 | 15 |
| | | 07.08.2017 | 08.08.2017 | 180 | 56 | 21 | 10 | 26 |
| | | 10.08.2017 | 11.08.2017 | 163 | 64 | 23 | 19 | 11 |
| | | 17.08.2017 | 18.08.2017 | 169 | 74 | 24 | 15 | 12 |
| | | 19.08.2017 | 20.08.2017 | 158 | 67 | 23 | 12 | 15 |
| | | 21.08.2017 | 22.08.2017 | 166 | 74 | 27 | 11 | 17 |
| | | 24.08.2017 | 25.08.2017 | 166 | 78 | 20 | 10 | 18 |
| | | 28.08.2017 | 29.08.2017 | 176 | 72 | 26 | 18 | 28 |
| | | 31.08.2017 | 01.09.2017 | 163 | 75 | 22 | 14 | 25 |

Analyzed by *[Signature]*

Checked by *[Signature]*

Lab In charge *[Signature]*

Note: 1) The results pertain to the samples refer
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Environment Laboratory, Regional Institute-V,
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 15/8

AIR QUALITY REPORT

| | | | | | |
|-------|--------|------|-------|-----------|----------------|
| Month | AUGUST | Area | GEVRA | Report No | KUS/2017/08/03 |
|-------|--------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 05.09.2017 |
| Name of the Project | Gevra OC | Sample Reference No. | 7-8 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|---|---|-----|---------------------|---------------------|------------------|---------------------|---------------------|---------|
| | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | | 600 | 300 | - | 120 | |
| | A-N | | 500 | 250 | - | 120 | 120 | |
| Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), AUGUST 02, 1996) | B | | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 7:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 5:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 16.34 | | ± 0.0687 | ± 0.4420 | |

| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | | |
|-----------------------|------------------|------------------|------------------|-----|----|----|----|----|--|
| 7-Ganga Nagar Village | B | 03.08.2017 | 04.08.2017 | 163 | 69 | 27 | 18 | 14 | |
| | | 07.08.2017 | 08.08.2017 | 156 | 58 | 22 | 10 | 25 | |
| | | 10.08.2017 | 11.08.2017 | 161 | 67 | 24 | 11 | 14 | |
| | | 17.08.2017 | 18.08.2017 | 177 | 69 | 28 | 15 | 23 | |
| | | 19.08.2017 | 20.08.2017 | 165 | 73 | 21 | 12 | 21 | |
| | | 21.08.2017 | 22.08.2017 | 164 | 80 | 19 | 14 | 24 | |
| | | 24.08.2017 | 25.08.2017 | 170 | 70 | 19 | 15 | 21 | |
| | | 28.08.2017 | 29.08.2017 | 172 | 63 | 14 | 25 | 18 | |
| | | 31.08.2017 | 01.09.2017 | 163 | 68 | 21 | 21 | 18 | |
| 8-Raha Village | B | 01.08.2017 | 02.08.2017 | 183 | 74 | 16 | 12 | 24 | |
| | | 04.08.2017 | 05.08.2017 | 174 | 77 | 27 | 15 | 18 | |
| | | 08.08.2017 | 09.08.2017 | 168 | 66 | 22 | 26 | 20 | |
| | | 11.08.2017 | 12.08.2017 | 167 | 78 | 24 | 17 | 24 | |
| | | 16.08.2017 | 17.08.2017 | 165 | 72 | 21 | 11 | 12 | |
| | | 28.08.2017 | 29.08.2017 | 176 | 69 | 31 | 14 | 20 | |
| | | 22.08.2017 | 23.08.2017 | 159 | 71 | 26 | 11 | 24 | |
| | | 25.08.2017 | 26.08.2017 | 169 | 59 | 28 | 16 | 23 | |
| | | 27.08.2017 | 28.08.2017 | 162 | 65 | 25 | 18 | 19 | |

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 Analyzed by

Wind
 Checked by

C.R.V.
 Lab in charge

Note: 1) The results shown are to the nearest 0.1 unit.
 2) The limit value of the standard is part of the report. The limit value is 600 for SPM, 300 for PM10, 60 for PM2.5, 120 for SO2 and 120 for NO2.



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 Company

NOISE QUALITY REPORT

| | | | | | |
|-------|--------|------|-------|-----------|---------------|
| Month | AUGUST | Area | GEVRA | Report No | KSM/2017/08/3 |
|-------|--------|------|-------|-----------|---------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 05.09.2017 |
| Name of the Project | GEVRA OC | Sample Reference No. | N31-N38 |

| Parameter | The Noise Pollution (R & C) rules, 2000 | | Remarks | | |
|-----------------------------|---|--|----------------|----------------|--|
| | Day Time | Night Time | | | |
| Limit (in dB(A) Leq) | Industrial area | A | 75 | 70 | |
| | Commercial area | B | 65 | 55 | |
| | Residential Area | C | 55 | 45 | |
| | Silence Zone | D | 50 | 40 | |
| Method of analysis | | CPCB Protocol For Ambient Level Noise Monitoring | | | |
| Station (Code) Station Name | Station category | Date of measurement | Value in dB(A) | Value in dB(A) | |
| 1-DETP Control Room | A | 14.08.2017 | 57.0 | 52.7 | |
| | | 19.08.2017 | 59.3 | 43.0 | |
| 2-Shakti Nagar | C | 14.08.2017 | 48.3 | 39.9 | |
| | | 19.08.2017 | 47.9 | 41.6 | |
| 3-Urja Nagar | C | 14.08.2017 | 46.2 | 43.6 | |
| | | 19.08.2017 | 45.3 | 39.9 | |
| 4-Dy.GM Office | A | 14.08.2017 | 57.0 | 47.1 | |
| | | 19.08.2017 | 55.3 | 47.2 | |
| 5-Bhilai Bazar Village | C | 14.08.2017 | 46.5 | 39.7 | |
| | | 19.08.2017 | 45.1 | 42.8 | |
| 6-Dhurena Village | C | 14.08.2017 | 40.1 | 38.9 | |
| | | 19.08.2017 | 41.6 | 39.7 | |
| 7-Ganga Nagar Village | C | 14.08.2017 | 41.5 | 39.4 | |
| | | 19.08.2017 | 43.2 | 40.2 | |
| 8-Ralia Village | C | 14.08.2017 | 42.4 | 38.7 | |
| | | 19.08.2017 | 43.9 | 39.8 | |

Analyzed by

Checked by

Lab in charge



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A Mine Rules Company

EFFLUENT WATER TEST REPORT
 For the month of August 2017

Report No = 08

GEVRA AREA

| | | | | | |
|----------------------|--|--|------------------|---------------------------------|------------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | Date of Issue | 13 th September 2017 | |
| Name of the Project | GEVRA O.C. | | Date of Sampling | | |
| Name of the Stations | 1 | Mine water at discharge point | 1 st | 2 nd | Date of Analysis |
| | 2 | Work shop effluent before treatment at O&G trap | 05.08.17 | 22.08.17 | 14.08 to 24.08 |
| | 3 | Work shop effluent after treatment at O&G trap | 05.08.17 | 22.08.17 | 25.08 to 04.09 |
| | 4 | Discharge of DETP, Gevra Area | 05.08.17 | 22.08.17 | 14.08 to 24.08 |
| | 5 | O&G dump run off and mine discharge water after treatment at settling pond | 05.08.17 | 22.08.17 | 25.08 to 04.09 |
| | 6 | Up-stream of Laxman nala | 05.08.17 | 22.08.17 | 14.08 to 24.08 |
| | 7 | Down-stream of Laxman nala | 05.08.17 | 22.08.17 | 25.08 to 04.09 |
| | 8 | Mine sump water | 05.08.17 | 22.08.17 | 14.08 to 24.08 |

| Sl. No | Parameter | Method of Analysis | Observed Value | | | | | | | | Lower Detection Limit | General Standards for discharge of Effluent (Part A Effluent, As per Schedule V, State water (Protection) Rules) | Minimum of Measurement for 95% C.F. (1%) |
|--------|-----------------------------------|---|----------------|------|------|-------|------|-------|-------|-------|-----------------------|--|--|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| | pH Value, (dt) | IS 3025 (Part 11):1983, P - 1996, Colorimetric Method | 6.80 | 6.87 | 6.95 | 6.84 | 6.88 | 6.81 | 7.50 | 6.89 | 0.0 | 5.5 to 9.5 | 4.5 to 9.5 |
| 1 | Total suspended Solids, mg/l, max | IS 3025 (Part 17):1984, R: 1995, Gravimetric Method | 28 | 67 | 34 | <25.0 | 26 | <25.0 | <25.0 | <25.0 | 0.0 | 500 | 1000 |
| 2 | C.O.D., mg/l, max | APHA, 22 nd Edition, 52206, open Reflux, Titration Method | 12 | 28 | 16 | 20 | 20 | <4.0 | 06 | 12 | 4.0 | 2500 | 5000 |
| 3 | O&G Grease, (sp/l), max | IS 3025 (Part 16):1991, R: 2001 Partition Gravimetric Method Thermometric | <2.0 | 14.4 | 7.2 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | 2.0 | 1.0 | 10 |
| 4 | B.O.D. (over 27°C), mg/l, max | IS 3025 (Part 44):1993, R: 2003, 3 days Incubator at 27°C | - | - | - | 24.3 | - | - | - | - | 2.0 | 10.0 | 117500 |

Scientific Asst

Checked by

Officer in Charge

Note: 1) The results above relate to the samples tested as received.
 2) This report can not be reproduced in part or full without the written permission of the HOD (Envt.) CMPDI, Bilaspur.
 3) L.D.L. indicates Lower Detection Limit & B.D.L. indicates Below Detection Limit



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ENVIRONMENTAL MONITORING REPORT

AIR, NOISE & EFFLUENT

(GEVRA AREA)



Environmental Monitoring

SEPTEMBER - 2017

SOUTH EASTERN COALFIELDS LIMITED

(A Mini Ratna Company)

Central Mine Planning & Design Institute Limited
Regional Institute - V. SECL Complex,
BILASPUR (C.G.)

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ENVIRONMENTAL MONITORING REPORT

GEVRA AREA - 'SEPTEMBER' 2017

| CONTENTS | | |
|-----------------|------------------------------|----------------|
| Sl.No. | Name of Air Sampling Station | No. of samples |
| 1 | DETP/TA Office | 8 |
| 2 | Shakti Nagar | 8 |
| 3 | Urja Nagar | 8 |
| 4 | Dy.GM Office | 8 |
| 5 | Bhilai Bazar Village | 8 |
| 6 | Dhurena Village | 8 |
| 7 | Ganga Nagar Village | 8 |
| 8 | Ralia Village | 8 |
| | Total | 64 |

| Sl. No. | Name of Noise Sampling Station | No. of samples |
|---------|--------------------------------|----------------|
| 1 | DETP/TA Office | 2 |
| 2 | Shakti Nagar | 2 |
| 3 | Urja Nagar | 2 |
| 4 | Dy.GM Office | 2 |
| 5 | Bhilai Bazar Village | 2 |
| 6 | Dhurena Village | 2 |
| 7 | Ganga Nagar Village | 2 |
| 8 | Ralia Village | 2 |
| | Total | 16 |

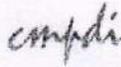
(i)

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| | Name of Effluent Sampling Station | No. of samples |
|---|---|----------------|
| 1 | Mine water at discharge point | 2 |
| 2 | W/S effluent before treatment at O&G trap | 2 |
| 3 | Workshop effluent after treatment at O&G trap | 2 |
| 4 | Discharge of DETP, GEVRA Area | 2 |
| 5 | OB dump run-off & mine discharge water after treatment at settling pond | 2 |
| 6 | Upstream of Laxman Nalla | 2 |
| 7 | Downstream of Laxman Nala | 2 |
| 8 | Mine sump Water | 2 |
| | Total | 16 |

(ii)

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178

| | | |
|---|---|---|
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AIR QUALITY REPORT

| | | | | | |
|-------|-----------|------|-------|-----------|----------------|
| Month | SEPTEMBER | Area | GEVRA | Report No | KUS/2017/09/03 |
|-------|-----------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 18.11.2017 |
| Name of the Project | GEVRA OC | Sample Reference No. | 1-2 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), SEPTEMBER 02, 1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ±19.04 | | ±0.0687 | ±0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 1-DETP/TA Office | A-O | 03.09.2017 | 05.09.2017 | 299 | 176 | 46 | 29 | 21 |
| | | 06.09.2017 | 08.09.2017 | 321 | 133 | 35 | 27 | 17 |
| | | 11.09.2017 | 13.09.2017 | 221 | 124 | 39 | 18 | 20 |
| | | 13.09.2017 | 15.09.2017 | 253 | 149 | 46 | 30 | 25 |
| | | 15.09.2017 | 18.09.2017 | 319 | 144 | 46 | 27 | 21 |
| | | 20.09.2017 | 22.09.2017 | 300 | 167 | 45 | 27 | 27 |
| | | 25.09.2017 | 27.09.2017 | 241 | 143 | 42 | 19 | 26 |
| | | 27.09.2017 | 29.09.2017 | 254 | 114 | 34 | 23 | 24 |
| 2-Shakti Nagar | B | 03.09.2017 | 05.09.2017 | 189 | 96 | 27 | 27 | 28 |
| | | 06.09.2017 | 08.09.2017 | 157 | 83 | 23 | 19 | 24 |
| | | 11.09.2017 | 13.09.2017 | 149 | 87 | 27 | 21 | 32 |
| | | 13.09.2017 | 15.09.2017 | 160 | 94 | 26 | 27 | 26 |
| | | 15.09.2017 | 18.09.2017 | 174 | 78 | 20 | 28 | 26 |
| | | 20.09.2017 | 22.09.2017 | 144 | 80 | 26 | 29 | 19 |
| | | 25.09.2017 | 27.09.2017 | 164 | 99 | 22 | 25 | 32 |
| | | 27.09.2017 | 29.09.2017 | 167 | 81 | 19 | 19 | 32 |

Analyzed by: *D. Das*
 Checked by: *Asim*
 Lab In charge: *C. K. V.*

| | | |
|---|---|--|
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AIR QUALITY REPORT

| | | | | | |
|-------|-----------|------|-------|-----------|----------------|
| Month | SEPTEMBER | Area | GEVRA | Report No | KUS/2017/09/03 |
|-------|-----------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 18.11.2017 |
| Name of the Project | Gevra OC | Sample Reference No. | 3-4 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|-------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), SEPTEMBER 02, 1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol. I, 2013 | IS-5182 PART 7:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ±19.04 | | ±0.0687 | ±0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 3-Urja Nagar | B | 03.09.2017 | 05.09.2017 | 196 | 97 | 28 | 27 | 21 |
| | | 06.09.2017 | 08.09.2017 | 197 | 92 | 28 | 24 | 22 |
| | | 11.09.2017 | 13.09.2017 | 172 | 95 | 27 | 27 | 26 |
| | | 13.09.2017 | 15.09.2017 | 188 | 99 | 23 | 20 | 28 |
| | | 15.09.2017 | 18.09.2017 | 195 | 94 | 31 | 26 | 21 |
| | | 20.09.2017 | 22.09.2017 | 190 | 94 | 27 | 28 | 23 |
| | | 25.09.2017 | 27.09.2017 | 182 | 89 | 34 | 22 | 29 |
| | | 27.09.2017 | 29.09.2017 | 180 | 85 | 34 | 27 | 24 |
| 4-Dy GM Office | A-O | 04.09.2017 | 06.09.2017 | 413 | 175 | 39 | 17 | 24 |
| | | 07.09.2017 | 09.09.2017 | 481 | 210 | 36 | 25 | 24 |
| | | 11.09.2017 | 13.09.2017 | 415 | 193 | 42 | 19 | 19 |
| | | 14.09.2017 | 16.09.2017 | 390 | 207 | 37 | 28 | 22 |
| | | 18.09.2017 | 20.09.2017 | 433 | 175 | 38 | 25 | 26 |
| | | 21.09.2017 | 23.09.2017 | 395 | 200 | 41 | 20 | 21 |
| | | 25.09.2017 | 27.09.2017 | 493 | 208 | 38 | 18 | 27 |
| | | 29.09.2017 | 03.10.2017 | 451 | 175 | 38 | 27 | 27 |

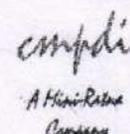
Analyzed by *D. Das*

Checked by *A. K. Panda*

Lab In charge *C. J. ...*

Note: 1) The results above relate to the samples tested.
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| | | |
|---|---|---|
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|---|---|---|

AIR QUALITY REPORT

| | | | | | |
|-------|-----------|------|-------|-----------|----------------|
| Month | SEPTEMBER | Area | GEVRA | Report No | KUS/2017/09/03 |
|-------|-----------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 18.11.2017 |
| Name of the Project | Gevra OC | Sample Reference No. | 5-6 |

| Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks | |
|--|--|---------------------|----------------------|------------------|---------------------|---------------------|---------|-----|
| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | | 120 |
| | | A-N | 500 | 250 | - | 120 | | 120 |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), SEPTEMBER 02, 1996) | B | 200 | 100 | 60 | 80 | | 80 |
| Method of analysis | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | ±19.04 | | ±0.0687 | ±0.4420 | | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 5-Bhilai Bazar Village | B | 01.09.2017 | 04.09.2017 | 189 | 84 | 52 | 28 | 33 |
| | | 05.09.2017 | 07.09.2017 | 185 | 84 | 47 | 26 | 33 |
| | | 08.09.2017 | 11.09.2017 | 183 | 84 | 51 | 24 | 32 |
| | | 12.09.2017 | 14.09.2017 | 193 | 86 | 48 | 26 | 31 |
| | | 15.09.2017 | 18.09.2017 | 189 | 86 | 46 | 32 | 25 |
| | | 19.09.2017 | 21.09.2017 | 194 | 82 | 46 | 32 | 29 |
| | | 22.09.2017 | 25.09.2017 | 178 | 92 | 48 | 25 | 33 |
| | | 26.09.2017 | 29.09.2017 | 180 | 88 | 53 | 31 | 29 |
| 6-Dhurena Village | B | 04.09.2017 | 06.09.2017 | 152 | 76 | 19 | 26 | 17 |
| | | 07.09.2017 | 09.09.2017 | 155 | 78 | 26 | 23 | 15 |
| | | 11.09.2017 | 13.09.2017 | 159 | 76 | 27 | 23 | 15 |
| | | 14.09.2017 | 16.09.2017 | 155 | 76 | 22 | 25 | 15 |
| | | 18.09.2017 | 20.09.2017 | 152 | 81 | 23 | 15 | 20 |
| | | 21.09.2017 | 23.09.2017 | 181 | 69 | 22 | 13 | 14 |
| | | 25.09.2017 | 27.09.2017 | 152 | 76 | 19 | 12 | 22 |
| | | 27.09.2017 | 29.09.2017 | 177 | 73 | 21 | 17 | 21 |

D. Das
Analyzed by

Aravind
Checked by

C. K. Reddy
Lab In charge

Note: 1) The results above relate to the samples tested.
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 Company

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AIR QUALITY REPORT

| | | | | | |
|-------|-----------|------|-------|-----------|----------------|
| Month | SEPTEMBER | Area | GEVRA | Report No | KUS/2017/09/03 |
|-------|-----------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 18.11.2017 |
| Name of the Project | Gevra OC | Sample Reference No. | 7-8 |

| Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks | |
|--|--|---------------------|----------------------|------------------|---------------------|---------------------|---------|----|
| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O 600 | 300 | - | 120 | 120 | | |
| | | A-N 500 | 250 | - | 120 | 120 | | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), SEPTEMBER 02, 1996) | B 200 | 100 | 60 | 80 | 80 | | |
| Method of analysis | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 7-Ganga Nagar Village | B | 04.09.2017 | 06.09.2017 | 154 | 86 | 22 | 25 | 18 |
| | | 07.04.2017 | 09.09.2017 | 145 | 82 | 23 | 12 | 19 |
| | | 11.09.2017 | 13.09.2017 | 137 | 85 | 22 | 23 | 28 |
| | | 14.09.2017 | 16.09.2017 | 177 | 78 | 19 | 24 | 22 |
| | | 18.09.2017 | 20.09.2017 | 156 | 84 | 25 | 23 | 22 |
| | | 21.09.2017 | 23.09.2017 | 177 | 80 | 25 | 12 | 15 |
| | | 25.09.2017 | 27.09.2017 | 134 | 78 | 25 | 28 | 26 |
| | | 29.09.2017 | 03.10.2017 | 181 | 78 | 26 | 24 | 25 |
| 8-Ratia Village | B | 01.09.2017 | 04.09.2017 | 188 | 79 | 43 | 22 | 33 |
| | | 05.09.2017 | 07.09.2017 | 184 | 89 | 41 | 21 | 24 |
| | | 08.09.2017 | 11.09.2017 | 175 | 86 | 32 | 33 | 34 |
| | | 12.09.2017 | 14.09.2017 | 172 | 88 | 38 | 33 | 34 |
| | | 15.09.2017 | 18.09.2017 | 178 | 81 | 40 | 31 | 35 |
| | | 19.09.2017 | 21.09.2017 | 181 | 79 | 32 | 25 | 30 |
| | | 22.09.2017 | 25.09.2017 | 190 | 85 | 33 | 34 | 34 |
| | | 26.09.2017 | 29.09.2017 | 184 | 86 | 31 | 19 | 25 |

D. Das
 Analyzed by

Anirudh
 Checked by

C. K. Verma
 Lab in charge

Note: 1) The results above relate to the samples tested.
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NOISE QUALITY REPORT

| | | | | | |
|-------|-----------|------|-------|-----------|---------------|
| Month | SEPTEMBER | Area | GEVRA | Report No | KSM/2017/09/3 |
|-------|-----------|------|-------|-----------|---------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 18.11.2017 |
| Name of the Project | GEVRA OC | Sample Reference No. | N31-N38 |

| Parameter | | | The Noise Pollution (R & C) rules, 2000 | | Remarks |
|-----------------------------|------------------|---------------------|--|----------------|---------|
| | | | Day Time | Night Time | |
| Limit (in dB(A) Leq | Industrial area | A | 75 | 70 | |
| | Commercial area | B | 65 | 55 | |
| | Residential Area | C | 55 | 45 | |
| | Silence Zone | D | 50 | 40 | |
| Method of analysis | | | CPCB Protocol For Ambient Level Noise Monitoring | | |
| Station (Code) Station Name | Station category | Date of measurement | Value in dB(A) | Value in dB(A) | |
| 1-DETP Control Room | A | 13.09.2017 | 62.3 | 53.7 | |
| | | 27.09.2017 | 65.0 | 54.2 | |
| 2-Shakti Nagar | C | 13.09.2017 | 46.4 | 39.9 | |
| | | 27.09.2017 | 48.2 | 40.5 | |
| 3-Urja Nagar | C | 13.09.2017 | 50.9 | 38.7 | |
| | | 27.09.2017 | 49.6 | 39.4 | |
| 4-Dy.GM Office | A | 13.09.2017 | 68.0 | 48.0 | |
| | | 27.09.2017 | 61.3 | 56.6 | |
| 5-Bhilai Bazar Village | C | 13.09.2017 | 45.7 | 38.4 | |
| | | 23.09.2017 | 48.1 | 38.8 | |
| 6-Dhurena Village | C | 13.09.2017 | 43.6 | 40.5 | |
| | | 23.09.2017 | 42.6 | 41.2 | |
| 7-Ganga Nagar Village | C | 13.09.2017 | 43.6 | 38.6 | |
| | | 23.09.2017 | 41.9 | 40.5 | |
| 8-Ralia Village | C | 13.09.2017 | 43.2 | 37.6 | |
| | | 23.09.2017 | 44.5 | 39.2 | |

D. Dasg
Analyzed by

Arundha
Checked by

C. K. vel
Lab In charge

Note: 1) The results above relate to the samples tested.

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EFFLUENT WATER TEST REPORT
 For the month of September'2017

Report No = 09

GEVRA AREA

| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | Date of Issue | 22 nd October'2017 | |
|----------------------|--|--|------------------|-------------------------------|----------------|
| Name of the Project | GEVRA O.C. | | Date of Sampling | Date of Analysis | |
| Name of the Stations | 1 | Mine water at discharge point | 1 st | 2 nd | |
| | 2 | Work shop effluent before treatment at O&G trap | 02.09.17 | 18.09.17 | 14.09 to 26.09 |
| | 3 | Work shop effluent after treatment at O&G trap | 02.09.17 | 18.09.17 | 14.09 to 26.09 |
| | 4 | Discharge of DETP, Gevra Area | 02.09.17 | 18.09.17 | 14.09 to 26.09 |
| | 5 | OB dump run off and mine discharge water after treatment at settling pond. | 02.09.17 | 18.09.17 | 14.09 to 26.09 |
| | 6 | Up-stream of Laxman nala. | 02.09.17 | 18.09.17 | 14.09 to 26.09 |
| | 7 | Down-stream of Laxman nala. | 02.09.17 | 18.09.17 | 14.09 to 26.09 |
| | 8 | Mine sump water. | 02.09.17 | 18.09.17 | 14.09 to 26.09 |

| Sl. No | Parameter | Method of Analysis | Observed Value | | | | | | | | Lower Detection Limit | General Standards for Discharge of Environmental Pollution (Part A: Effluent) as per Schedule VI, Environment (Protection) Rules | Uncertainty of Measurement (at 95% C.I. & K=1.96) |
|--------|-----------------------------------|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------------|--|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| 1 | pH Value, LDI | IS 3025 (Part 1):1983, R: 1996, Electrode Method | 6.908 6.897 | 6.184 6.207 | 6.759 6.728 | 6.901 6.945 | 6.897 6.867 | 7.248 7.189 | 5.997 6.957 | 6.475 6.459 | 0.01 | 5.5 to 9.0 | ±0.8841821 at 4.025 |
| 2 | Total suspended Solids, mg/l, max | IS 3025 (Part 17):1984, R: 1996, Gravimetric Method | <25.0 <25.0 | 124 119 | <25.0 <25.0 | <25.0 <25.0 | <25.0 <25.0 | <25.0 <25.0 | <25.0 <25.0 | <25.0 <25.0 | 25.0 | 100.0 | ±0.445mg/l at 24.429 mg/l |
| 3 | C.O.D, mg/l, max | APHA, 22 nd Edition, 5220B, open Reflux, Titration Method | <4.0 <4.0 | 4.0 | 250.0 | 0.61535782 at 16.2892 mg/l |
| 4 | Oil & Grease, mg/l, max | IS 3025 (Part 39):1991, R: 2003, Partition Gravimetric Method Thermometric | <2.0 <2.0 | 10.8 10.0 | 2.4 2.8 | <2.0 <2.0 | <2.0 <2.0 | <2.0 <2.0 | <2.0 <2.0 | <2.0 <2.0 | 2.0 | 10.0 | ±0.207mg/l at 10.314mg/l |
| 5 | B.O.D(3 days 27°C), mg/l, max | IS 3025 (Part 44):1993, R: 2003, 3days incubator at 27°C | | | 06.0 06.0 | | | | | | 2.0 | 30.0 | ±1.7596887 at 202.4 mg/l |

Scientific Asst

Checked By

Officer In-Charge

Note: 1) The results above relate to the samples tested as received.
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ENVIRONMENTAL MONITORING REPORT
AIR, NOISE & EFFLUENT

(GEVRA AREA)



Environmental
Monitoring

OCTOBER - 2017

SOUTH EASTERN COALFIELDS LIMITED

(A Mini Ratna Company)

Central Mine Planning & Design Institute Limited
Regional Institute - V, SECL Complex.
BILASPUR (C.G.)

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ENVIRONMENTAL MONITORING REPORT

GEVRA AREA - 'OCTOBER' 2017

| CONTENTS | | |
|----------|------------------------------|----------------|
| Sl.No. | Name of Air Sampling Station | No. of samples |
| 1 | DETP/TA Office | 9 |
| 2 | Shakti Nagar | 9 |
| 3 | Urja Nagar | 9 |
| 4 | Dy.GM Office | 9 |
| 5 | Bhilai Bazar Village | 9 |
| 6 | Dhurena Village | 9 |
| 7 | Ganga Nagar Village | 9 |
| 8 | Ralia Village | 9 |
| | Total | 72 |

| Sl. No. | Name of Noise Sampling Station | No. of samples |
|---------|--------------------------------|----------------|
| 1 | DETP/TA Office | 2 |
| 2 | Shakti Nagar | 2 |
| 3 | Urja Nagar | 2 |
| 4 | Dy.GM Office | 2 |
| 5 | Bhilai Bazar Village | 2 |
| 6 | Dhurena Village | 2 |
| 7 | Ganga Nagar Village | 2 |
| 8 | Ralia Village | 2 |
| | Total | 16 |

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CENTRAL MINE
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| Name of Effluent Sampling Station | |
|-----------------------------------|---|
| 1 | Mine water at discharge point |
| 2 | W/S effluent before treatment at O&G trap |
| 3 | Workshop effluent after treatment at O&G trap |
| 4 | Discharge of DETP, GEVRA Area |
| 5 | OB dump run-off & mine discharge water after treatment at settling pond |
| 6 | Upstream of Laxman Nalla |
| 7 | Downstream of Laxman Nala |
| 8 | Mine sump Water |
| Total | |

Month: OCTOBER Area:

Name of the Customer: South E

Name of the Project:

| Parameter | |
|--|---|
| Limit (in $\mu\text{g}/\text{m}^3 \cdot 24$ hrs) | Industrial Zone -(G.S.R. 74 dated 25.9.2000) |
| | Residential Zone-(G.S.R. 8 dated 16.11.2009 and GSR : OCTOBER 02, 1996) |

Method of analysis:

Uncertainty Range (in μ

| Station Name (Code) | Station category | Date |
|---------------------|------------------|------|
| 3-Urja Nagar | B | 03.1 |
| | | 05.1 |
| | | 07.1 |
| | | 11.1 |
| | | 15.1 |
| | | 17.1 |
| | | 22.1 |
| | | 25.1 |
| 4-Dy GM Office | A-O | 04.1 |
| | | 06.1 |
| | | 09.1 |
| | | 12.1 |
| | | 16.1 |
| | | 21.1 |
| | | 23.1 |
| | | 26.1 |
| | | 30.1 |

D. D. Singh
Analyzed by

Note: 1) The results above relate to the sa
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AIR QUALITY REPORT

| Month | OCTOBER | Area | GEVRA | Report No | KUS/2017/10/03 | | | |
|--|--|---------------------|----------------------|-------------------|---------------------|---------------------|---------|-----|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | Date of Issue | 27.11.2017 | | | | |
| Name of the Project | Gevra OC | | Sample Reference No. | 5-6 | | | | |
| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks | |
| | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | | 120 |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), OCTOBER 02, 1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | IS-5187 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol- I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 5:2005 | | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | ± 19.04 | | ± 0.0687 | ± 0.1420 | | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 5-Bhilai Bazar Village | B | 04.10.2017 | 06.10.2017 | 180 | 87 | 42 | 37 | 37 |
| | | 06.10.2017 | 09.10.2017 | 262 | 136 | 37 | 30 | 29 |
| | | 10.10.2017 | 12.10.2017 | 184 | 92 | 39 | 30 | 27 |
| | | 13.10.2017 | 16.10.2017 | 185 | 90 | 41 | 34 | 31 |
| | | 16.10.2017 | 18.10.2017 | 181 | 93 | 27 | 39 | 30 |
| | | 20.10.2017 | 23.10.2017 | 193 | 83 | 47 | 34 | 31 |
| | | 24.10.2017 | 26.10.2017 | 192 | 93 | 38 | 35 | 27 |
| | | 27.10.2017 | 30.10.2017 | 195 | 97 | 48 | 25 | 26 |
| | | 31.10.2017 | 02.11.2017 | 177 | 98 | 45 | 27 | 27 |
| 6-Dhurena Village | B | 03.10.2017 | 05.10.2017 | 205 | 80 | 36 | 25 | 25 |
| | | 05.10.2017 | 07.10.2017 | 189 | 79 | 32 | 25 | 28 |
| | | 09.10.2017 | 11.10.2017 | 184 | 84 | 27 | 26 | 23 |
| | | 12.10.2017 | 13.10.2017 | 187 | 83 | 34 | 30 | 24 |
| | | 16.10.2017 | 18.10.2017 | 162 | 91 | 33 | 29 | 15 |
| | | 21.10.2017 | 23.10.2017 | 192 | 83 | 29 | 20 | 20 |
| | | 23.10.2017 | 25.10.2017 | 164 | 79 | 27 | 18 | 14 |
| | | 26.10.2017 | 28.10.2017 | 180 | 86 | 25 | 22 | 27 |
| | | 30.10.2017 | 01.11.2017 | 187 | 90 | 26 | 27 | 24 |

D. Das
 Analyzed by

Anita
 Checked by

C. K. V.
 Lab In charge

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AIR QUALITY REPORT

| | | | | | |
|-------|---------|------|-------|-----------|----------------|
| Month | OCTOBER | Area | GEVRA | Report No | KUS/2017/10/03 |
|-------|---------|------|-------|-----------|----------------|

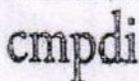
| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 27.11.2017 |
| Name of the Project | Gevra OC | Sample Reference No. | 7-8 |

| Limit (in $\mu\text{g}/\text{m}^3$ -24 hrs) | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|---|--|---------------------|----------------------|-------------------|---------------------|---------------------|---------|
| | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), OCTOBER 02, 1996) | A-O | A-N | B | A-O | A-N | |
| | | | 600 | 300 | - | 120 | 120 | |
| | | | 500 | 250 | - | 120 | 120 | |
| | | | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol. I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 5:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 7-Ganga Nagar Village | B | 03.10.2017 | 05.10.2017 | 167 | 71 | 30 | 28 | 19 |
| | | 05.10.2017 | 07.10.2017 | 190 | 88 | 27 | 25 | 30 |
| | | 09.10.2017 | 11.10.2017 | 162 | 88 | 21 | 22 | 29 |
| | | 12.10.2017 | 14.10.2017 | 182 | 77 | 23 | 20 | 20 |
| | | 16.10.2017 | 18.10.2017 | 171 | 89 | 24 | 24 | 36 |
| | | 21.10.2017 | 23.10.2017 | 184 | 75 | 21 | 20 | 33 |
| | | 23.10.2017 | 25.10.2017 | 186 | 84 | 26 | 23 | 27 |
| | | 26.10.2017 | 28.10.2017 | 178 | 91 | 28 | 20 | 27 |
| | | 30.10.2017 | 01.11.2017 | 169 | 83 | 28 | 29 | 38 |
| 8-Ralia Village | B | 03.10.2017 | 05.10.2017 | 196 | 87 | 28 | 29 | 35 |
| | | 06.10.2017 | 09.10.2017 | 185 | 91 | 30 | 25 | 33 |
| | | 10.10.2017 | 12.10.2017 | 175 | 82 | 37 | 20 | 20 |
| | | 13.10.2017 | 16.10.2017 | 191 | 87 | 33 | 28 | 36 |
| | | 16.10.2017 | 18.10.2017 | 248 | 99 | 24 | 20 | 32 |
| | | 20.10.2017 | 23.10.2017 | 259 | 92 | 38 | 29 | 24 |
| | | 24.10.2017 | 26.10.2017 | 184 | 84 | 26 | 24 | 27 |
| | | 27.10.2017 | 30.10.2017 | 195 | 97 | 29 | 23 | 19 |
| | | 31.10.2017 | 02.11.2017 | 193 | 83 | 37 | 29 | 35 |

Analyzed by *D. Prady*
 Checked by *Anil K.*
 Lab In charge *C. R. Verma*

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|---|---|--|

NOISE QUALITY REPORT

| | | | | | |
|-------|---------|------|-------|-----------|-------------|
| Month | OCTOBER | Area | GEVRA | Report No | KSM/17/10/3 |
|-------|---------|------|-------|-----------|-------------|

| | | | |
|----------------------|--|----------------------|----------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 28.11.17 |
| Name of the Project | GEVRA OC | Sample Reference No. | N31-N38 |

| Limit (in dB(A) Leq) | Parameter | | The Noise Pollution (R & C) rules, 2000 | | Remarks |
|--|------------------|---------------------|---|----------------|---------|
| | Industrial area | A | Day Time | Night Time | |
| | Commercial area | B | 75 | 70 | |
| | Residential Area | C | 65 | 55 | |
| | Silence Zone | D | 55 | 45 | |
| | | | | 40 | |
| Method of analysis: CPCB Protocol For Ambient Level Noise Monitoring | | | | | |
| Station (Code) Station Name | Station category | Date of measurement | Value in dB(A) | Value in dB(A) | |
| 1-DETP Control Room | A | 07.10.17 | 62.7 | 44.4 | |
| | | 30.10.17 | 63.0 | 51.2 | |
| 2-Shakti Nagar | C | 07.10.17 | 47.3 | 39.0 | |
| | | 30.10.17 | 46.7 | 42.6 | |
| 3-Urja Nagar | C | 07.10.17 | 48.4 | 42.1 | |
| | | 30.10.17 | 47.4 | 43.2 | |
| 4-Dy.GM Office | A | 07.10.17 | 59.2 | 46.7 | |
| | | 30.10.17 | 60.1 | 40.3 | |
| 5-Bhillai Bazar Village | C | 07.10.17 | 49.3 | 40.2 | |
| | | 30.10.17 | 50.7 | 40.4 | |
| 6-Dhurena Village | C | 07.10.17 | 42.0 | 40.6 | |
| | | 30.10.17 | 44.7 | 41.2 | |
| 7-Ganga Nagar Village | C | 07.10.17 | 42.5 | 38.1 | |
| | | 30.10.17 | 43.9 | 39.8 | |
| 8-Ralia Village | C | 07.10.17 | 45.1 | 40.7 | |
| | | 30.10.17 | 43.6 | 41.7 | |

D. Dasg
Analyzed by

Asim
Checked by

C. K. V.
Lab In charge

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EFFLUENT WATER TEST REPORT
 For the month of October 2017

Report No = 10

GEVRA AREA

| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | Date of Issue | 17 th Nov 2017 | |
|----------------------|--|-------------------------------|------------------|---------------------------|----------------------------------|
| Name of the Project | GEVRA O.C. | | Date of Sampling | Date of Analysis | |
| Name of the Stations | 1 st | 2 nd | 1 st | 2 nd | 3 rd |
| | 1 | Mine water at discharge point | | 12.10.17 | 22.10.17 |
| 2 | Work shop effluent before treatment at O&G trap | | 12.10.17 | 22.10.17 | 17.10 to 21.10 31.10 to 07.11 |
| 3 | Work shop effluent after treatment at O&G trap | | 12.10.17 | 22.10.17 | 17.10 to 21.10 31.10 to 07.11 |
| 4 | Discharge of DETP, Gevra Area | | 12.10.17 | 22.10.17 | 17.10 to 21.10 31.10 to 07.11 |
| 5 | OB dump run off and mine discharge water after treatment at settling pond. | | 12.10.17 | 22.10.17 | 17.10 to 21.10 31.10 to 07.11 |
| 6 | Up-stream of Laxman nala | | 12.10.17 | 22.10.17 | 17.10 to 21.10 31.10 to 07.11 |
| 7 | Down-stream of Laxman nala | | 12.10.17 | 22.10.17 | 17.10 to 21.10 31.10 to 07.11 |
| 8 | Mine sump water. | | 12.10.17 | 22.10.17 | 17.10 to 21.10 31.10 to 07.11 |

| Sl. No. | Parameter | Method of Analysis | Observed Value | | | | | | | | Lower Detection or Limit | General Standards for Discharge of Environmental Pollution (Part A, Effluents) as per Schedule VI Environment (Protection) Rules | Uncertainty of Measurement (at 95% C.L. & N=1, 95) |
|---------|---------------------------------|--|----------------|-------|-------|-------|-------|-------|-------|-------|--------------------------|--|--|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| 1 | SH Value LDl | IS 3025 (Part 11) 1983, R 1998. Electrometric Method | 6.451 | 6.804 | 6.682 | 6.581 | 7.650 | 7.215 | 6.950 | 6.741 | 0.01 | 5.5 to 8.0 | ±0.8341821 at 8.025 |
| 2 | Total suspended Solids mg/l max | IS 3025 (Part 17) 1984, R 1999. Gravimetric Method | <25.0 | 125 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 25.0 | 100.0 | ±0.445mg/l at 24.429 mg/l |
| | | | <25.0 | 109 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | | | |
| 3 | C.O.D. mg/l max | APHA 227 th Edition, 520CB open Reflux, Titration Method | <4.0 | 18.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | 4.0 | 350.0 | 0.61535782 at 10.2952 mg/l |
| | | | <4.0 | 20.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | | | |
| 4 | Ox & Grease mg/l max | IS 3025 (Part 93) 1991 R 2003. Particler Gravimetric Method Thermometric | <2.0 | 10.2 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | 2.0 | 16.0 | ±0.207mg/l at 10.314mg/l |
| | | | <2.0 | 12.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | | | |
| 5 | B.O.D. (5 days) 27°C, mg/l max | IS 3025 (Part 44) 1983, R 2002. 30days incubator at 27°C | | | | 09.0 | | | | | 2.0 | 35.0 | 11.7560582 at 202.4 mg/l |
| | | | | | | 06.0 | | | | | | | |

Scientific Asst

Checked By

Officer in Charge

Note: 1) The results above relate to the samples tested as received
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 3) LDl indicates Lower Detection Limit & BDL indicates Below Detection Limit



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ISO 9001 COMPANY

ENVIRONMENTAL MONITORING REPORT

AIR, NOISE & VIBRATION

(GEVRA AREA)



**Environmental
Monitoring**

DECEMBER-2017

SOUTH EASTERN COALFIELDS LIMITED

(A Mini Ratna Company)

Central Mine Planning & Design Institute Limited
Regional Institute - V, SECL Complex,
BILASPUR (C.G.)

150

ENVIRONMENTAL MONITORING REPORT

GEVRA AREA - 'DECEMBER' 2017

| CONTENTS | | |
|-----------------|------------------------------|----------------|
| Sl.No. | Name of Air Sampling Station | No. of samples |
| 1 | DETP/TA Office | 9 |
| 2 | Shakti Nagar | 9 |
| 3 | Urja Nagar | 9 |
| 4 | Dy.GM Office | 9 |
| 5 | Bhilai Bazar Village | 9 |
| 6 | Dhurena Village | 9 |
| 7 | Ganga Nagar Village | 9 |
| 8 | Ralia Village | 9 |
| | Total | 72 |

| Sl. No. | Name of Noise Sampling Station | No. of samples |
|---------|--------------------------------|----------------|
| 1 | DETP/TA Office | 2 |
| 2 | Shakti Nagar | 2 |
| 3 | Urja Nagar | 2 |
| 4 | Dy.GM Office | 2 |
| 5 | Bhilai Bazar Village | 2 |
| 6 | Dhurena Village | 2 |
| 7 | Ganga Nagar Village | 2 |
| 8 | Ralia Village | 2 |
| | Total | 16 |

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| | Name of Effluent Sampling Station | No. of samples |
|---|---|----------------|
| 1 | Mine water at discharge point | 2 |
| 2 | W/S effluent before treatment at O&G trap | 2 |
| 3 | Workshop effluent after treatment at O&G trap | 2 |
| 4 | Discharge of DETP, GEVRA Area | 2 |
| 5 | OB dump run-off & mine discharge water after treatment at settling pond | 2 |
| 6 | Upstream of Laxman Nalla | 2 |
| 7 | Downstream of Laxman Nala | 2 |
| 8 | Mine sump Water | 2 |
| | Total | 16 |

1(ii)



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 website: www.cmpdi.co.in

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 A Hindustan
 Company

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AIR QUALITY REPORT

| | | | | | |
|----------------------|--|------|-------|----------------------|----------------|
| Month | DECEMBER | Area | GEVRA | Report No | KUS/2017/12/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | Date of Issue | 17.01.2018 |
| Name of the Project | GEVRA OC | | | Sample Reference No. | 1-2 |

| Limit (in $\mu\text{g}/\text{m}^3$), 24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|---|---|---------------------|----------------------|-------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone -(G.S.R. 826(F), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol- I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 1-DETP/TA Office | A-O | 03.12.2017 | 05.12.2017 | 534 | 285 | 58 | 33 | 29 |
| | | 06.12.2017 | 08.12.2017 | 586 | 272 | 56 | 32 | 32 |
| | | 11.12.2017 | 13.12.2017 | 555 | 289 | 47 | 33 | 25 |
| | | 13.12.2017 | 15.12.2017 | 505 | 277 | 58 | 35 | 20 |
| | | 18.12.2017 | 20.12.2017 | 648 | 313 | 51 | 34 | 27 |
| | | 20.12.2017 | 22.12.2017 | 482 | 228 | 51 | 33 | 26 |
| | | 23.12.2017 | 26.12.2017 | 523 | 230 | 43 | 26 | 23 |
| | | 27.12.2017 | 29.12.2017 | 484 | 241 | 49 | 35 | 25 |
| 2-Shakti Nagar | B | 03.12.2017 | 05.12.2017 | 185 | 94 | 45 | 30 | 29 |
| | | 06.12.2017 | 08.12.2017 | 195 | 89 | 50 | 33 | 25 |
| | | 11.12.2017 | 13.12.2017 | 244 | 131 | 46 | 34 | 20 |
| | | 13.12.2017 | 15.12.2017 | 193 | 92 | 54 | 31 | 29 |
| | | 18.12.2017 | 20.12.2017 | 183 | 96 | 58 | 34 | 29 |
| | | 20.12.2017 | 22.12.2017 | 190 | 83 | 57 | 34 | 27 |
| | | 23.12.2017 | 26.12.2017 | 187 | 96 | 47 | 24 | 31 |
| | | 27.12.2017 | 29.12.2017 | 190 | 85 | 45 | 35 | 25 |

Analyzed by

Checked by

Lab in charge

Note: 1) The results above relate to the samples tested.
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 website: www.cmpdi.co.in

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AIR QUALITY REPORT

| Month | DECEMBER | Area | GEVRA | Report No | KUS/2017/12/03 | | | |
|--|--|------------------|---------------------|----------------------|-------------------|---------------------|---------------------|---------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | Date of Issue | 17.01.2018 | | | |
| Name of the Project | Gevra OC | | | Sample Reference No. | 3-4 | | | |
| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
| | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | | A-O | 600 | 300 | - | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | | A-N | 500 | 250 | - | 120 | 120 |
| | | | B | 200 | 100 | 60 | 80 | 80 |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 2:2006 | CPCB Vol. I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 5:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0627 | ± 0.1420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 3-Urja Nagar | B | 03.12.2017 | 05.12.2017 | 247 | 114 | 42 | 24 | 20 |
| | | 06.12.2017 | 08.12.2017 | 184 | 82 | 44 | 24 | 19 |
| | | 11.12.2017 | 13.12.2017 | 191 | 87 | 33 | 29 | 25 |
| | | 13.12.2017 | 15.12.2017 | 182 | 79 | 36 | 24 | 21 |
| | | 18.12.2017 | 20.12.2017 | 188 | 91 | 51 | 23 | 26 |
| | | 20.12.2017 | 22.12.2017 | 182 | 87 | 39 | 23 | 27 |
| | | 23.12.2017 | 26.12.2017 | 194 | 76 | 28 | 25 | 28 |
| | | 27.12.2017 | 29.12.2017 | 183 | 91 | 49 | 24 | 25 |
| 4-Dy GM Office | A-O | 04.12.2017 | 06.12.2017 | 500 | 235 | 38 | 33 | 28 |
| | | 07.12.2017 | 09.12.2017 | 629 | 222 | 57 | 31 | 36 |
| | | 11.12.2017 | 13.12.2017 | 515 | 234 | 51 | 30 | 25 |
| | | 14.12.2017 | 16.12.2017 | 533 | 242 | 48 | 37 | 23 |
| | | 18.12.2017 | 20.12.2017 | 516 | 213 | 48 | 34 | 35 |
| | | 21.12.2017 | 23.12.2017 | 590 | 272 | 35 | 30 | 22 |
| | | 25.12.2017 | 27.12.2017 | 501 | 220 | 50 | 29 | 26 |
| | | 28.12.2017 | 30.12.2017 | 571 | 260 | 44 | 31 | 31 |

B. S. Dhar
 Analyzed by

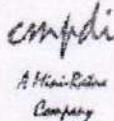
ANALISA
 Checked by

C. J. K. ✓
 Lab In charge

Note: 1) The results above relate to the samples tested

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2018

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|---|---|--|

AIR QUALITY REPORT

| | | | | | |
|-------|----------|------|-------|-----------|----------------|
| Month | DECEMBER | Area | GEVRA | Report No | KUS/2017/12/03 |
|-------|----------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 17.01.2018 |
| Name of the Project | Gevra OC | Sample Reference No. | 5-6 |

| Parameter | | | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|------------------|------------------|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | | 600 | 300 | - | 120 | 120 | |
| | | A-N | | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | | ± 19.94 | | ± 0.0637 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | | |
| 5-Bhilai Bazar Village | B | 05.12.2017 | 07.12.2017 | 192 | 93 | 60 | 26 | 30 | |
| | | 08.12.2017 | 11.12.2017 | 254 | 92 | 51 | 27 | 38 | |
| | | 12.12.2017 | 14.12.2017 | 190 | 96 | 57 | 26 | 35 | |
| | | 15.12.2017 | 18.12.2017 | 194 | 107 | 52 | 29 | 38 | |
| | | 19.12.2017 | 21.12.2017 | 187 | 89 | 46 | 34 | 32 | |
| | | 22.12.2017 | 26.12.2017 | 197 | 92 | 56 | 28 | 37 | |
| | | 25.12.2017 | 27.12.2017 | 185 | 85 | 53 | 35 | 31 | |
| 6-Dhurena Village | B | 04.12.2017 | 06.12.2017 | 187 | 83 | 44 | 23 | 16 | |
| | | 07.12.2017 | 09.12.2017 | 209 | 84 | 49 | 22 | 24 | |
| | | 11.12.2017 | 13.12.2017 | 184 | 87 | 34 | 23 | 27 | |
| | | 14.12.2017 | 16.12.2017 | 185 | 103 | 40 | 23 | 23 | |
| | | 18.12.2017 | 20.12.2017 | 194 | 95 | 34 | 26 | 21 | |
| | | 21.12.2017 | 23.12.2017 | 192 | 94 | 33 | 24 | 25 | |
| | | 25.12.2017 | 27.12.2017 | 179 | 85 | 33 | 24 | 26 | |
| 28.12.2017 | 30.12.2017 | 219 | 90 | 30 | 24 | 15 | | | |

B. S. Saha
Analyzed by

A. K. Saha
Checked by

C. K. Saha
Lab In charge

Note: 1) The results above relate to the samples tested.
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|---|--|---|

AIR QUALITY REPORT

| | | | | | |
|-------|----------|------|-------|-----------|----------------|
| Month | DECEMBER | Area | GEVRA | Report No | KUS/2017/12/03 |
|-------|----------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 17.01.2018 |
| Name of the Project | Gevra OC | Sample Reference No. | 7-8 |

| Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks | |
|--|--|---------------------|----------------------|-------------------|---------------------|---------------------|---------|----|
| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O 600 | 300 | - | 120 | 120 | | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | A-N 500 | 250 | - | 120 | 120 | | |
| | | B 200 | 100 | 60 | 80 | 80 | | |
| Method of analysis | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol. I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2005 | | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | ±19.04 | | ±0.0687 | ±0.4420 | | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 7-Ganga Nagar Village | B | 04.12.2017 | 06.12.2017 | 191 | 83 | 49 | 23 | 23 |
| | | 07.12.2017 | 09.12.2017 | 170 | 93 | 55 | 26 | 33 |
| | | 11.12.2017 | 13.12.2017 | 236 | 88 | 42 | 23 | 15 |
| | | 14.12.2017 | 16.12.2017 | 188 | 82 | 52 | 23 | 16 |
| | | 18.12.2017 | 20.12.2017 | 187 | 87 | 48 | 25 | 21 |
| | | 21.12.2017 | 23.12.2017 | 194 | 87 | 53 | 23 | 16 |
| | | 25.12.2017 | 27.12.2017 | 180 | 102 | 51 | 24 | 20 |
| | | 28.12.2017 | 30.12.2017 | 248 | 86 | 49 | 20 | 25 |
| B-Ralia Village | B | 05.12.2017 | 07.12.2017 | 244 | 86 | 53 | 29 | 34 |
| | | 08.12.2017 | 11.12.2017 | 194 | 127 | 55 | 22 | 34 |
| | | 12.12.2017 | 14.12.2017 | 233 | 87 | 45 | 17 | 31 |
| | | 15.12.2017 | 18.12.2017 | 188 | 84 | 51 | 22 | 19 |
| | | 19.12.2017 | 21.12.2017 | 189 | 93 | 47 | 17 | 26 |
| | | 22.12.2017 | 26.12.2017 | 195 | 112 | 50 | 16 | 21 |
| | | 26.12.2017 | 27.12.2017 | 186 | 98 | 41 | 26 | 29 |
| | | 28.12.2017 | 30.12.2017 | 189 | 82 | 50 | 25 | 20 |

Analized by *B. S. ...*

Checked by *...*

Lab in charge *C. B. ...*

Note: 1) The results above relate to the samples tested.

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NOISE QUALITY REPORT

| | | | | | |
|-------|----------|------|-------|-----------|---------------|
| Month | DECEMBER | Area | GEVRA | Report No | KSM/2017/12/3 |
|-------|----------|------|-------|-----------|---------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 17.01.2018 |
| Name of the Project | GEVRA OC | Sample Reference No. | N31-N38 |

| Parameter | | | The Noise Pollution (R & C) rules, 2000 | | Remarks |
|-----------------------------|--|---------------------|---|----------------|---------|
| Limit (In dB(A) Leq | Industrial area | A | Day Time | Night Time | |
| | Commercial area | B | 75 | 70 | |
| | Residential Area | C | 65 | 55 | |
| | Silence Zone | D | 55 | 45 | |
| Method of analysis | CPCB Protocol For Ambient Level Noise Monitoring | | | | |
| Station (Code) Station Name | Station category | Date of measurement | Value in dB(A) | Value in dB(A) | |
| 1-DETP Control Room | A | 14.12.2017 | 60.5 | 52.3 | |
| | | 28.12.2017 | 55.4 | 50.1 | |
| 2-Shakti Nagar | C | 14.12.2017 | 47.4 | 42.0 | |
| | | 28.12.2017 | 46.4 | 43.5 | |
| 3-Urja Nagar | C | 14.12.2017 | 44.7 | 44.0 | |
| | | 28.12.2017 | 45.1 | 43.0 | |
| 4-Dy.GM Office | A | 14.12.2017 | 56.9 | 53.8 | |
| | | 28.12.2017 | 53.5 | 50.9 | |
| 5-Bhilai Bazar Village | C | 14.12.2017 | 43.5 | 39.2 | |
| | | 28.12.2017 | 45.0 | 44.1 | |
| 6-Dhurena Village | C | 14.12.2017 | 42.5 | 38.3 | |
| | | 28.12.2017 | 44.6 | 38.3 | |
| 7-Ganga Nagar Village | C | 14.12.2017 | 41.7 | 38.9 | |
| | | 28.12.2017 | 46.7 | 39.1 | |
| 8-Ralia Village | C | 14.12.2017 | 48.7 | 41.5 | |
| | | 28.12.2017 | 45.3 | 42.2 | |

B. Soodhan
 Analyzed by

Arundha
 Checked by

C. K. V
 Lab In charge

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ENVIRONMENTAL MONITORING REPORT

AIR, NOISE & VIBRATION

(GEVRA AREA)



**Environmental
Monitoring**

JANUARY - 2010

SOUTH EASTERN COALFIELDS LIMITED

(A Mini Ratna Company)

Central Mine Planning & Design Institute Limited
Regional Institute - V, SECL Complex,
BILASPUR (C.G.)

158
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2010

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ENVIRONMENTAL MONITORING REPORT

GEVRA AREA - 'JANUARY' 2018

| CONTENTS | | |
|-----------------|------------------------------|----------------|
| Sl.No. | Name of Air Sampling Station | No. of samples |
| 1 | DETP/TA Office | 9 |
| 2 | Shakti Nagar | 9 |
| 3 | Urja Nagar | 9 |
| 4 | Dy.GM Office | 9 |
| 5 | Bhilai Bazar Village | 9 |
| 6 | Dhurena Village | 9 |
| 7 | Ganga Nagar Village | 9 |
| 8 | Ralia Village | 9 |
| | Total | 72 |

| Sl. No. | Name of Noise Sampling Station | No. of samples |
|---------|--------------------------------|----------------|
| 1 | DETP/TA Office | 2 |
| 2 | Shakti Nagar | 2 |
| 3 | Urja Nagar | 2 |
| 4 | Dy.GM Office | 2 |
| 5 | Bhilai Bazar Village | 2 |
| 6 | Dhurena Village | 2 |
| 7 | Ganga Nagar Village | 2 |
| 8 | Ralia Village | 2 |
| | Total | 16 |

107
22
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| | Name of Effluent Sampling Station | No. of samples |
|---|---|----------------|
| 1 | Mine water at discharge point | 2 |
| 2 | W/S effluent before treatment at O&G trap | 2 |
| 3 | Workshop effluent after treatment at O&G trap | 2 |
| 4 | Discharge of DETP, GEVRA Area | 2 |
| 5 | OB dump run-off & mine discharge water after treatment at settling pond | 2 |
| 6 | Upstream of Laxman Nalla | 2 |
| 7 | Downstream of Laxman Nala | 2 |
| 8 | Mine sump Water | 2 |
| | Total | 16 |

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 website: www.cmpdi.co.in

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AIR QUALITY REPORT

| | | | | | |
|----------------------|--|------|----------------------|------------|----------------|
| Month | JANUARY | Area | GEVRA | Report No | KUS/2018/01/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | Date of Issue | 15.02.2018 | |
| Name of the Project | GEVRA OC | | Sample Reference No. | 1-2 | |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|---|------------------|---------------------|----------------------|-------------------|---------------------|---------------------|---------|
| | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol. 1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 5:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | ±19.04 | | | ±0.0687 | ±0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 1 DELTA/TA Office | A-O | 01.01.2018 | 04.01.2018 | 496 | 221 | 50 | 34 | 25 |
| | | 04.01.2018 | 08.01.2018 | 586 | 229 | 57 | 31 | 35 |
| | | 07.01.2018 | 10.01.2018 | 547 | 232 | 54 | 28 | 26 |
| | | 10.01.2018 | 14.01.2018 | 581 | 262 | 57 | 29 | 23 |
| | | 14.01.2018 | 17.01.2018 | 641 | 246 | 59 | 33 | 27 |
| | | 17.01.2018 | 21.01.2018 | 453 | 216 | 46 | 35 | 30 |
| | | 21.01.2018 | 24.01.2018 | 531 | 208 | 53 | 25 | 28 |
| | | 24.01.2018 | 29.01.2018 | 612 | 248 | 52 | 30 | 29 |
| | | 28.01.2018 | 01.02.2018 | 511 | 225 | 49 | 28 | 30 |
| 2 Shakti Nagar | B | 01.01.2018 | 04.01.2018 | 197 | 90 | 48 | 31 | 26 |
| | | 04.01.2018 | 08.01.2018 | 188 | 96 | 50 | 33 | 35 |
| | | 07.01.2018 | 10.01.2018 | 191 | 89 | 45 | 27 | 33 |
| | | 10.01.2018 | 14.01.2018 | 182 | 84 | 53 | 30 | 30 |
| | | 14.01.2018 | 17.01.2018 | 193 | 95 | 42 | 29 | 29 |
| | | 17.01.2018 | 21.01.2018 | 224 | 127 | 47 | 34 | 31 |
| | | 21.01.2018 | 24.01.2018 | 189 | 94 | 44 | 28 | 27 |
| | | 24.01.2018 | 29.01.2018 | 195 | 83 | 45 | 32 | 29 |
| | | 28.01.2018 | 01.02.2018 | 192 | 92 | 40 | 29 | 30 |

B. S. J. M.
 Analyzed by

D. D. S.
 Checked by

C. K. S.
 Lab in charge

Note: 1) The results above relate to the samples tested.

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 website: www.cmpdi.co.in

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 A Mine Estate
 Company

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AIR QUALITY REPORT

| | | | | | |
|----------------------|--|------|-------|----------------------|----------------|
| Month | JANUARY | Area | GEVRA | Report No | KUS/2018/01/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | Date of Issue | 15.02.2018 |
| Name of the Project | Gevra OC | | | Sample Reference No. | 3-4 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|---|------------------|---------------------|---------------------|------------------|---------------------|---------------------|---------|
| | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 3:2005 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ±19.04 | | ±0.0687 | ±0.4470 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 3-Urja Nagar | B | 01.01.2018 | 04.01.2018 | 232 | 99 | 48 | 24 | 27 |
| | | 04.01.2018 | 08.01.2018 | 187 | 86 | 54 | 26 | 26 |
| | | 07.01.2018 | 10.01.2018 | 183 | 92 | 43 | 27 | 25 |
| | | 10.01.2018 | 14.01.2018 | 173 | 87 | 50 | 29 | 27 |
| | | 14.01.2018 | 17.01.2018 | 199 | 95 | 41 | 26 | 25 |
| | | 17.01.2018 | 21.01.2018 | 186 | 87 | 49 | 24 | 21 |
| | | 21.01.2018 | 24.01.2018 | 187 | 89 | 47 | 28 | 29 |
| | | 24.01.2018 | 29.01.2018 | 191 | 79 | 40 | 25 | 20 |
| A by GM Office | A-O | 02.01.2018 | 05.01.2018 | 510 | 229 | 48 | 35 | 29 |
| | | 05.01.2018 | 08.01.2018 | 539 | 236 | 53 | 30 | 34 |
| | | 08.01.2018 | 11.01.2018 | 563 | 230 | 46 | 33 | 30 |
| | | 11.01.2018 | 15.01.2018 | 540 | 232 | 50 | 29 | 32 |
| | | 15.01.2018 | 18.01.2018 | 567 | 235 | 46 | 24 | 25 |
| | | 18.01.2018 | 22.01.2018 | 611 | 263 | 51 | 32 | 35 |
| | | 22.01.2018 | 27.01.2018 | 515 | 244 | 52 | 30 | 28 |
| | | 27.01.2018 | 29.01.2018 | 521 | 241 | 47 | 28 | 31 |
| | | 29.01.2018 | 02.02.2018 | 536 | 239 | 49 | 29 | 27 |

B. Soodha
 Analyzed by

D. Singh
 Checked by

K. V. Singh
 Lab In charge

Note: 1) The results above relate to the samples tested.

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AIR QUALITY REPORT

| | | | | | |
|-------|---------|------|-------|-----------|----------------|
| Month | JANUARY | Area | GEVRA | Report No | KUS/2018/01/03 |
|-------|---------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 15.02.2018 |
| Name of the Project | Gevra OC | Sample Reference No. | 5-6 |

| Limit (in $\mu\text{g}/\text{m}^3$ -24 hrs) | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|---|------------------|---------------------|----------------------|-------------------|---------------------|---------------------|---------|
| | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 13:2006 | CPCB Vol- I, 2013 | IS-5182 PART 7:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0667 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| S-Bhilai Bazar Village | B | 02.01.2018 | 05.01.2018 | 189 | 84 | 51 | 28 | 37 |
| | | 05.01.2018 | 08.01.2018 | 196 | 91 | 49 | 33 | 25 |
| | | 09.01.2018 | 12.01.2018 | 210 | 95 | 55 | 30 | 32 |
| | | 12.01.2018 | 16.01.2018 | 186 | 81 | 48 | 29 | 29 |
| | | 16.01.2018 | 19.01.2018 | 192 | 92 | 50 | 31 | 30 |
| | | 19.01.2018 | 23.01.2018 | 188 | 97 | 49 | 35 | 32 |
| | | 23.01.2018 | 28.01.2018 | 246 | 115 | 52 | 31 | 30 |
| | | 28.01.2018 | 31.01.2018 | 189 | 88 | 48 | 24 | 29 |
| | | 30.01.2018 | 03.02.2018 | 193 | 106 | 55 | 26 | 24 |
| Dhurena Village | B | 02.01.2018 | 05.01.2018 | 186 | 88 | 37 | 22 | 23 |
| | | 05.01.2018 | 08.01.2018 | 198 | 91 | 45 | 24 | 26 |
| | | 08.01.2018 | 11.01.2018 | 188 | 86 | 48 | 27 | 22 |
| | | 11.01.2018 | 15.01.2018 | 176 | 84 | 42 | 25 | 26 |
| | | 15.01.2018 | 18.01.2018 | 194 | 96 | 51 | 23 | 23 |
| | | 18.01.2018 | 22.01.2018 | 189 | 84 | 46 | 24 | 21 |
| | | 22.01.2018 | 27.01.2018 | 182 | 89 | 33 | 23 | 26 |
| | | 27.01.2018 | 29.01.2018 | 193 | 92 | 40 | 26 | 22 |
| | | 29.01.2018 | 02.02.2018 | 184 | 81 | 38 | 21 | 24 |

B Soodh
 Analyzed by

L. N. S. I.
 Checked by

C. K. V.
 Lab In charge

A

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AIR QUALITY REPORT

| | | | | | |
|----------------------|--|------|----------------------|------------|----------------|
| Month | JANUARY | Area | GEVRA | Report No | KUS/2018/01/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | Date of Issue | 15.02.2018 | |
| Name of the Project | Gevra OC | | Sample Reference No. | 7-8 | |

| Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks | |
|--|--|----------------------|-----------------------|-------------------|----------------------|----------------------|---------|----|
| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O 600 | 300 | - | 120 | 120 | | |
| | | A-N 500 | 250 | - | 120 | 120 | | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B 200 | 100 | 60 | 80 | 80 | | |
| Method of analysis | | IS-5182 PART 4, 2005 | IS-5187 PART 23, 2006 | CPCB Vol. 1, 2013 | IS-5182 PART 2, 2001 | IS-5187 PART 6, 2005 | | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | ± 19.04 | | ± 0.0987 | ± 0.4419 | | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 7 Ganga Nagar Village | B | 02.01.2018 | 05.01.2018 | 183 | 88 | 48 | 24 | 25 |
| | | 05.01.2018 | 08.01.2018 | 186 | 90 | 50 | 29 | 31 |
| | | 08.01.2018 | 11.01.2018 | 177 | 87 | 44 | 26 | 24 |
| | | 11.01.2018 | 15.01.2018 | 181 | 81 | 43 | 21 | 26 |
| | | 15.01.2018 | 18.01.2018 | 224 | 93 | 51 | 23 | 25 |
| | | 18.01.2018 | 22.01.2018 | 179 | 89 | 45 | 29 | 29 |
| | | 22.01.2018 | 27.01.2018 | 194 | 83 | 41 | 28 | 22 |
| | | 27.01.2018 | 29.01.2018 | 245 | 91 | 39 | 23 | 20 |
| 8 Raho village | B | 03.01.2018 | 06.01.2018 | 194 | 91 | 52 | 26 | 29 |
| | | 06.01.2018 | 09.01.2018 | 252 | 118 | 48 | 29 | 27 |
| | | 09.01.2018 | 12.01.2018 | 192 | 90 | 53 | 24 | 25 |
| | | 17.01.2018 | 16.01.2018 | 187 | 109 | 55 | 25 | 29 |
| | | 16.01.2018 | 19.01.2018 | 209 | 98 | 47 | 28 | 20 |
| | | 19.01.2018 | 23.01.2018 | 191 | 90 | 55 | 24 | 26 |
| | | 23.01.2018 | 28.01.2018 | 199 | 85 | 50 | 26 | 24 |
| | | 28.01.2018 | 31.01.2018 | 269 | 137 | 48 | 30 | 21 |
| 30.01.2018 | 03.02.2018 | 198 | 96 | 44 | 22 | 23 | | |

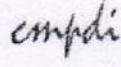
B. S. Dhar
 Analyzed by

[Signature]
 Checked by

[Signature]
 Lab In charge

Note: 1) The results above relate to the samples tested

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| | 165 | |

NOISE QUALITY REPORT

| | | | | | |
|-------|---------|------|-------|-----------|----------------|
| Month | JANUARY | Area | GEVRA | Report No | KSM/2018/01/03 |
|-------|---------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 12.02.2018 |
| Name of the Project | GEVRA OC | Sample Reference No. | N31-N38 |

| Parameter | The Noise Pollution (R & C) rules, 2000 | | Remarks | | |
|--|---|---------------------|----------------|----------------|--|
| | Day Time | Night Time | | | |
| Limit (in dB(A) Leq) | Industrial area A | 75 | 70 | | |
| | Commercial area B | 65 | 55 | | |
| | Residential Area C | 55 | 45 | | |
| | Silence Zone D | 50 | 40 | | |
| Method of analysis: CPCB Protocol For Ambient Level Noise Monitoring | | | | | |
| Station (Code) Station Name | Station category | Date of measurement | Value in dB(A) | Value in dB(A) | |
| 1-DETP Control Room | A | 05.01.2018 | 53.7 | 50.6 | |
| | | 19.01.2018 | 63.6 | 54.3 | |
| 2-Shakti Nagar | C | 05.01.2018 | 46.2 | 40.5 | |
| | | 19.01.2018 | 49.4 | 43.5 | |
| 3-Urja Nagar | C | 05.01.2018 | 44.9 | 39.9 | |
| | | 19.01.2018 | 47.6 | 43.2 | |
| 4-Dy.GM Office | A | 05.01.2018 | 54.1 | 41.6 | |
| | | 19.01.2018 | 55.7 | 47.1 | |
| 5-Bhilai Bazar Village | C | 05.01.2018 | 45.8 | 44.9 | |
| | | 19.01.2018 | 62.3 | 41.9 | |
| 6-Dhurena Village | C | 05.01.2018 | 45.4 | 39.4 | |
| | | 19.01.2018 | 44.4 | 37.5 | |
| 7-Ganga Nagar Village | C | 05.01.2018 | 46.3 | 38.9 | |
| | | 19.01.2018 | 47.3 | 40.9 | |
| 8-Ralia Village | C | 05.01.2018 | 46.1 | 43.3 | |
| | | 19.01.2018 | 49.5 | 38.8 | |

B. Sankar
Analyzed by

D. Dasg
Checked by

C. K. V
Lab in charge

Note: 1) The results above relate to the samples tested.

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EFFLUENT WATER TEST REPORT
 For the month of January 2018

Report No = 01

• GEVRA AREA

| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | | Date of Issue | | 10 th February 2018 | |
|----------------------|--|---|------------------|-----------------|------------------|-----------------|--------------------------------|-----------------|
| Name of the Project | GEVRA O.C. | | | | Date of Sampling | | Date of Analysis | |
| Name of the Stations | Sl. No. | Description | Date of Sampling | | Date of Analysis | | 1 st | 2 nd |
| | | | 1 st | 2 nd | 1 st | 2 nd | | |
| | 1 | Mine water at discharge point | 06.01.18 | 20.01.18 | 15.01 to 29.01 | 31.01 to 08.02 | | |
| | 2 | Work shop effluent before treatment at O&G trap | 06.01.18 | 20.01.18 | 15.01 to 29.01 | 31.01 to 08.02 | | |
| | 3 | Work shop effluent after treatment at O&G trap | 06.01.18 | 20.01.18 | 15.01 to 29.01 | 31.01 to 08.02 | | |
| | 4 | Discharge of DETP, Gevra Area | 06.01.18 | 20.01.18 | 15.01 to 29.01 | 31.01 to 08.02 | | |
| | 5 | O&G dump run off and mine discharge water after treatment at settling pond. | 06.01.18 | 20.01.18 | 15.01 to 29.01 | 31.01 to 08.02 | | |
| | 6 | Up-stream of Laxman nala. | 06.01.18 | 20.01.18 | 15.01 to 29.01 | 31.01 to 08.02 | | |
| | 7 | Down-stream of Laxman nala. | 06.01.18 | 20.01.18 | 15.01 to 29.01 | 31.01 to 08.02 | | |
| | 8 | Mine sump water | 06.01.18 | 20.01.18 | 15.01 to 29.01 | 31.01 to 08.02 | | |

| Sl. No. | Parameter | Method of Analysis | Observed Value | | | | | | | | Lower Detection Limit | General Standards for Discharge of Environmental Pollution (Part A Effluent) as per Schedule VI Environment (Protection) Rules | Units/limits of Maximum (as per C.L.R.R. '14) |
|---------|-----------------------------------|---|----------------|-------|-------|-------|-------|-------|-------|-------|-----------------------|--|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| 1 | pH Value, LDL | IS 3025 (Part 11) 1983, R 1995, Electrometric Method | 6.597 | 6.859 | 6.457 | 6.009 | 6.917 | 7.454 | 7.664 | 6.588 | 0.01 | 5.5 to 9.0 | 10.804/1001 ml 4.025 |
| 2 | Total suspended Solids, mg/l, max | IS 3025 (Part 17) 1984, R 1990, Gravimetric Method | <25.0 | 74 | <28.0 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 25.0 | 100.0 | 10.445/mg/l 24.52/mg/l |
| | | | <25.0 | 81 | <25.0 | <26.0 | <25.0 | <25.0 | <25.0 | <25.0 | | | |
| 3 | C.O.D, mg/l, max | APHA 22 nd Edition, 5220B, open Reflux, Titration Method | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | 4.0 | 250.0 | 0.8155/782 ml 16.2862 mg/l |
| | | | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | | | |
| 4 | Oil & Grease, mg/l, max | IS 3025 (Part 39) 1991, R 2003, Pasison, Gravimetric Method, Thermometric | <2.0 | 4.4 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | 2.0 | 10.0 | 10.707/mg/l 10.31/mg/l |
| | | | <2.0 | 4.2 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | | | |
| 5 | B.O.D, 3 days, 27°C, mg/l, max | IS 3025 (Part 44) 1983, R 2003, 3days Incubator at 27°C | | | | 05.0 | | | | | 2.0 | 30.0 | 11.759902/ ml 207.4 mg/l |
| | | | | | | 05.0 | | | | | | | |

Scientific Assst

Checked By

Officer in Charge

Note: 1) The results above relate to the samples tested as received.
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 3) LDL indicates Lower Detection Limit & BDL indicates Below Detection Limit



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ENVIRONMENTAL MONITORING REPORT

AND, WATER & EFFLUENT

(GEVRA AREA)



Environmental Monitoring

FEBRUARY - 2013

SOUTH EASTERN COALFIELDS LIMITED

(A Mini Ratna Company)

Central Mine Planning & Design Institute Limited

Regional Institute - V, SECL Complex,

BILASPUR (C.G.)

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ENVIRONMENTAL MONITORING REPORT

GEVRA AREA - 'FEBRUARY' 2018

| CONTENTS | | |
|-----------------|------------------------------|----------------|
| Sl.No. | Name of Air Sampling Station | No. of samples |
| 1 | DETP/TA Office | 8 |
| 2 | Shakti Nagar | 8 |
| 3 | Urja Nagar | 8 |
| 4 | Dy.GM Office | 8 |
| 5 | Bhilai Bazar Village | 8 |
| 6 | Dhurena Village | 8 |
| 7 | Ganga Nagar Village | 8 |
| 8 | Ralia Village | 8 |
| Total | | 64 |

| Sl. No. | Name of Noise Sampling Station | No. of samples |
|--------------|--------------------------------|----------------|
| 1 | DETP/TA Office | 2 |
| 2 | Shakti Nagar | 2 |
| 3 | Urja Nagar | 2 |
| 4 | Dy.GM Office | 2 |
| 5 | Bhilai Bazar Village | 2 |
| 6 | Dhurena Village | 2 |
| 7 | Ganga Nagar Village | 2 |
| 8 | Ralia Village | 2 |
| Total | | 16 |

| | Name of Effluent Sampling Station | No. of samples |
|---|---|----------------|
| 1 | Mine water at discharge point | 2 |
| 2 | W/S effluent before treatment at O&G trap | 2 |
| 3 | Workshop effluent after treatment at O&G trap | 2 |
| 4 | Discharge of DETP, GEVRA Area | 2 |
| 5 | OB dump run-off & mine discharge water after treatment at settling pond | 2 |
| 6 | Upstream of Laxman Nalla | 2 |
| 7 | Downstream of Laxman Nala | 2 |
| 8 | Mine sump Water | 2 |
| | Total | 16 |



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AIR QUALITY REPORT

| | | | | | |
|-------|----------|------|-------|-----------|----------------|
| Month | FEBRUARY | Area | GEVRA | Report No | KUS/2018/02/03 |
|-------|----------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 23.03.2018 |
| Name of the Project | GEVRA OC | Sample Reference No. | 1-2 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|-------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol- I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 5:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 1-DETP/TA Office | A-O | 01.02.2018 | 05.02.2018 | 503 | 232 | 53 | 34 | 32 |
| | | 05.02.2018 | 08.02.2018 | 579 | 351 | 71 | 35 | 35 |
| | | 08.02.2018 | 12.02.2018 | 575 | 250 | 50 | 27 | 31 |
| | | 11.02.2018 | 23.02.2018 | 592 | 265 | 48 | 29 | 27 |
| | | 14.02.2018 | 19.02.2018 | 624 | 281 | 57 | 33 | 31 |
| | | 18.02.2018 | 22.02.2018 | 543 | 234 | 68 | 28 | 26 |
| | | 21.02.2018 | 26.02.2018 | 489 | 221 | 58 | 23 | 30 |
| | | 24.02.2018 | 28.02.2018 | 543 | 230 | 59 | 31 | 35 |
| 2-Shakti Nagar | B | 01.02.2018 | 05.02.2018 | 223 | 113 | 54 | 29 | 27 |
| | | 05.02.2018 | 08.02.2018 | 189 | 89 | 46 | 25 | 28 |
| | | 08.02.2018 | 12.02.2018 | 189 | 108 | 54 | 29 | 33 |
| | | 11.02.2018 | 23.02.2018 | 178 | 86 | 49 | 27 | 29 |
| | | 14.02.2018 | 19.02.2018 | 179 | 115 | 50 | 24 | 28 |
| | | 18.02.2018 | 22.02.2018 | 184 | 93 | 47 | 33 | 29 |
| | | 21.02.2018 | 26.02.2018 | 195 | 90 | 43 | 35 | 35 |
| | | 24.02.2018 | 28.02.2018 | 240 | 121 | 53 | 33 | 32 |

B. S. S. S.
Analyzed by

Q. S. S.
Checked by

A. S. S.
Lab in charge

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AIR QUALITY REPORT

| | | | | | |
|-------|----------|------|-------|-----------|----------------|
| Month | FEBRUARY | Area | GEVRA | Report No | KUS/2018/02/03 |
|-------|----------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 23.03.2018 |
| Name of the Project | Gevra OC | Sample Reference No. | 7-8 |

| Limit (in $\mu\text{g}/\text{m}^3$ -24 hrs) | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 7-Ganga Nagar Village | B | 02.02.2018 | 05.02.2018 | 194 | 91 | 47 | 24 | 27 |
| | | 06.02.2018 | 08.02.2018 | 239 | 117 | 49 | 26 | 30 |
| | | 09.02.2018 | 12.02.2018 | 188 | 88 | 51 | 24 | 31 |
| | | 12.02.2018 | 23.02.2018 | 179 | 93 | 46 | 33 | 30 |
| | | 23.02.2018 | 19.02.2018 | 196 | 94 | 45 | 31 | 27 |
| | | 19.02.2018 | 22.02.2018 | 208 | 102 | 43 | 25 | 26 |
| | | 22.02.2018 | 26.02.2018 | 181 | 96 | 51 | 27 | 25 |
| | | 26.02.2018 | 28.02.2018 | 195 | 89 | 50 | 35 | 29 |
| 8-Ralia Village | B | 04.02.2018 | 06.02.2018 | 199 | 95 | 56 | 31 | 25 |
| | | 07.02.2018 | 09.02.2018 | 263 | 157 | 63 | 26 | 29 |
| | | 10.02.2018 | 12.02.2018 | 196 | 94 | 50 | 28 | 32 |
| | | 13.02.2018 | 16.02.2018 | 197 | 96 | 51 | 26 | 30 |
| | | 16.02.2018 | 19.02.2018 | 288 | 139 | 59 | 32 | 27 |
| | | 20.02.2018 | 23.02.2018 | 195 | 88 | 53 | 25 | 25 |
| | | 23.02.2018 | 26.01.2018 | 199 | 83 | 49 | 35 | 31 |
| | | 27.02.2018 | 01.03.2018 | 193 | 85 | 48 | 29 | 32 |

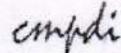
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 Analyzed by

(Signature)
 Checked by

(Signature)
 Lab In charge

Note: 1) The results above relate to the samples tested.

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| | 172 | |

NOISE QUALITY REPORT

| | | | | | |
|-------|----------|------|-------|-----------|----------------|
| Month | FEBRUARY | Area | GEVRA | Report No | KSM/2018/02/03 |
|-------|----------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 23.03.2018 |
| Name of the Project | GEVRA OC | Sample Reference No. | N31-N38 |

| Limit (in dB(A) Leq) | Parameter | | The Noise Pollution (R & C) rules, 2000 | | Remarks |
|--|------------------|---------------------|---|----------------|---------|
| | Industrial area | A | Day Time | Night Time | |
| | Commercial area | B | 65 | 55 | |
| | Residential Area | C | 55 | 45 | |
| | Silence Zone | D | 50 | 40 | |
| Method of analysis: CPCB Protocol For Ambient Level Noise Monitoring | | | | | |
| Station (Code) Station Name | Station category | Date of measurement | Value in dB(A) | Value in dB(A) | |
| 1-DETP Control Room | A | 12.02.2018 | 61.7 | 50.8 | |
| | | 27.02.2018 | 50.7 | 48.7 | |
| 2-Shakti Nagar | C | 12.02.2018 | 49.6 | 41.0 | |
| | | 27.02.2018 | 50.3 | 40.7 | |
| 3-Urja Nagar | C | 12.02.2018 | 41.8 | 39.8 | |
| | | 27.02.2018 | 53.5 | 39.1 | |
| 4-Dy.GM Office | A | 12.02.2018 | 49.6 | 41.3 | |
| | | 27.02.2018 | 51.3 | 48.1 | |
| 5-Bhilai Bazar Village | C | 12.02.2018 | 50.2 | 44.9 | |
| | | 27.02.2018 | 49.9 | 49.4 | |
| 6-Dhurena Village | C | 12.02.2018 | 48.4 | 43.6 | |
| | | 27.02.2018 | 50.8 | 39.2 | |
| 7-Ganga Nagar Village | C | 12.02.2018 | 50.8 | 45.4 | |
| | | 27.02.2018 | 49.0 | 41.6 | |
| 8-Ralia Village | C | 12.02.2018 | 50.4 | 45.8 | |
| | | 27.02.2018 | 51.7 | 41.2 | |

B. S. Singh
Analyzed by

Chand
Checked by

Aravind
Lab In charge



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AIR QUALITY REPORT

| | | | | | |
|----------------------|--|------|-------|----------------------|----------------|
| Month | FEBRUARY | Area | GEVRA | Report No | KUS/2018/02/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | Date of Issue | 23.03.2018 |
| Name of the Project | Gevra OC | | | Sample Reference No. | 3-4 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2003 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0667 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 3-Urja Nagar | B | 01.02.2018 | 05.02.2018 | 198 | 98 | 47 | 25 | 28 |
| | | 05.02.2018 | 08.02.2018 | 223 | 112 | 51 | 27 | 30 |
| | | 08.02.2018 | 12.02.2018 | 197 | 83 | 49 | 32 | 31 |
| | | 11.02.2018 | 23.02.2018 | 179 | 88 | 43 | 35 | 35 |
| | | 14.02.2018 | 19.02.2018 | 217 | 109 | 65 | 29 | 32 |
| | | 18.02.2018 | 22.02.2018 | 188 | 94 | 45 | 27 | 25 |
| | | 21.02.2018 | 26.02.2018 | 176 | 79 | 44 | 28 | 29 |
| | | 24.02.2018 | 28.02.2018 | 201 | 81 | 41 | 26 | 29 |
| 4-Dy GM Office | A-O | 02.02.2018 | 05.02.2018 | 525 | 246 | 51 | 30 | 33 |
| | | 06.02.2018 | 08.02.2018 | 582 | 246 | 53 | 27 | 25 |
| | | 09.02.2018 | 12.02.2018 | 657 | 315 | 58 | 29 | 28 |
| | | 12.02.2018 | 23.02.2018 | 521 | 235 | 52 | 27 | 25 |
| | | 23.02.2018 | 19.02.2018 | 563 | 243 | 48 | 30 | 26 |
| | | 19.02.2018 | 22.02.2018 | 591 | 270 | 46 | 29 | 29 |
| | | 22.02.2018 | 26.02.2018 | 512 | 228 | 49 | 27 | 24 |
| | | 26.02.2018 | 28.02.2018 | 621 | 311 | 65 | 25 | 27 |

Analyzed by *B. Soudh* Checked by *[Signature]* Lab In charge *[Signature]*

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AIR QUALITY REPORT

| Month | FEBRUARY | Area | GEVRA | Report No | KUS/2018/02/03 | | | |
|--|--|------------------------|----------------------|------------------|---------------------|---------------------|---------|----|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | Date of Issue | 23.03.2018 | | | | |
| Name of the Project | Gevra OC | | Sample Reference No. | 5-6 | | | | |
| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks | |
| | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O 600 | 300 | - | 120 | 120 | | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | A-N 500 B 200 | 250 100 | - 60 | 120 80 | 120 80 | | |
| Method of analysis | | IS-5182 PART 4:2005 | IS-5182 PART 23:2005 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | ± 19.04 | | ± 0.0667 | ± 0.4420 | | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 5-Bhilai Bazar Village | B | 04.02.2018 | 06.02.2018 | 196 | 99 | 53 | 29 | 32 |
| | | 07.02.2018 | 09.02.2018 | 251 | 134 | 58 | 34 | 30 |
| | | 10.02.2018 | 12.02.2018 | 198 | 96 | 51 | 35 | 29 |
| | | 13.02.2018 | 15.02.2018 | 196 | 91 | 54 | 33 | 34 |
| | | 16.02.2018 | 19.02.2018 | 275 | 153 | 53 | 26 | 31 |
| | | 20.02.2018 | 23.02.2018 | 196 | 94 | 47 | 25 | 23 |
| | | 23.02.2018 | 26.01.2018 | 194 | 99 | 50 | 33 | 27 |
| | | 27.02.2018 | 01.03.2018 | 191 | 95 | 53 | 27 | 27 |
| 6-Dhurena Village | B | 02.02.2018 | 05.02.2018 | 214 | 98 | 47 | 24 | 27 |
| | | 06.02.2018 | 08.02.2018 | 192 | 85 | 47 | 26 | 29 |
| | | 09.02.2018 | 12.02.2018 | 185 | 93 | 39 | 30 | 33 |
| | | 12.02.2018 | 23.02.2018 | 179 | 79 | 40 | 35 | 31 |
| | | 23.02.2018 | 19.02.2018 | 186 | 87 | 45 | 24 | 28 |
| | | 19.02.2018 | 22.02.2018 | 235 | 121 | 53 | 29 | 26 |
| | | 22.02.2018 | 26.02.2018 | 199 | 84 | 39 | 27 | 26 |
| | | 26.02.2018 | 28.02.2018 | 193 | 90 | 45 | 25 | 30 |

B. S. S. Analyzed by

Checked by

Lab In charge

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EFFLUENT WATER TEST REPORT
 For the month of February'2018

Report No = 02

GEVRA AREA

| | | | | | | |
|----------------------|--|--|------------------|-----------------|--------------------------------|-------------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | Date of Issue | | 11 th , March' 2018 | |
| Name of the Project | GEVRA O.C. | | Date of Sampling | | Date of Analysis | |
| Name of the Stations | | | 1 st | 2 nd | 1 st | 2 nd |
| 1 | Mine water at discharge point | | 02.02.18 | 17.02.18 | 15.02 to 24.02.18 | 28.02 to 06.03.18 |
| 2 | Work shop effluent before treatment at O&G trap | | 02.02.18 | 17.02.18 | 15.02 to 24.02.18 | 28.02 to 06.03.18 |
| 3 | Work shop effluent after treatment at O&G trap | | 02.02.18 | 17.02.18 | 15.02 to 24.02.18 | 28.02 to 06.03.18 |
| 4 | Discharge of DETP, Gevra Area | | 02.02.18 | 17.02.18 | 15.02 to 24.02.18 | 28.02 to 06.03.18 |
| 5 | OB dump run off and mine discharge water after Treatment at settling pond. | | 02.02.18 | 17.02.18 | 15.02 to 24.02.18 | 28.02 to 06.03.18 |
| 6 | Up-stream of Lakman nala. | | 02.02.18 | 17.02.18 | 15.02 to 24.02.18 | 28.02 to 06.03.18 |
| 7 | Down-stream of Lakman nala. | | 02.02.18 | 17.02.18 | 15.02 to 24.02.18 | 28.02 to 06.03.18 |
| 8 | Mine sump water. | | 02.02.18 | 17.02.18 | 15.02 to 24.02.18 | 28.02 to 06.03.18 |

| Sl. No | Parameter | Method of Analysis | Observed Value | | | | | | | | Lower Detection Limit | General Standards for Discharge of Environmental Pollution (Part A Effluent, as per Schedule VI, Environment (Protection) Rules) | Uncertainty of Measurement (at 95% C.I. & K=1.96) |
|--------|-----------------------------------|--|----------------|-------|-------|-------|-------|-------|-------|-------|-----------------------|--|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| 1 | pH Value, LDL | IS 3025 (Part 11) 1993, R: 1996, Electrometric Method | 6.589 | 6.687 | 6.578 | 6.897 | 6.024 | 7.554 | 7.064 | 6.559 | 0.01 | 5.5 to 9.0 | ±0.9941621 at 4.025 |
| 2 | Total suspended Solids, mg/l, max | IS 3025 (Part 17) 1994, R: 1996, Gravimetric Method | <25.0 | 94 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 25.0 | 100.0 | ±9.445mg/l at 24.429 mg/l |
| 3 | C.O.D, mg/l, max | APHA, 27 th Edition, 5220B open Reilas, Titration Method | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | 4.0 | 250.0 | ±9.51535792 at 16.2992 mg/l |
| 4 | Oil & Grease, mg/l, max | IS 3025 (Part 39) 1991, R: 2003, Partden Gravimetric Method Thermometric | <2.0 | 6.2 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | 2.0 | 10.0 | ±0.207mg/l at 10.314mg/l |
| 5 | B.O.D(3 days 27°C) mg/l, max | IS 3025 (Part 44) 1993, R: 2003, 3days Incubator at 27°C | | | | 66.0 | | | | | 2.0 | 30.0 | ±1.7095662 at 202.4 mg/l |

Scientific Asst

Checked By

Officer in Charge

Note: 1) The results above relate to the samples tested as received.
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 3) LDL indicates Lower Detection Limit & BDL indicates Below Detection Limit



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ENVIRONMENTAL MONITORING REPORT

AIR, NOISE & ENVIRONMENT

(GEVRA AREA)



**Environmental
Monitoring**

MARCH-2013

SOUTH EASTERN COALFIELDS LIMITED

(A Mini Ratna Company)

Central Mine Planning & Design Institute Limited

Regional Institute – V, SECL Complex,

BILASPUR (C.G.)

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ENVIRONMENTAL MONITORING REPORT

GEVRA AREA - 'MARCH' 2018

| CONTENTS | | |
|----------|------------------------------|----------------|
| Sl.No. | Name of Air Sampling Station | No. of samples |
| 1 | DETP/TA Office | 9 |
| 2 | Shakti Nagar | 9 |
| 3 | Urja Nagar | 9 |
| 4 | Dy.GM Office | 9 |
| 5 | Bhilai Bazar Village | 9 |
| 6 | Dhurena Village | 9 |
| 7 | Ganga Nagar Village | 9 |
| 8 | Ralia Village | 9 |
| | Total | 72 |

| Sl. No. | Name of Noise Sampling Station | No. of samples |
|---------|--------------------------------|----------------|
| 1 | DETP/TA Office | 2 |
| 2 | Shakti Nagar | 2 |
| 3 | Urja Nagar | 2 |
| 4 | Dy.GM Office | 2 |
| 5 | Bhilai Bazar Village | 2 |
| 6 | Dhurena Village | 2 |
| 7 | Ganga Nagar Village | 2 |
| 8 | Ralia Village | 2 |
| | Total | 16 |

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| | Name of Effluent Sampling Station | No. of samples |
|---|---|----------------|
| 1 | Mine water at discharge point | 2 |
| 2 | W/S effluent before treatment at O&G trap | 2 |
| 3 | Workshop effluent after treatment at O&G trap | 2 |
| 4 | Discharge of DETP, GEVRA Area | 2 |
| 5 | OB dump run-off & mine discharge water after treatment at settling pond | 2 |
| 6 | Upstream of Laxman Nalla | 2 |
| 7 | Downstream of Laxman Nala | 2 |
| 8 | Mine sump Water | 2 |
| | Total | 16 |



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AIR QUALITY REPORT

| | | | | | |
|-------|-------|------|-------|-----------|----------------|
| Month | MARCH | Area | GEVRA | Report No | KUS/2018/03/03 |
|-------|-------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 16.04.2018 |
| Name of the Project | GEVRA OC | Sample Reference No. | 1-2 |

| Limit (in $\mu\text{g}/\text{m}^3 \cdot 24$ hrs) | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 15.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 1-DETP/TA Office | A-O | 01.03.2018 | 05.03.2018 | 618 | 340 | 65 | 33 | 36 |
| | | 04.03.2018 | 07.03.2018 | 597 | 292 | 55 | 30 | 29 |
| | | 08.03.2018 | 12.03.2018 | 580 | 287 | 50 | 26 | 21 |
| | | 11.03.2018 | 14.03.2018 | 686 | 318 | 68 | 32 | 30 |
| | | 14.03.2018 | 19.03.2018 | 598 | 292 | 56 | 29 | 34 |
| | | 18.03.2018 | 21.03.2018 | 632 | 323 | 54 | 31 | 33 |
| | | 21.03.2018 | 24.03.2018 | 593 | 297 | 60 | 32 | 31 |
| | | 25.03.2018 | 28.03.2018 | 677 | 364 | 57 | 35 | 32 |
| | | 28.03.2018 | 02.04.2018 | 591 | 296 | 59 | 34 | 29 |
| 2-Shakti Nagar | B | 01.03.2018 | 05.03.2018 | 196 | 99 | 59 | 28 | 25 |
| | | 04.03.2018 | 07.03.2018 | 258 | 120 | 52 | 29 | 27 |
| | | 08.03.2018 | 12.03.2018 | 180 | 84 | 48 | 21 | 22 |
| | | 11.03.2018 | 14.03.2018 | 198 | 98 | 53 | 29 | 28 |
| | | 14.03.2018 | 19.03.2018 | 268 | 132 | 69 | 30 | 25 |
| | | 18.03.2018 | 21.03.2018 | 192 | 97 | 57 | 28 | 30 |
| | | 21.03.2018 | 24.03.2018 | 196 | 102 | 65 | 29 | 25 |
| | | 25.03.2018 | 28.03.2018 | 205 | 97 | 50 | 27 | 22 |
| | | 28.03.2018 | 02.04.2018 | 198 | 96 | 58 | 25 | 27 |

B. Senthil
 Analyzed by

D. Das
 Checked by

A. K. Saha
 Lab In charge

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AIR QUALITY REPORT

| | | | | | |
|-------|-------|------|-------|-----------|----------------|
| Month | MARCH | Area | GEVRA | Report No | KUS/2018/03/03 |
|-------|-------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 16.04.2018 |
| Name of the Project | Gevra OC | Sample Reference No. | 3-4 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0587 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 3-Urja Nagar | B | 01.03.2018 | 05.03.2018 | 192 | 98 | 58 | 27 | 27 |
| | | 04.03.2018 | 07.03.2018 | 206 | 102 | 59 | 29 | 29 |
| | | 08.03.2018 | 12.03.2018 | 186 | 84 | 43 | 22 | 20 |
| | | 11.03.2018 | 14.03.2018 | 198 | 99 | 56 | 28 | 28 |
| | | 14.03.2018 | 19.03.2018 | 220 | 107 | 64 | 29 | 29 |
| | | 18.03.2018 | 21.03.2018 | 197 | 96 | 57 | 28 | 30 |
| | | 21.03.2018 | 24.03.2018 | 237 | 116 | 62 | 30 | 27 |
| | | 25.03.2018 | 28.03.2018 | 198 | 95 | 53 | 28 | 31 |
| 4-Dy GM Office | A-O | 01.03.2018 | 05.03.2018 | 583 | 283 | 55 | 35 | 29 |
| | | 05.03.2018 | 08.03.2018 | 622 | 307 | 63 | 29 | 32 |
| | | 09.03.2018 | 12.03.2018 | 586 | 294 | 53 | 24 | 26 |
| | | 12.03.2018 | 15.03.2018 | 589 | 335 | 72 | 28 | 32 |
| | | 15.03.2018 | 19.03.2018 | 676 | 291 | 56 | 30 | 34 |
| | | 19.03.2018 | 21.03.2018 | 590 | 298 | 54 | 33 | 29 |
| | | 22.03.2018 | 26.03.2018 | 576 | 330 | 60 | 30 | 34 |
| | | 27.03.2018 | 30.03.2018 | 594 | 289 | 54 | 35 | 30 |
| 29.03.2018 | 02.04.2018 | 583 | 293 | 55 | 32 | 29 | | |

B. Sanyal
 Analyzed by

D. Das
 Checked by

A. K. Saha
 Lab In charge

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AIR QUALITY REPORT

| | | | | | |
|-------|-------|------|-------|-----------|----------------|
| Month | MARCH | Area | GEVRA | Report No | KUS/2018/03/03 |
|-------|-------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 16.04.2018 |
| Name of the Project | Gevra OC | Sample Reference No. | 5-6 |

| Limit (in $\mu\text{g}/\text{m}^3$ -24 hrs) | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 5:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ±19.04 | | ±0.0687 | ±0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 5-Bhilai Bazar Village | B | 03.03.2018 | 06.03.2018 | 206 | 116 | 59 | 37 | 38 |
| | | 07.03.2018 | 10.03.2018 | 184 | 89 | 49 | 25 | 21 |
| | | 10.03.2018 | 13.03.2018 | 193 | 95 | 67 | 35 | 32 |
| | | 13.03.2018 | 16.03.2018 | 266 | 175 | 57 | 30 | 33 |
| | | 16.03.2018 | 19.03.2018 | 196 | 94 | 58 | 33 | 32 |
| | | 19.03.2018 | 22.03.2018 | 288 | 135 | 65 | 31 | 36 |
| | | 22.03.2018 | 27.03.2018 | 194 | 95 | 56 | 29 | 30 |
| | | 27.03.2018 | 30.03.2018 | 197 | 93 | 59 | 33 | 28 |
| | | 29.03.2018 | 02.04.2018 | 287 | 109 | 64 | 31 | 32 |
| 6-Dhurena Village | B | 01.03.2018 | 05.03.2018 | 187 | 90 | 53 | 26 | 25 |
| | | 05.03.2018 | 08.03.2018 | 195 | 93 | 50 | 31 | 24 |
| | | 09.03.2018 | 12.03.2018 | 179 | 82 | 48 | 27 | 29 |
| | | 12.03.2018 | 15.03.2018 | 204 | 101 | 60 | 30 | 28 |
| | | 15.03.2018 | 19.03.2018 | 191 | 98 | 57 | 31 | 33 |
| | | 19.03.2018 | 21.03.2018 | 211 | 104 | 56 | 29 | 30 |
| | | 22.03.2018 | 26.03.2018 | 189 | 91 | 51 | 28 | 27 |
| | | 27.03.2018 | 30.03.2018 | 192 | 93 | 49 | 26 | 28 |
| | | 29.03.2018 | 02.04.2018 | 195 | 98 | 56 | 27 | 29 |

B. Sankar
 Analyzed by

D. Singh
 Checked by

M. K. ...
 Lab In charge

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AIR QUALITY REPORT

| | | | | | |
|-------|-------|------|-------|-----------|----------------|
| Month | MARCH | Area | GEVRA | Report No | KUS/2018/03/03 |
|-------|-------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 16.04.2018 |
| Name of the Project | Gevara OC | Sample Reference No. | 7-8 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|--|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone-(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPQB Vol 1, 2013 | IS-5182 PART 2:2007 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 7-Ganga Nagar Village | B | 01.03.2018 | 05.03.2018 | 181 | 84 | 54 | 36 | 27 |
| | | 05.03.2018 | 08.03.2018 | 179 | 80 | 46 | 25 | 23 |
| | | 09.03.2018 | 12.03.2018 | 191 | 96 | 47 | 28 | 33 |
| | | 12.03.2018 | 15.03.2018 | 189 | 95 | 53 | 27 | 30 |
| | | 15.03.2018 | 19.03.2018 | 210 | 109 | 48 | 25 | 34 |
| | | 19.03.2018 | 21.03.2018 | 186 | 94 | 51 | 32 | 25 |
| | | 22.03.2018 | 26.03.2018 | 229 | 103 | 48 | 31 | 34 |
| | | 27.03.2018 | 30.03.2018 | 190 | 97 | 53 | 29 | 30 |
| | | 29.03.2018 | 02.04.2018 | 195 | 90 | 50 | 33 | 29 |
| 8-Ralia Village | B | 03.03.2018 | 06.03.2018 | 229 | 113 | 58 | 26 | 38 |
| | | 07.03.2018 | 10.03.2018 | 196 | 95 | 49 | 32 | 28 |
| | | 10.03.2018 | 13.03.2018 | 189 | 92 | 58 | 30 | 29 |
| | | 13.03.2018 | 16.03.2018 | 250 | 147 | 68 | 34 | 35 |
| | | 16.03.2018 | 19.03.2018 | 192 | 93 | 57 | 36 | 39 |
| | | 19.03.2018 | 22.03.2018 | 264 | 99 | 60 | 31 | 28 |
| | | 22.03.2018 | 27.03.2018 | 199 | 107 | 57 | 35 | 35 |
| | | 27.03.2018 | 30.03.2018 | 191 | 97 | 54 | 28 | 30 |
| | | 29.03.2018 | 02.04.2018 | 201 | 95 | 63 | 29 | 28 |

B. Soudhal
 Analyzed by

[Signature]
 Checked by

[Signature]
 Lab In charge

Note: 1) The results above relate to the samples tested.

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NOISE QUALITY REPORT

| | | | | | |
|-------|-------|------|-------|-----------|----------------|
| Month | MARCH | Area | GEVRA | Report No | KSM/2018/03/03 |
|-------|-------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 16.04.2018 |
| Name of the Project | GEVRA OC | Sample Reference No. | N31-N38 |

| Limit (in dB(A)) Leg | Parameter | | The Noise Pollution (R & C) rules, 2000 | | Remarks |
|-----------------------------|------------------|--|---|----------------|---------|
| | Industrial area | A | Day Time | Night Time | |
| | Commercial area | B | 65 | 55 | |
| | Residential Area | C | 55 | 45 | |
| | Silence Zone | D | 50 | 40 | |
| Method of analysis | | CPCB Protocol For Ambient Level Noise Monitoring | | | |
| Station (Code) Station Name | Station category | Date of measurement | Value in dB(A) | Value in dB(A) | |
| 1-DETP Control Room | A | 14.03.2018 | 64.1 | 46.9 | |
| | | 28.03.2018 | 53.9 | 48.1 | |
| 2-Shakti Nagar | C | 14.03.2018 | 55.6 | 42.7 | |
| | | 28.03.2018 | 53.8 | 41.7 | |
| 3-Urja Nagar | C | 14.03.2018 | 48.4 | 38.8 | |
| | | 28.03.2018 | 53.2 | 43.0 | |
| 4-Dy.GM Office | A | 14.03.2018 | 59.2 | 40.2 | |
| | | 28.03.2018 | 54.7 | 47.6 | |
| 5-Bhilai Bazar Village | C | 14.03.2018 | 45.1 | 43.2 | |
| | | 28.03.2018 | 55.2 | 39.2 | |
| 6-Dhurena Village | C | 14.03.2018 | 46.4 | 40.9 | |
| | | 28.03.2018 | 53.4 | 38.4 | |
| 7-Ganga Nagar Village | C | 14.03.2018 | 46.2 | 39.8 | |
| | | 28.03.2018 | 52.2 | 38.6 | |
| 8-Ralla Village | C | 14.03.2018 | 47.8 | 41.7 | |
| | | 28.03.2018 | 51.0 | 40.7 | |

B. S. Das
 Analyzed by

Pradyumn
 Checked by

Anita
 Lab in charge

Note: 1) The results above relate to the samples tested

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Report No = 03

EFFLUENT WATER TEST REPORT
 For the month of March 2018

GEVRA AREA

| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | | Date of Issue | | 18 th April 2018 | |
|----------------------|--|--|----------|----------|------------------|----------------|-----------------------------|--|
| Name of the Project | GEVRA O.C. | | | | Date of Sampling | | Date of Analysis | |
| Name of the Stations | 1 | Mine water at discharge point | 10/03/18 | 17/03/18 | 16/03 to 20/03 | 30/03 to 06/04 | | |
| | 2 | Work shop effluent before treatment at O&G trap | 10/03/18 | 17/03/18 | 16/03 to 20/03 | 30/03 to 05/04 | | |
| | 3 | Work shop effluent after treatment at O&G trap | 10/03/18 | 17/03/18 | 16/03 to 20/03 | 30/03 to 05/04 | | |
| | 4 | Discharge of DETP, Gevra Area | 10/03/18 | 17/03/18 | 16/03 to 20/03 | 30/03 to 05/04 | | |
| | 5 | OB dump run-off and mine discharge water after Treatment at settling pond. | 10/03/18 | 17/03/18 | 16/03 to 20/03 | 30/03 to 06/04 | | |
| | 6 | Up-stream of Lakman nala. | 10/03/18 | 17/03/18 | 16/03 to 20/03 | 30/03 to 06/04 | | |
| | 7 | Down-stream of Lakman nala. | 10/03/18 | 17/03/18 | 16/03 to 20/03 | 30/03 to 06/04 | | |
| | 8 | Mine sump water. | 10/03/18 | 17/03/18 | 16/03 to 20/03 | 30/03 to 06/04 | | |

| Parameter | Method of Analysis | Observed Value | | | | | | | | Lower Detection Limit | Generic Standards for Discharge of Environmental Pollution (Part A Effluent) as per Schedule VI Environment (Protection) Rules | Measurement Unit |
|-----------------------------------|--|----------------|-------|-------|-------|-------|-------|-------|-------|-----------------------|--|------------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| pH Value (DI) | IS 3025 (Part 11) 1983, R 1996, Electrode Method | 6.987 | 6.917 | 6.557 | 6.884 | 6.022 | 7.457 | 7.747 | 6.644 | 0.01 | 5.5 to 9.0 | Dimensionless |
| Total suspended Solids (mg/l max) | IS 3025 (Part 17) 1984, R 1998, Gravimetric Method | <25.0 | 115 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 25.0 | 100.0 | mg/l |
| Total Hardness (mg/l max) | APHA 22 nd Edition 5220B, open Reflux, Titrimetric Method | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | 4.0 | 200.0 | mg/l |
| Oil & Grease (mg/l max) | IS 3025 (Part 38) 1991, R 2003, Petrol Oxidation Method Infrared Spectro | <2.0 | 8.8 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | 2.0 | 10.0 | mg/l |
| BOD (5 days 27°C) (mg/l max) | IS 3025 (Part 44) 1983, R 2003, 5 days incubator at 27°C | | | | 06.0 | | | | | 2.0 | 30.0 | mg/l |

Scientific Asst

Checked By

Officer in Charge

Note: 1) The results above relate to the samples tested as received.
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 3) L.D.L. indicates Lower Detection Limit & B.D.L. indicates Below Detection Limit



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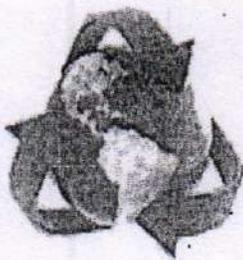
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ENVIRONMENTAL MONITORING REPORT

AIR, NOISE & EFFLUENT

(GEVRA AREA)



Environmental Monitoring

APRIL - 2018

SOUTH EASTERN COALFIELDS LIMITED

(A Mini Ratna Company)

Central Mine Planning & Design Institute Limited
Regional Institute - V, SECL Complex,
BILASPUR (C.G.)

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ENVIRONMENTAL MONITORING REPORT

GEVRA AREA - 'APRIL' 2018

| CONTENTS | | |
|----------|------------------------------|----------------|
| Sl.No. | Name of Air Sampling Station | No. of samples |
| 1 | DETP/TA Office | 8 |
| 2 | Shakti Nagar | 8 |
| 3 | Urja Nagar | 8 |
| 4 | Dy.GM Office | 8 |
| 5 | BhilaiBazar Village | 8 |
| 6 | Dhurena Village | 8 |
| 7 | Ganga Nagar Village | 8 |
| 8 | Ralia Village | 8 |
| | Total | 64 |

| Sl. No. | Name of Noise Sampling Station | No. of samples |
|---------|--------------------------------|----------------|
| 1 | DETP/TA Office | 2 |
| 2 | Shakti Nagar | 2 |
| 3 | Urja Nagar | 2 |
| 4 | Dy.GM Office | 2 |
| 5 | BhilaiBazar Village | 2 |
| 6 | Dhurena Village | 2 |
| 7 | Ganga Nagar Village | 2 |
| 8 | Ralia Village | 2 |
| | Total | 16 |

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| | Name of Effluent Sampling Station | No. of samples |
|---|---|----------------|
| 1 | Mine water at discharge point | 2 |
| 2 | W/S effluent before treatment at O&G trap | 2 |
| 3 | Workshop effluent after treatment at O&G trap | 2 |
| 4 | Discharge of DETP, GEVRA Area | 2 |
| 5 | OB dump run-off & mine discharge water after treatment at settling pond | 2 |
| 6 | Upstream of Laxman Nalla | 2 |
| 7 | Downstream of Laxman Nala | 2 |
| 8 | Mine sump Water | 2 |
| | Total | 16 |

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AIR QUALITY REPORT

| | | | | | |
|-------|-------|------|-------|-----------|----------------|
| Month | APRIL | Area | GEVRA | Report No | KUS/2018/04/03 |
|-------|-------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 21.05.2018 |
| Name of the Project | GEVRA OC | Sample Reference No. | 1-2 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 1-DETP/TA Office | A-O | 01.04.2018 | 04.04.2018 | 655 | 315 | 68 | 38 | 30 |
| | | 04.04.2018 | 09.04.2018 | 591 | 282 | 54 | 39 | 31 |
| | | 09.04.2018 | 12.04.2018 | 577 | 238 | 55 | 32 | 36 |
| | | 12.04.2018 | 15.04.2018 | 562 | 230 | 69 | 38 | 29 |
| | | 15.04.2018 | 18.04.2018 | 501 | 203 | 47 | 20 | 23 |
| | | 18.04.2018 | 22.04.2018 | 700 | 330 | 70 | 30 | 33 |
| | | 22.04.2018 | 25.04.2018 | 593 | 297 | 58 | 32 | 30 |
| | | 25.04.2018 | 28.04.2018 | 649 | 313 | 67 | 36 | 34 |
| 2-Shakti Nagar | B | 01.04.2018 | 04.04.2018 | 183 | 90 | 56 | 38 | 30 |
| | | 04.04.2018 | 09.04.2018 | 190 | 80 | 51 | 30 | 32 |
| | | 09.04.2018 | 12.04.2018 | 223 | 117 | 59 | 27 | 28 |
| | | 12.04.2018 | 15.04.2018 | 193 | 97 | 55 | 32 | 31 |
| | | 15.04.2018 | 18.04.2018 | 170 | 60 | 40 | 25 | 22 |
| | | 18.04.2018 | 22.04.2018 | 196 | 66 | 53 | 29 | 31 |
| | | 22.04.2018 | 25.04.2018 | 258 | 103 | 63 | 36 | 32 |
| | | 25.04.2018 | 28.04.2018 | 193 | 95 | 52 | 30 | 33 |

B. S. Singh
 Analyzed by

Arvind
 Checked by

Arvind
 Lab in charge

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AIR QUALITY REPORT

| | | | | | |
|----------------------|--|------|----------------------|------------|----------------|
| Month | APRIL | Area | GEVRA | Report No | KUS/2018/04/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | Date of Issue | 21.05.2018 | |
| Name of the Project | Gevra OC | | Sample Reference No. | 3-4 | |

| Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks | |
|--|--|---------------------|----------------------|-------------------|---------------------|---------------------|---------|-----|
| Limit (in $\mu\text{g}/\text{m}^3$ -24 hrs) | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | | 120 |
| | | A-N | 500 | 250 | - | 120 | | 120 |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | 200 | 100 | 60 | 80 | | 80 |
| Method of analysis | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol. I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | ±19.04 | | ±0.0687 | ±0.4420 | | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 3-Urja Nagar | B | 01.04.2018 | 04.04.2018 | 238 | 132 | 62 | 33 | 29 |
| | | 04.04.2018 | 09.04.2018 | 194 | 93 | 50 | 33 | 26 |
| | | 09.04.2018 | 12.04.2018 | 265 | 116 | 61 | 32 | 23 |
| | | 12.04.2018 | 15.04.2018 | 195 | 90 | 57 | 31 | 24 |
| | | 15.04.2018 | 18.04.2018 | 180 | 89 | 43 | 28 | 22 |
| | | 18.04.2018 | 22.04.2018 | 190 | 91 | 50 | 31 | 28 |
| | | 22.04.2018 | 25.04.2018 | 235 | 125 | 57 | 28 | 31 |
| 4-Dy GM Office | A-O | 02.04.2018 | 05.04.2018 | 501 | 200 | 48 | 29 | 28 |
| | | 05.04.2018 | 09.04.2018 | 640 | 316 | 63 | 37 | 29 |
| | | 09.04.2018 | 13.04.2018 | 533 | 246 | 55 | 38 | 32 |
| | | 13.04.2018 | 16.04.2018 | 566 | 272 | 53 | 29 | 31 |
| | | 16.04.2018 | 19.04.2018 | 572 | 289 | 53 | 31 | 23 |
| | | 19.04.2018 | 23.04.2018 | 592 | 308 | 60 | 29 | 32 |
| | | 23.04.2018 | 26.04.2018 | 596 | 293 | 57 | 30 | 39 |
| 26.04.2018 | 30.04.2018 | 632 | 313 | 63 | 28 | 27 | | |

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 Checked by

Anand
 Lab in charge

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AIR QUALITY REPORT

| Month | APRIL | Area | GEVRA | Report No | KUS/2018/04/03 | | | | |
|--|---|------------------|---------------------|----------------------|-------------------|---------------------|---------------------|---------|-----|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | Date of Issue | 21.05.2018 | | | | |
| Name of the Project | Gevra OC | | | Sample Reference No. | 5-6 | | | | |
| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks | |
| | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | | A-O | 600 | 300 | - | 120 | | 120 |
| | | | A-N | 500 | 250 | - | 120 | | 120 |
| Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | | B | 200 | 100 | 60 | 80 | 80 | | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2005 | CPCB Vol- I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ±19.04 | | ±0.0687 | ±0.4420 | | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | | |
| 5-Bhilai Bazar Village | B | 03.04.2018 | 06.04.2018 | 194 | 91 | 51 | 39 | 33 | |
| | | 06.04.2018 | 11.04.2018 | 230 | 123 | 53 | 35 | 37 | |
| | | 11.04.2018 | 14.04.2018 | 192 | 92 | 60 | 31 | 34 | |
| | | 14.04.2018 | 17.04.2018 | 179 | 82 | 42 | 28 | 27 | |
| | | 17.04.2018 | 20.04.2018 | 249 | 101 | 69 | 33 | 40 | |
| | | 20.04.2018 | 24.04.2018 | 191 | 97 | 58 | 31 | 27 | |
| | | 24.04.2018 | 27.04.2018 | 225 | 121 | 57 | 37 | 38 | |
| | | 27.04.2018 | 02.05.2018 | 198 | 98 | 54 | 28 | 43 | |
| 6-Dhurena Village | B | 02.04.2018 | 05.04.2018 | 170 | 81 | 47 | 20 | 25 | |
| | | 05.04.2018 | 09.04.2018 | 186 | 92 | 55 | 31 | 32 | |
| | | 09.04.2018 | 13.04.2018 | 198 | 97 | 52 | 27 | 20 | |
| | | 13.04.2018 | 16.04.2018 | 219 | 101 | 61 | 26 | 31 | |
| | | 16.04.2018 | 19.04.2018 | 190 | 91 | 48 | 31 | 24 | |
| | | 19.04.2018 | 23.04.2018 | 189 | 90 | 53 | 23 | 30 | |
| | | 23.04.2018 | 26.04.2018 | 251 | 104 | 51 | 25 | 34 | |
| | | 26.04.2018 | 30.04.2018 | 193 | 83 | 42 | 31 | 32 | |

B. Sudhan
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Checked by

Aravind
Lab In charge

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AIR QUALITY REPORT

| | | | | | |
|-------|-------|------|-------|-----------|----------------|
| Month | APRIL | Area | GEVRA | Report No | KUS/2018/04/03 |
|-------|-------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|---------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 21.05.2018 |
|----------------------|--|---------------|------------|

| | | | |
|---------------------|----------|----------------------|-----|
| Name of the Project | Gevra OC | Sample Reference No. | 7-8 |
|---------------------|----------|----------------------|-----|

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol I, 2013 | IS-5182 PART 7:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ±19.04 | | ±0.0687 | ±0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 7-Ganga Nagar Village | B | 02.04.2018 | 05.04.2018 | 183 | 87 | 42 | 29 | 31 |
| | | 05.04.2018 | 09.04.2018 | 234 | 108 | 52 | 30 | 37 |
| | | 09.04.2018 | 13.04.2018 | 188 | 95 | 50 | 37 | 42 |
| | | 13.04.2018 | 16.04.2018 | 245 | 114 | 53 | 39 | 30 |
| | | 16.04.2018 | 19.04.2018 | 190 | 85 | 47 | 33 | 40 |
| | | 19.04.2018 | 23.04.2018 | 189 | 90 | 53 | 29 | 31 |
| | | 23.04.2018 | 26.04.2018 | 186 | 86 | 51 | 31 | 32 |
| | | 26.04.2018 | 30.04.2018 | 193 | 91 | 48 | 38 | 30 |
| 8-Ralia Village | B | 03.04.2018 | 06.04.2018 | 193 | 95 | 55 | 33 | 29 |
| | | 06.04.2018 | 11.04.2018 | 236 | 124 | 67 | 30 | 32 |
| | | 11.04.2018 | 14.04.2018 | 194 | 99 | 56 | 31 | 30 |
| | | 14.04.2018 | 17.04.2018 | 193 | 90 | 58 | 29 | 31 |
| | | 17.04.2018 | 20.04.2018 | 276 | 131 | 64 | 30 | 31 |
| | | 20.04.2018 | 24.04.2018 | 194 | 96 | 52 | 34 | 23 |
| | | 24.04.2018 | 27.04.2018 | 193 | 98 | 57 | 29 | 32 |
| | | 27.04.2018 | 02.05.2018 | 244 | 133 | 50 | 32 | 33 |

B. S. Sahu
 Analyzed by

Abhishek
 Checked by

Abhishek
 Lab In charge

5

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NOISE QUALITY REPORT

| | | | | | |
|-------|-------|------|-------|-----------|----------------|
| Month | APRIL | Area | GEVRA | Report No | KSM/2018/04/03 |
|-------|-------|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 21.05.2018 |
| Name of the Project | GEVRA OC | Sample Reference No. | N31-N38 |

| Limit (in dB(A) Leq | Parameter | | The Noise Pollution (R & C) rules, 2000 | | Remarks |
|--|------------------|---------------------|---|----------------|---------|
| | Industrial area | A | Day Time | Night Time | |
| | Commercial area | B | 65 | 55 | |
| | Residential Area | C | 55 | 45 | |
| | Silence Zone | D | 50 | 40 | |
| Method of analysis: CPCB Protocol For Ambient Level Noise Monitoring | | | | | |
| Station (Code) Station Name | Station category | Date of measurement | Value in dB(A) | Value in dB(A) | |
| 1-DETP Control Room | A | 12.04.2018 | 71.3 | 48.3 | |
| | | 26.04.2018 | 68.5 | 47.1 | |
| 2-Shakti Nagar | C | 12.04.2018 | 53.6 | 41.8 | |
| | | 26.04.2018 | 47.2 | 35.5 | |
| 3-Urja Nagar | C | 12.04.2018 | 47.0 | 40.1 | |
| | | 26.04.2018 | 47.7 | 35.5 | |
| 4-Dy.GM Office | A | 12.04.2018 | 59.4 | 44.1 | |
| | | 26.04.2018 | 66.5 | 47.1 | |
| 5-Bhilai Bazar Village | C | 12.04.2018 | 56.9 | 42.6 | |
| | | 26.04.2018 | 45.1 | 39.9 | |
| 6-Dhurena Village | C | 12.04.2018 | 38.5 | 40.0 | |
| | | 26.04.2018 | 41.6 | 39.2 | |
| 7-Ganga Nagar Village | C | 12.04.2018 | 49.6 | 38.8 | |
| | | 26.04.2018 | 46.6 | 37.9 | |
| 8-Ralia Village | C | 12.04.2018 | 51.7 | 43.4 | |
| | | 26.04.2018 | 41.9 | 42.1 | |

B. Sankar
 Analyzed by

Deepal
 Checked by

Aswale
 Lab in charge

Note: 1) The results above relate to the samples tested.

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EFFLUENT WATER TEST REPORT
 For the month of April'2018

Report No = 04

GEVRA AREA

| Name of the Customer | SOUTH EASTERN COALFIELDS LIMITED, BILASPUR | | Date of Issue | | 23 rd May 2018 | |
|----------------------|--|--|------------------|----------|---------------------------|----------------|
| Name of the Project | GEVRA O.C. | | Date of Sampling | | Date of Analysis | |
| Name of the Stations | 1 | Mine water at discharge point | 05.04.18 | 25.04.18 | 14.04 to 22.04 | 30.04 to 08.05 |
| | 2 | Work shop effluent before treatment at O&G trap | 05.04.18 | 25.04.18 | 14.04 to 22.04 | 30.04 to 08.05 |
| | 3 | Work shop effluent after treatment at O&G trap | 05.04.18 | 25.04.18 | 14.04 to 22.04 | 30.04 to 08.05 |
| | 4 | Discharge of DETP, Gevra Area | 05.04.18 | 25.04.18 | 14.04 to 22.04 | 30.04 to 08.05 |
| | 5 | OB dump run off and mine discharge water after Treatment at settling pond. | 05.04.18 | 25.04.18 | 14.04 to 22.04 | 30.04 to 08.05 |
| | 6 | Up-stream of Laxman nala. | 05.04.18 | 25.04.18 | 14.04 to 22.04 | 30.04 to 08.05 |
| | 7 | Down-stream of Laxman nala. | 05.04.18 | 25.04.18 | 14.04 to 22.04 | 30.04 to 08.05 |
| | 8 | Mine sump water. | 05.04.18 | 25.04.18 | 14.04 to 22.04 | 30.04 to 08.05 |

| Sl. No | Parameter | Method of Analysis | Observed Value | | | | | | | | Lower Detection Limit | General Standards for Discharge of Environmental Pollution (Part A Effluent) as per Schedule VI, Environment (Protection) Rules | Uncertainty of Measurement (at 95% C.L. & K=1.95) |
|--------|-----------------------------------|---|----------------|-------|-------|-------|-------|-------|-------|-------|-----------------------|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| 1 | pH Value, LDL | IS 3025 (Part 1): 1983, R: 1996, Electrometric Method | 6.747 | 6.560 | 6.551 | 6.989 | 8.212 | 7.565 | 7.547 | 6.662 | 0.01 | 5.5 to 9.0 | ±0.894 to 0.21 at 4.025 |
| 2 | Total suspended Solids, mg/l, max | IS 3025 (Part 17): 1984, R: 1996, Gravimetric Method | <25.0 | 97 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 25.0 | 100.0 | ±0.445 mg/l at 24.429 mg/l |
| 3 | C.O.D, mg/l, max | APHA, 22 nd Edition, 6220B, open Reflux, Titration Method | <4.0 | 32 | 12 | 24 | <4.0 | <4.0 | <4.0 | 16 | 4.0 | 250.0 | 0.31535782 at 13.2692 mg/l |
| 4 | Oil & Grease, mg/l, max | IS 3035 (Part 38): 1991, R: 2003, Partition Gravimetric Method Thermometric | <2.0 | 12.2 | 4.2 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | 2.0 | 10.0 | ±0.207 mg/l at 10.314 mg/l |
| 5 | B.O.D(3 days 27°C), mg/l, max | IS 3025 (Part 44): 1993, R: 2003, 5days Incubator at 27°C | | | | 5.0 | | | | | 2.0 | 30.0 | 1.7396082 at 202.4 mg/l |

Scientific Asst

Checked By

Officer In-Charge

Note: 1) The results above relate to the samples tested as received.
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 3) LDL indicates Lower Detection Limit & BDL indicates Below Detection Limit



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ENVIRONMENTAL MONITORING REPORT

AMR, MONITORING & INVESTIGATION

(GEVRA AREA)



Environmental Monitoring

MAY - 2010

SOUTH EASTERN COALFIELDS LIMITED

(A Mini Ratna Company)

Central Mine Planning & Design Institute Limited
Regional Institute - V, SECL Complex,
BILASPUR (C.G.)

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ENVIRONMENTAL MONITORING REPORT

GEVRA AREA - 'MAY' 2018

| CONTENTS | | |
|----------|------------------------------|----------------|
| Sl.No. | Name of Air Sampling Station | No. of samples |
| 1 | DETP/TA Office | 9 |
| 2 | Shakti Nagar | 9 |
| 3 | Urja Nagar | 9 |
| 4 | Dy.GM Office | 9 |
| 5 | Bhilai Bazar Village | 9 |
| 6 | Dhurena Village | 9 |
| 7 | Ganga Nagar Village | 9 |
| 8 | Ralia Village | 9 |
| | Total | 72 |

| Sl. No. | Name of Noise Sampling Station | No. of samples |
|---------|--------------------------------|----------------|
| 1 | DETP/TA Office | 2 |
| 2 | Shakti Nagar | 2 |
| 3 | Urja Nagar | 2 |
| 4 | Dy.GM Office | 2 |
| 5 | Bhilai Bazar Village | 2 |
| 6 | Dhurena Village | 2 |
| 7 | Ganga Nagar Village | 2 |
| 8 | Ralia Village | 2 |
| | Total | 16 |

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| | Name of Effluent Sampling Station | No. of samples |
|---|---|----------------|
| 1 | Mine water at discharge point | 2 |
| 2 | W/S effluent before treatment at O&G trap | 2 |
| 3 | Workshop effluent after treatment at O&G trap | 2 |
| 4 | Discharge of DETP, GEVRA Area | 2 |
| 5 | OB dump run-off & mine discharge water after treatment at settling pond | 2 |
| 6 | Upstream of Laxman Nalla | 2 |
| 7 | Downstream of Laxman Nala | 2 |
| 8 | Mine sump Water | 2 |
| | Total | 16 |



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 Company

197-57

AIR QUALITY REPORT

| | | | | | |
|-------|-----|------|-------|-----------|----------------|
| Month | MAY | Area | GEVRA | Report No | KUJ/2018/05/03 |
|-------|-----|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 15.06.2018 |
| Name of the Project | GEVRA OC | Sample Reference No. | 1-2 |

| Limit (in $\mu\text{g}/\text{m}^3$) hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 1-DETP/TA Office | A-O | 02.05.2018 | 07.05.2018 | 640 | 346 | 62 | 34 | 30 |
| | | 06.05.2018 | 09.05.2018 | 596 | 296 | 57 | 36 | 32 |
| | | 09.05.2018 | 14.05.2018 | 683 | 304 | 69 | 30 | 36 |
| | | 13.05.2018 | 16.05.2018 | 592 | 292 | 54 | 32 | 32 |
| | | 16.05.2018 | 21.05.2018 | 654 | 368 | 60 | 33 | 33 |
| | | 20.05.2018 | 23.05.2018 | 594 | 294 | 52 | 36 | 35 |
| | | 23.05.2018 | 26.05.2018 | 660 | 367 | 63 | 35 | 36 |
| | | 26.05.2018 | 29.05.2018 | 598 | 285 | 58 | 39 | 37 |
| | | 29.05.2018 | 02.06.2018 | 624 | 289 | 54 | 34 | 39 |
| 2-Shakti Nagar | B | 02.05.2018 | 07.05.2018 | 231 | 127 | 50 | 31 | 33 |
| | | 06.05.2018 | 09.05.2018 | 195 | 94 | 49 | 30 | 31 |
| | | 09.05.2018 | 14.05.2018 | 240 | 115 | 58 | 28 | 34 |
| | | 13.05.2018 | 16.05.2018 | 198 | 96 | 48 | 25 | 33 |
| | | 16.05.2018 | 21.05.2018 | 195 | 103 | 52 | 27 | 30 |
| | | 20.05.2018 | 23.05.2018 | 233 | 98 | 56 | 28 | 34 |
| | | 23.05.2018 | 26.05.2018 | 194 | 97 | 54 | 29 | 33 |
| | | 26.05.2018 | 29.05.2018 | 246 | 136 | 57 | 32 | 34 |
| | | 29.05.2018 | 02.06.2018 | 196 | 100 | 52 | 27 | 32 |

B. Sanyal
 Analyzed by

Aravind
 Checked by

Aravind
 Lab in charge

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AIR QUALITY REPORT

| | | | | | |
|----------------------|--|------|-------|----------------------|----------------|
| Month | MAY | Area | GEVRA | Report No | KUS/2018/05/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | Date of Issue | 15.06.2018 |
| Name of the Project | Gevra OC | | | Sample Reference No. | 3-4 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|-------------------|---------------------|---------------------|--------------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5187 PART 23:2006 | CPCB Vol- I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | | ± 19.04 | | ± 0.0687 | ± 0.4420 |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 3-Urja Nagar | B | 02.05.2018 | 07.05.2018 | 247 | 104 | 66 | 31 | 28 |
| | | 06.05.2018 | 09.05.2018 | 192 | 96 | 53 | 34 | 24 |
| | | 09.05.2018 | 14.05.2018 | 286 | 130 | 60 | 36 | 33 |
| | | 13.05.2018 | 16.05.2018 | 194 | 98 | 52 | 30 | 32 |
| | | 16.05.2018 | 21.05.2018 | 190 | 95 | 54 | 32 | 30 |
| | | 20.05.2018 | 23.05.2018 | 212 | 115 | 63 | 28 | 35 |
| | | 23.05.2018 | 26.05.2018 | 194 | 95 | 52 | 29 | 30 |
| | | 26.05.2018 | 29.05.2018 | 231 | 92 | 58 | 39 | 35 |
| | | 29.05.2018 | 02.06.2018 | 199 | 107 | 54 | 31 | 33 |
| 4-Dy GM Office | A-O | 03.05.2018 | 07.05.2018 | 596 | 295 | 55 | 34 | 23 |
| | | 07.05.2018 | 10.05.2018 | 660 | 324 | 67 | 39 | 32 |
| | | 10.05.2018 | 14.05.2018 | 599 | 296 | 58 | 35 | 34 |
| | | 14.05.2018 | 17.05.2018 | 596 | 287 | 59 | 31 | 31 |
| | | 17.05.2018 | 21.05.2018 | 674 | 328 | 64 | 33 | 35 |
| | | 21.05.2018 | 24.05.2018 | 583 | 298 | 54 | 34 | 37 |
| | | 24.05.2018 | 27.05.2018 | 585 | 296 | 58 | 36 | 34 |
| | | 27.05.2018 | 30.05.2018 | 590 | 293 | 57 | 32 | 38 |
| 30.05.2018 | 04.06.2018 | 653 | 324 | 63 | 37 | 36 | | |

B. Sanyal
 Analyzed by

A. Singh
 Checked by

A. Singh
 Lab in charge

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AIR QUALITY REPORT

| | | | | | |
|-------|-----|------|-------|-----------|----------------|
| Month | MAY | Area | GEVRA | Report No | KUS/2018/05/03 |
|-------|-----|------|-------|-----------|----------------|

| | | | |
|----------------------|--|----------------------|------------|
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | Date of Issue | 15.06.2018 |
| Name of the Project | Gevra OC | Sample Reference No. | 5-6 |

| Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks | |
|--|--|---------------------|----------------------|------------------|---------------------|---------------------|---------|----|
| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O 600 | 300 | - | 120 | 120 | | |
| | | A-N 500 | 250 | - | 120 | 120 | | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B 200 | 100 | 60 | 80 | 80 | | |
| Method of analysis | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol-1, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | ±19.04 | | ±0.0687 | ±0.4420 | | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 5-Bhilai Bazar Village | B | 04.05.2018 | 08.05.2018 | 278 | 117 | 61 | 38 | 35 |
| | | 08.05.2018 | 11.05.2018 | 198 | 96 | 54 | 30 | 34 |
| | | 11.05.2018 | 15.05.2018 | 245 | 135 | 68 | 36 | 30 |
| | | 15.05.2018 | 18.05.2018 | 197 | 97 | 52 | 35 | 31 |
| | | 18.05.2018 | 22.05.2018 | 232 | 129 | 59 | 32 | 32 |
| | | 22.05.2018 | 25.05.2018 | 194 | 95 | 53 | 38 | 29 |
| | | 25.05.2018 | 28.05.2018 | 264 | 148 | 67 | 32 | 37 |
| | | 28.05.2018 | 30.05.2018 | 198 | 98 | 58 | 35 | 33 |
| | | 30.05.2018 | 02.06.2018 | 215 | 118 | 60 | 34 | 31 |
| 6-Dhurena Village | B | 03.05.2018 | 07.05.2018 | 189 | 93 | 50 | 30 | 28 |
| | | 07.05.2018 | 10.05.2018 | 216 | 104 | 60 | 25 | 26 |
| | | 10.05.2018 | 14.05.2018 | 190 | 89 | 52 | 26 | 27 |
| | | 14.05.2018 | 17.05.2018 | 188 | 95 | 48 | 25 | 30 |
| | | 17.05.2018 | 21.05.2018 | 196 | 83 | 55 | 32 | 27 |
| | | 21.05.2018 | 24.05.2018 | 216 | 116 | 58 | 28 | 36 |
| | | 24.05.2018 | 27.05.2018 | 196 | 90 | 47 | 29 | 28 |
| | | 27.05.2018 | 30.05.2018 | 243 | 123 | 42 | 34 | 35 |
| | | 30.05.2018 | 04.06.2018 | 193 | 89 | 49 | 23 | 26 |

B. S. Singh
 Analyzed by

Arindam
 Checked by

Aswale
 Lab In charge

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AIR QUALITY REPORT

| | | | | | |
|----------------------|--|------|-------|----------------------|----------------|
| Month | MAY | Area | GEVRA | Report No | KUS/2018/05/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | | Date of Issue | 15.06.2018 |
| Name of the Project | Gevra OC | | | Sample Reference No. | 7-8 |

| Limit (in $\mu\text{g}/\text{m}^3$)-24 hrs | Parameter | | SPM | PM10 | PM2.5 | SO2 | NO2 | Remarks |
|--|--|---|---------------------|----------------------|------------------|---------------------|---------------------|---------|
| | | Industrial Zone -(G.S.R. 742(E), dated 25.9.2000) | A-O | 600 | 300 | - | 120 | |
| | | A-N | 500 | 250 | - | 120 | 120 | |
| | Residential Zone-(G.S.R. 826(E), dated 16.11.2009 and GSR 176 (E), 02.04.1996) | B | 200 | 100 | 60 | 80 | 80 | |
| Method of analysis | | | IS-5182 PART 4:2005 | IS-5182 PART 23:2006 | CPCB Vol I, 2013 | IS-5182 PART 2:2001 | IS-5182 PART 6:2006 | |
| Uncertainty Range (in $\mu\text{g}/\text{m}^3$) | | | | ±19.04 | | ±0.0687 | ±0.4420 | |
| Station Name (Code) | Station category | Date of sampling | Date of analysis | | | | | |
| 7-Ganga Nagar Village | B | 03.05.2018 | 07.05.2018 | 188 | 85 | 51 | 32 | 24 |
| | | 07.05.2018 | 10.05.2018 | 204 | 103 | 60 | 30 | 31 |
| | | 10.05.2018 | 14.05.2018 | 192 | 90 | 52 | 28 | 34 |
| | | 14.05.2018 | 17.05.2018 | 186 | 93 | 49 | 27 | 31 |
| | | 17.05.2018 | 21.05.2018 | 210 | 103 | 53 | 29 | 28 |
| | | 21.05.2018 | 24.05.2018 | 190 | 94 | 47 | 25 | 27 |
| | | 24.05.2018 | 27.05.2018 | 183 | 89 | 49 | 29 | 26 |
| | | 27.05.2018 | 30.05.2018 | 200 | 112 | 52 | 31 | 25 |
| 8-Ralia Village | B | 04.05.2018 | 08.05.2018 | 263 | 125 | 66 | 29 | 34 |
| | | 08.05.2018 | 11.05.2018 | 197 | 98 | 57 | 32 | 37 |
| | | 11.05.2018 | 15.05.2018 | 236 | 143 | 62 | 38 | 35 |
| | | 15.05.2018 | 18.05.2018 | 194 | 95 | 54 | 41 | 38 |
| | | 18.05.2018 | 22.05.2018 | 240 | 129 | 60 | 35 | 32 |
| | | 22.05.2018 | 25.05.2018 | 196 | 99 | 57 | 32 | 36 |
| | | 25.05.2018 | 28.05.2018 | 271 | 132 | 58 | 31 | 33 |
| | | 28.05.2018 | 30.05.2018 | 198 | 94 | 56 | 33 | 32 |
| 30.05.2018 | 02.06.2018 | 248 | 121 | 64 | 34 | 34 | | |

B. Singh
 Analyzed by

Arshad
 Checked by

Arshad
 Lab in charge

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NOISE QUALITY REPORT

| | | | | | |
|----------------------|--|------|----------------------|------------|----------------|
| Month | MAY | Area | GEVRA | Report No | KSM/2018/05/03 |
| Name of the Customer | South Eastern Coalfields Ltd, Bilaspur | | Date of Issue | 15.06.2018 | |
| Name of the Project | GEVRA OC | | Sample Reference No. | N31-N38 | |

| Limit (in dB(A)) Leq | Parameter | | The Noise Pollution (R & C) rules, 2000 | | Remarks |
|--|------------------|---------------------|---|----------------|---------|
| | Industrial area | A | Day Time | Night Time | |
| | Commercial area | B | 75 | 70 | |
| | Residential Area | C | 65 | 55 | |
| | Silence Zone | D | 55 | 45 | |
| Method of analysis | | | 50 | | 40 |
| GPCB Protocol For Ambient Level Noise Monitoring | | | | | |
| Station (Code) Station Name | Station category | Date of measurement | Value in dB(A) | Value in dB(A) | |
| 1-DETP Control Room | A | 05.05.2018 | 58.1 | 54.2 | |
| | | 19.05.2018 | 56.5 | 56.4 | |
| 2-Shakti Nagar | C | 05.05.2018 | 44.3 | 40.3 | |
| | | 19.05.2018 | 44.8 | 39.3 | |
| 3-Urja Nagar | C | 05.05.2018 | 44.7 | 45.5 | |
| | | 19.05.2018 | 44.4 | 38.5 | |
| 4-Dy.GM Office | A | 05.05.2018 | 58.0 | 43.7 | |
| | | 19.05.2018 | 55.6 | 51.5 | |
| 5-Bhilai Bazar Village | C | 05.05.2018 | 47.2 | 39.9 | |
| | | 19.05.2018 | 46.9 | 40.5 | |
| 6-Dhurena Village | C | 05.05.2018 | 51.3 | 41.1 | |
| | | 19.05.2018 | 42.3 | 42.1 | |
| 7-Ganga Nagar Village | C | 05.05.2018 | 50.6 | 40.3 | |
| | | 19.05.2018 | 43.4 | 38.9 | |
| 8-Ralla Village | C | 05.05.2018 | 49.1 | 39.1 | |
| | | 19.05.2018 | 42.7 | 42.5 | |

B. Singh
 Analyzed by

[Signature]
 Checked by

[Signature]
 Lab In charge

Note: 1) The results above relate to the samples tested.
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Report No = 05

EFFLUENT WATER TEST REPORT
 For the month of May 2018

GEVRA AREA

| Name of the Customer | SOUTH EASTERN COALFIELDS LIMITED, BILASPUR | | Date of Issue | | 24 th June 2018 | |
|----------------------|--|--|------------------|-----------------|----------------------------|-------------------|
| Name of the Project | GEVRA O.C. | | Date of Sampling | | Date of Analysis | |
| Name of the Stations | | | 1 st | 2 nd | 1 st | 2 nd |
| 1 | Mine water at discharge point. | | 08.05.18 | 19.05.18 | 15.05 to 20.05.18 | 29.05 to 06.06.18 |
| 2 | Work shop effluent before treatment at O&G trap | | 08.05.18 | 19.05.18 | 15.05 to 20.05.18 | 29.05 to 06.06.18 |
| 3 | Work shop effluent after treatment at O&G trap | | 08.05.18 | 19.05.18 | 15.05 to 20.05.18 | 29.05 to 06.06.18 |
| 4 | Discharge of DETP, Gevra Area | | 08.05.18 | 19.05.18 | 15.05 to 20.05.18 | 29.05 to 06.06.18 |
| 5 | OB dump run off and mine discharge water after Treatment at settling pond. | | 08.05.18 | NA | 15.05 to 20.05.18 | |
| 6 | Up-stream of Laxman nala. | | 08.05.18 | NA | 15.05 to 20.05.18 | |
| 7 | Down-stream of Laxman nala. | | 08.05.18 | NA | 15.05 to 20.05.18 | |
| 8 | Mine sump water. | | 08.05.18 | 19.05.18 | 15.05 to 20.05.18 | 29.05 to 06.06.18 |

| S. No. | Parameter | Method of Analysis | Observed Value | | | | | | | | Lower Detection Limit | General Standards for Discharge of Environmental Pollution (Part A - Effluents) as per Schedule VI, Environment Protection Rules | Units of Measurement (at 95% C.I. & K=1.96) |
|--------|-----------------------------------|--|----------------|-------|-------|-------|-------|-------|-------|-------|-----------------------|--|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| 1 | pH Value (LD) | IS 3025 (Part 11), 1993 R 1999 Electronic Method | 6.889 | 6.597 | 6.667 | 6.878 | 6.224 | 7.596 | 7.486 | 6.661 | 0.01 | 5.5 to 9.0 | to 8841.57 to 4.0% |
| | | | 6.827 | 6.679 | 6.922 | 6.787 | - | - | - | 6.744 | | | |
| 2 | Total suspended Solids (mg/l max) | IS 3025 (Part 17), 1994 R 1999 Gravimetric Method | <25.0 | 124 | <25.0 | 36 | <25.0 | <25.0 | <25.0 | 29 | 25.0 | 100.0 | to 445 mg/l to 24.425 mg/l |
| | | | <25.0 | 118 | <25.0 | 31 | - | - | - | 30 | | | |
| 3 | C.O.D. (mg/l max) | APHA 22 nd Edition 5220B open Reflux, Titration Method | 24 | 72 | 32 | 45 | <4.0 | <4.0 | <4.0 | 24 | 4.0 | 250.0 | to 615.15782 mg/l to 2697 mg/l |
| | | | 20 | 64 | 34 | 48 | - | - | - | 32 | | | |
| 4 | Oil & Grease (mg/l max) | IS 3025 (Part 35), 1991 R 2003 Partition Gravimetric Method Thermometric | <2.0 | 20.2 | 4.2 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | 2.0 | 10.0 | to 1.0 mg/l to 10.31 mg/l |
| | | | <2.0 | 18.6 | 6.2 | <2.0 | - | - | - | <2.0 | | | |
| 5 | B.O.D. (3 days 27°C) (mg/l max) | IS 3025 (Part 44), 1993, R 2003, 30 days Incubator at 27°C | | | | 6.0 | | | | | 2.0 | 30.0 | to 149.645 mg/l to 202.4 mg/l |
| | | | | | | 6.6 | | | | | | | |

Scientific Asst

Checked By

Officer In-Charge

Note: 1) The results above relate to the samples tested as received.
 2) This report can not be reproduced in part or full without the written permission of the HOD (Env), CMPDI, RI-V.
 3) LDL indicates Lower Detection Limit & BDL indicates Below Detection Limit

203 15

10. Split Gevra Area
24000
KID Attention - Sri Rakesh Kumar.



Central Mine Planning & Design Institute Limited
RI-V, BILASPUR (C.G)

Dept: Environment Department 1397 Date - 06/04/2018

Name of Officer: H.K. Gour, HOD (Env.)

Sub: Allocation of 300 nos. EDs for undertaking Study of carrying capacity of eco-System of the area to assess mining operations with minimal impact on Ecosystem Services

On a request of General Manager, Gevra Area, through letter no. SECL/GM/GA/2017/251 dated, 07/12/2017 (Enclosed as Annexure-I), the CMPDI, RIV, Bilaspur, referred the above matter to CMPDI HQ., Ranchi, seeking consent as to whether it will be able to carry out the said study of "Carrying System of the Eco-System to assess of Optimal Mining Operations with Minimal Impact on Eco-System Services". The matter is also related with compliance of EC Conditions (Point No.4 (ix)) as stipulated by MoEF (Refer EC of Expansion of Gevra Opencast Coal Project - 45 MTPA enclosed as Annexure-II).

Now, CMPDI HQ., Ranchi, has expressed their consent to take-up the job of the said study provided that they will be requiring the following :

- (i) 300 EDs.
- (ii) A time duration of Six Months from June, 2018 or the date of issue of the Work Order from SECL whichever is later (Please refer their Consent Letter as Annexure-III).

Since, the matter is related with compliance of EC Conditions of a mega project like Gevra Opencast Project, it will have to be dealt with on Top Priority Basis.

Hence, a formal Work Order in this respect from SECL approving the EDs requirements of 300 nos. is required so that the above job can be started by CMPDI HQ, Ranchi, at the earliest possible.

Submitted for kind perusal and approval, please.

[Signature]
HOD (Env.), RIV

RD, RIV, Bilaspur *[Signature]*

✓ GM (Env.), SECL

Encl: as above

⑥
o/c
Rakesh Kumar