

December 5, 2015

Additional Principal Chief Conservator of Forests
Ministry of Environment, Forests & Climate Change
Regional Office (WCZ),
New Secretariat Building,
Civil Lines,
Nagpur-440 001

Sub: Submission of Six monthly compliance reports for the period April 2015 – September 2015 w.r.t Umbershet Bauxite Mine of M/s. Ashapura Minechem Limited, at Village- Umbershet, Taluk -Dapoli, District- Ratnagiri, Maharashtra reg.

Ref: 1. Environmental Clearance granted by MoEF vide. Letter No: J-11015/275/2007-IA.II (M) dated 31.10.2008.
2. TOR issued by MoEF vide letter No. J-11015/418/2013.IA.II (M) dated 17.07.2014

Respected Sir,

With reference to the above cited subject, please find enclosed herewith six monthly compliance reports on environmental clearance conditions for the period April-2015 to September - 2015, stipulated for Umbershet Bauxite Mine of Ashapura Minechem Ltd. at Village Umbershet, Taluka Dapoli, Dist. Ratnagiri, Maharashtra.

We hope the above information will fulfill your requirement.

Thanking You,

For Ashapura Minechem Limited



(Rajnikant Pajwani)

CEO & Whole Time Director

**2015 -
2016**

**ENVIRONMENTAL COMPLIANCE STATEMENT
FOR THE PERIOD
APRIL-2015 TO SEPTEMBER 2015**

Environmental Compliance Statement for submission to Ministry of Environment & Forests as a part of Environmental Clearance issued by MoEF vide No J-11015/275/2007-IA.II [M] dated 31.10.2008 for the Expansion from 0.06 MTPA to 0.26 MTPA of Umbershet Bauxite Mine, ML Area 99.86 ha at village Umbershet, Dapoli Taluk, Ratnagiri District, Maharashtra.

BY

ASHAPURA MINECHEM LTD
Jeevan Udyog Building, 3rd Floor, 278, D.N. Road, Fort, Mumbai-400 001

SUBMITTED TO

MINISTRY OF ENVIRONMENT, FORESTS & CLIMATE CHANGE
REGIONAL OFFICE (WESTERN REGION)
NEW SECRETARIAT BUILDING
NAGPUR

**SIX MONTHLY COMPLIANCE REPORT ON ENVIRONMENTAL CLEARANCE CONDITIONS
FOR THE PERIOD APRIL-2015 TO SEPTEMBER-2015**

Name of the Project: Umbershet Bauxite Mine of M/s. Ashapura Minechem Limited, Village-Umbershet, Taluk-Dapoli, Dist.-Ratnagiri, Maharashtra State.

Reference: Environmental Clearance issued by MoEF vide letter No. J-11015/275/ 2007-IA.II [M] dated 31.10.2008.

A. Specific Conditions

S. No	Condition	Compliance
(i)	Environmental Clearance is subject to implementation of conservation plan for wildlife in consultation with the office of the concerned Chief Wild Life Warden within six months. The plan shall consist of in-built monitoring and evaluation mechanism. Necessary fund for implementation of the same shall be separately allocated and shall not be diverted for any other activity.	There is no forest within 10 km radius of the mine lease area. However, a general conservation plan for flora & fauna is stated in EIA & EMP report will be strictly adhered.
(ii)	Primary survey data of flora and fauna shall be submitted to the Ministry within six months.	Authenticated list of flora & fauna is already submitted to regional office of MoEF at Bhopal.
(iii)	No two pits shall be simultaneously worked i.e before the first is exhausted and reclamation work completed, no more mineral bearing area shall be worked.	Only one pit is in operation and no mineral bearing area would be worked before the first pit is exhausted and reclamation work is taken up. Mining is carried out as per the Mining Plan approved by Indian Bureau of Mines (IBM). The reclamation of mined out pits is carried simultaneously and presently 0.60 Ha area is reclaimed with native species of plantation. Photographs enclosed.
(iv)	After exhausting the first mine pit and before starting mining operations in the next pit, reclamation and plantation works in the exhausted pit shall be completed so as to ensure that reclamation, forest cover and vegetation are visible during the first year of mining operations in the next pit. This process will follow till the last pit is exhausted. Adequate rehabilitation of mined pit shall be completed before any new ore bearing area is worked for expansion.	At present only one pit is in operation. Mining is carried out as per the Mining Plan/ Mining Scheme approved by IBM. The reclamation of exhausted pits is being carried out as per Environmental Management Plan. In the year 2015-16, 0.60 Ha area has been reclaimed and planted 1504 nos. of native plant species of fruit bearing seedlings like Mango, Cashew, Suru and Acacia. Aftercare of the plantation is being taken until its self-sustainable.
(v)	Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.	Mining is carried as per Mining Plan approved by IBM & adequate buffer is maintained between two consecutive mineral bearing deposits as per mining plan.
(vi)	Detailed hydro-geological study of the	The Detailed hydrogeological study for the area

S. No	Condition	Compliance
	area shall be carried out before start of expansion to review impact on ground water regime and mitigation measures to contain any adverse impact on ground water put in place. Report of the same shall be submitted to the Regional office of the Ministry and other concerned departments.	where M/s Ashapura Minechem Ltd is operating Mines at Dapoli Taluk were carried out by Ultra-Tech, Mumbai. The same is already submitted to Regional office of MoEF (Western) at Bhopal.
(vii)	Blast vibration study shall be conducted and submitted to the Ministry within six months. The study shall also provide measures for prevention of blasting associated impact on nearby houses and agricultural fields.	Blast vibration studies have been carried out by VISFOTECH Consultants, Pune. The report is already submitted to Regional Office of MoEF at Bhopal.
(viii)	Continuous Ambient Air Quality Monitoring System shall be installed within six months at appropriate sites in consultation with the State Pollution Control Board / Regional Office of Central Pollution Control Board. Ambient Air Quality Data shall be regularly submitted to the Regional Office of the Ministry and other concerned departments The ambient air quality monitoring shall include PM10. Regular analysis of silica content for PM10 shall be carried out. Assessment of silica in silt shall be regularly carried out and records maintained.	Ambient Air Quality Monitoring for the particle size PM ₁₀ and other parameters are being carried out regularly as per National Ambient Air Quality Standards (NAAQS) by MoEF approved laboratory and the results is enclosed as Annexure - 1 .
(ix)	Need based assessment for the near by villages shall be conducted to study economic measures which can help in upliftment of poor section of society. Income generating projects/tools such as development of fodder farm, fruit bearing orchards, vocational training etc can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. This will be in addition to vocational training for individuals imparted to take up self-employment and jobs.	Need based assessment is carried out in the EIA report and the suggestions given during EC meeting are being implemented. The community development programme includes providing vocational training to the local youths, donation of school aids to needy students, maintenance of roads, construction of temples, donation of fruit bearing seedlings to farmers, donation for community development, society welfare fund etc. During this reporting period company has spent Rs.3,46,208/- on above mentioned work. Photographs of CSR work are enclosed.
(x)	Action plan for economic upliftment of tribals, scheduled caste and economically weak section of society shall be formulated and implemented within six months. Status of implementation shall be reported to the Regional Office of the Ministry and the State Government.	Local people from nearby villages are employed in our mining lease and Vocational training is being provided to them on regular basis. The same will be reviewed for adequacy on yearly basis.

S. No	Condition	Compliance
(xi)	Land use pattern of the nearby villages shall be studied and action plan for abatement and compensation for damage to agricultural produce and land/common property land (if any) in the near by villages, due to mining activity shall be submitted to the Regional Office of the Ministry within six months. Annual Status of implementation of the plan and expenditure thereon shall be reported to the Regional Office of the Ministry from time to time.	Land use pattern of the nearby villages had been studied and incorporated in the EIA/EMP report. However no damage to the crops or compensation paid during reporting period.
(xii)	Rain water harvesting shall be undertaken to recharge the ground water source. Status of implementation shall be submitted to the Regional Office of the Ministry within six months and thereafter every year from the next consequent year.	For harvesting rain water pond has been made in the lease area and excess rainwater from mining area is channelized to these ponds. Desilting of the same is being carried out before the onset of monsoons every year.
(xiii)	Measures for prevention and control of soil erosion and management of silt shall be undertaken. Protection of dumps against erosion shall be carried out with geo-textile matting or other suitable material, and thick plantation of native trees and shrubs shall be carried out at the dump slopes. Dumps shall be protected by retaining walls.	Retaining wall has been constructed at mining lease. The total length of retaining wall is 93 m. During the reporting period 1504 nos. of species planted within mining lease area and species planted are- Mango (<i>Mangifera indica</i>), Cashew(<i>Anacardium-occidentale</i>) Suru (<i>Casurina eqisetifolia</i>) Acacia (<i>Acacia-auriculiformes</i>)
(xiv)	Cultivable waste land within 5 km radius of the lease shall be identified and developed into productive land and made available to villages. Status of implementation shall be submitted to the Regional Office of the Ministry within six months.	Cultivable waste land in the vicinity of the mine area has been identified and utilization pattern of this land is provided in EIA/EMP. For development of this land we are in constant touch with local revenue department.
(xv)	Trenches / garland drains shall be constructed at foot of dumps and coco filters (or other suitable filters) shall be installed at regular intervals to arrest silt from being carried to water bodies. Adequate number of check dams and gully plugs shall be constructed across seasonal / perennial nallahs (if any) flowing through the ML area and silts arrested. De-silting at regular intervals shall be carried out. Garland drain of appropriate size, gradient and length shall also be constructed for both mine pit and for waste dump. Sump capacity shall be designed keeping 50% safety margin	There are no OB dumps at the mine lease thus silt will not be carried to water bodies. However retaining wall is constructed at lease. The total length of retaining wall is 93 m. Garland drains are constructed along the mine boundary and excess rainwater is channelized into mining pits. Desilting of the same is being carried out before the onset of monsoon every year.

S. No	Condition	Compliance
	over and above peak sudden rainfall (based on 50 years data) and provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and de-silted at regular intervals.	
(xvi)	Ground water in the core zone shall be regularly monitored for contamination and depletion due to mining activity and records maintained. The monitoring data shall be submitted to regional office of the Ministry regularly. Further, monitoring points shall be located between mine and drainage in the direction of flow of ground water shall be set up and records maintained.	Mining is carried upto 5-7 mtrs from the surface on hill top and ground water table is not encountered during the mining operations. However ground water quality in the buffer zone is being monitored regularly. Detail Hydrogeological study has also been carried out and report was submitted to the Regional office of MoEF.
(xvii)	Fugitive dust generation shall be controlled. Fugitive dust emission shall be regularly monitored at locations of nearest human habitation (including schools and other public amenities located nearest to sources of dust generation as applicable) and records submitted to the Regional Office of the Ministry.	Fugitive dust generation is controlled by regularly sprinkling water on haulage road. Sprinklers are fixed along the main haulage road [0.1.5 km] to reduce the dust. Inside the mine lease area 0.105 km road has been asphalted. Truck carrying ore are being covered with Tarpaulin to arrest spillage and dust on the road. Afforestation programme is carried. Dust emissions are being monitored on regular basis.
(xviii)	Transportation of ore shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore / dust takes place. Transportation shall be done only during day time.	Transportation is carried out only in day time. Truck carrying ore are being covered with tarpaulin to reduce spillage and dust. Photographs enclosed.
(xix)	Occupational health and safety measures for the workers including identification of work related health hazards, training on malaria eradication, HIV, and health effects on exposure to mineral dust etc., shall be carried out. The company shall engage a full time qualified doctor who is trained in occupational health. Periodic monitoring for exposure to respirable mineral dust on the workers shall be conducted and records maintained including health records of the workers. Awareness programme for workers on impact of mining on their health and precautionary measures like use of personal equipments etc shall be carried out periodically. Review of impact of various health measures undertaken (at interval of five years or less) shall be conducted followed by	Periodic health checkup of workers is carried from authorized Medical Centre i.e.: BKL Walawalkar Hospital Diagnostic & Research Centre, A/p Sawarde, Tal. Chiplun, Dist. Ratnagiri Sawarde. Pin – 415 606 Regular workshops for workmen are arranged and training is provided on Occupational Health. Personal protecting equipment's like helmet, safety shoe, dust mask, ear plugs etc. are provided to workers. Training & awareness on using these PPEs is being provided to workers on regular basis.

S. No	Condition	Compliance
	follow up actions wherever required.	
(xx)	Maintenance of village roads through which transportation of ores are undertaken shall be carried out by the company regularly at its own expenses. The roads shall be black topped.	Village roads are maintained by the company regularly on its own expenses & during this reporting period Rs.1,00,000/- was spent towards this job.
(xxi)	Top soil/solid waste shall be stacked properly and separately with proper slope and adequate safeguards and shall be utilized for backfilling (wherever applicable) for reclamation and rehabilitation of mined out area.	The entire mine lease area is having laterite capping hence top soil generation is negligible & whenever encountered is being used for reclaiming the mining pit. Solid waste is stacked separately & is being used for backfilling exhausted pit and afforestation is being carried on it.
(xxii)	<p>Overburden (OB) shall be stacked at earmarked dump site (s) only and shall not be kept active for long period. The maximum height of the dump shall not exceed 30 m, each stage shall be preferably be of 10m and overall slope of dump shall not exceed 28°. The OB dump shall be backfilled. The OB dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off.</p> <p>Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests on six monthly basis.</p>	<p>The overburden generated is being used to fill the exhausted pit.</p> <p>An area of 9.26 Ha has been reclaimed till date and rehabilitation has been done by plantation of 7314 trees over the reclaimed area. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining.</p>
(xxiii)	Slope of the mining bench and ultimate pit limit shall be as per the mining scheme approved by Indian Bureau of Mines.	Slope of mining bench and ultimate pit limit will be as per the approved mining scheme.
(xxiv)	Drilling (if any) shall be conducted by using dust extractors / wet drilling. Controlled blasting shall be undertaken.	Drilling is being carried out by using dust extractors along with wet drilling. Controlled blasting operations will be carried out using ANFO Slurry as approved by Explosive department.
(xxv)	<p>Plantation shall be raised adequately in the ML area, haul roads, OB dump sites etc.</p> <p>Green belt development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO / Agriculture Department.</p> <p>Herbs and shrubs shall also form a part of afforestation programme besides tree plantation.</p> <p>The density of the trees shall be around 2500 plants per ha.</p>	<p>Plantation is carried out in ML area and along the haulage road, OB dumps are maintained as per approved mining plan. Species for plantation are selected after discussing the Konkan Krishi Vidyapeet at Dapoli for expert guidance. Also local people are being involved for plantation work.</p> <p>Plantation carried out in the year 2015-16 is 1504 nos. and species planted are mainly Mango (<i>Mangifera indica</i>), Cashew(<i>Anacardium-occidentale</i>) Suru (<i>Casurina eqisetifolia</i>) Acacia (<i>Acacia-auriculiformes</i>)</p>

S. No	Condition	Compliance
	The company shall involve local people with the help of self help group for plantation programme. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the Regional Office of the Ministry every year.	
(xxvi)	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year – Pre monsoon (April – May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected shall be regularly sent to MoEF, Central Ground Water Authority and Regional Director, Central Ground Water Board.	Regular monitoring of water quality and level is being carried out. Central ground water (CGWB) has carried out water exploration in district. Based on GEC-97 methodology, 4-Piezometer is installed in district by CGWB. The report of the study carried by CGWB is available at http://cgwb.gov.in/district_profile/maharashtra/ratnagiri.pdf
(xxvii)	The waste water from the mine shall be treated to conform to the prescribe standards before discharging into the natural streams. The discharged water from the Tailing Dam (if any) shall be monitored and report submitted to the Ministry of Environment & Forests, Central Pollution Control Board and the State Pollution Control Board.	There is no waste water generation from the mine lease area. The rainwater from the mining area is diverted to settling ponds before leaving it into natural nallahs.
(xxviii)	Prior permission from the competent authority shall be obtained for extraction of ground water, if any.	We are withdrawing maximum 80 KLD of water for dust suppression (60 KLD) and other uses i.e. domestic and gardening (20 KLD) which is well below the limit of 100 KLD as specified by CGWA in its guidelines guideline for ground water abstraction dated 15.11.2012. Hence permission from CGWB / competent authority is not necessary.
(xxix)	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of ores and others shall have valid permissions as prescribed under Central Motor Vehicle Rules, 1989 and its amendments. Transportation of ore shall be done only during day time. The vehicles transporting ores shall be covered with a tarpaulin or other suitable enclosures so that no dust particles / fine matters escape during the course of transportation. No overloading of ores for transportation shall be committed. The trucks	Vehicles are maintained on regular basis to have emission under control. All the vehicles are made mandatory to carry PUC certificate. Transportation of ore will be carried out during day time only once the mining activity commences. Transportation of ore will be done through tarpaulin covered trucks only. There will be no overloading of trucks. Weigh bridges will be maintained at the outlet of mine area. There are no forest area or wild life sanctuary in the study area.

S. No	Condition	Compliance
	transporting ore shall not pass through wild life sanctuary.	
(xxx)	Action plan with respect to suggestions / improvements and recommendations made during public consultation / hearing shall be submitted to the Ministry and the State Government within six months.	Action plan for suggestions / improvements made during public consultation is enclosed submitted to regional office of MoEF and is being followed during mining operations.
(xxxi)	A final mine closure plan, along with details of Corpus Fund, shall be submitted to the Ministry of Environment & Forests, 5 years in advance of final mine closure for approval.	Will be complied.
B: GENERAL CONDITIONS:		
S. No.	Condition	Compliance status.
i	No change in mining technology and scope of working shall be made without prior approval of Ministry of Environment and Forests.	There is no change in Mining technology.
ii	No change in calendar plan including excavation, quantum of mineral and waste shall be made.	Only calendar year plan as per approved Mining Plan is being followed for excavation quantum of mineral and waste.
iii	Four ambient air quality- monitoring stations shall be established in the core zone as well as in the buffer zone for RPM, SPM, SO ₂ , NO _x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Monitoring stations are selected as suggested in EIA/EMP and in consultation with the State Pollution Control Board. Three ambient air quality monitoring stations are established in core zone viz., Mine pit, Crushing Plant & Haulage road. Similarly 3 stations are established in buffer zone at Umbershet, Rowale and Kavdoli village.
iv	Data on ambient air quality (RPM, SPM, SO ₂ , NO _x) should be regularly submitted to the Ministry including its Regional office located at Bhopal and the State Pollution Control Board/ Central Pollution Control Board once in six month.	Data on ambient air quality is regularly monitored and recorded. Enclosed herewith the data for Summer season-2015-2016 as Annexure-1.
v	Fugitive dust emissions from all the sources shall be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points shall be provided and properly maintained.	Fugitive dust emissions from all the sources are controlled. Water spraying on the haulage roads is being done by deploying 4 nos. of water tankers. Sprinklers are fixed along the main haulage road [0.1.5 km] to reduce the dust. Inside the mine lease area 0.105 km road has been asphalted. Photographs of Water sprinkling system are enclosed.

vi	Measures shall be taken for control of noise level below 85 dB (A) in the work environment. Workers engaged in operations of HEMM, etc. shall be provided with ear plugs / muffs.	Adequate measures are taken to minimize the noise level by doing regular maintenance of all machineries. Workers engaged in operation of HEMM are provided with Ear Muffs.												
vii	Industrial Waste water (workshop & waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December, 1993 or as amended from time to time. Oil and Grease trap shall be installed before discharge of workshop effluents.	We have not established any workshop within the mining lease. Maintenance of all the vehicles and machineries are done at nearby town Dapoli in private garages. Water from the mine is not being discharged into surface water and diverted to settling pond.												
viii	Personnel 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.	Personnel working in dusty areas are provided with respiratory devices like masks and goggles. The information and training is provided to all for use of these devices.												
ix	Provisions shall be made for the housing the labourers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	No labourers are staying at site as all the labourers are from nearby villages. Transport facility is provided to them.												
x	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 Organization.	A separate Environmental Management cell is opened. AGM – Environment is appointed and he is directly reporting to the head of the organization.												
xi	The project authorities shall inform to the Regional office located at Bhopal regarding date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work	We are using our own resources and this clause is not applicable.												
68432 Oxii	The funds earmarked for environmental protection measures shall be kept in separate account and should not be diverted for other purpose. Year wise expenditure shall be reported to the ministry and its Regional Office located at Bhopal.	<p>The funds earmarked for Environmental protection work is kept separately. The expenditure occurred for above said job during last six month is Rs. 15,55,610</p> <table border="1"> <thead> <tr> <th>Particular of the job</th> <th>Recurring Cost. (Rs.)</th> </tr> </thead> <tbody> <tr> <td>Afforestation & Aftercare</td> <td>98,113</td> </tr> <tr> <td>Environmental Monitoring</td> <td>1,20,000</td> </tr> <tr> <td>Water Sprinkling (Dust Suppression)</td> <td>12,37,497</td> </tr> <tr> <td>Other (Road Maint.)</td> <td>1,00,000</td> </tr> <tr> <td>TOTAL</td> <td>15,55,610</td> </tr> </tbody> </table>	Particular of the job	Recurring Cost. (Rs.)	Afforestation & Aftercare	98,113	Environmental Monitoring	1,20,000	Water Sprinkling (Dust Suppression)	12,37,497	Other (Road Maint.)	1,00,000	TOTAL	15,55,610
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xiii	The project authorities shall inform to the Regional office located at Bhopal regarding date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work	We are using our own resources and this clause is not applicable.
xiv	The Regional office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The project authorities should extend full co-operation to the officer (s) of the Regional office by furnishing the requisite data / information / monitoring reports.	The project authorities will extend co-operation to any of the concerned officer by furnishing the requisite data.
xv	A copy of Clearance letter will be marked to concern Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.	Complied
xvi	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District industry Centre and collector's office / Tehsildars office for 30 days.	Not Applicable
xvii	The project authorities shall advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at http://envfor.nic.in and a copy of the same shall be forwarded to the Regional Office of this Ministry located at Bhopal.	Complied.

Date:-05.12.2015

For Ashapura Minechem Limited



Place: Mumbai

**Rajnikant Pajwani
CEO & Whole Time Director**

Annexure-1: Ambient Air quality Monitoring Results 2015- 2016

S.No.	Locations	April 2015				May 2015				June 2015				July 2015				August 2015			
		Parameters ($\mu\text{g}/\text{m}^3$)				Parameters ($\mu\text{g}/\text{m}^3$)				Parameters ($\mu\text{g}/\text{m}^3$)				Parameters ($\mu\text{g}/\text{m}^3$)				Parameters ($\mu\text{g}/\text{m}^3$)			
		PM ₁₀	PM _{2.5}	SO _x	NO _x	PM ₁₀	PM _{2.5}	SO _x	NO _x	PM ₁₀	PM _{2.5}	SO _x	NO _x	PM ₁₀	PM _{2.5}	SO _x	NO _x	PM ₁₀	PM _{2.5}	SO _x	NO _x
1.	Near Mining Pit	66.9	11.5	6.5	1.24	70.0	14.9	8.1	1.5	65.7	12.1	6.5	1.8	66.7	13.8	7.4	4.2	62.5	13.6	5.8	2.4
2.	Crushing Plant	68.0	14.5	8.6	1.8	65.2	13.9	8.3	1.6	68.9	13.9	7.3	1.1	71.5	14.2	9.3	4.5	68.1	13.9	7.4	2.6
3.	Haulage Road	67.6	12.02	8.0	2.1	64.8	12.6	7.2	1.7	66.4	15.1	5.9	2.1	71.2	14.9	6.8	4.4	67.2	12.4	7.4	2.9
4.	Umbershet Village	40.6	8.3	5.08	0.6	43.5	8.2	2.8	0.6	40.7	6.6	2.9	0.5	42.7	6.4	2.7	1.1	43.2	6.6	2.1	0.7
5.	Rowale Village	42.3	8.8	3.5	1.6	43.9	7.7	4.0	1.1	44.5	6.9	4.1	1.0	47.1	7.3	3.9	1.3	46.8	7.7	3.4	0.6
6.	Kavadoli Village	54.6	9.6	6.5	1.0	56.6	10.3	4.3	0.95	53.3	10.3	4.8	0.64	54.5	9.6	4.3	1.7	50.8	10.6	4.5	1.3
7.	Mine Lease (Dust Fall)	71.54	14.3	-	-	70.06	14.8	-	-	71.34	14.2	-	-	68.7	14.6	-	-	72.0	12.5	-	-

Permissible limits as per NAAQS Standards

PM₁₀ 100 $\mu\text{g}/\text{m}^3$

PM_{2.5} 60 $\mu\text{g}/\text{m}^3$

SO_x 80 $\mu\text{g}/\text{m}^3$

NO_x 80 $\mu\text{g}/\text{m}^3$

SUSTAINABLE MINING AT ASHAPURA MINECHEM LTD (UMBERSHET MINES).



Afforestations at Umbershet Bauxite Mine

Retaining wall for control of erosion during monsoon season.



Dust Suppression System on Haulage Road at Mines

**Tarpaulin covering of
Transporting trucks to
reduce fly dust.**



Tar road at mine site

CSR ACTIVITIES AT ASHAPURA MINECHEM LTD (UMBERSHET MINE)



Cleaning of Kelshi beach area

Distribution of computer at Zila Parishad School

