BEFORE THE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE, CHENNAI

ORIGINAL APPLICATION No. 39 OF 2022 (SZ)

IN THE MATTER OF:

Gedam Dilip Kumar,
R/o.Vullipitta (V), Tiryani (M),
Kumurambheem Asifabad District
& another .... Applicant(s)

Versus

M/s. Singareni Collieries Co Ltd., & others .... Respondent(s)

REPORT OF THE JOINT COMMITTEE

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Place: Hyderabad
Date: 11-08-2022.

Report of the Joint Committee in O.A. No. 39 of 2022 (SZ) in the matter of Gedam Dilip Kumar & another, R/O.Vullipitta (V), Tiryani (M), Komurambheem Asifabad District, Telangana State V/S The Singareni Collieries Company Ltd submitted to Honble National Green Tribunal, South Zone, Chennai in Compliance to Order Dated 28.03.2022

Submitted To

Hon'ble National Green Tribunal

South Zone, Chennai

July, 2022

(1)

REPORT OF THE JOINT COMMITTEE IN OA No.39 OF 2022 (SZ) IN THE MATTER OF GEDAM DILIP KUMAR & ANOTHER, R/O.VULLIPITTA (V), TIRYANI (M), KOMURAMBHEEM ASIFABAD DISTRICT, TELANGANA STATE V/S THE SINGARENI COLLIERIES COMPANY LTD SUBMITTED TO HONBLE NATIONAL GREEN TRIBUNAL, SOUTHZONE, CHENNAI IN COMPLIANCE TO ORDER DATED 28.03.2022

1. Preamble

It is to submit that Sri Gedam Dilip Kumar & another, R/o.Vullipitta (V), Tiryani Mandal, Komurambheem Asifabad Districthave filed an application before the Hon'ble National Green Tribunal, Southern Zone, Chennai (Application No. 39 of 2022) against M/s. Singareni Collieries Company Ltd., for Open cast coal mining of M/s. Khairagura Open Cast Mine at Bellampalli Area of Komurambheem Asifabad District and the main prayer of the applicant is as follows:

1. *The grievance in this application is regarding the action of Respondent No. 1,3 & 9 is illegal, arbitrary & contrary to the EP Act, 1986, CFO issued by Telangana State Pollution Control Board and Environment Clearance Dt: 06.02.2015 for violating consent conditions.*
2. *Appoint an independent experts Committee to verify the allegations raised by the Applicants in regard to environmental violations, damage caused to the water body, inundation, air, water pollution by Respondent No.1,3 and 9 in the execution of Khairagura Opencast Coal Mine at Bellampalli area of Komurambheem Asifabad District in Telangana State.*
3. *Direct the Respondent No.2 (MoEF&CC)and 4 (TSPCB) to take stringent action according to Section 5 of Environment (Protection) Act, 1986 for violations of Environment Clearance, CFO conditions committed and loss caused to the environment, people by Respondent No.1,3 and 9.*
4. *Direct the District Collector of Komurambheem Asifabad to enumerate and assess the loss caused due to inundation and diversion of Vatti Vagu by Respondent No.1 for providing appropriate rehabilitation and resettlement.*
5. *Direct the Respondent No.2 to file an action taken report on the violationof Special Conditions and General Conditions.*

6. *Direct the Respondent No.2 to initiate action against the Respondent No.1 and 9 for non-compliance and fix accountability for the damage caused to the property, loss to the villagers due to Khairagura Open cast Mine.*
7. *Direct the Respondent No.1,3 to provide Rehabilitation and Resettlement to the victims according to Special Conditions and implement CSR activities according to conditions by taking assistance of local grama panchayaths.*
8. *Direct the Respondent No.1,3 and 9 to set up Environment Management cell, Environment Audit cell according to General Condition No. xi, 9 of Environment Clearance dated 6.2.2015 and direct the Respondent No. 1 and 9 to set up separate account for funds earmarked for environmental protection measures for spending according to the EMP/EIA.*
9. *Direct the Telangana PCB to submit action taken report on Notice No. 2087/TSPCB/RO/ NZB/W&A/20121-725 dated 23.12.2021.*
10. *Pass any such order, as the Hon'ble Tribunal may deem fit and proper in the facts and circumstances of the case.*

2. In order to ascertain the genuineness of the allegations made in the application, Hon'ble NGT, Chennai has passed orders dated 28.03.2022 to appoint a joint committee to inspect the area in question and submit a factual as well as action taken report if there is any violation found. The Hon'ble NGT, Chennai in its orders dated 28.03.2022 has appointed a joint committee consisting of;

(1) A Senior officer from MOEF&CC, Integrated Regional Office, Hyderabad.
(2) A Senior Officer from Integrated Regional Office, Chennai.
(3) A Senior Officer from Telangana SPCB as deputed by its chairman.
(4) The District Collector, Komurambheem Asifabad District, Telangana State.
(5) The Executive Engineer, Irrigation Department, Komurambheem Asifabad District.

3. <u>Scope of the Committee</u>

The Hon'ble NGT directed the Joint Committee to inspect and verify the following:

1. *Whether the first respondent company having all necessary Environmental Clearance and other permission required under the Environmental laws.*

2. *Even if they are having such clearances/permissions, whether they are complying with the conditions of Environmental Clearance and other permissions granted and if not, what are all the violations noted and the action taken against the first respondent for such violations,*

3. *Whether any pollution both air, soil and water including noise pollution, has been caused on account of the operation of the first respondent unit and if so, what are all the remediation measures to be taken by them to mitigate the circumstances,*

4. *The committee is directed to ascertain the AAQ, sound level and also soil as well as ground water contamination if any caused in the neighbouring area and inside the unit on account of operation of the first respondent unit in that area.*

5. *If there is any contamination or pollution caused, what are the remedial measures to be taken to rectify the same by the first respondent company,*

6. *The committee is also directed to ascertain the environmental damage if any being caused on account of their operation and assess the environmental compensation on that basis including the expenses required for restoration of damage caused to the environment.*

7. *If whether there was any health impact caused in the area on account of the alleged pollution as raised by the applicant on account of the operation of the first respondent unit in the area, and if so, what are the remedial measures to be taken by the first respondent to mitigate the circumstances and to protect the health of the people in that area as part of their CSR activities.*

8. *Apart from assessing environmental compensation caused on account of the damage caused to the environment and if there is any violations found then assess the compensation for such violation, as has been directed by this Tribunal,*

9. *Ascertain as to whether the alleged diversion of Vattivagu water body mentioned in the application has been done with necessary permissions and on Account of such diversion and environment impact is caused in the area and if so, what are the remedial measures to be taken to mitigate such impact.*

The District Collector, Komurambheem Asifabad District, Telangana State will be the nodal agency for co-ordination and providing necessary logistics for this purpose.The District Collector, Komurambheem Asifabad District, Telangana State is directed to co-operate with

the members of the committee and to take steps to inspect the area in question and submit a report to this Tribunal without delay..."

4. **In compliance to the Hon'ble NGT order dated 28.03.2022, in case of O.A. No. 39 of 2022, the committee was constituted comprising of the following officers:**
   a. The District Collector, Komurambheem Asifabad.
   b. Sri R. Rajkumar, Scientist D. CPCB, Chennai.
   c. Dr E. ArockiaLenin,Scientist C, MoEF&CC (Integrated Regional Office – IRO), Hyderabad.
   d. Sri G.Hanumanth Reddy, JCEE, TSPCB, ZO, R.C Puram, Sangareddy District.
   e. Sri Jadav GunavantRao, Executive Engineer, Irrigation Department, Komurambheem Asifabad District.

Additionally, Additional Collector, Komurambheem Asifabad &Sri B. Bhikshapathi, EE, TSPCB, Regional Office,Nizamabadhave assisted in compilation of the report.

5. **Joint Committee Inspection & Observations:**

The joint committee has inspected the M/s. Khairagura Opencast Coal Project and surrounding area on 27.04.2022. During the inspection, complainants and villagers of Vullipitta were contacted and accompanied with the team during inspection & monitoring. The complainants and villagers of Vullipitta alleged that due to dust deposits in the nearby agricultural lands, the soil quality and also fertility of the land is decreasing there by reducing the crop yield and also complained that during the rainy season, the piled-up coal/over burden dust flows into the water bodies and seeps into the ground water there by polluting the surface and ground water.

About the area:

M/s. Khairagura Opencast Coal Mining Project is near to the Vattivagu Reservoir. This reservoir receives water from the catchment streams of the surrounding hills. The complainant village (Vullipitta Village) is located near to the reservoir and the complaint raised by the villagers was that during the heavy rainfall erosion from (over Burden) OB leads to flood and deposit of the OB soil in nearby areas. The locations are shown in the below google image.

Figure 1:Village, OB dump site & Vattivagu dam location

Observations by the Committee:

- The Village is located near the Vattivagu reservoir is found to be in flood plain zone (whereas no ear marking of FPZ observed), during heavy rain thereare chances of flooding of few houses of the villages from the reservoir and in addition the erosion from OB is also observed, which may effect a few houses.

Figure 2: OB near village

Figure 3: Soil erosion in OBs

- Water logging / Part of Submergence of Vullipitta village has happened on 22.07.2021 due to surface run off from nearby catchment area and D3 OB Dump of M/s. SCCL as a result of heavy rainfall of 185 mm and some silt was carried from surrounding areas into Vullipitta Village.

  After the above incident, as per instructions of District collector, M/s. SCCL has taken up following works in Vullipitta Village:

  a. Construction of 2 nos. box culverts- Rs. 20 Lakhs

  b. Construction of 2 houses - Rs. 12 Lakhs (Houses damaged during Heavy Rain Fall)

  c. Nallah strengthening works 200 m - Rs. 20 Lakhs

  d. Hume pipe culvert no.1 - Rs. 6 Lakhs

  e. Deck drains, garland drains and settling ponds were provided for arresting silt from overburden dump surface runoff.

- During the discussion with villagers, it is learnt that, they seek alternate land for shifting their residence on the cost of the project proponent. Whereas, the project proponents informed that at time of granting EC for coal mining near the village, the villagers opposed to shift their location and agreed for the project. Presently, the mining near the village was completed, so project proponent doesn't have scope for solving the present issue.

- Garland drains provided around the OBs are found closed due to erosion, but as per the google image measurement, the height of the OBs is around 69mts, which is within the permitted height of 120mts as well as the slope is also less than the

permissible limit. The google images of OB measurement is shown below:

Figure 4: Height of dump

Minimum elevation is 243mts above MSL

Maximum elevation is 312mts above MSL

Difference = height of the dump = 69mts

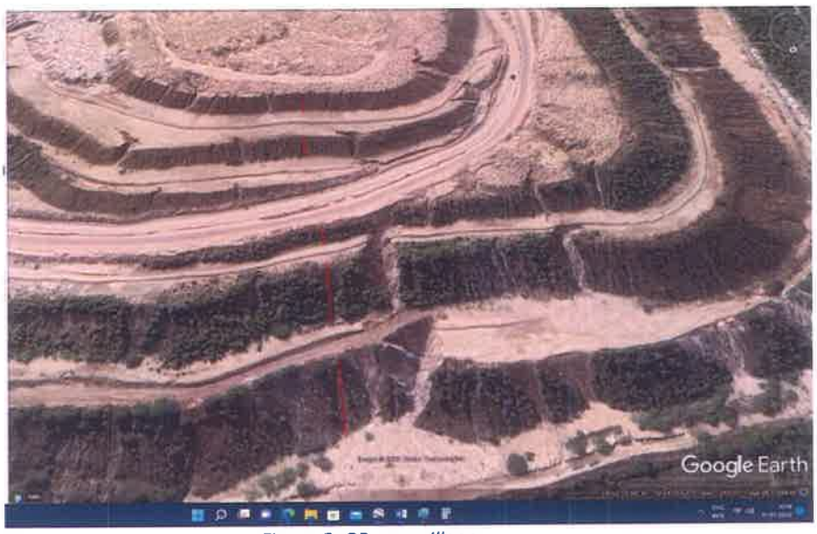

Figure 5: OB near village

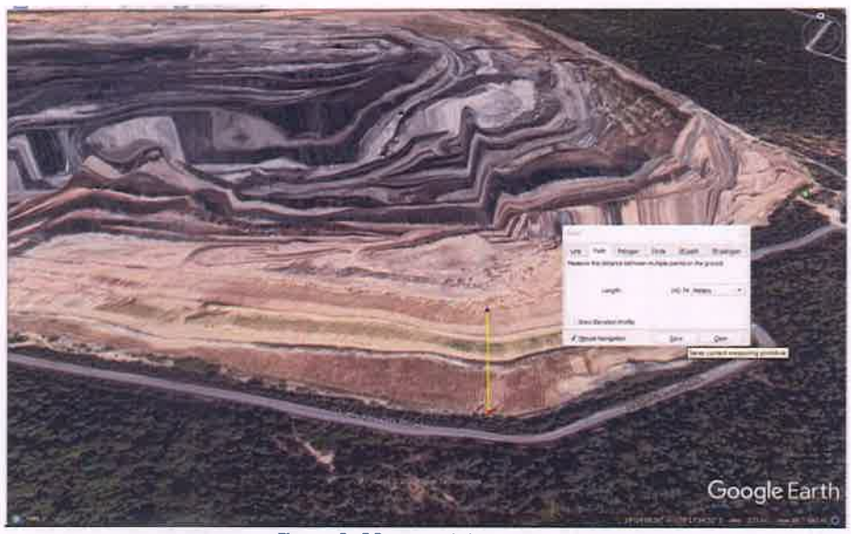

Figure 6: OB near mining

Figure 7: Google image shows erosion, garland drain closure & merging of different stacks

- The settling tank provided is not proper & adequate.

Figure 8: Settling tank

- The project proponent proposed only to change the existing flow path of the stream reaching the reservoir, which will not impact the village. The existing stream flow is shown in dark blue colour and proposed 2rd diversion in light blue colour in the

figure below. Vullipitta village is shown in pink colour along with distance from both existing and diversion streams shown in yellow colour.

Figure 9: First diversion & second diversion of Vattivagu

5 (a) Status of M/s. Khairagura Open Cast Project:

1) M/s. Khairagura Opencast Coal Mining Project is located near Devaiguda village in Tiryani (M), Kumram Bheem Asifabad District of Telangana State. Coal mining operations in this project commenced on 01.07.2005 and expansion operations started on 01.06.2015. The project is surrounded by villages like Devaiguda, Vullipitta, Chanduguda, Dampur, Gowruguda, Saleguda and Jendaguda villages.

2) M/s. Khairagura Opencast Coal Mining Project was accorded Environmental Clearance vide Letter No. J-11015/36/2003-IA. II(M), Dt: 16.09.2004 for at a rated capacity of 0.72 MTPA in a mine lease area of 338.78 Ha. and the project was again granted Environmental Clearance vide MoEF&CC letter No. J-11015/689/2007-IA. II(M), Dt: 22.10.2007 for Expansion in rated capacity from 0.72 MTPA to 2.5 MTPA with peak production of 3 MTPA and increasing mine lease are 338.78 Ha. to 1217.50 Ha.

3) M/s. Khairagura Opencast Coal Mining Project was again granted Environmental Clearance vide MoEF&CC letter No. J-11015/28/2013-IA. II(M), Dt: 06.02.2015 for

Expansion in production from 3 MTPA to 3.75 MTPA within the same mine lease area with 25% production expansion. A corrigendum EC was also given vide Lr.no. J-11015/28/2013-IA. II(M), Dt: 20.01.2016 for increasing the height of dumps.The total mine lease area is 1217.50 Ha, out of which forest land is 296.86 Ha. and non-forest land is 920.64 Ha.

4) The SCCL, Khairagura Open Cast Expansion Project has obtained CFO of the Board vide order Dt: 01.06.2017 with a capacity of 3.75 MTPA in mine lease area of 1217.50 Ha., and CFO validity up to 30.09.2022.

Status of permissions/clearances obtained by the Project:

S.No	Name of Certificate	Document/ license No.		Issue date	Valid up to
1.	Environment Clearance	J-11015/28/2013-IA.II (M)		06.02.2015	01.04.2027
2.	Consent For Establishment	02/TSPCB/CFE/RO-NZM/HO/2015/693		04.11.2015	NA
3.	Consent For Operations	TSPCB/RCP/NZB/HO/W&A/2017/854		01.06.2017	30.09.2022
4.	Forest Clearance	Lr No. 8-28/94-FC for 29.85 ha.	**As per G.O.MS. No.3 Dt:12.01.2005** For a period of 20 years from 01.01.2015	28.09.2000	31.12.2034
		Lr No. 8-102/2000-FC for 140.30 ha		10.09.2003	31.12.2034
		Lr No. 8-28/94-FC, for 126.71 ha.		01.07.2011	31.12.2034
5.	Ground Water Clearance	441/T/2007		02.07.2007	NA
6.	Mining Plan	No. 13016/2/2006-CA-II		17.10.2014	NA
7.	DGMS Permissions	HR-2/SCZ/98(1)&98(3)/40(17)/2017/3242		27.07.2017	NA
8.	I&CAD permission for Vattivagu diversion	PhaseI: DCE.III/OT2/M21230/VVP/Diversion		26.04.2001	NA
		PhaseII: CE/DCE/OT/To/Diversion/Vattivagu/92		17.04.2021	NA

5) ***Status of Compliance of EC conditions:*** There are 47 Specific Conditions and 19 General Conditions were stipulated by Ministry. No non compliance is observed. Details of partial compliance observed are as follows. Specific conditions xxiii, xxiv, xxvi, xxvii.xli, xliii

For Over burden dumps:

i. It is observed that the OB soil is sandy and silt in nature, the height of D3 Dump which is closer to village is 120m which caused the soil erosion in the village and vattivagu reservoir.

ii. PA may conduct scientific study for the stability of 120m in D3 OB dump or its reuse for filling of mine void at the end of the mine life as stipulated EC condition no. vii. So that, the height of OB shall be reduced.

iii. PA shall also carry out study for suitability of linking of Vattivagu reservoir and proposed water body in the final mine void area as single water body.

iv. Strengthening of Toe wall around the D3 Dump with stone pitching.

v. Green belt is also needs to be improved mainly base of the OB near to the Vattivagu and adjacent village.

For settling ponds:

i. PA shall provide additional siltation ponds with increased capacity focusing sudden rainfall as the present capacity of siltation ponds are inadequate to hold the peak rain fall

Retaining wall:

ii. PA shall improve the retaining wall with stone or concrete wherever erosion is observed (i.e. as shown in the picture)

R&R activities

i. There is R&R involved. PA has submitted that total numbers of Project Affected Persons (PAFs) involved in the project are 881 and Project Displaced Families (PDFs) are 488. Compensation of Rs. 22.43 Crores was paid for PAFs and R&R for 488 PDFs were completed at an expenditure of Rs.16.15 Crores in the year 2013 as per G.O no. 68 of 2005.

ii. However, there is discrepancy observed with statement submitted by project authority and Environmental Clearance wherein it is mentioned that (page 3-4, s.no. xxii) that total 556 families were already displaced. 18 families were displaced as a part of Khairagura OC and Rs. 17.83 Crs has already paid under R&R.

iii. PA has submitted that R&R for 49 families who are near Vattivagu have been completed. PA shall take amendment in the above mentioned parah of existing EC from Ministry, if complied.

Project Authority may take up developmental activities on humanitarian grounds for the people who are residing Full Tank Level of Vattivagu Project under CSR activities.

Status of Compliance of EC conditions are enclosed as **Annexure –I**

6) Status of Compliance of Consent for Operations (CFO) conditions are enclosed as **Annexure –II**

5 (b) Status of Ambient Air Quality and Noise Monitoring Values in the surrounding areas of Khairagura Open Cast Project of SCCL

The Committee monitored the Ambient Air Quality in 4 locations to assess the impact of operation respondent unit, the Results of Analysis of Ambient Air Quality monitored are depicted below:

During inspection on 27.04.2022 & 28.04.2022, AAQ monitoring was conducted at the following 4 locations.

Results of Analysis of Ambient Air Quality Monitored

S. No.	Sampling Location	Results		
		Shift Type	PM10 µg/m^3	$PM_{2.5}$ µg/m^3
1.	Ambient Air Quality Monitoring conducted at Residence of Athram Jaggu in Vulipitta (V), Thiryani (M), Komaram Bheem Asifabad District and it is about 5 KM distance from M/s. SCCL, Khairaguda OCP and 250 meters from D3 Over Burden Dump.	Shift –I 5:45 PM to 1:45 AM	56	24
		Shift –II 1:50 AM to 9:50 AM	63	
		Shift –III 10:00 AM to 3:00 PM	52	
		24 Hours Average	**57**	**24**
2.	Ambient Air Quality Monitoring conducted at Residence of Shiva in Rehabilitated Dorli (Dampur) (V), Thiryani (M), Komaram Bheem Asifabad District and it is about 5.8 KM distance from M/s. SCCL, Khairaguda OCP and 1093 metersfrom D3 Over Burden Dump.	Shift –I 6:00 PM to 2:00 AM	62	28
		Shift –II 2:05 AM to 10:05 AM	74	
		Shift –III 10:10 AM to 3:15 PM	69	
		24 Hours Average	**68**	**28**
3.	Ambient Air Quality Monitoring conducted at Residence of A. Nagu in Gover Guda (V), Thiryani (M), Komaram Bheem Asifabad District and it is about 1.2 Kms distance from M/s. SCCL, Khairaguda OCP.	Shift –I 6:05 PM to 2:05 AM	85	45
		Shift –II 2:10 AM to 10:10 AM	80	
		Shift –III 10:10 AM to 3:15 PM	95	
		24 Hours Average	**87**	**45**
4.	Ambient Air Quality Monitoring conducted at Residence of Tekkam Paggu in Chopidi (V), Thiryani (M), Komaram Bheem Asifabad District and it is about 900 meters distance from M/s. SCCL, Khairaguda OCP and 550 metersfrom D1 Stabilized Over Burden Dump.	Shift –I 6:15 PM to 2:15 AM	72	48
		Shift –II 2:20 AM to 10:20 AM	84	
		Shift –III 10:25 AM to 3:15 PM	88	
		24 Hours Average	**81**	**48**
National Ambient Air Quality Standards for 24 Hours			**100**	**60**

As per the National Ambient Air Quality Standards for 24 Hours the Ambient Air Quality values are Meeting the Standards Stipulated in the National Ambient Air Quality Standards.

5 (c) Noise Monitoring Values:

The Committee monitored the Noise Monitoring in 2 locations to assess the impact of operation respondent unit, the Results of Analysis of Noise monitored are depicted below:
During inspection on 27.04.2022 & 28.04.2022, Noise monitoring was conducted at the following 2 locations.

Noise monitoring values are:

1. Sampling Location	Leq	L10	L50	L90	Lmin	Lmax	Standards for Residential Areain dB(A)	
							Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)
Background Noise level before blasting at Khairaguda OCP in dB(A) Monitoring Duration: 3:00 PM to 3:15 PM	**55.87**	63.89	59.83	57.82	53.03	57.44	**55**	**45**
Noise level during the blasting at Khairaguda OCP in dB(A) Monitoring Duration: 3:15 PM to 3:30 PM	**57.54**	66.70	61.78	59.56	53.40	59.14		

2. Sampling Location	Leq	L10	L50	L90	Lmin	Lmax	Standards for Residential Areain dB(A)	
							Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)
Background Noise level before blasting at Khairaguda OCP in dB(A) Monitoring Duration: 3:00PM to 3:15PM	**57.14**	68.96	64.01	61.85	52.94	61.43	**55**	**45**
Noise level during the blasting at Khairaguda OCP in dB(A) Monitoring Duration: 3:15PM to 3:30PM	**63.53**	77.83	71.75	69.29	58.16	68.84		

Comparative with back ground Noise Level Monitoring during the time of Blasting increasing Noise Levels Values are marginal, in the range of 2 to 6 Decibel units.

5 (d) Status of Ground water quality in the surrounding area of respondent unit:

The Committee collected the Bore well water samples in 6 locations (**M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.)** to assess the impact of operation respondent units, the Results of Analysis of water samples are depicted below:

S.No	Sample Location
1	Borewell water sample collected at SC colony, Vulipitta (V)
2	Borewell water sample collected at SC colony, Near D. Shanker Residence, Vulipitta (V).
3	Borewell water sample collected at Gover Guda Village.
4	Borewell water sample collected at Chopidi Village.
5	Borewell water sample collected at Dorli Village.
6	Borewell water sample collected at Pathibanda Village.

The Bore wells samples are meeting the Standards ISO 10500: 2012 Permissible Limit for Drinking water and the Analysis reports are enclosed as **Annexure – III**.

5 (e) Status of Surface water quality in the surrounding area of respondent unit:

The Committee collected the Mine Discharge water samples in 4 locations to assess the impact of operation respondent units, the Results of Analysis of water samples are depicted below:

S.No	Sample Location
1	Mine Discharge water (Filter Bed Inlet)
2	Filter Bed Outlet
3	Sample collected from Mine discharging water drain leading to Vattivagu near Iron Bridge.
4	Sample collected from Phase – I diversion of Vattivagu before confluence of mine

	discharging water drain.
5	Sample collected from Phase – I diversion of Vattivagu after confluence of mine discharging water drain.

As per the Analysis Reports of Vattivagu Water Quality not effected due to Mine Discharge water. The Analysis Reports are enclosed as **Annexure – IV.**

The Committee collected the Dorli Stream water samples in 2 locations to assess the impact of operation respondent units, the Results of Analysis of water samples are depicted below:

S.No	Sample Location
1	Water sample collected from Dorli Stream.
2	Water sample collected from Vattivagu Reservoir after joining of Dorli Stream.

As per the Analysis Reports of Dorli Stream Before and After Confluence Vattivagu Water Quality not affected. The Analysis Reports are enclosed as **Annexure – V.**

The Committee collected the Vatti Vaagu Reservoir water samples in 2 locations to assess the impact of operation respondent units, the Results of Analysis of water samples are depicted below:

S.No	Sample Location
1	Water sample collected from Vatti Vaagu Reservoir near grave yard, Vatti Vaagu (V), Thiryani (M), KB Asifabad District.
2	Water sample collected from Vatti Vaagu Reservoir near Protection Bund.

The Vatti Vaagu Reservoir water samples are meeting the Standards ISO 10500: 2012 Permissible Limit for Drinking water and the Analysis reports are enclosed as**Annexure – VI**.

5 (f) Status of Sediments collected:

As per analysis report, the sediment samples are non-hazardous as per CRIT criteria. The Analysis reports are enclosed as **Annexure – VIa**

5 (g) STATUS AND SCENARIO OF GROUND WATER AT KHAIRAGURA OCP REPORT SUBMITTED BY DISTRICT GROUND WATER OFFICER, Kumuram Bheem Asifabad District(AS ON MAY 2022)

The District Ground Water Officer in his Report concluded the following:

- The study of water level fluctuation data indicates that the Ground Water levels rise to 3.19mbgl in May-2022 in comparison with May-2021.
- Depth to Ground Water levels more than 20m bgl is recorded in One Piezo meter during May – 2022.
- The average groundwater level for the Khairagura OCP area in the month of May 2022 is 11.75m bgl, whereas it was 14.94mbgl during the same period in the previous year.
- The predominant water level range during May 2022 is between 5 to 10 meters the Khairagura OCP area.

Report of Ground water department enclosed as **Annexure – VII.**

5 (h) Assessment of Soil Quality and Crop Yield in the Surrounding lands. Report Submitted by Agriculture Department, Kumuram Bheem Asifabad District:

Agricultural officials collected the soils samples at 9 farmer's fields of Vullipitta village for Macro nutrients, micronutrients and any trace of heavy metals and also average crop yield details for last five years

Analysis reports as follows

- ✓ The heavy metals content in all the soil samples are within the normal range
- ✓ All the soils are sufficient in available copper, manganese and iron
- ✓ All the soil samples except 1 & 7 are deficient in available zinc

Year wise Average Yield Particulars in Quintals in Vullipitta village

S. No	Crop	2016-17	2017-18	2018-19	2019-20	2020-21
1	Cotton	6.0-7.0	5.0-6.0	7.0-8.0	6.0-7.0	7.0-8.0
2	Redgram	3.0-4.0	4.0-5.0	5.0-6.0	4.0-5.0	4.0-5.0
3	Jowar	3.0-4.0	3.0-4.0	4.0-5.0	5.0-6.0	4.0-5.0

Crop yield data shows there is no drastic change of crop yield due to mining activity, Reports of Agricultural department enclosed as **Annexure – VIII**.

5 (i) Report Submitted by District Medical & Health Officer (DMHO), Kumuram Bheem Asifabad dated on 20.06.2022

As per District Medical & Health Officer (DMHO), Kumuram Bheem Asifabad, the health of surrounding villages of Khairagura opencast i.e. Vullipita, Chopidi, Jendaguda, Saleguda and Gouruguda is not affected by the Khairagura opencast activities. There is no occupational health issue in the above said villages.

The DM & HO has concluded that there is no evidence/record of severe health issues in the above-mentioned villages.

Enclosed medical reports submitted by DMHO are enclosed as **Annexure– IX.**

5 (j) Report Submitted by Executive Engineer, I & CAD, Division – IV, Kumuram Bheem Asifabad dated on14.06.2022

- The SCCL has obtained permission to divert the upstream existing natural stream during the year 2002, i.e., first diversion to extract coal from Khairagura Opencast project.
- 1st diversion permission accorded vide G.O.Rt.No.1637 (I&CAD) (IRR VII), Dt.19.10.2002 (Copy of permission enclosed).
- The diversion of stream was taken up during the year 2003 to 2004.
- The SCCL has carried out the Nallah diversion work.
- The I&CAD Dept., has appointed to counter check the diversion along with QC inspections during the year 2003 to 2004.
- The SCCL has provided an earthen dam on upstream side of Vattivagu reservoir for a length of 3.20 km along with toe wall and pitching to protect the surrounding villages against back water flow of Vattivagu reservoir.
- The 1st diversion of Vattivagu stream has not affected the inflows and capacity of the Vattivagu reservoir.
- At present, the SCCL has again obtained permission to divert the upstream existing 1st diversion Nallah, i.e., second diversion to extract coal from Khairagura OCP by expanding the project.
- For the 2nd diversion of Vattivagu Nallah, the permission was accorded to the Engineer – in – Charge (I&CAD), Hyderabad by Principal Secretary to Government of Telangana State to issue **No Objection Certificate** for phase-II Diversion of Vattivagu vide Memo no.1411/Project IV/A2/2020, Dt.07.08.2020.
- The No Objection Certificate was issued from CE(Irrigation)/Mancherial vide Lr.No.CE/DLE/OT/TO/DIVERSION/VATTIVAGU/92, dt.17.04.2021

- The I&CAD dept., has appointed to counter check the diversion along with QC inspections.

Conclusion Remarks of Irrigation& CAD:

- The upstream villages of Vattivagu reservoir i.e., Vullipitta, Dampur & Chanduguda were **not inundated under back water** of the Vattivagu project since the first diversion of Vattivagu stream.
- There is no evidence/record of reduction in the storage capacity of Vattivagu reservoir.
- The villagers of Ullipitta village were opined that due to siltation of project, there was increase in water level and the houses of them were inundated. The fact is that they are staying in the PP land (100m from FRL contour of the Project) of the project along bank of Vattivagu reservoir. Only silt accumulated near the houses after the heavy downpours.
- It is advised to the SCCL, to provide Toe drain of 150mx15m including Revetment wherever gullies are formed along the Toe of Dump No.3 of Khairagura OCP to reduce the siltation from Dump.
- Irrigation &CAD report enclosed as **Annexure– X.**

6. STATUS OF POINT WISE COMPLIANCE OF NGT ORDER ARE AS FOLLOWS:

<table>
<tr><th>S. No</th><th>Condition</th><th>Compliance observed by committee</th></tr>
<tr><td>i)</td><td>Whether the first respondent is having all necessary Environmental Clearance and other permissions required under the Environmental Laws</td><td>Status of permissions/clearances obtained by the Project:
<table>
<tr><th>S.No.</th><th>Name of Certificate</th><th>Issued by</th></tr>
<tr><td>1.</td><td>Environment Clearance</td><td>MoEF&CC</td></tr>
<tr><td>2.</td><td>Consent for Establishment</td><td>TSPCB</td></tr>
<tr><td>3.</td><td>Consent for Operations</td><td>TSPCB</td></tr>
<tr><td>4.</td><td>Forest Clearance</td><td>MoEF&CC(F.C. Division)</td></tr>
<tr><td>5.</td><td>Ground water</td><td>State Ground water Dept.</td></tr>
<tr><td>6.</td><td>Mining plan approved by</td><td>MoC</td></tr>
<tr><td>7.</td><td>DGMS Permissions</td><td>DGMS</td></tr>
<tr><td>8.</td><td>I&CAD permission for Vattivagu diversion (Phase-I and Phase-II).</td><td>Irrigation & CAD Dept</td></tr>
</table></td></tr>
<tr><td>ii)</td><td>Even if they are having such clearances / permissions, whether they are complying with the conditions of Environmental Clearance and other permissions granted and if not, what are all the violations noted and the action taken against the first respondent for such violation</td><td>1) OBs height is found to be around 69mts which is less than the permitted height of 120mts (as per google earth measurement)
2) Garland drains are found to be closed due to erosion of OBs.
3) Settling tank provided is not proper & adequate.
4) Water logging / Part of Submergence of Vullipitta village was happened on 22.07.2021 due to surface run off from nearby catchment area and D3 OB Dump of M/s. SCCL as a result of heavy rainfall of 185 mm and some silt was carried from surrounding areas into Vullipitta Village.
After the above incident, as per instructions of District administration, M/s. SCCL has taken up following works in Vullipitta Village:

a. Construction of 2 no.s box culverts- Rs. 20 Lakhs
b. Construction of 2 houses - Rs. 12 Lakhs (Houses damaged during Heavy Rain Fall)
c. Nallah strengthening works 200 m - Rs. 20 Lakhs
d. Hume pipe culvert no.1 - Rs. 6 Lakhs
e. Deck drains, garland drains and settling ponds were provided for arresting silt from overburden dump surface runoff.
Recently, after the district witnessed flash floods due to</td></tr>
</table>

		heavy rains from 10th to 15th July, 2022, as per instructions of District administration, M/s SCCL has taken up repairs of the road.
iii)	***Whether any pollution both air, soil and water including noise pollution, has been caused on account of operation of the first respondent unit and if so, what are all the remediation measures to be taken by them to mitigate the circumstances***	Air, soil&water qualityas well asnoise level are found to be within norms as per the analysis report of the samples collected during the committee visit.
iv)	***The committee is directed to ascertain the Ambient Air Quality (AAQ), sound level and soil as well as ground water contamination if any caused in the neighboring area inside the unit on account of operation of the first respondent unit in that area***	
v)	***If there is any contamination or pollution caused, what are the remedial measures to be taken to rectify the same by the first respondent company***	
vi)	***The committee is also directed to ascertain the environmental damage if any being caused on account of their operation and assess the environmental compensation on that basis including the expenses required for restoration of damage caused to the environment***	Any significant violations are not observed on account of operations.
vii)	***If whether there was any health impact caused in the area on account of the operation of the first respondent unit in that area, and if so, what are the remedial measures to be taken by the first respondent to mitigate the circumstances and to protect the health of the people in that area as a part of CSR activities***	As per District Medical & Health Officer (DMHO), Kumuram Bheem Asifabad, the health of surrounding villages of Khairagura opencast i.e. Vullipita, Chopidi, Jendaguda, Saleguda and Gouruguda is not affected by the Khairagura opencast activities. There is no occupational health issue in the above said villages. The DM & HO has concluded that there is no evidence/record of severe health issues in the above-mentioned villages. Enclosed medical reports submitted by DMHO as Annexure-**IX**

viii)	***Apart from assessing environmental compensation caused on account of damage caused to the environment and if there is any violations found, then assess the compensation for such violation, as has been directed by this tribunal***	Any significant violation is not observed.
ix)	***Ascertain as to whether the alleged diversion of Vattivagu water body mentioned in the application has been done with necessary permissions and on account of such diversion and environment impact is caused in that area and if so, what are the remedial measures to be taken to mitigate such impact***	Necessary approvals have been obtained by the project proponent. The present stream (catchment of water from surrounding Hills) is leading to the Vattivagu reservoir. The project proponent is changing the present flow path of the stream & again connecting to the Vattivagu reservoir.

7. Over all Conclusion/ Suggestions:

1. The project proponent has obtained all the necessary clearances/permissions from all the concerned departments and no adverse impact is observed on soil, air and water quality as well as on health of villagers. The noise levels are also within stipulated norms.
2. Erosion of OB soil into the village happened due to heavy rainfall and project proponent is may be instructed to take following corrective measures to avoid in future:
    - Deepening and widening of garland and deck drains
    - Increasing width of garland drain from present 10 metres to at least 20 meters
3. OB height found to be 69mts which is less than the permitted height and also the slope is found to be within the permissible limit (as per Google earth measurements)
4. Further the project proponent may take up developmental activities as well as activities for ecological conservation and livelihood generation in the nearby villages under CSR activities.
5. The project proponent may develop the green belt and grass turfing to avoid the erosion. Further, stone pitching and rock toe wall can also be taken up.

6. A terrace arrangement should be followed, such that there is pitching on the village side and dipping towards toe of upper deck, in order to prevent flow of water towards the village.
7. A 150 m x15 m riveting is also recommended on the ground level whereever gullies are likely to be formed near the Vullipetta village, in order to strengthen the bund.
8. The present stream (catchment of water from surrounding Hills) is leading to the Vattivagu reservoir. The project proponent is changing the present flow path of the stream & again connecting it to the Vattivagu reservoir with all necessary approvals.
9. The project proponent shall provide proper settling tank with adequate capacity and should desilt it periodically.
10. As the villagers are residing near the flood plain zone, chances of water flooding are more, the Project Proponent under CSR activity may take necessary remedial measures like construction of bund wall near SC colony or taking up construction of some houses (which are prone to inundation) on higher pedestal.

Signature of Committee Members:

5/8/22

Sri R. Rajkumar,
Scientist D
Central Pollution Control Board,
Regional Directorate, Chennai

Dr. E. Arockia Lenin,
Scientist C
MoEF&CC

Sri G. Hanumantha Reddy
JCEE, TSPCB, Zonal Office Ramachandrapuram

Sri Jadav Gunavant Rao,
Executive Engineer,
Irrigation Department

Sri Rahul Raj P.S
Collector & District Magistrate
Komurambheem Asifabad -
Telangana

ANNEXURE-J

Annexure- I

Compliance status of the conditions stipulated in the Environmental Clearance by the Joint Committee

Environmental Clearance: The project authority has obtained expansion of Khairagura Opencast Expansion Coal Mining Project (from 3.0 MTPA to 3.75 MTPA in ML area of 1217.50 ha; Lattitute 19 14' 10" to 19 15' 20" (North) and Longitude 79 16 00 to 79 18' 15" (East) of M/s. The Singareni Collieries Co. Ltd., Dist. Adilabad, Telangana-Expansion under 7(ii) of EIA Notification 2006-Environmental Clearance vide letter no. MoEF&CC no. J-11015/28/2013-IA-II(M) dated 06.02.2015.

Compliance Status of EC conditions: There are 47 Specific Conditions and 19 General Conditions were stipulated by Ministry. No non compliance is observed. Details of partial compliance observed are as follows. Specific conditions xxiii, xxiv, xxvi, xxvii.xli, xliii

Recommendations

For Over burden dumps:

i. It is observed that the OB soil is sandy and silt in nature, the height of D3 Dump which is closer to village is 120m which caused the soil erosion in the village and vattivagu reservoir.

ii. PA may conduct scientific study for the stability of 120m in D3 OB dump or its reuse for filling of mine void at the end of the mine life as stipulated EC condition no. vii. So that, the height of OB shall be reduced.

iii. PA shall also carry out study for suitability of linking of Vattivagu reservoir and proposed water body in the final mine void area as single water body.

iv. Strengthening of Toe wall around the D3 Dump with stone pitching.

v. Green belt is also needs to be improved mainly base of the OB near to the Vattivagu and adjacent village.

For settling ponds:

i. PA shall provide additional siltation ponds with increased capacity focusing sudden rainfall as the present capacity of siltation ponds are inadequate to hold the peak rain fall

Retaining wall:

ii. PA shall improve the retaining wall with stone or concrete wherever erosion is observed (i.e. as shown in the picture)

R&R activities

i. There is R&R involved. PA has submitted that total numbers of Project Affected Persons (PAFs) involved in the project are 881 and Project Displaced Families (PDFs) are 488. Compensation of Rs. 22.43 Crores was paid for PAFs and R&R for 488 PDFs were completed at an expenditure of Rs.16.15 Crores in the year 2013 as per G.O no. 68 of 2005.

ii. However, there is discrepancy observed with statement submitted by project authority and Environmental Clearance wherein it is mentioned that (page 3-4, s.no. xxii) that total 556 families were already displaced. 18 families were displaced as a part of Khairagura OC and Rs. 17.83 Crs has already paid under R&R.

iii. PA has submitted that R&R for 49 families who are near Vattivagu have been completed. PA shall take amendment in the above mentioned parah of existing EC from Ministry, if complied.

iv. Project Authority may take up developmental activities on humanitarian grounds for the people who are residing Full Tank Level of Vattivagu Project under CSR activities.

(26)

Part –I

Data Sheet (as per information provided by Project authority)

1	Project Type: River Valley / Mining / Industry / Thermal / Nuclear / Other (Specify)	Coal Mining
2	Name of the Project	Khairagura Opencast Expansion Coal Mining Project `of M/s. Singareni Collieries Company Limited.
3	Clearance letter(s)/OM No. and dated	EC Lr. No. J-11015/28/2013-IA.II (M), dt: 06.02.2015 & Corrigendum to EC dt. 20.01.2016.
4	Location	
	Village	Devaiguda
	Tehsil (s)	Tiryani
	District	Kumram Bheem Asifabad
	State(s)	Telangana state
	Latitude/Longitude	North: 19° 14' 10" to 19° 15' 20" East : 79° 16' 00" to 79° 18' 15"
5	Address for correspondence	Sri M. Srinivas
	a. Address of concerned project Chief Engineer (with Code &Telephone / Telex / Fax numbers)	Project Officer, Khairagura OCP, C/o. GM's Office, SCCL, Bellampalli Area, Goleti-504292. Mobile No. 9491144206. Fax No. 08735-231662 Email ID: po_khg@scclmines.com
6	Salient Features	
	a. of the project	EC for Khairagura Opencast Project (0.72 MTPA, 338.78 ha.) was obtained vide Lr. No. J-11015/36/2003-IA.II (M) dt. 16.09.2004. EC for Expansion of Khairagura Opencast Project (from 0.72 to 3.00 MTPA, 1217.50 ha.) was obtained vide Lr. No. J-11015/689/2007-IA.II (M) dt. 22.10.2007. Further, EC was obtained for Khairagura Opencast Expansion Coal Mining Project for enhancement of coal production from 3.0 MTPA to 3.75 MTPA in the project area of 1217.50 ha under 25% expansion category as

		per OM No.J-11015/30/2004.IA.II(M), Dated: 19-12-2012, superseding the earlier two ECs vide EC Lr. No. J-11015/28/2013-IA.II (M), dt: 06.02.2015 & Corrigendum to EC dt. 20.01.2016.
	b. Of the environmental management plans	As per EIA/EMP & submitted to MoEF&CC during appraisal.
7	Break up of the project area (in Ha.)	
	a. Submergence area (forest & non-forests)	Not Applicable
	b. others	As per project authority project area is furnished under Forest Land: 296.86 ha. Non-Forest Land: 920.64 ha. Total Project Area: 1217.50 ha.
8	Break up of the project affected population with enumeration of those losing houses / dwelling units only, agricultural land and landless labours / artisans	Total number of PAFs involved in the project are 881 and PDFs are 488. Compensation of Rs. 22.43 Crores was paid for PAFs and R&R for 488 PDFs were completed at an expenditure of Rs.16.15 Crores in the year 2013 as per G.O no. 68 of 2005.
	a. SC,ST /Adivasis	SC- 125; ST- 320
	b. Others	43
9	Finance Details	
	a. Project cost as originally planned and subsequent revised estimates and the years of price reference	The project cost was originally planned for Rs. 47.46 Crores (as per FR, 2001). Revised estimated cost was Rs. 92.46 Crores (As per RFR, 2006). Project cost was further revised to Rs.169.26 Crores(as per Marginal Scheme, 2014).
	b. Allocations made for environmental management plans, with item wise and year wise breakup (capital &Reccuring)	Allocation made for environment management plan was with a capital cost of Rs. 20.02 Crores and revenue cost of Rs. 18.72 per Tonne of coal (Rs. 4.64 Crores/Annum).
	c. Cost Benefit Ratio / Internal Rate of Return and the year of Assessment	IRR at 100% is 31.16 % (as per Marginal Scheme, 2014).
	d. Whether (c) includes the cost of environment management as shown in (b) above	Yes
	e. Total expenditure on the Project so far	Capital expenditure in the project is Rs 199.65 Crores (up to 31.03.2022), which includes capital expenditure incurred in earlier stages of project.
	f. Actual expenditure incurred on the environment management plans so far	Revenue Expenditure: Rs.112.24Crores

10	Forest land requirement	296.86 ha.
	a. The status of approval for a diversion of forest land for non-forestry use	Total forest land involved in the project is 296.86 ha. Entire forest land has been diverted and the details of diversion of Forest land are furnished hereunder: • Letter No. 8-28/94-FC dated 28.09.2000for 29.85 ha. • Letter No. 8-102/2000-FC dated 10.09.2003 for 140.30 ha. • Letter No. 8-28/94-FC, dt. 01.07.2011, for 126.71 ha.
	b. The status of compensatory afforestation, if any	Completed
	c. The status of clear felling	-
	d. Comments on the viability and sustainability of compensatory afforestation programme in the light of actual field experience so far	-
11	The status of clear felling in non-forest area (such as submergence area of reservoir, approach road), if any, with quantitative information	-
12	Status of construction	
	a. Date of commencement	Mining operations in Khairagura OCP initially started on 01.07.2005 and expansion operations were commenced on 01.06.2015.
	b. Reason for the delay if the project is yet to start	Not applicable

Part II

Condition wise Compliance Status (as per information provided by Project authority and field observations)

<table>
<tr><th>S.No.</th><th>EC Conditions</th><th>Compliance Status</th></tr>
<tr><td colspan="3">4A. Specific condition:</td></tr>
<tr><td>(i)</td><td>The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.</td><td>Being Complied.
The coal production from mine is within the prescribed limits of EC capacity as given under.
<table>
<tr><th rowspan="2">S. No</th><th rowspan="2">Year</th><th></th><th>Coal (in MT)</th></tr>
<tr><th>As per EC</th><th>Actual</th></tr>
<tr><td>1.</td><td>2015-16</td><td rowspan="7">3.75 (As per existing EC)</td><td>3.37</td></tr>
<tr><td>2.</td><td>2016-17</td><td>3.12</td></tr>
<tr><td>3.</td><td>2017-18</td><td>3.41</td></tr>
<tr><td>4.</td><td>2018-19</td><td>2.91</td></tr>
<tr><td>5.</td><td>2019-20</td><td>2.60</td></tr>
<tr><td>6.</td><td>2020-21</td><td>1.25</td></tr>
<tr><td>7.</td><td>2021-22</td><td>2.35</td></tr>
</table></td></tr>
<tr><td>(ii)</td><td>The validity of the EC is for the life of the Mine or as specified in the EIA Notification, 2006, whichever is earlier.</td><td>Complied
The life of the mine is 14 years from 1.4.2013 as per EC.</td></tr>
<tr><td>(iii)</td><td>The voids shall be filled up to the near ground level by the OB from the new Ullipitta Dorli mine.

The coal transportation on road by mechanically covered trucks.</td><td>Agreed to comply
At present mining activities are in progress. Project Authority is submitted that the void shall filled at the end of mine life as per stipulations.

Being Complied
Transportation of coal is being done by tarpaulin covered trucks.</td></tr>
</table>

(iv)	The coal loading at siding shall be by conveyer belt.	**Complied** The coal loading at the siding is being carried out by the closed conveyor belts.
(v)	The social audit report of the CSR be submitted to the MoEF for record and be uploaded on to the Company's website.	**Being Complied** The Social Audit of CSR activities of the project were carried out through Centre for Good Governance in February 2021. The study report was submitted to MoEF&CC on 26.08.2021 and uploaded to SCCL website along with EC compliance report at www.scclmines.com/env
(vi)	Instead of provision of bag filter, effective sensor operated water sprinkling system be provided for dust suppression at crusher house and transfer points at pit head coal handling arrangement.	**Complied.** Sensor operated water sprinkling system has been provided for dust suppression at crusher house and transfer points at pit head coal handling arrangement. Al dust fighter (mist sprayer) is also provided at pit head CHP for dust suppression. A sensor activated wetting point is provided to wet, loaded dumpers before unloading the coal into crushers. Permanent water sprinkling arrangement is provided around pre-weigh bin.
(vii)	The proponent shall utilize the final void for dumping of overburden generated from the proposed "Ullipitta Block" (Relay Project) which is adjacent to the Khairagura OC Project.	**Agreed to comply** At present mining activities are in progress. Project Authority is submitted that the void shall filled at the end of mine life as per stipulations.
(viii)	The final mine closure plan will be submitted to MOEF 5 years in advance of final mine closure for approval.	**Agreed to comply** Project authority has submitted that the final mine closure plan shall be submitted to MoEF&CC in the year 2025-26.

(31)

(ix)	Coal transportation in-pit Crusher to surface CHP through belt conveyor (1.5 Km length). Surface to siding by trucks (14Km) and siding to loading by wagon.	**Complied.** Coal is being transported from face to in-pit crusher by dumpers within the project and to Goleti CHP by covered trucks. The coal is being loaded by conveyors into closed pre-weigh bin and then into wagons.
(x)	The production shall be within the same Mining Lease area.	**Complied.** The coal production is within mine lease area only.
(xi)	The depth of the internal void shall be 40 m from the ground level and should be adequate for fishery purpose.	**Agreed to comply** At present mining activities are in progress. PA shall fill the void as per stipulations.
(xii)	All safety measures shall be taken as per CMR, 1957 and related circulars.	**Being Complied.** All safety measures are being taken as per CMR, 2017 and related circulars. All statutory permissions were obtained from DGMS for safe operation of the mine.
(xiii)	The production shall be within the same Mining Lease area.	**Complied** The coal production is confined to mine lease area only.
(xiv)	The OB shall be completely re-handled at the end of the mining and will be back filled up to the ground level and covered with about a meter thick topsoil and put to use. The land after mining shall be brought back for agriculture purpose.	**Agreed to comply** Project authority is agreed to rehandle OB will at the end of mining operations as per the final mine closure plan approved by Ministry of Coal, Government of India. Till date, about 101.152 MCM of OB was backfilled in 202.078 Ha up to 31.03.2022. It is recommended that the (i) PA may conduct scientific study for the stability of 120m OB and reuse of OB for filling of mine void at the end of the mine life as stipulated EC condition no. Vii. By doing so, the height of OB shall be reduced. PA shall also carry out study for the connection of Vattivagu reservoir and proposed water body in the final mine void area as

		single water body. (ii) Green belt is also needs to be improved mainly base of the OB near to the Vattivagu and adjacent village. (iii) EMP shall be included the shoreline development of final void area.
(xv)	Garland drains to be provided.	Being **complied.** Garland drains and deck drains were constructed around three external overburden dumps for arresting silt. The garland drains, deck drains need to be regularly de-silted and maintained properly.
xvi)	Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine.	Being **Complied** Earthen bund of 3.0 km length was constructed along Vatti Vagu reservoir. (Top width-10m, Bottom width-16m, Height-3m above the HFL). However, embankment needs to be strengthened with stone pitching and plantation along the river upto Vatti Vagu reservoir.
xvii)	The CSR cost should be Rs.5 per tonne of coal produced which should be adjusted as per the annual inflation.	**Being complied.** The CSR plan is being implemented as per the CSR policy approved by SCCL's Board of Directors. Till date, an amount of Rs. 22.13 Crores was spent on CSR activities in the surrounding villages of the project. The CSR expenditure is more than Rs. 5.0 / tonne of coal In addition to the above, an amount of Rs. 184.84 Crores was deposited with Komuram Bheem District Authorities towards District Mineral Foundation Trust (DMFT) for taking up developmental activities in the project affected villages.
(xviii)	Everybody in the core area should be provided with mask for protection against fugitive	**Being Complied** Dust masks were provided to employees working in core area for protection against fugitive dust emissions.

	dust emissions.	
(xix)	Dust mask to be provided to everyone working in the mining area.	**Being Complied** Dust masks were provided to every employee exposed to dusty environment.
(xx)	The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.	**Being Complied.** The supervisory staff are ensuring wearing of dust mask by employees working in the core area.
(xxi)	People working in the core area should be periodically tested for the lung diseases and the burden of cost on account of working in the coal mine area.	**Being Complied.** People working in the core area is being tested periodically for lung related issues.

(xxii)	The mining area should be surrounded by green belt having closed thick canopy of the tree cover.	**Being Complied.** Green belt is being developed by the project authority. Till date, about 14,78,294 nos. of saplings have been raised in an area of 393.23 ha. up to 31.03.2022 against 386.51 ha as per EMP schedule. The Green belt details are under. i. Dump area- 338.95 Ha. (including 20 Ha internal dump) ii. Avenue &Block plantation area: 54.28Ha. However, Green belt development needs to be improved along the OB area, river boundary, transportation road, near coal stock yard etc.,
xxiii)	The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilized with plantation so as to with stand the peak water flow and prevent mine inundation.	**Partly Complied.** Earthen bund of 3.0 km length was constructed along Vatti Vagu reservoir. (Top width-10m, Bottom width-16m, Height-3m above the HFL). *However, **embankment needs to be strengthened with stone pitching and plantation along the critical patches river upto Vatti Vagu reservoir.***
(xxiv)	There shall be no overflow of OB into the river and into the agricultural fields and massive plantation of native species	**Partly complied** The height of the OB are maintained 90m for D1 and D2 Dumps and 120m for D3 Dumps. PA has provided embankment, Garlend drains to arrest siltation.

(35)

	shall be taken up in the area between the river and the project.	*However, Soil erosion and overflow of the OB near to Vattivagu reservoir are observed. Having OB with loose soil may leads into the erosion of OB during the heavy rain fall.* *The present management of OB is inadequate to control the siltation during the heavy rain fall.* *It is observed that the height of D3 Dump which is closer to village is 120m which caused the soil erosion in the village and vattivagu reservoir.* *(i) PA may conduct scientific study for the stability of 120m in D3 OB dump or its reuse for filling of mine void at the end of the mine life as stipulated EC condition no. vii. So that, the height of OB shall be reduced.* *(ii) PA shall also carry out study for the linking of Vattivagu reservoir and proposed water body in the final mine void area as single water body.* *(iii) Strengthening of Toe wall around the D3 Dump with stone pitching.* *(iv) Green belt is also needs to be improved mainly base of the OB near to the Vattivagu and adjacent village.* *(v) EMP shall also be included the shoreline development of final mine void area.*

(xxv)	OB shall be stacked at four earmarked external OB dumpsite(s) only. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of existing reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forests & Climate Change and its concerned Regional office on yearly basis.	Being **Complied.** OB was dumped at three earmarked external dump sites and at one internal dump as envisaged in the approved EMP. The ultimate slope of the dump is less than 28 degrees. The plantation was carried out as per EMP. Monitoring and management of existing reclaimed dump sites is being carried out. Compliance status is being submitted to the Ministry of Environment, Forests & Climate Change and its concerned Regional office on half yearly basis.
(xxvi)	Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilized for watering the mine area, roads, green belt development, etc. The drains shall be regularly de-silted and maintained properly. Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area	**Partly complied.** Garland drains and deck drains are made around 3 external overburden dumps for arresting silt. The garland drains, deck drains etc., are being regularly de-silted and maintained properly. *PA shall provide additional siltation ponds with increased capacity focusing sudden rainfall as the present capacity of siltation ponds are inadequate to hold the peak rain fall.*

	adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.	
(xxvii)	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.	**Partly complied.** Retaining wall at the tce of the dumps and OB benches are provided. However, PA shall provide the retaining wall with stone or concrete wherever erosion is notices as shown in the picture. 

(xxvii i)	Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.	Being **Complied.** Back filter is not provided. Mist spray arrangements have been provided for controlling dust emissions and the air quality parameters monitored at the CHP are well within the stipulated norms. PA is in the process of amending this condition. Fixed water sprinkling system was provided to check fugitive emissions from crushing operations, haul roads, coal transfer points, etc., for effective dust suppression. A sensor activated wetting point is provided for wetting coal loaded dumpers before unloading coal into crushers. Seven Mobile water sprinklers of 28 KL & 5 no of 10KL capacity are deployed for dust suppression on haul roads, approach roads, dumps, etc.

(xxix)	Drills shall be wet operated. Roads shall be metal topped and mechanical sweepers shall be regularly deployed to clear the dust off the main approach and mineral transportation roads. Water sprinkling (fixed and mist type, mobile) shall be regularly done along the main haul roads.	**Being Complied.** Drills are wet operated. Mechanical sweeper is deployed to clear the dust from coal transport road. A sensor activated wetting point is provided for wetting coal loaded dumpers before unloading coal into crushers. Fixed point water sprinkling system is provided along permanent roads. A mist sprayer is also provided at pit head CHP for dust suppression. Seven Mobile water sprinklers of 28 KL & 5 no of 10KL capacity are deployed for dust suppression on haul roads, approach roads, dumps, etc.
(xxx)	The project authorities shall undertake regular repairing and tarring of roads used for mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads.	**Being Complied.** Maintenance of coal transport road is being carried out at regular intervals. Three tier Green belt development needs to be improved along the OB area, river boundary, transportation road, near coal stock yard etc
(xxxi)	Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.	**Being Complied.** Controlled blasting with non-electric delay detonators is being adopted. The blasting is being carried out only during day time. Mitigative measures like optimum charge per delay, sequence of blasting, designed blasting pattern, etc., are being taken to reduce the ground vibrations and to arrest fly rock. The blast ground vibrations and noise levels are being monitored as per DGMS guidelines.
(xxxii)	A progressive afforestation plan shall be implemented	**Being Complied.** Green belt is being taken up along ML boundary,

	covering an area of 882.29 ha. at the end of mining, which includes reclaimed External OB dump area (388.57 ha.), Internal OB dump area(261.93 ha.), and Green belt (231.79 ha.) in township located outside the lease by planting native species in consultation with the local DFO/ Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and a 3-tier avenue plantation along the main approach roads to the mine.	roads, service buildings and CHP, and other areas within the lease by planting native species at a density of not less than 2500 nos. of plants/ha as per EMP. Three tier Green belt development needs to be improved along the OB area, river boundary, transportation road, near coal stock yard etc as suggested in condition no. xxx.
(xxxiii)	An estimated total 578.49 Mm3 of OB will be generated during the entire life of the mine. Out of which 184.58 Mm3 of OB will be dumped in three external OB in an earmarked area covering 331.75 Ha. Of land. 393.91 Mm3 of OB will be dumped in one internal OB Dump in an earmarked area covering 280.98 ha. Of land. The maximum height of external OB dump will not exceed 90m.	**Being complied.** OB was dumped at three earmarked external dump sites and one internal dump as envisaged in the approved EMP. Till date, 179.641 MCM of OB is dumped up to 31.03.2022at three external dump sites in an earmarked area covering 360.7 Ha. The present height of external dumps is D1-90 m., D2-90 m. and D3-120 m. Refer condition no. xxv for suggestions.

	The maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self-sustaining and compliance status shall be submitted to MoEF and its Regional Office on yearly basis.	
(xxxiv)	The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.	**Being complied.** The restoration and reclamation plan envisaged in the approved EMP is being implemented. Plantation is being done with native species to maintain sustainability.
(xxxv)	Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.	**Complied.** i. The project authority is taking various compensatory ecological and restoration of waste land activities with forest department. ii. An amount of Rs.53,80,000/- to DFO, Mahaboobnagar vide cheque No.076559, dated 08.06.2002 towards Compensatory Afforestation for diversion of 140.30Ha. of forest land vide F.C. letter no. 8-102/2000-FC, dated 10.09.2003. iii. Equivalent extent i.e.140.30Ha. of non-forest land is handed over to Forest Department in Dhanwada & Kistapur villages in Mahaboobnagar District. An extent i.e.29.85 Ha. of non-forest land is handed over to Forest Department, Bellampalli Division in Kistampet and Venkatpalli villages of Tandur Mandal on

		16.02.1999. iv. Project authority has paid Rs.11.84 lakhs to State Government for for diversion of 29.85Ha. of forest land Bellampalli on 30.03.1999 vide F.C. letter no. 8-28/94-FC, dated 28.09.2000. v. Equivalent extent of 126.71 Ha. Of non-forest land identified in Sy. Nos. 168, 327 & 376 of Jagatpalli village, Peddamandadi (M) of Mahaboobnagar District part of 344.72 Ha has been handed over to forest department on 20.02.2007 and the said land had been mutated in favor of forest department on 23.02.2007. vi. Project authority has paid Rs.127.00 lakhs to CAMPA account No.3449010070179 of Union Bank of India, New Delhi on 24.05.2010 towards CA while diversion of 126.71Ha. of forest land as per F.C. letter no. 8-28/94-FC, dated 01.07.2011. vii. Plantation is also being carried out by SCCL in 57.00Ha. of RF land in consultation with DFO., Asifabad division.
(xxxvi)	The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.	**Being Complied.** OB dumping is being done in three external dumps and one internal dump as envisaged in approved EMP. No extra over burden dumps are planned for this project. Refer condition no. xxv for suggestions.

(xxxvii)	No groundwater shall be used for mining operations.	**Being Complied.** Groundwater is not being used for mining operations. Part of mine discharge water is being used for washing, drinking, fire-fighting and dust suppression purpose.
(xxxviii)	Of the total quarry area of 542.91 ha, the backfilled quarry area of 261.93 ha. shall be reclaimed with plantation and a void of 280.98 ha. at a depth of 40 m which is proposed to be converted into a water body shall be gently sloped and the upper benches shall be terraced and stabilized with plantation /afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.	**Agreed to comply** As of now, mining activities are in progress. The restoration and reclamation plan envisaged in the approved EMP is being implemented. The final voids of project will be filled at final stage as per approved final mine closure plan approved by MoC.
(xxxix)	Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity shall be done four times a year in pre-monsoon (may), monsoon (August), post-monsoon (November) and winter	**Being complied.** Regular monitoring of groundwater level and quality are being carried out in five established piezometers and fourteen existing open wells through third party NABL laboratory. The monitoring of quantity and quality is being done four times a year in pre-monsoon(May), monsoon (August), post-monsoon(November) and winter (January) seasons. Monitoring report is being submitted to the MoEF&CC and to the State Pollution Control Board on half-yearly basis.

	(January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment, Forests & Climate. Change and the Central Pollution Control Board quarterly within one month of monitoring.	
(xl)	The company shall put up artificial ground water recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	**Being complied.** Project authority has developed seven settling ponds and six check dams within the mine lease area. Water requirement of nearby villages are being met by PA.
(xli)	Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.	**Partly complied.** Two ETPs (each 60 KLD capacity) were constructed at base workshop and pit head CHP for treating waste water. *At present, domestic effluents in Goleti township is being treated by conventional method i.e., septic tank followed by soak pit. Construction of Sewage treatment plant (2x100KLD) is under process.*
(xlii)	Besides carrying out regular periodic health check-up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be	**Complied.** The Project Proponent is carrying out occupational health check-up for 20% of workmen every year in the area hospital with qualified doctors, staff & facilities as per stipulations.

	subjected to health check-up for occupational diseases and hearing impairment, if any, through an specialized agency/institution within the District/State and the results reported to this Ministry and to DGMS.	
(xliii)	Land oustees shall be compensated as per the norms laid out R&R Policy of CIL or the National R&R Policy or R&R Policy of the State Government whichever is higher.	**Complied.** This EC is granted for enhancement of annual coal production capacity of the project from 3.0MTPA to 3.75MTPA within the existing mine lease area, R&R plan was already implemented in the project earlier. *There is R&R involved. PA has submitted that total numbers of Project Affected Persons (PAFs) involved in the project are 881 and Project Displaced Families (PDFs) are 488. Compensation of Rs. 22.43 Crores was paid for PAFs and R&R for 488 PDFs were completed at an expenditure of Rs.16.15 Crores in the year 2013 as per G.O no. 68 of 2005.* *However, as per EC, there is discrepancy observed with statement submitted by project authority wherein it stated that total 556 families were already displaced. 18 families were displaced as a part of Khairagura OC and Rs. 17.83 Crs has already paid under R&R.* *Another 49 families who are near Vattivagu are also proposed for rehabilitation on their request. An amount of Rs. 365.21 Lakhs provided and R&R will be carried out through State government.* *PA has not complied the shifting of 49 families who are near Vattivagu under Rehabilitation.*
(xliv)	For monitoring land use pattern	**Being complied.**

	and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1:5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF&CC and its concerned regional office.	Digital processing of entire lease area using remote sensing technique is being done regularly once in three years for monitoring land use pattern and latest reports. The study was previously carried out by Geosys enterprise solutions Pvt Ltd., during 2019-20 and the report was submitted to RO, MoEF& CC, Chennai.
(xlv)	A detailed Final Mine Closure Plan along with details of Corpus fund shall be submitted to the Ministry of Environment, Forests & Climate Change within 6 months of grant of Environmental clearance.	**Being Complied.** A progressive mining & mine closure plan along with the corpus fund details as approved by MoC was already submitted along with half yearly reports vide Ltr.No.BPA/ENV/R-02/2015/98, dt:23.05.2015. Corpus fund for final mine closure plan a separate account is opened(Acc.no. 38363991199) an amount of Rs. 84.82 Crore is deposited including interest as on 31.03.2022. The final mine closure plan will be submitted after approval by MoC five years before the closure of the mine i.e., in the year 2025-26.
(xlvi)	The project authorities shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine	**Being Complied.** The CSR activities are being taken up every year in consultation with the Panchayats of the local villages & administration. An amount of Rs. 22.13 Crores has been incurred under CSR activities in the surrounding villages of Bellampalli Area. In addition to the above, an amount of Rs. 184.84 Crores was deposited with Komuram Bheem District Authorities towards District Mineral Foundation Trust (DMFT)

		for taking up developmental activities in the project affected villages.
(xlvii)	**Corporate Environment Responsibility:**	
a)	The company shall have a well laid down Environment Policy approved by the Board of Directors.	**Complied.** The SCCL has a well laid down Environment Policy approved by the Board of Directors on 01.11.2011.
b)	The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements /deviation/ violation of the environmental or forest norms/conditions.	**Complied.** The SCCL has a well laid down Environment Policy approved by the Board of Directors consisting standard operating process/procedures to bring into focus any infringements/ deviation/ violation of the environmental or forest norms/conditions. The status of compliance of EC/FC is being appraised to SCCL Board of Directors once in three months as per Companies Act, 2013 by the project authorities.
c)	The hierarchical system or administrative order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.	**Being Complied.** A company level environment cell with qualified personnel headed by General Manager (Environment) who is directly reportable to the Chairman of the Company is established to monitor and guide in implementation of the environmental safeguards.
d)	To have proper checks and balance, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of	**Complied** PP stated that SCCL is having a well laid down environmental policy duly approved by the Board of Directors. The environmental policy is containing

	Directors of the company and/or shareholders or stakeholders at large.	standard operating procedures to have proper checks and to bring into focus any violation of the environmental norms.

4B: General conditions:

<table>
<tr><td>(i)</td><td>No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, Forests & Climate Change.</td><td>Complied.</td></tr>
<tr><td>(ii)</td><td>No Change in the calendar plan of production for quantum of mineral coal shall be made.</td><td>Complied.
The year-wise coal production (copy enclosed) is within the sanctioned EC capacity as shown below.
<table>
<tr><td rowspan="2">.
lo</td><td rowspan="2">Year</td><td></td><td>Coal (in MT)</td></tr>
<tr><td>As per EC</td><td>Actual</td></tr>
<tr><td>1.</td><td>2015-16</td><td rowspan="7">3.75
(As per existing EC)</td><td>3.37</td></tr>
<tr><td>2.</td><td>2016-17</td><td>3.12</td></tr>
<tr><td>3.</td><td>2017-18</td><td>3.41</td></tr>
<tr><td>4.</td><td>2018-19</td><td>2.91</td></tr>
<tr><td>5.</td><td>2019-20</td><td>2.60</td></tr>
<tr><td>6.</td><td>2020-21</td><td>1.25</td></tr>
<tr><td>7.</td><td>2021-22</td><td>2.35</td></tr>
</table></td></tr>
<tr><td>(iii)</td><td>Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM_{10}, $PM_{2.5}$, SO_2 andNox monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in</td><td>Being complied.
Eight ambient air quality monitoring stations (four stations in core including one CAAQMS & four stations in buffer zone) have been established in the project. Ambient air quality is being monitored through third party NABL accredited laboratory. The parameters, PM_{10}, $PM_{2.5}$, SO_2 and NOx are being monitored once in</td></tr>
</table>

	consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.	fortnight. Heavy metals such as Hg, As, Ni, Cd, Cr, etc in coal and particulate matter are being carried out once in six months. The monitored data is being submitted to MoEF&CC and TSPCB on regular basis.
(iv)	Data on ambient air quality (PM_{10} , $PM_{2.5}$, SO_2 and Nox) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its concerned Regional Office and to the State Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognized under the EPA rules, 1986 shall be furnished as part of compliance report.	**Being Complied.** Data on ambient air quality (PM_{10}, $PM_{2.5}$, SO_2 and Nox) and heavy metals such as Hg, As, Ni, Cd, Cr, and other monitoring data is being regularly submitted to the Ministry including its concerned Regional Office and to the State Pollution Control Board once in six months along with half yearly reports.

(v)	Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc., shall be provided with ear plugs/muffs.	**Being Complied.** Adequate measures are being taken for control of noise levels below 85 dBA in the work environment. Sound proof cabins are provided in HEMM. The periodic planned preventive maintenance & engine tuning of HEMM and other transport vehicles is being done at regular intervals as per schedules submitted by OEM (Original Equipment Manufacturer) to keep the noise levels below 85 dBA. The persons engaged in high noise work environment such as drilling and blasting operations are being provided with earplugs. Controlled blasting techniques with the use of Non-electric (Nonel) delay detonators are being practiced to control ground vibrations, noise and fly rock. The ambient noise level in the work environment and nearby villages is being monitored regularly.
(vi)	Industrial waste water (workshop and waste water from the mine) shall be properly collected, treated so as to confirm to the standards prescribed under GSR 422(E) dt 19th May, 1993 and 31st December, 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	**Complied.** Two ETP's (each 60 KLD capacity), one for base workshop and second one for pit head CHP are constructed. Periodical monitoring of effluents is being carried out to ensure compliance to prescribed standards before discharging into natural water source.
(vii)	Vehicular emissions shall be kept under control and regularly	**Being Complied.** The periodic planned preventive

	monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.	maintenance and engine tuning of HEMM and other transport vehicles are being done at regular intervals as per schedules submitted by OEM to keep the vehicular emissions under control. Vehicles used for transporting of coal are being covered with tarpaulin and optimally loaded. The vehicular emissions are being monitored once in six months. Vehicles having valid PUC certificates from authorized pollution testing centres are only engaged.
(viii)	Monitoring of Environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analyzed through a laboratory recognized under EPA Rules, 1986.	**Being Complied.** Post project environmental monitoring work is being carried out by an external agency, i.e. "Environmental Protection Training and Research Institute" (EPTRI), Hyderabad which is a CPCB recognized & NABL accredited lab (recognized under EPA Rules, 1986). A regional environmental laboratory for Bellampalli region was established by M/s EPTRI at Mandamarri for monitoring of critical parameters. The laboratory recognized under EPA Rules, 1986.
(ix)	Personal working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.	**Complied.** Protective wear like dust respirators or dust masks are being provided to workers exposed to dusty environment periodically. the adequate training is being imparted on safety and health aspects at the Mine Vocational Training Center provided at

		Goleti.
(x)	Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof. The quality of Environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.	**Being complied.** Occupational health surveillance programme of the workers (Periodical Medical Examination (PME) is being carried out to check the health profile of the workmen i.e. for the lung diseases, hearing impairment, eye testing, heart functioning, hypertension, diabetes, chest X-Ray, complete blood and urine picture, etc., and records are being maintained. Periodically Medical Examination (PME) is being done at an interval of once in five years for employees age up to 45 years, once in three years for employees age more than 45 years and eye refraction test is being done for vehicle drivers and HEMM operators at an interval of once in a year.
(xi)	A separate Environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.	**Being Complied.** A separate Environmental management cell with qualified personnel is being set up under the control of GM Environment.
(xii)	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned regional office.	**Being complied.** The funds earmarked for the environmental safeguards are being spent for environmental protection measures. Allocation made for environment management plan was with a capital cost of Rs. 20.02 Crores and revenue cost of Rs. 18.72 per Tonne (Rs. 4.64 Crores/Annum).

		Till date, Capital expenditure of Rs. 43.79 Crores and revenue expenditure: Rs.112.241 Crores was incurred in the project for environment management. The year-wise environmental expenditure is being submitted along with half yearly reports to the ministry and its regional office of MoEF&CC.
(xiii)	The project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days 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 may also be seen at the website of the Ministry of Environment, Forests & Climate Change at http://envfor.nic.in.	**Complied.** The project was granted EC, was advertised in widely circulated two local daily news papers i.e. in "Andhra Jyothi" (in Telugu language) & in "The Hindu" (in English language), dt: 06.03.2015. A copy of the Environmental Clearance letter was marked to the Member Secretary, T.S.P.C.B., Hyderabad, vide Ltr.No.BPA/ENV/G-06/2015/30, dt: 21.02.2015.
(xiv)	A copy of the Environmental Clearance letter shall be marked to concern Panchayat/Zilla Parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on	**Complied.** This condition was complied by marking a copy to the concerned vide letter no.BPA/ENV/G-06/2015/30, dated 21.02.2015. The Environmental Clearance letter is displayed on company's website i.e. www.scclmines.com.

	company's website.	
(xv)	A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Sector and Collector's officer/ Tehasildar's Office for 30 days.	**Complied.** This condition was complied vide Ltr .No.BPA /ENV/G-06/2015/30. dated 21.02.2015.
(xvi)	The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance 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. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM_{10} , $PM_{2.5}$, SO_2 and Nox (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.	**Complied.** The Environmental Clearance letter was displayed on company's website i.e. www. Scclmines.com. The compliance status of the stipulated environmental clearance conditions will be updated once in every six months along half yearly monitoring report on company's website i.e.www.scclmines.com., so as to bring the same in public domain. The monitoring data of environmental quality parameters, Air, SW, GW, Effluents, Noise, etc. & critical pollutants PM_{10}, $PM_{2.5}$, SO_2 Nox etc. ambient air and critical sectoral parameters are regularly displayed at the entrance of the project premises and mine office, in corporate office and on company's website i.e.www.scclmines.com.
(xvii)	The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated Environmental clearance conditions (both in hard copy and in e-mail) to	**Complied.** The updated half yearly monitoring reports on status of compliance of the stipulated Environmental Clearance conditions is being submitted (both in hard copy, soft data in e-

	the respective Regional Office of the Ministry, respective Zonal Officer's of CPCB and the SPCB.	mail) once in every six months to the Regional Office, MoEF&CC and TSPCB.
(xviii)	The Regional office of this Ministry located in the Region shall monitor compliance of the stipulated conditions. The project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	The project authority is extending full cooperation to the office (s) of the regional office by furnishing the requisite data / information / monitoring reports.
(xix)	The Environmental statement for each financial year ending 31st 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.	**Complied.** The Environmental Statement for each financial year ending 31st March in Form-V is being submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently.
5	The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report so also during their presentation to the EAC.	All commitments and recommendations made in the EIA / EMP report have been complied.
6	The commitment made by the Proponent to the issue raised during Public Hearing shall be implemented by the Proponent.	This EC was granted for enhancement of annual production capacity of the project from 3.0MTPA to 3.75MTPA under 25% expansion category as per OM No.J-

		11015/30/2004.IA.II(M), Dated: 19-12-2012 and public hearing was not required to be conducted in this case. However, the commitments made in earlier PH is being complied by project authorities (copy enclosed)
7	The Proponent is required to obtain all necessary clearance/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.	Complied
8	The Ministry or any other competent authority may stipulate any further condition for environmental protection.	Agreed.
9	The Proponent shall setup an Environment Audit cell with responsibility and accountability to ensure implementation of all the EC conditions.	**Being Complied.** An area level internal environment audit cell is setup with the following members under the chairmanship of SO to GM of area. Sl.No | Designation | 1 | SO to GM | Chairman 2 | Area Engineer (E&M) | member 3 | DGM(Civil) | member 4 | Area env.officer | member The above audit cell is conducting meeting once in a month and auditing the condition wise compliance status of all the EC conditions.
10	Concealing factual data or submission of false/fabricated data and failure to comply with any of the	Agreed

	conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	
11	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. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of ground water and surface water, and occupational and other diseases due to the mining operations.	**Complied.** CFE and CFO were obtained for the project under air and Water Acts. PLI policy is also being taken every year. The latest PLI policy was taken from National insurance Company bearing no. 550200492210000013, dt. 30.04.2022 and is valid up to 29.04.2023. All measures are being taken to avoid soil contamination, contamination of ground water, surface water, and occupational and other diseases due to the mining operations.
12	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.	Agreed.
13	This EC supersedes the earlier EC	Agreed

	vide letter no. J-11015/36/2003-IA. II(M) dt 16.09.2004 for at a rated capacity of 0.72 MTPA in a lease area of 338.78 ha. And environmental clearance videMoEF letter No. J-11015/689/2007-IA-II(M), dt. 22.10.2007 for expansion in rated capacity from 0.72 MTPA to 2.5 MTPA with a peak production of 3 MTPA and increase in lease area from 338.78 ha. To 1217.50 ha.	

Sub: Khairagura Opencast Expansion Project (3.75 MTPA), Ref: EC No. J-11015/28/2013-IA-II (M), dated 20.01.2016

S.No.	EC Conditions	Compliance Status
1	An estimated total 578.49 Mm3 of OB will be generated during the entire life of the mine. Out of which 184.58 Mm3 of OB will be dumped in three external OB in an earmarked area covering 331.75 Ha. Of land. 393.91 Mm3 of OB will be dumped in one internal OB Dump in an earmarked area covering 280.98 ha. Of land. The maximum height of external OB dump will not exceed 120m. The maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self-sustaining and compliance status shall be submitted to MoEF and its Regional Office on yearly basis.	Refer to condition no. xxiv

ANNEXURE-II

Compliance status of the Consent For Operation (CFO) of Khairagura Opencast Expansion Project.

Consent Order No: TSPCB/RCP/NZB/HO/W&A/2017/854, dt: 01.06.2017. valid up to 30.09.2022

SCHEDULE – B (SPECIAL CONDITIONS)

<table>
<tr><th>S. No</th><th>Condition</th><th>Compliance status</th></tr>
<tr><td>1</td><td>The industry shall scrupulously comply with all the terms & conditions stipulated in the E.C. obtained from MoE&F, GOI on 06.02.2015.</td><td>--</td></tr>
<tr><td>2</td><td>The effluent discharged shall not contain constituents in excess of the tolerance limits prescribed below.
<table>
<tr><th>Order No.</th><th>Parameter</th><th>Limiting Standards.</th></tr>
<tr><td>1</td><td>PH</td><td>5.50-9.0</td></tr>
<tr><td></td><td>Total suspended solids (TSS).</td><td>100.0 mg/l</td></tr>
<tr><td></td><td>Oil & grease.</td><td>10.0 mg/l</td></tr>
<tr><td></td><td>COD</td><td>250 mg/l</td></tr>
</table></td><td>The analysis reports are enclosed as Annexure.</td></tr>
<tr><td>3</td><td>The industry shall file the water cess returns in Form-I as required under section (5)of Water (Prevention and Control of Pollution) Cess Act, 1977 on or before the 5th of every calendar month, showing the quantity of water consumed in the previous month along with water meter readings. The industry shall remit water cess as per the assessment orders as and when issued by Board.</td><td>--</td></tr>
</table>

<table>
<tr><th>S. No</th><th>Condition</th><th>Compliance status</th></tr>
<tr><td>4</td><td>The industry shall take steps to reduce water consumption to the extent possible and consumption shall NOT exceed the quantities prescribed below:

<table><tr><th>Sl. No</th><th>Purpose.</th><th>Quantity in KLD.</th></tr><tr><td>1</td><td>Process & wash (Dust suppression, plantation & washing of HEMM)</td><td>2300</td></tr><tr><td>2</td><td>Domestic.</td><td>70</td></tr><tr><td>3</td><td>Service water</td><td>60</td></tr><tr><td></td><td>Total:</td><td>2430</td></tr><tr><td>4</td><td>Mine Seepage</td><td>11430</td></tr></table></td><td>Complied.

water consumption & water consumption details are being submitted along with half yearly reports.</td></tr>
<tr><td>5</td><td>The industry shall comply with Ambient Air Quality standards for the Suspended Particulate Matter (SPM), Respirable Particulate Matter (RPM), sulphur Di-oxide (SO2) & oxides of Nitrogen(NOx) concentration in down wind direction considering pre-dominant wind direction, at a distance of 500mts from the following dust generating sources, as prescribed below:

<u>Dust Generating Sources:</u>

Loading or unloading, haul road, coal Transportation Road, coal Handling plant (CHP), Railway sliding, Blasting, Drilling, overburden dumps or any other dust generating external sources, nearby road etc.

<table><tr><th>Sl. No.</th><th>Parameters</th><th>Time weighted Average</th><th>Standards In</th></tr></table></td><td>The Ambient Air Quality Monitoring & Noise monitoring reports are enclosed as Annexure.</td></tr>
</table>

<table>
<tr><th>S. No</th><th>Condition</th><th>Compliance status</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td></td><td></td><td>ug/m3.</td></tr>
<tr><td>1</td><td>SPM</td><td>Annual Average</td><td>360</td></tr>
<tr><td></td><td></td><td>24 Hrs</td><td>500</td></tr>
<tr><td>2</td><td>RPM</td><td>AnnualAverage</td><td>180</td></tr>
<tr><td></td><td></td><td>24 Hrs</td><td>250</td></tr>
<tr><td>3</td><td>SO2</td><td>AnnualAverage</td><td>80</td></tr>
<tr><td></td><td></td><td>24 Hrs</td><td>120</td></tr>
<tr><td>4</td><td>NOx</td><td>AnnualAvarage</td><td>80</td></tr>
<tr><td></td><td></td><td>24 Hrs</td><td>120</td></tr>
</table>
Noise Levels:
Day time (6 AM to 10 PM) – 75 dB(A).
Night time (10 PM to 6 AM)- 70 dB(A).
</td><td></td></tr>
<tr><td>6</td><td>The industry shall not increase the capacity beyond the permitted capacity, without obtaining CFE & CFO of the Board.</td><td>Complied.
<table>
<tr><th>S. No</th><th>Year</th><th>As per EC and CFO</th><th>Coal (in MTPA)</th></tr>
<tr><td></td><td></td><td></td><td>Actual</td></tr>
<tr><td></td><td>2015-16</td><td rowspan="7">3.75 MTPA (As per existing EC)</td><td>3.37</td></tr>
<tr><td></td><td>2016-17</td><td>3.12</td></tr>
<tr><td></td><td>2017-18</td><td>3.41</td></tr>
<tr><td></td><td>2018-19</td><td>2.91</td></tr>
<tr><td></td><td>2019-20</td><td>2.60</td></tr>
<tr><td></td><td>2020-21</td><td>1.25</td></tr>
<tr><td></td><td>2021-22</td><td>2.35</td></tr>
</table>
</td></tr>
</table>

S. No	Condition	Compliance status
7	The industry shall comply with the Notification No.GSR.O2 (E), dt. .02.01.2014, issued by the Ministry of Environment & Forests, Govt.of India regarding supply of Raw or blended or beneficiated coal to the Thermal Power Plants with stipulated Ash content.	--
8	The company shall provide water sprinkling system at coal yards.	7 nos. of 28 KL & 5 no of 10KL capacity mobile water tankers are being deployed for dust suppression on coal yards, haul roads, approach roads, dumps, etc & Permanent water sprinkling arrangement was provided.
9	The industry shall ensure continuous water sprinkling on haul roads, at the coal handling facility and at other sources of dust emissions.	A sensor activated wetting point is provided to wet, loaded dumpers before unloading the coal into crushers. Fixed point water sprinkling system is provided along permanent roads. A mist sprayer is also provided at pit head CHP for dust suppression. 7 nos. of 28 KL & 5 no of 10KL capacity mobile water sprinklers are being deployed for dust suppression on haul roads, approach roads, dumps, etc.,
10	The company shall provide the fixed water sprinkling arrangements for the complete Haul road.	Fixed water sprinkling arrangement is provided along permanent haul roads.
11	The company shall provide water sprinklers and dust collection system at all transfer points and dust collection system to coal crusher.	A sensor activated wetting point is provided to wet, loaded dumpers before unloading the coal into crushers. A mist sprayer is provided at crusher of pit head CHP for dust suppression.
12	The industry shall take up black topping of permanent roads like routes to Coal Handling Plant, permanent internal roads etc., in a time bound	The entire coal transport road, routes to Coal Handling Plant & permanent internal roads were already black topped.

S. No	Condition	Compliance status
	manner.	
13	The company shall provide necessary treatment system for treatment of waste water generated from workshops, washing of HEMM& excess mine water to be discharged from the mine, before commissioning of the mine.	Two No.s of ETPs (each 60 KLD capacity) were constructed at base workshop and pit head CHP for treating waste water.
14	The company shall ensure covering of coal trucks with tarpaulin to avoid spillages of coal and fugitive emissions due to transportation of coal.	Vehicles used for transporting of coal are being covered with tarpaulin.
15	The industry shall adopt eco-friendly mining practices.	The industry is adopting eco-friendly mining practices such as controlled blasting technique.
16	The industry shall under take only wet drilling & shall ensure maintenance of adequate measures to mitigate dust generation from drilling operations.	Wet drilling is being practiced.
17	The industry shall adopt blasting technique using shock tube and delay detonators.	Controlled blasting with NONEL (non-electric) technology is being done Mitigative measures like optimum charge per delay, sequence of blasting, following designed blasting pattern, etc., are being taken to reduce the ground vibrations, to arrest fly rock and to prevent boulders.
18	The industry shall develop and maintain greenbelt all along haul roads and CHP.	Green belt is developed and being maintained all along haul roads and CHP. Plantation was carried out with native species. 14,78,294 nos. of plants were planted in an area of 393.23 Ha. up to 31.03.2022, In dump area- 338.95Ha. (including 20 Ha internal dump)

S. No	Condition	Compliance status
		In avenue & greenbelt area: 54.28Ha.
19	The industry shall take all measures for control of coal dust nuisance and Air pollution at Rechini & Rebbana Railway Sidings. The company shall erect permanent sheeting all along the Rechini & Rebbana Railway sidings. The company shall erect permanent sheeting all along the Rechini & Rebbana Railway sidings, instead of net cloth. The company shall adopt continuous water sprinkling at these Railway sidings. The coal shall be wetted before loading in to wagons and water spraying shall be done while unloading of coal by operating mobile sprinklers. The company shall maintain records of water sprinkling at these Railway sidings.	The Coal Handling Plant with siding is constructed at Goleti X Road. The coal is being loaded by conveyer through closed pre-weigh bin into wagons No Siding and loading operations in wagons in Rechini & Rebbana siding
20	The company shall commission the CHP at Goleti by September, 2017 as committed by the industry during the meeting and vide letter dt.26.05.2017.	Commissioned.
21	The company shall take up extensive plantation under the Haritha Haram program of the state Government.	The mining area is surrounded by green belt having closed thick canopy of the tree cover. Plantation is being taken up every year as per approved EMP. 14,78,294 nos. of plants were planted in an area of 393.23 Ha. up to 31.03.2022.
22	The company shall provide and maintain Electro-magnetic water meters for recording water consumption for dust suppression and domestic purposes.	Flow meters provided for recording water consumption for dust suppression and domestic purposes.
23	The natural drainage of water shall be maintained. Dump sites shall not cross any streams, water flow from the Mining Lease Area, even during the monsoon, shall be free of suspended	All necessary measures such as preparation of drains around dumps, making of earthen bund around dumps, stabilization of final dumps with plantation, etc. are being taken up to prevent overflow of OB into the

S. No	Condition	Compliance status
	matter and conform to prescribed water quality standards.	Vattivagu reservoir and into the agricultural fields. The garland drains, deck drains etc., are being regularly de-silted and maintained properly. sump capacity was designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity was provided adequate retention period to allow proper settling of silt material.
24	Dumping of overburden, if done, shall use the retreating pyramid bench formation with concurrent, physical and biological reclamation. Dumps shall be contoured and provided with relief control and stabilized. Dump tops shall be compacted, leveled and be properly drained.	Dumping of overburden is being done as per approved EMP. The final dumps are levelled, compacted, spread with topsoil and stabilized with native species at 2500 plants per Ha.
25	Soil binding and nitrogen fixing plants shall be planted in the Mining Lease Area. Biological reclamation shall be done in two phases, the first phase shall be plant appropriate quick growing grass & shrubs and the second phase shall grow slower growing native shrubs & trees.	Plantation is being done with soil binding and nitrogen fixing plants at 2500 plants per Ha. as envisaged in approved EMP. Hamata grass, Agave succers, leguminous plants, etc., are being planted in first phase for prevention of soil erosion and native forest species for sustainable development.
26	The industry shall take all possible measures for artificial recharge of ground water by implementing corrective measures.	Seven nos. of settling ponds and six nos. of check dams constructed in the project area are also serving the purpose of augmentation of ground water recharging. Mine discharge water undergoes treatment in slow Sand filter bed/sedimentation tank is being used for consumption and remaining water discharged into natural drains leading to Vattivagu.
27	The industry shall comply with all the	--

S. No	Condition	Compliance status
	relevant provisions of the Utilization of the Fly Ash Notification issued by MoEF & CC, Govt. of India.	
28	The industry shall comply with the conditions stipulated in the EC order issued by MoEF & CFE order issued by the Board.	
29	All waste material shall be accommodated within the Mining Lease Area.	All waste material i.e. overburden excavated is being accommodated within the Mining Lease Area.
30	The industry shall fix sensor activated water spraying plungers at unloading points to conserve the water and to make the system full proof mechanism.	A sensor activated wetting point was provided to wet, loaded dumpers before unloading the coal into crushers.
31	The industry shall minimize the height of fall of coal at all coal transfer points.	The height of fall of coal at all coal transfer points was kept minimum.
32	The industry shall construct garland drains along the dumps and within the lease area to restrict the suspended solids entering into the natural water regime as well as to prevent the storm water entering the lease area.	Garland drains and deck drains are made around 3 external overburden dumps and around one internal over burden dump for arresting silt. The garland drains, deck drains etc., are being regularly de-silted and maintained properly. Garland drains and deck drains were made for a total length of 18.01 km and 28.6 km for OB dumps respectively. At D I Dump Garland drain for a length of 6.6 Km Deck drains for 5.1 Km length on first deck terrace Deck drains for 4.44 Km length on second deck terrace At D II Dump Garland drains for a length of 3.8km

S. No	Condition	Compliance status
		Deck drains for 3.42 km length on first deck terrace Deck drains for 2.21 km length on second deck terrace. At D III dump Garland drains for a length of 6.61 km Deck drains for 6.64 km length on first deck terrace Deck drains for 4.10 km length on second deck terrace At Internal dump Garland drains for a length of 1 Km deck drains for 840m length on first deck terrace deck drains for 850m length on 2nd deck terrace deck drains for 1 km length on 3rd deck terrace Around Quarry 8 km Garland drain is provided around the quarry. Seven no's of settling ponds of size 30mX30mX2m are made followed by six check dams to arrest silt and sediment flows from dumps.
33	The industry shall provide impact rollers at transfer points to damper the noise levels at Coal Handling Plant (CHP).	Impact rollers are provided at transfer points to damper the noise levels at Coal Handling Plant.
34	The industry shall reuse the treated workshop effluents for dust separation and for raising plantation within the	The treated workshop effluents are being reused for dust separation and for raising plantation within the workshop premises.

S. No	Condition	Compliance status
	workshop premises.	
35	Check dams and filter beds shall be constructed to protect from stream runoffs.	Six nos. of check dams and one filter bed are constructed to protect from stream runoffs.
36	Ground water table levels shall be monitored every season. Any lowering of the ground water table in comparison to the previous season shall be reported to the Board immediately. Discarded pits shall be allowed to fill with water.	Six nos. of check dams constructed in the project area are also serving the purpose of augmentation of ground water recharging. There is no incidence of drying of wells in nearby villages.
37	Vehicles shall be well maintained and engine idling shall be minimized. Vehicle cabs shall be made dust proof and air-conditioned.	Complied.
38	All the dumped over burden shall be covered with top soil and also the refilled are of the mine. After covering with top soil, afforestation shall be done on the dumps and refilled mining area with local species of trees.	The topsoil is being preserved separately and top soil is being spread on final dumps, and plantation is being taken up with native species at 2500 plants per Ha. on final dumps and refilled mining area.
39	Crushers at CHP shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, hauling roads, transfer points, etc.,	The management has provided mist spray arrangements for controlling dust emissions and it is to submit that coal is not pulverized in the crushers and is only crushed to (-) 200mm size. A sensor activated wetting point is provided to wet, loaded dumpers before unloading the coal into crushers. Fixed point water sprinkling system is provided along permanent roads. A mist sprayer is provided at crusher of pit head CHP for dust suppression 7 no's of 28 KL & 5 nos of 10 KL capacity mobile water sprinklers are being deployed for dust suppression on haul roads,

S. No	Condition	Compliance status
		approach roads, dumps, etc,.
40	The industry shall adhere to the following blasting techniques proposed in EIA/MP report. Control Blast Technique shall be strictly implemented. They shall have a 50 meter wide green belt around the mine and beyond that they shall provide fencing as a measure to prevent accidents. The proponent shall conserve the top soil for use in re-forestation programme and for covering the over burden dumps and retiled mine for regeneration of forest and for developing green belt. The op soil shall be reserved for further refilling.	Controlled blasting technique is being practiced. Thick and reserve forest exists all around the mine and a trench was provided all around the boundary as a safety measure. The removed topsoil is being stacked at earmarked site. In order to avoid keeping active of topsoil dump, Eucalyptus clones were planted and Hamata seeds spread on the topsoil dump. Leguminous plants were planted to preserve the fertility. The topsoil is being spread on final dumps and final refilled area before taking up plantation.
41	The applicable shall submit Environment Statement in Form-V before 30th September of every year as per Rule NO.14 of E (P) rules, 1986 & amendments thereof.	The Environment Statement in Form-V is being submitted before 30th September of every year as per Rule NO.14 of E (P) rules, 1986 & amendments thereof. Environment statement for the financial year (2020-2021) was submitted in form V on 21.09.2021.
42	The conditions are without prejudice to the rights and contentions of this Board in any Hon'ble Court of Law.	--

(70)

ANNEXURE-III

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT

Sample Nos. 2022 – 04393

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**
2) Sample Source : Borewell water sample collected at SC colony, Vulipitta (V).
3) Sample Collected on : 27/04/2022
4) Sample Received on : 29/04/2022
5) Report issued on : 21/05/2022
6) Sample Collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No	Parameter	Units	Method No*	Results	Standards as per IS 10500 : 2012 Permissible Limit
				04393	
1	pH		4500-H^+-B	7.46	6.5 to 8.5
2	E. Conductivity	µmhos/cm	2510-B	1720	-
3	Total Suspended Solids (TSS)	mg/L	2540-D	13	-
4	Total Dissolved Solids (TDS)	mg/L	2540 C	1036	2000
5	Chemical Oxygen Demand (COD)	mg/L	5220 B	22	-
6	Total Alkalinity as $CaCO_3$	mg/L	2320-B	324	600
7	Total Hardness as $CaCO_3$	mg/L	2340-C	376	600
8	Calcium as Ca^{2+}	mg/L	3500-Ca B	98	200
9	Magnesium as Mg^{2+}	mg/L	3500-Mg B	32	100
10	Chlorides as Cl^-	mg/L	4500 Cl^- B	146	1000
11	Sulphates as SO_4^{-2}	mg/L	4500-SO_4^{-2}	65	400
12	Nitrates as NO_3^-	mg/L	4500-B-NO_3^- B	5	45
13	Sodium	mg/L	3500-Na B	76	-
14	Potassium	mg/L	3500-K B	14	-
15	Fluoride as F^-	mg/L	4500-F^--C	0.27	1.5
16	Percent Sodium (% Na)	% (meq/L)	-	29.42	-
17	Sodium Absorption Ratio(SAR)	meq/L	-	1.70	-
18	Cadmium	mg/L	3111B & 3500 as Cd	0.001	0.003
19	Lead	mg/L	3111B & 3500 as Pb	0.032	0.01
20	Total Chromium	mg/L	3111B & 3500 as Cr	BDL	0.05
21	Copper	mg/L	3111B & 3500 as Cu	BDL	1.5
22	Nickel	mg/L	3111B & 3500 as Ni	BDL	0.02
23	Zinc	mg/L	3111B & 3500 as Zn	1.123	15
24	Iron	mg/L	3111B & 3500 as Fe	0.041	0.3
25	Manganese	mg/L	3111B & 3500 as Mn	0.031	0.3
26	Boron	mg/L	4500-B-C	0.32	1.0

*Standard Methods for the examination of water & waste water APHA – 23rd edition.

Note:
1) Results are related to samples as received.
2) All Values are expressed in mg/L except pH.

BDL – Below Detectable Limit.

21-5-22

SENIOR ENVIRONMENTAL SCIENTIST
ZONAL LABORATORY
T.S. POLLUTION CONTROL BOARD
R.C.PURAM, SANGAREDDY DISTRICT

(71)

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT

Sample Nos. 2022 – 04394

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**

2) Sample Source : Borewell water sample collected at SC colony, Near D. Shanker Residence, Vulipitta (V).

3) Sample Collected on : 27/04/2022

4) Sample Received on : 29/04/2022

5) Report issued on : 21/05/2022

6) Sample Collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No	Parameter	Units	Method No*	Results	Standards as per IS 10500 : 2012 Permissible Limit
				04394	
1	pH		4500-H^+-B	7.38	6.5 to 8.5
2	E. Conductivity	µmhos/cm	2510-B	1655	-
3	Total Suspended Solids (TSS)	mg/L	2540-D	12	-
4	Total Dissolved Solids (TDS)	mg/L	2540 C	1014	2000
5	Chemical Oxygen Demand (COD)	mg/L	5220 B	21	-
6	Total Alkalinity as $CaCO_3$	mg/L	2320-B	436	600
7	Total Hardness as $CaCO_3$	mg/L	2340-C	508	600
8	Calcium as Ca^{2+}	mg/L	3500-Ca B	110	200
9	Magnesium as Mg^{2+}	mg/L	3500-Mg B	56	100
10	Chlorides as Cl^-	mg/L	4500 Cl^- B	126	1000
11	Sulphates as SO_4^{-2}	mg/L	4500-SO_4^{-2}	63	400
12	Nitrates as NO_3^-	mg/L	4500-B-NO_3^- B	3	45
13	Sodium	mg/L	3500-Na B	44	-
14	Potassium	mg/L	3500-K B	2	-
15	Fluoride as F^-	mg/L	4500-F-C	0.22	1.5
16	Percent Sodium (% Na)	% (meq/L)	-	15.77	-
17	Sodium Absorption Ratio(SAR)	meq/L	-	0.85	-
18	Cadmium	mg/L	3111B & 3500 as Cd	BDL	0.003
19	Lead	mg/L	3111B & 3500 as Pb	0.011	0.01
20	Total Chromium	mg/L	3111B & 3500 as Cr	BDL	0.05
21	Copper	mg/L	3111B & 3500 as Cu	BDL	1.5
22	Nickel	mg/L	3111B & 3500 as Ni	BDL	0.02
23	Zinc	mg/L	3111B & 3500 as Zn	0.301	15
24	Iron	mg/L	3111B & 3500 as Fe	0.276	0.3
25	Manganese	mg/L	3111B & 3500 as Mn	BDL	0.3
26	Boron	mg/L	4500-B-C	0.01	1.0

*Standard Methods for the examination of water & waste water APHA – 23rd edition.

Note:
1) Results are related to samples as received.
2) All Values are expressed in mg/L except pH.

BDL – Below Detectable Limit.

21/5/22

SENIOR ENVIRONMENTAL SCIENTIST

SENIOR ENVIRONMENTAL SCIENTIST
ZONAL LABORATORY
T.S. POLLUTION CONTROL BOARD
R.C.PURAM, SANGAREDDY DISTRICT

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TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT

Sample Nos. 2022 – 04395

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**

2) Sample Source : Borewell water sample collected at Gover Guda Village.

3) Sample Collected on : 27/04/2022

4) Sample Received on : 29/04/2022

5) Report issued on : 21/05/2022

6) Sample Collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No	Parameter	Units	Method No*	Results	Standards as per IS 10500 : 2012 Permissible Limit
				04395	
1	pH		4500-H^+-B	6.99	6.5 to 8.5
2	E. Conductivity	µmhos/cm	2510-B	1358	-
3	Total Suspended Solids (TSS)	mg/L	2540-D	10	-
4	Total Dissolved Solids (TDS)	mg/L	2540 C	836	2000
5	Chemical Oxygen Demand (COD)	mg/L	5220 B	18	-
6	Total Alkalinity as $CaCO_3$	mg/L	2320-B	436	600
7	Total Hardness as $CaCO_3$	mg/L	2340-C	464	600
8	Calcium as Ca^{2+}	mg/L	3500-Ca B	102	200
9	Magnesium as Mg^{2+}	mg/L	3500-Mg B	51	100
10	Chlorides as Cl^-	mg/L	4500 Cl^- B	174	1000
11	Sulphates as SO_4^{-2}	mg/L	4500-SO_4^{-2}	34	400
12	Nitrates as NO_3^-	mg/L	4500-B-NO_3^- B	4	45
13	Sodium	mg/L	3500-Na B	75	-
14	Potassium	mg/L	3500-K B	2	-
15	Fluoride as F^-	mg/L	4500-F^--C	0.09	1.5
16	Percent Sodium (% Na)	% (meq/L)	-	25.75	-
17	Sodium Absorption Ratio(SAR)	meq/L	-	1.51	-
18	Cadmium	mg/L	3111B & 3500 as Cd	BDL	0.003
19	Lead	mg/L	3111B & 3500 as Pb	0.011	0.01
20	Total Chromium	mg/L	3111B & 3500 as Cr	BDL	0.05
21	Copper	mg/L	3111B & 3500 as Cu	BDL	1.5
22	Nickel	mg/L	3111B & 3500 as Ni	BDL	0.02
23	Zinc	mg/L	3111B & 3500 as Zn	0.271	15
24	Iron	mg/L	3111B & 3500 as Fe	0.194	0.3
25	Manganese	mg/L	3111B & 3500 as Mn	BDL	0.3
26	Boron	mg/L	4500-B-C	BDL	1.0

*Standard Methods for the examination of water & waste water APHA – 23rd edition.

Note:
1) Results are related to samples as received.
2) All Values are expressed in mg/L except pH.

BDL – Below Detectable Limit.

21/5/22

SENIOR ENVIRONMENTAL SCIENTIST

SENIOR ENVIRONMENTAL SCIENTIST
ZONAL LABORATORY
T.S. POLLUTION CONTROL BOARD
R.C.PURAM, SANGAREDDY DISTRICT

(73)

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT

Sample Nos. 2022 – 04396

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**
2) Sample Source : Borewell water sample collected at Chopidi Village.
3) Sample Collected on : 27/04/2022
4) Sample Received on : 29/04/2022
5) Report issued on : 21/05/2022
6) Sample Collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No	Parameter	Units	Method No*	Results	Standards as per IS 10500 : 2012 Permissible Limit
				04396	
1	pH		4500-H^+-B	7.39	6.5 to 8.5
2	E. Conductivity	µmhos/cm	2510-B	1576	-
3	Total Suspended Solids (TSS)	mg/L	2540-D	14	-
4	Total Dissolved Solids (TDS)	mg/L	2540 C	958	2000
5	Chemical Oxygen Demand (COD)	mg/L	5220 B	20	-
6	Total Alkalinity as $CaCO_3$	mg/L	2320-B	512	600
7	Total Hardness as $CaCO_3$	mg/L	2340-C	384	600
8	Calcium as Ca^{2+}	mg/L	3500-Ca B	75	200
9	Magnesium as Mg^{2+}	mg/L	3500-Mg B	48	100
10	Chlorides as Cl^-	mg/L	4500 Cl^- B	152	1000
11	Sulphates as SO_4^{-2}	mg/L	4500-SO_4^{-2}	44	400
12	Nitrates as NO_3^-	mg/L	4500-B-NO_3^- B	3	45
13	Sodium	mg/L	3500-Na B	143	-
14	Potassium	mg/L	3500-K B	2	-
15	Fluoride as F^-	mg/L	4500-F^--C	0.98	1.5
16	Percent Sodium (% Na)	% (meq/L)	-	44.35	-
17	Sodium Absorption Ratio(SAR)	meq/L	-	3.16	-
18	Cadmium	mg/L	3111B & 3500 as Cd	0.005	0.003
19	Lead	mg/L	3111B & 3500 as Pb	0.032	0.01
20	Total Chromium	mg/L	3111B & 3500 as Cr	BDL	0.05
21	Copper	mg/L	3111B & 3500 as Cu	BDL	1.5
22	Nickel	mg/L	3111B & 3500 as Ni	BDL	0.02
23	Zinc	mg/L	3111B & 3500 as Zn	0.034	15
24	Iron	mg/L	3111B & 3500 as Fe	0.039	0.3
25	Manganese	mg/L	3111B & 3500 as Mn	BDL	0.3
26	Boron	mg/L	4500-B-C	BDL	1.0

*Standard Methods for the examination of water & waste water APHA – 23rd edition.

Note:
1) Results are related to samples as received.
2) All Values are expressed in mg/L except pH.

BDL – Below Detectable Limit.

21/5/22

SENIOR ENVIRONMENTAL SCIENTIST

SENIOR ENVIRONMENTAL SCIENTIST
ZONAL LABORATORY
T.S. POLLUTION CONTROL BOARD
R.C.PURAM, SANGAREDDY DISTRICT

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT

Sample Nos. 2022 – 04397

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**
2) Sample Source : Borewell water sample collected at Dorli Village.
3) Sample Collected on : 27/04/2022
4) Sample Received on : 29/04/2022
5) Report issued on : 21/05/2022
6) Sample Collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No	Parameter	Units	Method No*	Results 04397	Standards as per IS 10500 : 2012 Permissible Limit
1	pH		4500-H^+-B	7.20	6.5 to 8.5
2	E. Conductivity	µmhos/cm	2510-B	1527	-
3	Total Suspended Solids (TSS)	mg/L	2540-D	12	-
4	Total Dissolved Solids (TDS)	mg/L	2540 C	940	2000
5	Chemical Oxygen Demand (COD)	mg/L	5220 B	16	-
6	Total Alkalinity as $CaCO_3$	mg/L	2320-B	496	600
7	Total Hardness as $CaCO_3$	mg/L	2340-C	304	600
8	Calcium as Ca^{2+}	mg/L	3500-Ca B	68	200
9	Magnesium as Mg^{2+}	mg/L	3500-Mg B	32	100
10	Chlorides as Cl^-	mg/L	4500 Cl^- B	128	1000
11	Sulphates as SO_4^{-2}	mg/L	4500-SO_4^{-2}	27	400
12	Nitrates as NO_3^-	mg/L	4500-B-NO_3^- B	3	45
13	Sodium	mg/L	3500-Na B	139	-
14	Potassium	mg/L	3500-K B	2	-
15	Fluoride as F^-	mg/L	4500-F^--C	0.64	1.5
16	Percent Sodium (% Na)	% (meq/L)	-	49.69	-
17	Sodium Absorption Ratio(SAR)	meq/L	-	3.47	-
18	Cadmium	mg/L	3111B & 3500 as Cd	BDL	0.003
19	Lead	mg/L	3111B & 3500 as Pb	0.074	0.01
20	Total Chromium	mg/L	3111B & 3500 as Cr	BDL	0.05
21	Copper	mg/L	3111B & 3500 as Cu	BDL	1.5
22	Nickel	mg/L	3111B & 3500 as Ni	BDL	0.02
23	Zinc	mg/L	3111B & 3500 as Zn	0.244	15
24	Iron	mg/L	3111B & 3500 as Fe	0.129	0.3
25	Manganese	mg/L	3111B & 3500 as Mn	BDL	0.3
26	Boron	mg/L	4500-B-C	BDL	1.0

*Standard Methods for the examination of water & waste water APHA – 23rd edition.

Note:
1) Results are related to samples as received.
2) All Values are expressed in mg/L except pH.

BDL – Below Detectable Limit.

21/5/22

SENIOR ENVIRONMENTAL SCIENTIST

SENIOR ENVIRONMENTAL SCIENTIST
ZONAL LABORATORY
T.S. POLLUTION CONTROL BOARD
R.C.PURAM, SANGAREDDY DISTRICT

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT

Sample Nos. 2022 – 04398

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**
2) Sample Source : Borewell water sample collected at Pathibanda Village.
3) Sample Collected on : 27/04/2022
4) Sample Received on : 29/04/2022
5) Report issued on : 21/05/2022
6) Sample Collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No	Parameter	Units	Method No*	Results	Standards as per IS 10500 : 2012 Permissible Limit
				04398	
1	pH		4500-H^+-B	7.25	6.5 to 8.5
2	E. Conductivity	µmhos/cm	2510-B	1292	-
3	Total Suspended Solids (TSS)	mg/L	2540-D	9	-
4	Total Dissolved Solids (TDS)	mg/L	2540 C	780	2000
5	Chemical Oxygen Demand (COD)	mg/L	5220 B	15	-
6	Total Alkalinity as $CaCO_3$	mg/L	2320-B	352	600
7	Total Hardness as $CaCO_3$	mg/L	2340-C	308	600
8	Calcium as Ca^{2+}	mg/L	3500-Ca B	80	200
9	Magnesium as Mg^{2+}	mg/L	3500-Mg B	26	100
10	Chlorides as Cl^-	mg/L	4500 Cl^- B	112	1000
11	Sulphates as SO_4^{-2}	mg/L	4500-SO_4^{-2}	14	400
12	Nitrates as NO_3^-	mg/L	4500-B-NO_3^- B	5	45
13	Sodium	mg/L	3500-Na B	76	-
14	Potassium	mg/L	3500-K B	2	-
15	Fluoride as F^-	mg/L	4500-F^--C	0.06	1.5
16	Percent Sodium (% Na)	% (meq/L)	-	34.70	-
17	Sodium Absorption Ratio(SAR)	meq/L	-	1.88	-
18	Cadmium	mg/L	3111B & 3500 as Cd	BDL	0.003
19	Lead	mg/L	3111B & 3500 as Pb	0.011	0.01
20	Total Chromium	mg/L	3111B & 3500 as Cr	BDL	0.05
21	Copper	mg/L	3111B & 3500 as Cu	BDL	1.5
22	Nickel	mg/L	3111B & 3500 as Ni	BDL	0.02
23	Zinc	mg/L	3111B & 3500 as Zn	0.588	15
24	Iron	mg/L	3111B & 3500 as Fe	0.041	0.3
25	Manganese	mg/L	3111B & 3500 as Mn	BDL	0.3
26	Boron	mg/L	4500-B-C	BDL	1.0

*Standard Methods for the examination of water & waste water APHA – 23rd edition.

Note:
1) Results are related to samples as received.
2) All Values are expressed in mg/L except pH.

BDL – Below Detectable Limit.

21/5/22

SENIOR ENVIRONMENTAL SCIENTIST

ZONAL LABORATORY
POLLUTION CONTROL BOARD
R.PURAM, SANGAREDDY DISTRICT

(76)

ANNEXURE- IV

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT
FORM – X
REPORT BY THE BOARD ANALYST
(See Rule 26)

Report No. 2022 – 04379 & 04380 Dt:-21-05-2022

I hereby certify that I, Sri. D. Nageswar Rao, State Board Analyst, Zonal Laboratory duly appointed under sub-section (3) of section 53 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) received on the day 29/04/2022 from **Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee,** a sample of **M/s. SCCL, Khairaguda OCP. The Joint Committee inspected the M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District** collected on 28/04/2022 for analysis. The samples were in a condition fit for analysis reported below:

2022 – 04379 : Mine Discharge water (Filter Bed Inlet)
2022 – 04380 : Filter Bed Outlet

I further certify that I have analyzed the aforementioned sample on 29/04/2022 to 21/05/2022 and declare the result of the analysis to be as follows:

S. No.	Parameter	Method No*	Results	
			04379	04380
1	pH	**4500-H^+-B**	7.82	7.87
2	Total Suspended Solids (TSS)	**2540-D**	14	8
3	Total Dissolved Solids (TDS)	**2540-C**	828	782
4	Chemical Oxygen Demand (COD)	**5220-B**	7	3
5	Biological Oxygen Demand (BOD)	**5210-B**	BDL	BDL
6	Oil & Grease	**5520-B,D**	BDL	BDL
7	Cadmium	**3111B & 3500 as Cd**	BDL	BDL
8	Lead	**3111B & 3500 as Pb**	0.053	BDL
9	Total Chromium	**3111B & 3500 as Cr**	BDL	BDL
10	Copper	**3111B & 3500 as Cu**	BDL	BDL
11	Nickel	**3111B & 3500 as Ni**	BDL	BDL
12	Zinc	**3111B & 3500 as Zn**	0.022	BDL
13	Iron	**3111B & 3500 as Fe**	0.172	0.137
14	Manganese	**3111B & 3500 as Mn**	BDL	BDL
15	Boron	**4500-B-C**	0.04	BDL

Note: All result are expressed in mg/L except pH.

* Standard methods for the examination of water & waste water APHA -23rd edition.

The results are related to samples as received.
The condition of the seals, fastening and container on receipt was intact.

BDL – Below Detectable Limit.

21/5/22

BOARD ANALYST
SENIOR ENVIRONMENTAL SCIENTIST
ZONAL LABORATORY
T.S. POLLUTION CONTROL BOARD
R.C.PURAM, SANGAREDDY DISTRICT

Signed this: 21/05/2022
Address:
D. Nageswar Rao
Senior Environmental Scientist,
Zonal Laboratory, R.C.Puram.

To,
Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT

Sample Nos. 2022 – 04381

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**

2) Sample Source : Sample collected from Mine discharging water drain leading to Vatti Vaagu near Iron Bridge.

3) Sample Collected on : 27/04/2022

4) Sample Received on : 29/04/2022

5) Report issued on : 21/05/2022

6) Sample Collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No	Parameter	Units	Method No*	Results
				04381
1	pH		4500-H^+-B	8.11
2	E. Conductivity	µmhos/cm	2510-B	1374
3	Total Suspended Solids (TSS)	mg/L	2540-D	10
4	Total Dissolved Solids (TDS)	mg/L	2540 C	826
5	Chemical Oxygen Demand (COD)	mg/L	5220 B	370
6	Total Alkalinity as $CaCO_3$	mg/L	2320-B	272
7	Total Hardness as $CaCO_3$	mg/L	2340-C	368
8	Calcium as Ca^{2+}	mg/L	3500-Ca B	86
9	Magnesium as Mg^{2+}	mg/L	3500-Mg B	37
10	Chlorides as Cl^-	mg/L	4500 Cl^- B	158
11	Sulphates as SO_4^{-2}	mg/L	4500-SO_4^{-2}	68
12	Nitrates as NO_3^-	mg/L	4500-B-NO_3^- B	6
13	Sodium	mg/L	3500-Na B	75
14	Potassium	mg/L	3500-K B	8
15	Fluoride as F^-	mg/L	4500-F^--C	0.17
16	Percent Sodium (% Na)	% (meq/L)	-	30.06
17	Sodium Absorption Ratio(SAR)	meq/L	-	1.70
18	Cadmium	mg/L	3111B & 3500 as Cd	BDL
19	Lead	mg/L	3111B & 3500 as Pb	0.032
20	Total Chromium	mg/L	3111B & 3500 as Cr	BDL
21	Copper	mg/L	3111B & 3500 as Cu	BDL
22	Nickel	mg/L	3111B & 3500 as Ni	BDL
23	Zinc	mg/L	3111B & 3500 as Zn	0.127
24	Iron	mg/L	3111B & 3500 as Fe	4.911
25	Manganese	mg/L	3111B & 3500 as Mn	0.139
26	Boron	mg/L	4500-B-C	0.2

*Standard Methods for the examination of water & waste water APHA – 23rd edition.

Note:
1) Results are related to samples as received.
2) All Values are expressed in mg/L except pH.

BDL – Below Detectable Limit.

21/5/22

SENIOR ENVIRONMENTAL SCIENTIST
T.S. POLLUTION CONTROL BOARD
R.C.PURAM, SANGAREDDY DISTRICT

SENIOR ENVIRONMENTAL SCIENTIST

(78)

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT

Sample Nos. 2022 – 04383

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**

2) Sample Source : Sample collected from Phase – I diversion of Vatti Vaagu before confluence of mine discharging water drain.

3) Sample Collected on : 27/04/2022

4) Sample Received on : 29/04/2022

5) Report issued on : 21/05/2022

6) Sample Collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No	Parameter	Units	Method No*	Results
				04383
1	pH		4500-H^+-B	8.46
2	E. Conductivity	µmhos/cm	2510-B	755
3	Total Suspended Solids (TSS)	mg/L	2540-D	8
4	Total Dissolved Solids (TDS)	mg/L	2540 C	464
5	Chemical Oxygen Demand (COD)	mg/L	5220 B	17
6	Total Alkalinity as $CaCO_3$	mg/L	2320-B	164
7	Total Hardness as $CaCO_3$	mg/L	2340-C	180
8	Calcium as Ca^{2+}	mg/L	3500-Ca B	40
9	Magnesium as Mg^{2+}	mg/L	3500-Mg B	19
10	Chlorides as Cl^-	mg/L	4500 Cl^- B	72
11	Sulphates as SO_4^{-2}	mg/L	4500-SO_4^{-2}	28
12	Nitrates as NO_3^-	mg/L	4500-B-NO_3^- B	4
13	Sodium	mg/L	3500-Na B	37
14	Potassium	mg/L	3500-K B	3
15	Fluoride as F^-	mg/L	4500-F^--C	0.47
16	Percent Sodium (% Na)	% (meq/L)	-	30.53
17	Sodium Absorption Ratio(SAR)	meq/L	-	1.20
18	Cadmium	mg/L	3111B & 3500 as Cd	BDL
19	Lead	mg/L	3111B & 3500 as Pb	BDL
20	Total Chromium	mg/L	3111B & 3500 as Cr	BDL
21	Copper	mg/L	3111B & 3500 as Cu	BDL
22	Nickel	mg/L	3111B & 3500 as Ni	BDL
23	Zinc	mg/L	3111B & 3500 as Zn	BDL
24	Iron	mg/L	3111B & 3500 as Fe	0.571
25	Manganese		3111B & 3500 as Mn	0.001
26	Boron	mg/L	4500-B-C	BDL

*Standard Methods for the examination of water & waste water APHA – 23rd edition.

Note:
1) Results are related to samples as received.
2) All Values are expressed in mg/L except pH.

BDL – Below Detectable Limit.

21/5/22

SENIOR ENVIRONMENTAL SCIENTIST

ZONAL LABORATORY
T.S. POLLUTION CONTROL BOARD
R.C.PURAM, SANGAREDDY DISTRICT

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TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT

Sample Nos. 2022 – 04385

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**

2) Sample Source : Sample collected from Phase – I diversion of Vatti Vaagu after confluence of mine discharging water drain.

3) Sample Collected on : 27/04/2022

4) Sample Received on : 29/04/2022

5) Report issued on : 21/05/2022

6) Sample Collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No	Parameter	Units	Method No*	Results
				04385
1	pH		4500-H^+-B	8.33
2	E. Conductivity	µmhos/cm	2510-B	873
3	Total Suspended Solids (TSS)	mg/L	2540-D	9
4	Total Dissolved Solids (TDS)	mg/L	2540 C	532
5	Chemical Oxygen Demand (COD)	mg/L	5220 B	12
6	Total Alkalinity as $CaCO_3$	mg/L	2320-B	192
7	Total Hardness as $CaCO_3$	mg/L	2340-C	220
8	Calcium as Ca^{2+}	mg/L	3500-Ca B	45
9	Magnesium as Mg^{2+}	mg/L	3500-Mg B	26
10	Chlorides as Cl^-	mg/L	4500 Cl^- B	84
11	Sulphates as SO_4^{-2}	mg/L	4500-SO_4^{-2}	33
12	Nitrates as NO_3^-	mg/L	4500-B-NO_3^- B	5
13	Sodium	mg/L	3500-Na B	40
14	Potassium	mg/L	3500-K B	3
15	Fluoride as F^-	mg/L	4500-F^--C	0.27
16	Percent Sodium (% Na)	% (meq/L)	-	27.90
17	Sodium Absorption Ratio(SAR)	meq/L	-	1.17
18	Cadmium	mg/L	3111B & 3500 as Cd	BDL
19	Lead	mg/L	3111B & 3500 as Pb	0.011
20	Total Chromium	mg/L	3111B & 3500 as Cr	BDL
21	Copper	mg/L	3111B & 3500 as Cu	BDL
22	Nickel	mg/L	3111B & 3500 as Ni	BDL
23	Zinc	mg/L	3111B & 3500 as Zn	BDL
24	Iron	mg/L	3111B & 3500 as Fe	0.224
25	Manganese		3111B & 3500 as Mn	0.215
26	Boron	mg/L	4500-B-C	BDL

*Standard Methods for the examination of water & waste water APHA – 23rd edition.

Note:
1) Results are related to samples as received.
2) All Values are expressed in mg/L except pH.

BDL – Below Detectable Limit.

21/5/22

SENIOR ENVIRONMENTAL SCIENTIST

SENIOR ENVIRONMENTAL SCIENTIST
T.S. POLLUTION CONTROL BOARD
R.C.PURAM, SANGAREDDY DISTRICT

(80)

ANNEXURE – V

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT

Sample Nos. 2022 – 04387

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**

2) Sample Source : Water sample collected from Dorli Stream.

3) Sample Collected on : 27/04/2022

4) Sample Received on : 29/04/2022

5) Report issued on : 21/05/2022

6) Sample Collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No	Parameter	Units	Method No*	Results
				04387
1	pH		4500-H^+-B	8.02
2	E. Conductivity	µmhos/cm	2510-B	926
3	Total Suspended Solids (TSS)	mg/L	2540-D	12
4	Total Dissolved Solids (TDS)	mg/L	2540 C	566
5	Chemical Oxygen Demand (COD)	mg/L	5220 B	23
6	Total Alkalinity as $CaCO_3$	mg/L	2320-B	284
7	Total Hardness as $CaCO_3$	mg/L	2340-C	328
8	Calcium as Ca^{2+}	mg/L	3500-Ca B	80
9	Magnesium as Mg^{2+}	mg/L	3500-Mg B	31
10	Chlorides as Cl^-	mg/L	4500 Cl^- B	146
11	Sulphates as SO_4^{-2}	mg/L	4500-SO_4^{-2}	29
12	Nitrates as NO_3^-	mg/L	4500-B-NO_3^- B	4
13	Sodium	mg/L	3500-Na B	66
14	Potassium	mg/L	3500-K B	2
15	Fluoride as F^-	mg/L	4500-F^--C	0.02
16	Percent Sodium (% Na)	% (meq/L)	-	30.19
17	Sodium Absorption Ratio(SAR)	meq/L	-	1.58
18	Cadmium	mg/L	3111B & 3500 as Cd	BDL
19	Lead	mg/L	3111B & 3500 as Pb	0.011
20	Total Chromium	mg/L	3111B & 3500 as Cr	BDL
21	Copper	mg/L	3111B & 3500 as Cu	BDL
22	Nickel	mg/L	3111B & 3500 as Ni	BDL
23	Zinc	mg/L	3111B & 3500 as Zn	BDL
24	Iron	mg/L	3111B & 3500 as Fe	0.259
25	Manganese		3111B & 3500 as Mn	BDL
26	Boron	mg/L	4500-B-C	BDL

*Standard Methods for the examination of water & waste water APHA – 23rd edition.

Note:
1) Results are related to samples as received.
2) All Values are expressed in mg/L except pH.

BDL – Below Detectable Limit.

21/5/22

SENIOR ENVIRONMENTAL SCIENTIST

SENIOR ENVIRONMENTAL SCIENTIST
ZONAL LABORATORY
T.S. POLLUTION CONTROL BOARD
R.C.PURAM, SANGAREDDY DISTRICT

81

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT

Sample Nos. 2022 – 04388

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**

2) Sample Source : Water sample collected from Vatti Vaagu Reservoir after joining of Dorli Stream.

3) Sample Collected on : 27/04/2022

4) Sample Received on : 29/04/2022

5) Report issued on : 21/05/2022

6) Sample Collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No	Parameter	Units	Method No*	Results
				04388
1	pH		4500-H^+-B	7.93
2	E. Conductivity	µmhos/cm	2510-B	730
3	Total Suspended Solids (TSS)	mg/L	2540-D	8
4	Total Dissolved Solids (TDS)	mg/L	2540 C	440
5	Chemical Oxygen Demand (COD)	mg/L	5220 B	22
6	Total Alkalinity as $CaCO_3$	mg/L	2320-B	158
7	Total Hardness as $CaCO_3$	mg/L	2340-C	200
8	Calcium as Ca^{2+}	mg/L	3500-Ca B	49
9	Magnesium as Mg^{2+}	mg/L	3500-Mg B	19
10	Chlorides as Cl^-	mg/L	4500 Cl^- B	62
11	Sulphates as SO_4^{-2}	mg/L	4500-SO_4^{-2}	36
12	Nitrates as NO_3^-	mg/L	4500-B-NO_3^- B	4
13	Sodium	mg/L	3500-Na B	25
14	Potassium	mg/L	3500-K B	3
15	Fluoride as F^-	mg/L	4500-F^--C	0.61
16	Percent Sodium (% Na)	% (meq/L)	-	20.91
17	Sodium Absorption Ratio(SAR)	meq/L	-	0.77
18	Cadmium	mg/L	3111B & 3500 as Cd	BDL
19	Lead	mg/L	3111B & 3500 as Pb	0.011
20	Total Chromium	mg/L	3111B & 3500 as Cr	BDL
21	Copper	mg/L	3111B & 3500 as Cu	BDL
22	Nickel	mg/L	3111B & 3500 as Ni	BDL
23	Zinc	mg/L	3111B & 3500 as Zn	BDL
24	Iron	mg/L	3111B & 3500 as Fe	1.109
25	Manganese		3111B & 3500 as Mn	0.139
26	Boron	mg/L	4500-B-C	BDL

*Standard Methods for the examination of water & waste water APHA – 23rd edition.

Note:
1) Results are related to samples as received.
2) All Values are expressed in mg/L except pH.

BDL – Below Detectable Limit.

SENIOR ENVIRONMENTAL SCIENTIST
ZONAL LABORATORY
TELANGANA STATE POLLUTION CONTROL BOARD
R.C.PURAM, SANGAREDDY DISTRICT.

SENIOR ENVIRONMENTAL SCIENTIST

(82)

ANNEXURE -VI

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT

Sample Nos. 2022 – 04390

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**

2) Sample Source : Water sample collected from Vatti Vaagu Reservoir near grave yard, Vatti Vaagu (V), Thiryani (M), KB Asifabad District.

3) Sample Collected on : 27/04/2022

4) Sample Received on : 29/04/2022

5) Report issued on : 21/05/2022

6) Sample Collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No	Parameter	Units	Method No*	Results 04390	Standards as per IS 10500 : 2012 Permissible Limit
1	pH		4500-H^+-B	8.08	6.5 to 8.5
2	E. Conductivity	µmhos/cm	2510-B	648	-
3	Total Suspended Solids (TSS)	mg/L	2540-D	10	-
4	Total Dissolved Solids (TDS)	mg/L	2540 C	394	2000
5	Chemical Oxygen Demand (COD)	mg/L	5220 B	23	-
6	Total Alkalinity as $CaCO_3$	mg/L	2320-B	136	600
7	Total Hardness as $CaCO_3$	mg/L	2340-C	184	600
8	Calcium as Ca^{2+}	mg/L	3500-Ca B	38	200
9	Magnesium as Mg^{2+}	mg/L	3500-Mg B	21	100
10	Chlorides as Cl^-	mg/L	4500 Cl^- B	74	1000
11	Sulphates as SO_4^{-2}	mg/L	4500-SO_4^{-2}	19	400
12	Nitrates as NO_3^-	mg/L	4500-B-NO_3^- B	3	45
13	Sodium	mg/L	3500-Na B	27	-
14	Potassium	mg/L	3500-K B	2	-
15	Fluoride as F^-	mg/L	4500-F^--C	0.18	1.5
16	Percent Sodium (% Na)	% (meq/L)	-	24.08	-
17	Sodium Absorption Ratio(SAR)	meq/L	-	0.87	-
18	Cadmium	mg/L	3111B & 3500 as Cd	BDL	0.003
19	Lead	mg/L	3111B & 3500 as Pb	BDL	0.01
20	Total Chromium	mg/L	3111B & 3500 as Cr	BDL	0.05
21	Copper	mg/L	3111B & 3500 as Cu	BDL	1.5
22	Nickel	mg/L	3111B & 3500 as Ni	BDL	0.02
23	Zinc	mg/L	3111B & 3500 as Zn	BDL	15
24	Iron	mg/L	3111B & 3500 as Fe	BDL	0.3
25	Manganese		3111B & 3500 as Mn	0.008	0.3
26	Boron	mg/L	4500-B-C	BDL	1.0

*Standard Methods for the examination of water & waste water APHA – 23rd edition.

Note:
1) Results are related to samples as received.
2) All Values are expressed in mg/L except pH.

BDL – Below Detectable Limit.

SENIOR ENVIRONMENTAL SCIENTIST

SENIOR ENVIRONMENTAL SCIENTIST
POLLUTION CONTROL BOARD
...PURAM, SANGAREDDY DISTRICT

(83)

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

ANALYSIS REPORT

Sample Nos. 2022 – 04391

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**

2) Sample Source : Water sample collected from Vatti Vaagu Reservoir near Protection Bund.

3) Sample Collected on : 27/04/2022

4) Sample Received on : 29/04/2022

5) Report issued on : 21/05/2022

6) Sample Collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No	Parameter	Units	Method No*	Results	Standards as per IS 10500 : 2012 Permissible Limit
				04391	
1	pH		4500-H^+-B	8.03	6.5 to 8.5
2	E. Conductivity	µmhos/cm	2510-B	519	-
3	Total Suspended Solids (TSS)	mg/L	2540-D	6	-
4	Total Dissolved Solids (TDS)	mg/L	2540 C	318	2000
5	Chemical Oxygen Demand (COD)	mg/L	5220 B	20	-
6	Total Alkalinity as $CaCO_3$	mg/L	2320-B	128	600
7	Total Hardness as $CaCO_3$	mg/L	2340-C	140	600
8	Calcium as Ca^{2+}	mg/L	3500-Ca B	26	200
9	Magnesium as Mg^{2+}	mg/L	3500-Mg B	18	100
10	Chlorides as Cl^-	mg/L	4500 Cl^- B	50	1000
11	Sulphates as SO_4^{-2}	mg/L	4500-SO_4^{-2}	12	400
12	Nitrates as NO_3^-	mg/L	4500-B-NO_3^- B	3	45
13	Sodium	mg/L	3500-Na B	22	-
14	Potassium	mg/L	3500-K B	2	-
15	Fluoride as F^-	mg/L	4500-F^--C	0.40	1.5
16	Percent Sodium (% Na)	% (meq/L)	-	25.12	-
17	Sodium Absorption Ratio(SAR)	meq/L	-	0.81	-
18	Cadmium	mg/L	3111B & 3500 as Cd	BDL	0.003
19	Lead	mg/L	3111B & 3500 as Pb	BDL	0.01
20	Total Chromium	mg/L	3111B & 3500 as Cr	BDL	0.05
21	Copper	mg/L	3111B & 3500 as Cu	BDL	1.5
22	Nickel	mg/L	3111B & 3500 as Ni	BDL	0.02
23	Zinc	mg/L	3111B & 3500 as Zn	BDL	15
24	Iron	mg/L	3111B & 3500 as Fe	0.102	0.3
25	Manganese	mg/L	3111B & 3500 as Mn	BDL	0.3
26	Boron	mg/L	4500-B-C	0.01	1.0

*Standard Methods for the examination of water & waste water APHA – 23rd edition.

Note:
1) Results are related to samples as received.
2) All Values are expressed in mg/L except pH.

BDL – Below Detectable Limit.

21/5/22

SENIOR ENVIRONMENTAL SCIENTIST

ZONAL LABORATORY
T.S. POLLUTION CONTROL BOARD
C.PURAM, SANGAREDDY DISTRICT

83-A

ANNEXURE-VI (A)

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

SOIL / SOLID WASTE ANALYSIS REPORT

Sample Nos. 2022 – 04382

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**

2) Sample Source : Sediment sample collected from Mine discharging water drain leading to Vatti Vaagu near Iron Bridge.

3) Sample Collected on : 27/04/2022

4) Sample Received on : 29/04/2022

5) Report issued on : 21/05/2022

6) Sample collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No.	Parameter	Units	Results
			04382
1.	Cadmium	mg/kg	BDL
2.	Lead	mg/kg	BDL
3.	Total Chromium	mg/kg	BDL
4.	Copper	mg/kg	0.6
5.	Nickel	mg/kg	BDL
6.	Zinc	mg/kg	1.94
7.	Iron	mg/kg	0.28
8.	Manganese	mg/kg	BDL
9.	Boron	mg/kg	BDL

Note:
1) Results are related to sample as received.

BDL – Below Detectable Limit.

SENIOR ENVIRONMENTAL SCIENTIST

83-B

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

SOIL / SOLID WASTE ANALYSIS REPORT

Sample Nos. 2022 – 04384

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**

2) Sample Source : Sediment sample collected from Phase – I diversion of Vatti Vaagu before confluence of mine discharging water drain.

3) Sample Collected on : 27/04/2022

4) Sample Received on : 29/04/2022

5) Report issued on : 21/05/2022

6) Sample collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No.	Parameter	Units	Results
			04384
1.	Cadmium	mg/kg	BDL
2.	Lead	mg/kg	BDL
3.	Total Chromium	mg/kg	BDL
4.	Copper	mg/kg	0.4
5.	Nickel	mg/kg	BDL
6.	Zinc	mg/kg	1.2
7.	Iron	mg/kg	0.24
8.	Manganese	mg/kg	BDL
9.	Boron	mg/kg	BDL

Note:
1) Results are related to sample as received.

BDL – Below Detectable Limit.

SENIOR ENVIRONMENTAL SCIENTIST

83-C

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

SOIL / SOLID WASTE ANALYSIS REPORT

Sample Nos. 2022 – 04386

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**

2) Sample Source : Sediment sample collected from Phase – I diversion of Vatti Vaagu after confluence of mine discharging water drain.

3) Sample Collected on : 27/04/2022

4) Sample Received on : 29/04/2022

5) Report issued on : 21/05/2022

6) Sample collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No.	Parameter	Units	Results
			04386
1.	Cadmium	mg/kg	BDL
2.	Lead	mg/kg	BDL
3.	Total Chromium	mg/kg	BDL
4.	Copper	mg/kg	0.4
5.	Nickel	mg/kg	BDL
6.	Zinc	mg/kg	0.92
7.	Iron	mg/kg	0.2
8.	Manganese	mg/kg	BDL
9.	Boron	mg/kg	BDL

Note:
1) Results are related to sample as received.

BDL – Below Detectable Limit.

SENIOR ENVIRONMENTAL SCIENTIST

83-D

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

SOIL / SOLID WASTE ANALYSIS REPORT

Sample Nos. 2022 – 04389

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**

2) Sample Source : Sediment sample collected from Vatti Vaagu Reservoir after joining of Dorli Stream.

3) Sample Collected on : 27/04/2022

4) Sample Received on : 29/04/2022

5) Report issued on : 21/05/2022

6) Sample collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No.	Parameter	Units	Results
			04389
1.	Cadmium	mg/kg	BDL
2.	Lead	mg/kg	BDL
3.	Total Chromium	mg/kg	BDL
4.	Copper	mg/kg	0.2
5.	Nickel	mg/kg	BDL
6.	Zinc	mg/kg	0.80
7.	Iron	mg/kg	0.3
8.	Manganese	mg/kg	BDL
9.	Boron	mg/kg	BDL

Note:
1) Results are related to sample as received.

BDL – Below Detectable Limit.

SENIOR ENVIRONMENTAL SCIENTIST

83-E

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: R.C.PURAM
25-35/11, Tulasi Reddy Complex, R.C.Puram, Sangareddy District.

SOIL / SOLID WASTE ANALYSIS REPORT

Sample Nos. 2022 – 04392

1) Sample Description : **M/s. SCCL, Khairaguda OCP and Surrounding Villages (Vatti vagu, Vulipitta, Gover Guda, Chopidi, Dorli and Pathibanda) Thiryani (M), Komaram Bheem Asifabad District.**

2) Sample Source : Sediment sample collected from Vatti Vaagu Reservoir near Protection Bund.

3) Sample Collected on : 27/04/2022

4) Sample Received on : 29/04/2022

5) Report issued on : 21/05/2022

6) Sample collected by : Hon'ble NGT, South Zone, Chennai, OA. No. 39 of 2022 appointed Joint Committee.

S. No.	Parameter	Units	Results
			04392
1.	Cadmium	mg/kg	BDL
2.	Lead	mg/kg	BDL
3.	Total Chromium	mg/kg	BDL
4.	Copper	mg/kg	0.2
5.	Nickel	mg/kg	BDL
6.	Zinc	mg/kg	0.4
7.	Iron	mg/kg	BDL
8.	Manganese	mg/kg	BDL
9.	Boron	mg/kg	BDL

Note:
1) Results are related to sample as received.

BDL – Below Detectable Limit.

SENIOR ENVIRONMENTAL SCIENTIST

ANNEXURE-VII

(84)

GOVERNMENT OF TELANGANA
GROUND WATER DEPARTMENT

C2-S/921/2022

From,

A.Srivalli, M.Sc.,
District Ground Water Officer (I/c.),
Ground Water Department,
KUMRAM BHEEM ASIFABAD.

To,

The District Collector & Magistrate,
KUMRAM BHEEM ASIFABAD.

Office of the District Collector & Magistrate, Kumram Bheem Asifabad District
12 MAY 2022

Lr.No. **783/T/2020** Date: 12.05.2022.

Sir,

Sub :- Ground Water Department, Kumram Bheem Asifabad District - Submission of Ground Water Level Report at Kairagura OCP area, Kairagura village of Tiryani Mandal- Regarding.

Ref :- Phone call Received from Colletor Office. Date:09.05.2022.

-:o000:-

With reference to the subject and reference cited above, It is to submit the Ground Water Level Report at Kairagura OCP area, Kairagura village of Tiryani Mandal with detailed information is here with enclosed.

Your faithfully,

Sd/-
Dist.Ground Water Officer(I/c),
GWD, Kumram Bheem Asifabad.

Encl: As above.

//t.c.f.b.o//

B Ganesh

(B GANESH)
Assistant Hydrogeologist,
GWD, K.B.Asifabad

AC(LB) Peshi Received 13/5/2022

DRO

7032982029 - Srivalli, AGH Dist.

85

GROUND WATER DEPARTMENT, K B ASIFABAD

STATUS AND SCENARIO OF GROUND WATER AT KHAIRAGURA OCP AT KHAIRAGURA VILLAGE OF TIRYANI MANDAL AS ON MAY 2022

1. Introduction:

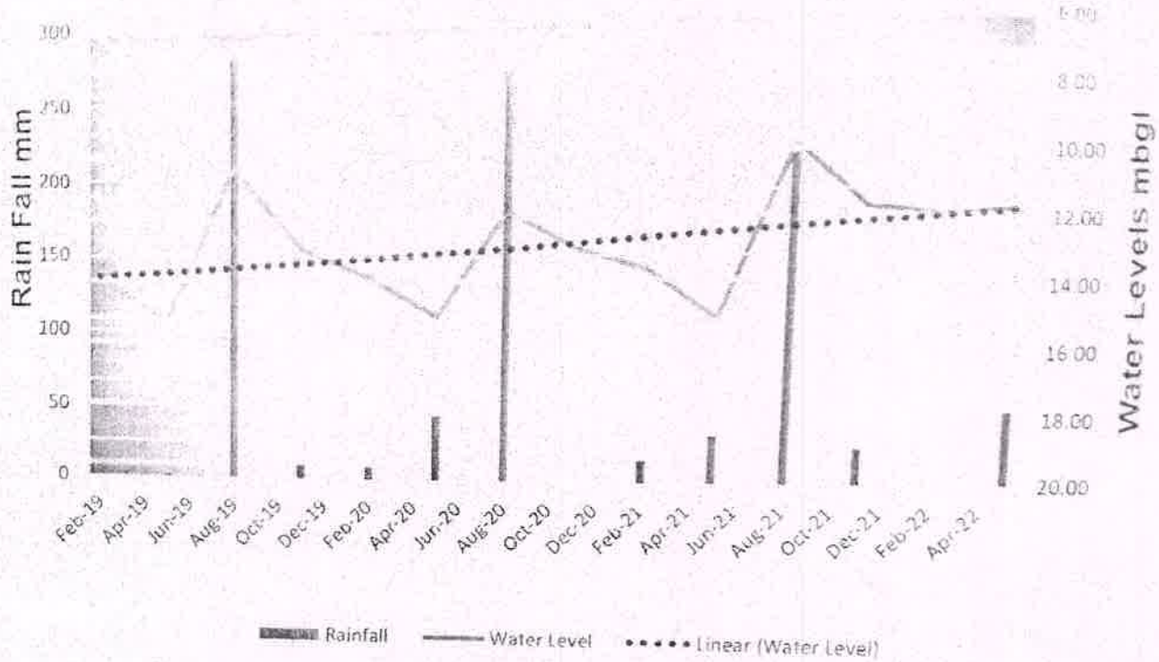
Ground Water Department, Asifabad is monitoring the change in ground water regime Quarterly continuously through a network of 4 monitoring stations in the Khairagura OCP in different hydro geological and geomorphic units from commonly developed aquifers. We are monitoring piezometers Quarterly. During May 2022, 4 Piezometers are monitored, and the water levels are analyzed. The water levels are recorded quarterly, and the fluctuations noticed seasonally and annually which are analyzed in relation to rainfall, recharge measures, drought and extraction of groundwater in the area. The water level data collected for the month of May – 2022 is analyzed and compared with earlier periods for studying the seasonal, annual fluctuations. The analytical results are represented through tables and maps along with suitable explanations (**Annexure-I**).

2. Rainfall:

Rainfall is the principal source of input for groundwater recharge. The behavior of groundwater table is essentially governed by rainfall, its quantity, intensity and frequency. The district received 1553.6 mm actual rainfall against the normal rainfall of 1179.1mm (32% of Excess Rain fall to the normal rainfall during **water year2021-22** up to May 2022). The South-West monsoon contributes about 79% of Normal rainfall, 21% is contributed by North-East monsoon and rest by other seasons.

Khairagura OCP area located at Khairagura Village of Tiryani Mandal received 1445.7mm actual rainfall against to the normal rainfall of 1073.8mm (35 % of Excess Rainfall to normal Rainfall during Water Year 2021-2022 upto May 2022).

COMPOSITE HYDROGRAPH OF KHAIRAGURA OCP, KHAIRAGURA VILLAGE OF TIRYANI MANDAL ASIFABAD DISTRICT TELANGANA FROM FEBRUARY-2019 TO MAY-2022



3. DEPTH TO WATER LEVEL DURING MAY-2022 (KHAIRAGURA OCP AREA).

The depth to water levels during May 2022 are summarized below.

1. An analysis of depth to water level data of 4 piezometers (**Annexure-I**) shows range from 7.10mbgl at Khairagura PZ3 in Khairagura OCP area to 22.43m bgl at Khairagura PZ4 in Khairagura OCP area.
2. Shallow water level in the range of 0 to 2 m bgl is not observed in any piezometer.
3. Water levels in the range of 2 to 5 m bgl is not observed in any piezometer.
4. Water levels in the range of 5 to 10 m bgl (50% of Piezometers) is observed in 03 piezometers.
5. Water levels between 10 to 20 m bgl is not observed in any piezometer.
6. Deep water levels of more than 20mbgl is observed in 01 piezometer.

4. W .TER LEVEL FLUCTUATION DURING MAY -2021 WITH REFERENCE TO MAY 2022:

Water level fluctuations during May-2022 with respect to May 2021 are presented in **Annexure-I.** The analysis of 4 piezometers shows that water level **rise** is recorded in 4 piezometers (100%) and there is No fall Observed in any piezometers. Rise in water levels is mainly due recharge during monsoon season (**Fig-1**).

1. The minimum and maximum rise is recorded as 1.00m at Khairagura PZ4 of and 6.18m at Khairagura PZ2 of Khairagura OCP area Piezometers respectively.
2. The minimum and maximum fall is not recorded in any Piezometer.
3. Compared to May 2021>0 m to<2 m rise in water levels is observed in 02 piezometers and 2 to 4 m rise in water levels is observed in 01piezometers.
4. Maximum rise of > 4 m rise in water levels is observed in 01piezometers.

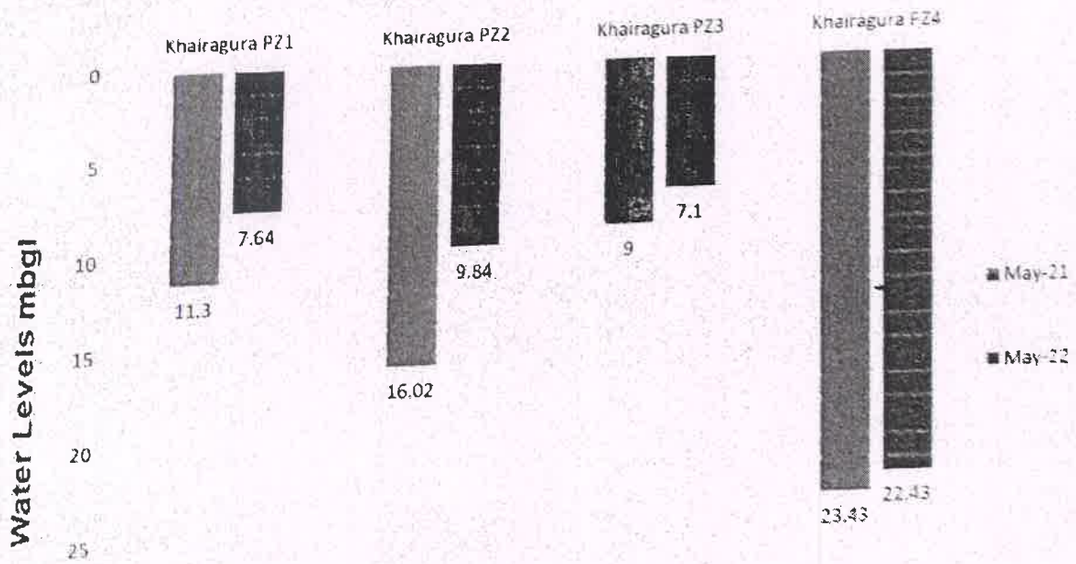


Fig-1 :Water Level Comparison in May -2022 with respect to May - 2021 in Khairagura OCP

5. WATER LEVEL FLUCTUATION DURING MAY -2020 WITH REFERENCE TO MAY 2022:

Water level fluctuations during May-2022 with respect to May 2020 are presented in **Annexure-I**. The analysis of 4 piezometers shows that water level **rise** is recorded in 4 piezometers (100%) and there is No fall Observed in any piezometers. Rise in water levels is mainly due recharge during monsoon season (**Fig-2**).

1. The minimum and maximum rise is recorded as 0.84m at Khairagura PZ4 of and 6.11m at Khairagura PZ2 of Khairagura OCP area Piezometers respectively.
2. The minimum and maximum fall is not recorded in any Piezometer.
3. Compared to May 2021>0 m to<2 m rise in water levels is observed in 02 piezometers and 2 to 4 m rise in water levels is observed in 01piezometers.
4. Maximum rise of > 4 m rise in water levels is observed in 01piezometers.

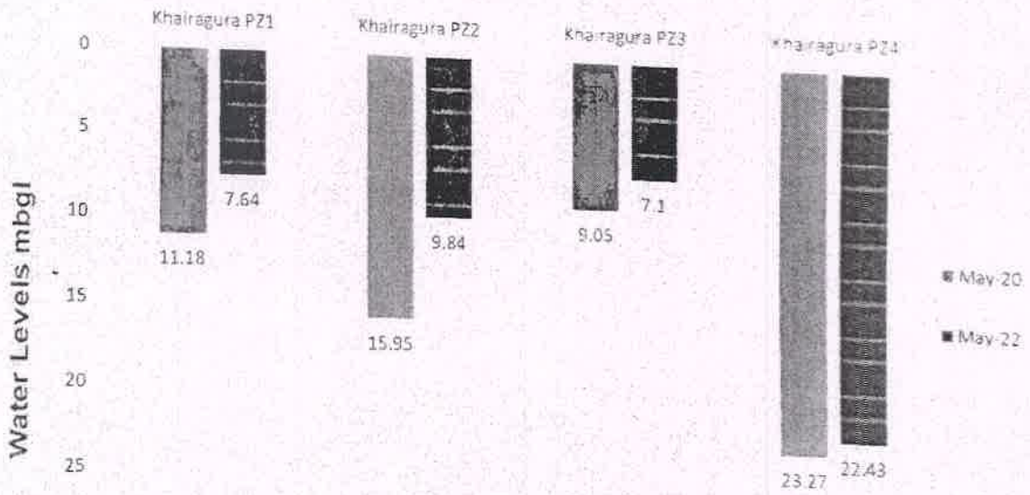


Fig-2 :Water Level Comparison in May -2022 with respect to May - 2020 in Khairagura OCP

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6. WATER LEVEL FLUCTUATION DURING MAY -2019 WITH REFERENCE TO MAY 2022:

Water level fluctuations during May-2022 with respect to May 2019 are presented in **Annexure-I**. The analyses of 4 piezometers shows that water level **rise** is recorded in 4 piezometers (100%) and there is No fall Observed in any piezometers. Rise in water levels is mainly due recharge during monsoon season **(Fig-3)**.

1. The minimum and maximum rise is recorded as 1.09m at Khairagura PZ4 of and 6.31m at Khairagura PZ2 of Khairagura OCP area Piezometers respectively.
5. The minimum and maximum fall is not recorded in any Piezometer.
6. Compared to May 2021 >0 m to 2 m rise in water levels is observed in 02 piezometers and 2 to 4 m rise in water levels is observed in 01piezometers.
7. Maximum rise of > 4 m rise in water levels is observed in 01piezometers.

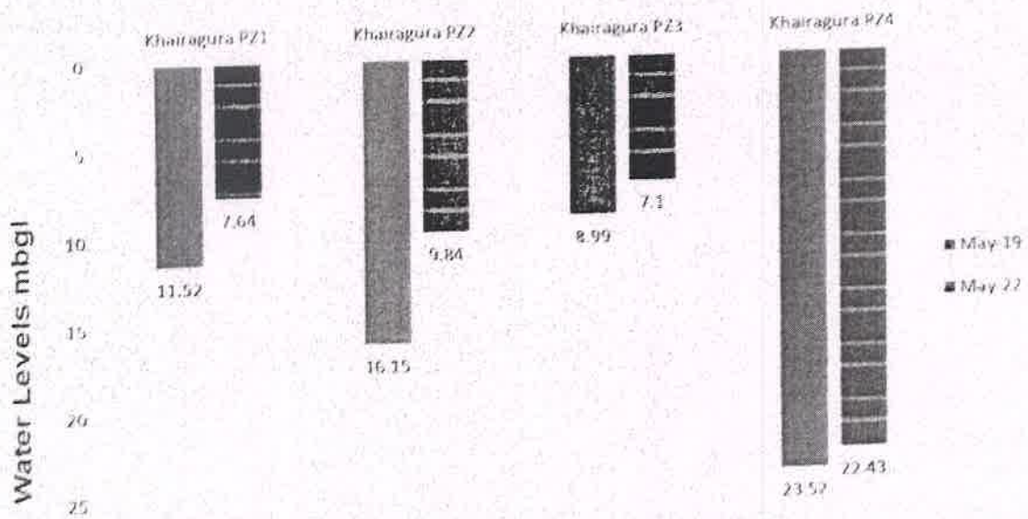

Fig-3 : Water Level Comparison in May -2022 with respect to May - 2019 in Khairagura OCP

7. DEEP WATER LEVELS:

Out of 4 Piezometers, one of the piezometer is showing average water levels > 20 m bgl (**Annexure-I**). The deepest water level 22.43mbgl is recorded in Khairagura PZ4 of Khairagura OCP area.

8. CONCLUSIONS:

- The study of water level fluctuation data indicates that the Ground Water levels rise to 3.19mbgl in May-2022 in comparison with May-2021.
- Depth to Ground Water levels more than 20m bgl is recorded in One Piezometer during May - 2022.
- The average groundwater level for the Khairagura OCP area in the month of May 2022 is 11.75m bgl, whereas it was 14.94mbgl during the same period in the previous year.
- The predominant water level range during May 2022 is between 5 to 10meters the Khairagura OCP area.

Sd -
DISTRICT GROUND WATER OFFICER
GWD, K.B. ASIFABAD

Annexure - 1

GROUND WATER DEPARTMENT, ASIFABAD

DEPTH TO GROUND WATER LEVELS REPORT FOR SHALLOW TABLE PIEZOMETERS IN BPA AREA Kharagura OC Expansion Project, ASIFABAD DISTRICT FOR THE MONTH OF MAY'2022

S.No	Piezometric Well No	Location	Depth (m)	Dia(m)	MP(m)	Latitude	Longitude	Depth to Water Levels in meters							Fluctuation in meters between May'2022 in Comparision to		
								May-19	Nov-19	May-20	Nov-20	May-21	Nov-21	May-22	May-19	May-20	May-21
1	Kharagura PZ1	Near coal haulage road at BoK Camp Office	50	01	0.86	19.25064	79.26689	11.52	9.02	11.18	8.97	11.3	7.1	7.64	3.88	3.54	3.66
2	Kharagura PZ2	In the Premises of Seam coal Yard	50	01	0.39	19.25111	79.2634	16.15	11.85	15.95	11.64	16.02	10.79	9.84	6.31	6.11	6.18
3	Kharagura PZ3	Near iron bridge at SRPOC Road side	50	01	0.58	19.23646	79.28035	8.99	7.7	9.05	7.98	9	6.99	7.1	1.89	1.95	1.9
4	Kharagura PZ4	Near Check post at SRPOC East side stake direction	50	01	0.45	19.23579	79.30001	23.52	22.55	23.27	22.67	23.43	21.62	22.43	1.09	0.84	1
							Average Water Levels	15.05	12.78	14.86	12.82	14.94	11.63	11.75	3.29	3.11	3.19
							Maximum Water Levels	23.52	22.55	23.27	22.67	23.43	21.62	22.43	6.31	6.11	6.18
							Minimum Water Levels	8.99	7.70	9.05	7.98	9.00	6.99	7.10	1.09	0.84	1.00

Sd/-
District Ground Water Officer,
Ground Water Department, Asifabad.

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ANNEXURE-VIII

Date: 11/05/2022

From

J.Milind Kumar M.Sc (Ag)

Assistant Director of Agriculture

Asifabad

To

District Agriculture Officer

Kumuram BHeem Asifabad

Sub: - Submission of Soil Sample Analysis Results Drawn at Ullipitta Village of Thiryani Mandal – Reg.

Sir,

With reference to above subject cited I am herewith submitting that, we have drawn 9 (Nine) soil samples from Fields at Ullipitta Village of Tiryani Mandal and sent to Soil Testing Lab Adilabad. The Soil sample analysis reports are enclosed herewith. As per the analysis reports

1.	Soil texture	: Clay Loam
2.	Colour	: LBGR
3.	pH	: 7.85 to 8.39 (Moderately Alkaline)
4.	EC	: 0.05 to 0.12 (Normal)
5.	Organic Carbon	: Low to Medium
6.	EFFERVESCENCE	: Calcarius
7.	P2O5(Kg /ac)	:5 to 10 (Low)
8.	K2O(Kg /ac)	: 88 to 176 (Medium to High)

With the above analysis report the following inferences can be drawn

1. The soil is fit for cultivation of crops
2. With good management practices we can achieve normal crop yields in above said fields
3. The analysis report says it is a Normal Soil
4. There is no any effect of mining on soil fertility.

This is submitted for favour of information and necessary action please

Thanking you sir

Yours Faithfully

J. Milind Kumar
Assistant Director of Agriculture(R)
Asifabad Division, Asifabad

Assistant Director of Agriculture

Asifabad

RESULTS OF SOIL SAMPLES DRAWN FROM ULLIPITTA VILLAGE OF THIRYANI MANDAL

Sr No	NAME OF THE FARMER	FATHER/HUSBAND NAME	NAME OF THE VILLAGE	SURVEY No	NAME OF THE MANDAL	COLOUR	SOIL TEXTURE	PH	EC	ORGANIC CORBON	LETTERVESCENCE	P2O5(Kg/ac)	K2O(/ac)
1	ATHARAM ARJU	POTTI	ULLIPITTADORLI	14	TIRYANI	LGBR	CLAYLOAM	8.32 (MODERATELY ALKALINE)	0.06 (NORMAL)	MEDIUM	CALCARIOUS	9 (LOW)	88 (MEDI
2	BORKUNTA AKKU	BUCHAIAH	ULLIPITTADORLI		TIRYANI	LGBR	CLAYLOAM	8.39 (MODERATELY ALKALINE)	0.06 (NORMAL)	MEDIUM	CALCARIOUS	10 (LOW)	117 (MEDIU
3	GEDAM DEELIP KUMAR	DIKARAM	ULLIPITTADORLI		TIRYANI	LGBR	CLAYLOAM	8.37 (MODERATELY ALKALINE)	0.05 (NORMAL)	LOW	CALCARIOUS.	5 (LOW)	106 (MEDIUM
4	BORKUNTA SOMAYYA	AKKU	ULLIPITTADORLI	46	TIRYANI	LGBR	CLAYLOAM	8.22 (MODERATELY ALKALINE)	0.05 (NORMAL)	LOW	CALCARIOUS	6 (LOW)	89 (MEDIUM
5	SOYAM ARJU	JANGU	ULLIPITTADORLI		TIRYANI	LGBR	CLAYLOAM	8.18 (MODERATELY ALKALINE)	0.06 (NORMAL)	MEDIUM	CALCARIOUS.	7 (LOW)	108 (MEDIUM)
6	BANKA PENTAKKA	KONDAIAH	ULLIPITTADORLI	8	TIRYANI	LGBR	CLAYLOAM	8.11 (MODERATELY ALKALINE)	0.07 (NORMAL)	MEDIUM	CALCARIOUS	10 (LOW)	176 (HIGH)
7	SOYAM SATTUBAI	JANGU	ULLIPITTADORLI		TIRYANI	LGBR	CLAYLOAM	8.16 (MODERATELY ALKALINE)	0.07 (NORMAL)	LOW	CALCARIOUS	6 (LOW)	112 (MEDIUM)
8	AGGILA BHEEMRAO	MALLAIAH	ULLIPITTADORLI		TIRYANI	LGBR	CLAYLOAM	7.85 (SLIGHTLY ALKALINE)	0.12 (NORMAL)	MEDIUM	CALCARIOUS.	8 (LOW)	96 (MEDIUM)
9	ATHRAM MARU	POCHAIAH	ULLIPITTADORLI		TIRYANI	DGBR	CLAYLOAM	8.10 (MODERATELY ALKALINE)	0.06 (NORMAL)	HIGH	MEDIUM CALCARIUS	15 (MEDIUM)	197 (HIGH)

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Asst. Director of Agriculture (R)
Agricultural Division Asifabad
Dist. Kumuram Bheem Asf.

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GOVERNMENT OF TELANGANA

DEPARTMENT OF AGRICULTURE

CERTIFICATE OF ANALYSIS REPORT OF SOIL SAMPLE

1	NAME OF THE FARMER	:	ATHARAM ARJU
2	FATHER/HUSBAND NAME		POTTI
3	NAME OF THE VILLAGE	:	ULLIPITTADORLI
4	SURVEY No.		14
5	NAME OF THE MANDAL	:	TIRYANI
6	COLOUR		LGBR
7	SOIL TEXTURE		CLAYLOAM
8	PH	:	8.32 (MODERATLY ALKALINE)
9	EC	:	0.06 (NORMAL)
10	ORGANIC CORBON	:	MEDIUM
11	EFFERVESCENCE		CALCARIOUS.
12	P2O5(Kg /ac)	:	9 (LOW)
13	K2O(Kg /ac)	:	88 (MEDIUM)

Asst.Director of Agriculture
Soil testing Laboratory
Adilabad.

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GOVERNMENT OF TELANGANA

DEPARTMENT OF AGRICULTURE

CERTIFICATE OF ANALYSIS REPORT OF SOIL SAMPLE

1	NAME OF THE FARMER	:	BORKUNTA AKKU
2	FATHER/HUSBAND NAME		BUCHAIAH
3	NAME OF THE VILLAGE	:	ULLIPITTADORLI
4	SURVEY No.		
5	NAME OF THE MANDAL	:	TIRYANI
6	COLOUR		LGBR
7	SOIL TEXTURE		CLAYLOAM
8	PH	:	8.39 (MODERATLY ALKALINE)
9	EC	:	0.06 (NORMAL)
10	ORGANIC CORBON	:	MEDIUM
11	EFFERVESCENCE		CALCARIOUS.
12	P2O5(Kg /ac)	:	10 (LOW)
13	K2O(Kg /ac)	:	117 (MEDIUM)

Asst.Director of Agriculture
Soil testing Laboratory
Adilabad.

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GOVERNMENT OF TELANGANA

DEPARTMENT OF AGRICULTURE

CERTIFICATE OF ANALYSIS REPORT OF SOIL SAMPLE

1	NAME OF THE FARMER	:	GEDAM DEELIP KUMAR
2	FATHER/HUSBAND NAME		DIKARAM
3	NAME OF THE VILLAGE	:	ULLIPITTADORLI
4	SURVEY No.		
5	NAME OF THE MANDAL	:	TIRYANI
6	COLOUR		LGBR
7	SOIL TEXTURE		CLAYLOAM
8	PH	:	8.37 (MODERATLY ALKALINE)
9	EC	:	0.05 (NORMAL)
10	ORGANIC CORBON	:	LOW
11	EFFERVESCENCE		CALCARIOUS.
12	P2O5(Kg /ac)	:	5 (LOW)
13	K2O(Kg /ac)	:	106 (MEDIUM)

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Asst.Director of Agriculture
Soil testing Laboratory
Adilabad.

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GOVERNMENT OF TELANGANA

DEPARTMENT OF AGRICULTURE

CERTIFICATE OF ANALYSIS REPORT OF SOIL SAMPLE

1	NAME OF THE FARMER	:	BORKUNTA SOMAYYA
2	FATHER/HUSBAND NAME		AKKU
3	NAME OF THE VILLAGE	:	ULLIPITTADORLI
4	SURVEY No.		46
5	NAME OF THE MANDAL	:	TIRYANI
6	COLOUR		LGBR
7	SOIL TEXTURE		CLAYLOAM
8	PH	:	8.22 (MODERATLY ALKALINE)
9	EC	:	0.05 (NORMAL)
10	ORGANIC CORBON	:	LOW
11	EFFERVESCENCE		CALCARIOUS.
12	P2O5(Kg /ac)	:	6 (LOW)
13	K2O(Kg /ac)	:	89 (MEDIUM)

10/5

Asst. Director of Agriculture
Soil testing Laboratory
Adilabad.

GOVERNMENT OF TELANGANA

DEPARTMENT OF AGRICULTURE

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CERTIFICATE OF ANALYSIS REPORT OF SOIL SAMPLE

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1	NAME OF THE FARMER	:	SOYAM ARJU
2	FATHER/HUSBAND NAME		JANGU
3	NAME OF THE VILLAGE	:	ULLIPITTADORLI
4	SURVEY No.		
5	NAME OF THE MANDAL	:	TIRYANI
6	COLOUR		LGBR
7	SOIL TEXTURE		CLAYLOAM
8	PH	:	8.18 (MODERATLY ALKALINE)
9	EC	:	0.06 (NORMAL)
10	ORGANIC CORBON	:	MEDIUM
11	EFFERVESCENCE		CALCARIOUS.
12	P2O5(Kg /ac)	:	7 (LOW)
13	K2O(Kg /ac)	:	108 (MEDIUM)

10/5

Asst.Director of Agriculture
Soil testing Laboratory
Adilabad.

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GOVERNMENT OF TELANGANA

DEPARTMENT OF AGRICULTURE

CERTIFICATE OF ANALYSIS REPORT OF SOIL SAMPLE

1	NAME OF THE FARMER	:	BANKA PENTAKKA
2	FATHER/HUSBAND NAME		KONDAIAH
3	NAME OF THE VILLAGE	:	ULLIPITTADORLI
4	SURVEY No.		8
5	NAME OF THE MANDAL	:	TIRYANI
6	COLOUR		LGBR
7	SOIL TEXTURE		CLAYLOAM
8	PH	:	8.11 (MODERATLY ALKALINE)
9	EC	:	0.07 (NORMAL)
10	ORGANIC CORBON	:	MEDIUM
11	EFFERVESCENCE		CALCARIOUS.
12	P2O5(Kg /ac)	:	10 (LOW)
13	K2O(Kg /ac)	:	176 (HIGH)

10/5

Asst.Director of Agriculture
Soil testing Laboratory
Adilabad.

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GOVERNMENT OF TELANGANA

DEPARTMENT OF AGRICULTURE

CERTIFICATE OF ANALYSIS REPORT OF SOIL SAMPLE

1	NAME OF THE FARMER	:	SOYAM SATTUBAI
2	FATHER/HUSBAND NAME		JANGU
3	NAME OF THE VILLAGE	:	ULLIPITTADORLI
4	SURVEY No.		
5	NAME OF THE MANDAL	:	TIRYANI
6	COLOUR		LGBR
7	SOIL TEXTURE		CLAYLOAM
8	PH	:	8.16 (MODERATLY ALKALINE)
9	EC	:	0.07 (NORMAL)
10	ORGANIC CORBON	:	LOW
11	EFFERVESCENCE		CALCARIOUS.
12	P2O5(Kg /ac)	:	6 (LOW)
13	K2O(Kg /ac)	:	112 (MEDIUM)

10/5

Asst.Director of Agriculture
Soil testing Laboratory
Adilabad.

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GOVERNMENT OF TELANGANA

DEPARTMENT OF AGRICULTURE

CERTIFICATE OF ANALYSIS REPORT OF SOIL SAMPLE

1	NAME OF THE FARMER	:	AGGILA BHEEMRAO
2	FATHER/HUSBAND NAME		MALLAIAH
3	NAME OF THE VILLAGE	:	ULLIPITTADORLI
4	SURVEY No.		
5	NAME OF THE MANDAL	:	TIRYANI
6	COLOUR		LGBR
7	SOIL TEXTURE		CLAYLOAM
8	PH	:	7.85 (SLIGHTLY ALKALINE)
9	EC	:	0.12 (NORMAL)
10	ORGANIC CORBON	:	MEDIUM
11	EFFERVESCENCE		CALCARIOUS.
12	P2O5(Kg /ac)	:	8 (LOW)
13	K2O(Kg /ac)	:	96 (MEDIUM)

10/5

Asst.Director of Agriculture
Soil testing Laboratory
Adilabad.

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GOVERNMENT OF TELANGANA

DEPARTMENT OF AGRICULTURE

CERTIFICATE OF ANALYSIS REPORT OF SOIL SAMPLE

1	NAME OF THE FARMER	:	ATHARAM MARU
2	FATHER/HUSBAND NAME		POCHAIAH
3	NAME OF THE VILLAGE	:	ULLIPITTADORLI
4	SURVEY No.		
5	NAME OF THE MANDAL	:	TIRYANI
6	COLOUR		DGBR
7	SOIL TEXTURE		CLAYLOAM
8	PH	:	8.10 (MODERATLY ALKALINE)
9	EC	:	0.06 (NORMAL)
10	ORGANIC CORBON	:	HIGH
11	EFFERVESCENCE		MEDIUM CALCARIOUS.
12	P2O5(Kg /ac)	:	15 (MEDIUM)
13	K2O(Kg /ac)	:	197 (HIGH)

10/5

Asst. Director of Agriculture
Soil testing Laboratory
Adilabad.

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ANNEXURE- IX

OFFICE OF THE DISTRICT MEDICAL AND HELATH OFFICER, KUMRAUM BHEEM ASIFABAD DISTRICT.

From :--
The District Medical & Health Officer,
Kumuram Bheem Asifabad District.

To:--
The District Collector,
Kumuram Bheem Asifabad District.

Rc. No. 216/PLG/SCCL/2022,Date:-- 20-06-2022.

Respected Sir,

Sub:- Planning-Submission of Health Survey Particulars of surrounding villages of Khairagura opencast of Tiryani mandal for National Green Tribunal - OA No.39/2022(SZ), Dt.19.03.2022 Report Submission - Reg.

Ref :-- BPA/ENV/2/216, Date:-- 22-04-2022, of the General Manager, SCCL, Bellampally area, Vill & Post Goleti, Mdl. Rebbena.

@#@#@

A detailed survey has been conducted by the concerned Medical officers regarding the Health Survey Particulars of surrounding villages of Khairagura opencast of Tiryani mandal of Kumuram Bheem Asifabad District as desired there in the reference cited above.

I am herewith enclosing a copy of the Health Survey Particulars enabling you to submit to NGT.

The health of surrounding villages of Khairagura opencast i.e., Ullipitta, Dampur, Jendaguda, Saleguda & Chanduguda are not affected by the Khairagura opencast activities. There is no occupational Health issue in above said villages

There is no evidence/record of severe health issues.

This is for your kind information and further necessary action sir

Thanking you Sir.

Yours faithfully,

District Medical & Health Officer,
Kumuram Bheem Asifabad District.

NAME OF THE VILLAGE	HOUSES	POPULATION	RESPIRATORY DISEASES			COMMUNICABLE DISEASE						NCD				
			ASTHMA	HEARING LOSS	SKIN DISEASE	MALARIA	TYPHOID	HIV	AIDS	MEASLES	TB	DM	HTN	ANC ANEMIA	NON ANCAN EMIA	CANCER
ULLIPITTA		761	7	2	1	0	0	0	0	0	0	4	11	1	2	0
JENDAGUDA		105	3	2	1	0	0	0	0	0	0	0	0	0	3	0
CHOPIDI		189	0	0	1	0	0	0	0	0	3	0	2	0	0	0
GOURUGUDA		131	0	0	1	0	0	0	0	0	0	0	1	0	0	0
SAALEGUDA		102	2	0	3	0	0	0	0	0	0	1	11	0	2	0
PHC GINNEDARI	Total	1288	12	4	7	0	0	0	0	0	3	5	25	1	7	0
THIRYANI	329	1141	0	0	0	0	0	0	0	0	0	8	21	0	0	0
BHEEMARAM	168	563	0	0	0	0	0	0	0	0	0	6	23	0	0	0
CHINTHAPALLY	135	540	0	0	0	0	0	0	0	0	0	2	18	0	0	0
NAIKAPUGUDA	110	344	0	0	0	0	0	0	0	0	0	0	3	0	0	0
IRKAPALLY	71	271	0	1	0	0	0	0	0	0	0	0	1	0	0	0
RR COLONY	57	203	0	1	0	0	0	0	0	0	0	0	0	0	0	0
CHELIMELA	18	63	0	0	0	0	0	0	0	0	0	1	8	0	0	0
KODDUGUDA	45	155	0	1	0	0	0	0	0	0	0	1	5	0	0	0
BUGGARAMANNA	18	54	0	0	0	0	0	0	0	0	0	0	1	0	0	0
GAMBHIRAOPET	350	1212	2	0	0	0	0	0	0	0	0	7	72	0	0	0
GANGAPUR	30	120	1	0	0	0	0	0	0	0	0	0	3	0	0	0
YEDULAPAD	96	440	1	0	0	0	0	0	0	0	0	0	5	0	0	0
DONLA	20	70	1	0	0	0	0	0	0	0	0	0	0	0	0	0
CHINNA	100	285	1	0	0	0	0	0	0	0	0	0	3	0	0	0
NAGUGUDA	15	54	1	0	0	0	0	0	0	0	0	0	0	0	0	0
KANNEPALLY	120	390	1	0	0	0	0	0	0	0	0	1	3	0	0	0
RAMBAIGUDA	40	132	1	0	0	0	0	0	0	0	0	0	1	0	0	0
LINGIGUDA	25	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORRIGUDA	90	322	1	0	0	0	0	0	0	0	0	0	4	0	0	0
LOYA	6	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			22	7	7											

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C Sathish

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ANNEXURE-X

Government of Telangana
Irrigation & CAD Department

rom,
Sri J.Gunwanth Rao,B.E;
Executive Engineer, I&CADD
Irrigation Division No.4, Asifabad
Kumuram Bheem Asifabad(Dist)

To,
The District collector & Magistrate
Kumuram Bheem Asifabad District.

Lr.No: EE/ID-4/ASF/VVP/NGT/49/m Date:14.06.2022

Respected sir,

Sub:- National Green Tribunal – OA No.39/2022(SZ), Dt: 19.03.2022 – Honorable NGT has appointed a Joint Committee - conducted spot inspection on Dt: 27.04.2022 – Submission report – Reg.
Ref: DEE 's Lr No: DEE/ISD-2/ASF/VVP/NGT/ , Dt: 13.06.2022

-o0o-

The Honorable NGT has appointed the District Collector, Kumuram Bheem Asifabad District Telangana State as Nodal officer to the joint committee consisting of following committee (1) a Senior Officer from Ministry of Environment, forests and Climate Change (MoEF&CC), Integrated Regional Office, Hyderabad, (2) a Senior Officer from Integrated Regional Office, Central Pollution Control Board, Chennai (3) a Senior Officer from Telangana State Pollution Control Board as deputed by its Chairman, (4) The District Collector, Kumrambheem Asifabad District, Telangana State and (5) The Executive Engineer, Irrigation Department, Kumuram Bheem Asifabad Dist., Telangana to inspect the area in question and submit a factual as well as action taken report if there any violation found.

The undersigned, along with the committee members have inspected the area on Dt.27.04.2022 i.e., Ullipitta Village, Vattivagu reservoir & Diverted streams of Vattivagu river Phase-1 and the proposed Phase-II diversion.

The brief report is prepared and submitted on the point raised by complainant regarding "altering and diverting Vattivagu water body, inundation of houses, agricultural lands in Dampur and Chanduguda villages, facing flooding during rainy seasons and undergoing severe financial loss and threat to their lives, reduction of storage of the water body".

Salient features of Vattivagu reservoir:

- It is a medium irrigation project completed in 2001.
- Total ayacut – 24,500 acres (when storage capacity is 2.89 TMC.)
- LF canal – 7.00 km – 2,700 acres
- RF canal – 21.60 km – 21,800 acres
- FRL (full reservoir level) – +239.50
- MDDL (maximum draw down level) - +228.00
- TBL (top of bund level) - +243.50
- Crest level - +233.50
- Length of spill way – 86.00 mtrs.

Storage capacity of reservoir – 2.890 TMC (Now its capacity reduced due to silt up effect of coal debris in open casts which are formed within the storage area)

Salient features of the Khairagura opencast project:

- **Sponsor:** Singareni Collieries Company Limited
- **Parent company:** Coal India Limited
- **Location:** village Khairagura, Mandal Tiryani, District Kumrambhim Asifabad, State Telangana, India.
- **GPS coordinates:** 19.2555556, 79.266666
- **Status:** Operating
- **Capacity:** 3.75 MTPA
- **Production:**2.602655 million tons (as on 2020)
- **Total Resource:** 74.310 MT
- **Mineable Reserves:** 66.870 MT
- **Coal Type:** Non-coking coal
- **Mine Size:** 1217.50 Ha hectares
- **Mine Type:** Opencast
- Balance life of the project – 6 years
- Man power – 550 No.s employees
- Combination of equipment – shovel-dumper combination

➢ The SCCL has obtained permission to divert the upstream existing natural stream during the year 2002, i.e., first diversion to extract coal from Khairagura Opencast project.

➢ 1st diversion permission accorded vide G.O.Rt.No.1637 (I&CAD) (IRR VII), Dt.19.10.2002.

➢ The diversion of stream was taken up during the year 2003 to 2004.

Details of 1st diversion –

- Bed level at diversion point: +240.340
- Bed level at confluence of Vattivagu:+238.834
- Length of 1st diversion of Nala Course - 1.40 km

The SCCL has carried out the Nala diversion work.The I&CAD Dept., has appointed to counter check the diversion along with QC inspections during the year 2003 to 2004.The SCCL has provided an earthen dam on upstream side of Vattivagu reservoir for a length of 3.20 km along with toe wall and pitching to protect the surrounding villages against back water flow of Vattivagu reservoir.

The 1st diversion of Vattivagu stream has not affected the inflows and capacity of the Vattivagu reservoir. At present, the SCCL has again obtained permission to divert the upstream existing 1st diversion Nala, i.e., second diversion to extract coal from KhairaguraOCP by expanding the project.

For the 2nd diversion of Vattivagu Nala, the permission was accorded to the Engineer – in – Charge (I&CAD), Hyderabad by Principal Secretary to Government of Telangana State to issue No Objection Certificate for phase-II Diversion of Vattivagu vide Memo no.1411/Project IV/A2/2020, Dt.07.08.2020.The No Objection Certificate was issued from Chief Engineer (Irrigation& Command Area Development)/Mancherial unit vide Lr.No.CE/DLE/OT/TO/DIVERSION/VATTIVAGU/92, dt.17.04.2021

Details of 2nd diversion –

- Bed level at diversion point: +240.340
- Bed level at confluence of Vattivagu: +239.869
- Length of 2nd diversion of Nala course - 1.65 km
- Discharge of Nala – 1382.25 cumecs
- Design discharge of Nala – 1416.00 cumecs
- Bed fall – 1 in 3500

The SCCL has to carry out the Nala diversion work without effecting inflow. If the SSCL prior inform their action plan to I&CAD dept., may appointed to counter check the diversion along with QC inspections with proper guidance.

Conclusion:

The upstream villages of Vatti Vagu Reservoir i.e. Ullipitta, Dampur and Chanduguda were not inundated under back water of Vatti Vagu Project since the first diversion of Vatti Vagu stream.

Right now, we cannot find the storage capacity as of now it is almost full and we may conduct contour survey with Engineering Experts team, when there is no water.

The villagers of Ullipita village were opined that due to siltation of project, there was increase in water level and the houses of them were inundated. The fact is that they are staying in the PP land (100m FRL contour of the project) of the project along the bank of Vatti Vagu Resrvoir. Only silt accumulated near the houses after the heavy downpours.

It is advised to the SCCL, to provide Toe Drain of 150mx150m including Revetment whenever gullies are formed along the toe of Dump No.3 of Khairiguda OCP to reduce the siltation from the dump.

This is for favor of information and further necessary action.

Executive Engineer, I&CADD
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