STEEL AUTHORITY OF INDIA LTD.
(A Govt. of India Enterprise)
Raw Materials Division
Bhawanathpur Group of Mines
PO- BhawanathpurTownship,
Distt: Garhwa (Jharkhand.),
PIN- 822129
Email: bnptdr@gmail.com

Ref: RMD/BNP/DGM/2019- 13	Date : 08/05/2019

To,

The Director(IA-division)
Vayu-305, Indira Paryavaran Bhawan,
Ministry of Environment, Forest & CC,
Jorbagh Road, Lodi Road, New Delhi-110003

Sub:-**Six monthly status of compliance of conditions stipulated in Environmental Clearance(Grant order of MoEF No J-11015/14/92-IA,II(M) dated 24th March 1995) for the period ending up to 31st March 2019 of Tulsidamar Dolomite Mine, RMD, SAIL.**

Sir,

Please find enclosed here with the six monthly compliance report with respect to the conditions stipulated by ministry of Environment and Forest, New Delhi while granting environmental clearance to Tulsidamar Dolomite Mines of M/S Steel Authority of India Limited vide MoEF letter No J-11015/14/92-IA, II(M) dated 24th March 1995 for the period from October - 2018 to March-2019.

Thanking You,

Yours Faithfully,

08/05/19

Dy. General Manager(Mines)
BNP Group of Mines

Dy. General Manager
(SAIL/RMD)
Bhawanathpur Group of Mines
Distt. - Garhwa (Jharkhand)

Enclosed as stated:

Copy to:-

1. Member secretary, JSPCB, Ranchi,
2. Regional office, JSPCB, Ranchi,
3. Regional office, MOEFCC, Ranchi.

Status of Compliance to Conditions Stipulated in Environmental Clearance (Vide order no. J-11015/14/92-IA.II (M), dt.24.03.1995) of Tulsidamar Dolomite Mine, RMD, SAIL

(Period: October, 2018 to March, 2019)

1. **The project involves diversion of 101.32 ha of forest land. The project should be taken in the forest area only after clearance under Forest (Conservation) Act, 1980 is granted.**

   Forestry Clearance has been granted by MoEF vide No. 8 - 57 / 94 FC, dated 18.12.1997 for diversion of 101.32 ha of forest land within the lease hold area. The forest clearance is valid till 31-03-2020, Co-terminous with mining lease as per letter No-F. No 11-51/2015-FC, Govt of India, Ministry of Environment and Forest and Climate Change dated 30-11-2017. Mining is confined within permitted forest area only. For renewal of F.C, application submitted online vide application No-FP/JH/MIN/37402/2018 dated 29-03-2019, one year before the expiry date of forest clearance.

2. **The company should surrender 83.7 ha of the forest land under its mine lease to the concerned State after authorities as incorporated in the revised EMP.**

   Forest land covering an area of 83.7 ha has already been surrendered to DFO, Garhwa (North Division) vide letter no. 314 dated 13.12.1997. Accordingly, the original lease of 202.42 ha (Forest Land: 185.02 ha & Raity land: 17.40 ha) has been reduced to 118.72 ha (101.32 ha forest land + 17.40 ha non-forest land).

3. **The existing OB Dumps due to previous mining should be stabilized on priority by appropriate physical and biological reclamation measures to prevent water pollution and siltation of the adjoining nallahs.**

   Existing OB dumps have been stabilized by physical and biological reclamation so as to prevent water pollution and silting. Plantation of saplings done in the road side OB dumps in the year 2018-19.

4. **The pollution control measures for maintaining adequate air quality, water quality and noise level detailed in the revised EMP should be implemented in conformity with the standards prescribed by Central / Sate Pollution Control Board under Environment (Protection) Act, 1986. Sufficient number of air and water quality monitoring stations should be set up. Six monthly monitoring reports should be sent to this Ministry and Regional Office, Bhubaneshwar and to State Pollution Control Board.**

   Five numbers air quality and five numbers of water quality monitoring locations have been established at the mine in consultation with the Jharkhand State Pollution Control Board and being monitored regularly. The Air & Noise and water quality data for the period of October, 2018 to March, 2019 are placed as Annexure-I & II respectively.

5. **The project authorities should implement mined area reclamation as elaborated in the EMP. A green belt in non-mineralized area should be developed.**

Reclamation of mined areas shall commence after reaching the bottom of the deposit as per the approved Mining Plan & Progressive Mine Closure Plan. Plantation in and around the mine is being done to improve the green cover. Green belt in non-mineralized area is developed.

1.Details of Afforestation of Tulsidamar Dolomite Mine

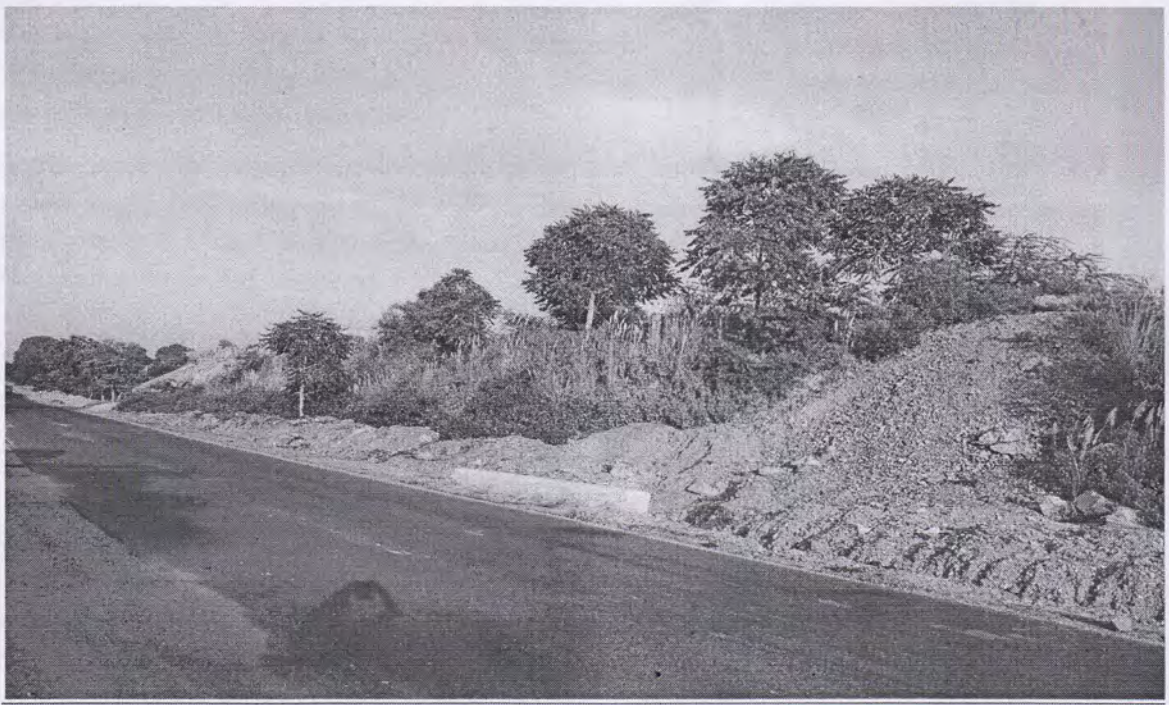
Year	Area covered in Ha	Saplings Planted(Nos)
2009-10	-	-
2010-11	-	-
2011-12	-	-
2012-13	2.11	2000
2013-14	2.00	2000
2014-15	-	-
2015-16	-	1500
2016-17	-	-
2017-18	2.00	1500
2018-19	1.0	1000
Total	7.11	8000

2.Details of Waste Dump of Tulsidamar Dolomite Mine (As on 31.03.2017)

No of Waste Dump(OB/IB)	6 Nos
Waste Dump Area Covered	16 Ha
Waste Dump area stabilized	6 Ha

Stabilized waste dump at Tulsidamar Mines

Plantation along road side of Tulsidamar Dolomite Mine.



Garland Drain along road side Tulsidamar mines Area.

6. **The project authorities should take up adequate socio economic measures including community development projects in the project impact zone.**

In accordance to the MoEF guideline and as a Maharatna company of India, SAIL has envisaged its policy on Corporate Social Responsibility (CSR), which was approved by the Board of Directors of the SAIL in July 2009. SAIL has formulated CSR policy for showing its commitments towards economic as well as social development. The company's CSR policy recognizes that its business activities have direct and indirect impact on the society. The policy also aims improving the quality of life of the workforce and their families as well as of the local community and society at large.

In line with CSR policy of SAIL, Tulsidamar & Bhawanathpur Group of Mines, Raw Materials Division (RMD) has also contributed for social up-liftment of the region in and around its mining complex.

To improve education facilities of the region, a DAV Public School, Bhawanathpur is being run by SAIL with presently about 1450 students from LKG to 12th standard. Most of the school children of the DAV School are from nearby villages. SAIL is presently spending to the tune of Rs. 100 to 150 lac per annum towards running & maintenance of the DAV School. In addition to the above, an amount of Rs. 1.54 lakh has been spent during 2018-19 under CSR at the Tulsidamar & Bhawanathpur Group of Mines involving free medical camps, free eye operation camps etc.

As a measure of socio-economic development SAIL, RMD is giving skill development programme in which meritorious poor students of peripheral villages are given free ITI training in SAIL sponsored institutes for two years.

Sixteen (16) students of nearby villages of Tulsidmar Dolomite Mine have been nominated under this programme in the year 2017-18 and undergoing training at Chinmoya Technical Academy, Sonaparbat, Rourkela. Towards education, boarding and lodging SAIL, RMD is spendingRs90,000/- per student in two years at present. An amount of Rs7,20,000 paid for skill development programme for the year 2018-19.

7. **The project should have an environmental management cell for monitoring the quality of environmental parameters, OB dump stabilization, green belt development and other action plans for protection of environment.**

An Environmental Management Cell exist under Tulsidamar & Bhawanathpur Group of Mines to control environmental aspects of the mines including environmental quality monitoring, waste management & dump stabilization, afforestation & green belt development, compliance to conditions stipulated in clearances and consents, submission of statutory compliance etc.

8. **A periodic progress report regarding the implementation of the EMP measures should be submitted once in 6 months.**

The following are the major various pollution prevention & control measures are implemented at the mines:

- Wet drilling to control dust emissions
- Water sprinkling on haul roads through mobile Road Sprinklers
- Plantation in and around the mines
- Check dams & settling tanks for surface runoff control
- Stabilization of waste dumps

9. **The funds earmarked for EMP measures including antipollution measures should not be diverted for any other purposes.**

Based on the requirement, fund allocation for pollution prevention & control is being made every year and the same is being utilized for schemes related to environmental protection measures. During the year, 2013-14, an amount of Rs. 14.39 lakhs has been spent towards to environmental management at the Tulsidamar & Bhawanathpur Group of Mines. An amount of Rs16.37 lakhs has been spent towards environmental expenditure in 2015-16. An amount of Rs15 lakhs have been spent in different environment related programmes in 2018-19. An amount of Rs. 150 lakhs has been earmarked for environmental protection measures in the year 2019-20 and same shall only be utilized for schemes related to environmental protection measures.

Pillar posting in Tulsidamar Mines in Mine boundary and safety zone has been done. The estimated amount for the work is around 7.5 Lakhs.

DGPS Survey completed in Tulsidamar Mine. The survey done by team of experts of IIT,Dhanbad. Geo-referencing of Lime stone mines Ghagra, Gurgaon and Saraiya Limestone mine also completed.

Surrender proposal of Bhawanathpur Limestone is under process. The FMCP of Ghagra, Gorgaon and Saraiya limestone mines is being prepared by M/s mecon Ltd at a cost of Rs 45 lakhs.

10. **This ministry may stipulate subsequently any other conditions as may be required in the interest of environmental protection.**

Agreed.

08/05/19

Dy. General Manager (Mines)
Bhawanathpur & Tulsidamar Group of Mines

Dy. General Manager
(SAIL/RMD)
Bhawanathpur Group of Mines
Distt. - Garhwa (Jharkhand)

ANNEXURE - I

AIR QUALITY DATA
(Period : Oct 2018 – March, 2019)

A. Ambient Air Quality (4th Quarter)

Location	*RSPM(PM_{10})* ($\mu g/m^3$)	*SO_2* ($\mu g/m^3$)	*NO_X* ($\mu g/m^3$)
Tulsidamar (TDM) office (15-01-2019)	65	08	18
Tulsidamar (TDM) village	-	-	-
Norm	**100**	**80**	**80**

BDL: Below Detectable limit is 6 Micro gram/M^3

B. Workzone Air Quality

Location	*SPM* ($\mu g/m^3$)	*RSPM(PM_{10})* ($\mu g/m^3$)	*SO_2* ($\mu g/m^3$)	*NO_X* ($\mu g/m^3$)
Mine Face of PCC Quarry	-	-	-	-
Haul Road(27-09-2018)	422	78	12	17
Wagon Loading Area(27-09-2018	388	68	10	15
Norm	**700**	**350**	5000	6000

C. Ambient Noise Levels

Location	**Day time* Leq - dB(A)**	**Night time* Leq - dB(A)**
Tulsidamar (TDM) office	55.6	-
Tulsidamar (TDM) village	53.5	-
Alkar Village	52.4	40.9
Norm	**75**	**70**

ANNEXURE - II

WATER QUALITY DATA
(Period : Oct 2018 – March, 2019)

A. Surface Water Quality

Sl. No	Parameter	*Seeta Chuhiya Nullah*	*PCC Spring Water*	*Limits as per IS 10500-2012*
1.	Color(Pt-Co Scale)	8	05	5.0
2.	Odour	Odourless	Un-Objectionable	Agreeable
3.	Temperature (^{O}C)	21.7	25.3	-
4.	Taste	Agreeable	Agreeable	Agreeable
5.	Turbidity (NTU)		06	1.0
6.	Total Suspended Solids (mg/l)	3	07	-
7.	*p*H	7.0	7.4	6.5-8.5
8.	Alkalinity as $CaCO_3$ (mg/l)	99	94	200
9.	Conductivity (Micro Siemens / cm)	304	486	-
10.	Total Dissolved Solids (mg/l)	156	243	500
11.	Ammonical Nitrogen as N (mg/l)	BDL	0.02	0.5
12.	Free Chlorine (mg/l)	NA	BDL	0.2 (min)
13.	Total Hardness as $CaCO_3$ (mg/l)	100	173	200
14.	Calcium as Ca (mg/l)	39.6	38	75
15.	Magnesium as Mg (mg/l)	0.24	19	30
16.	Hexavalent Chromium as Cr^{+6}(mg/l)	0.014	0.001	0.05
17.	Fluoride as F (mg/l)	0.6	0.35	1.0
18.	Dissolved Phosphate as PO_4 (mg/l)	1.29	0.03	-
19.	Sulphide as S^{2-} (mg/l)	0.008	0.001	-
20.	Manganese (mg/l)	0.3	0.02	0.1
21.	Total Iron as Fe (mg/l)	0.05	0.11	0.3
22.	Chloride as Cl (mg/l)	19	54	250
23.	Sulphates as SO_4 (mg/l)	30	38	200
24.	Nitrate Nitrogen as N (mg/l)	0.02	1.8	45

- **There was no water in Seeta Chuhiya Nullah during the monitoring period.**

B. Ground Water Quality

Sl. No	Parameter	*Dug Well at TDM Office*	*Handpump Alkar Village*	*Handpump TDM office*	*Limits as per IS 10500-2012*
1	Color(Pt-Co Scale)	08	05	08	5.0
2	Odour	Odourless	Odourless	Odourless	Agreeable
3	Temperature (^{O}C)	25.8	21.8	25.9	-
4	Taste	Agreeable	Agreeable	Agreeable	Agreeable
5	Turbidity (NTU)	06	07.2	07	1.0
6	Total Suspended Solids (mg/l)	08	NIL	7	-
7	*p*H	7.4	7.2	7.5	6.5-8.5
8	Alkalinity as $CaCO_3$ (mg/l)	110	169	128	200
9	Conductivity (Micro Siemens / cm)	474	613	508	-
10	Total Dissolved Solids (mg/l)	237	319	254	500
11	Ammonical Nitrogen as N (mg/l)	0.02	0.49	0.02	0.5
12	Free Chlorine (mg/l)	0.23	NA	0.21	0.2 (min)
131	Total Hardness as $CaCO_3$ (mg/l)	225	292	240	200
41	Calcium as Ca (mg/l)	54	20.8	60	75
51	Magnesium as Mg (mg/l)	22	58.1	22	30
6	Hexavalent Chromium as Cr^{+6}(mg/l)	0.002	0.01	0.001	0.05
17	Fluoride as F (mg/l)	0.42	0.43	0.45	1.0
18	Dissolved Phosphate as PO_4 (mg/l)	0.04	0.41	0.04	-
19	Sulphide as S^{2-} (mg/l)	0.001	BDL	0.002	-
20	Manganese (mg/l)	0.03	0.03	0.02	0.1
21	Total Iron as Fe (mg/l)	0.09	0.25	0.07	0.3
22	Chloride as Cl (mg/l)	57	18	57	250
23	Sulphates as SO_4 (mg/l)	42	43	48	200
24	Nitrate Nitrogen as N (mg/l)	0.68	0.02	1.12	45