Project Code: Yet not been allocated

HALF YEARLY COMPLIANCE REPORT OF ENVIRONMENT CLEARNACE FOR SLAG GRINDING UNIT

NAME OF THE PROJECT: Expansion of Cement grinding Unit from 2.2 MTPA to 4.8 MTPA by setting up of 2.60 MTPA Slag Grinding Unit at Bilakalagudur (Village), Gadivemula (Mandal) dist. Kurnool (A.P.)

MOEF LETTER NO. & DATE: J-11011/159/2010-IA-II (I) Dt:13-05-2011

PERIOD OF COMPLIANCE REPORT: 01.10.16 to 31.03.2017

Sl.No.	CONDITIONS	COMPLIANCE
6 A	SPECIFIC CONDITIONS	
i	Continuous stack monitoring facilities to monitor gaseous emissions from the stacks shall be provided. Particulate emissions shall be controlled within 50mg/Nm3 by installing adequate air pollution controlled systems Viz. Bag filters and stacks of adequate height etc. Data on ambient air, fugitive and stack emissions shall be submitted to the Ministry's Regional Office at Bangalore, Andhra Pradesh Pollution Control Boards (APCB) and CPCB regularly.	We have provided Bag Houses in all the equipment viz. Crusher, Raw Mill, Kiln, Coal Mill, Cement/ Slag Mills and Packing Plant. Online continuous monitoring facilities to monitor particulate emissions from the stacks have been provided to Kiln/ Rawmill, Cooler, Coal mill, Cement Mill and Slag mill stacks. Adequate stack heights have been provided. Particulate emissions are maintained well within the prescribed limits. We have also installed 3 nos. of CAAQMS for monitoring ambient air quality. Online data are electronically transmitted to APPCB & CPCB website. It is also ensured that at no time the particulate emissions from the grinding unit exceed 30 mg/Nm^3. Interlocking facility has been provided in the pollution control equipment.
ii	The national Ambient Air Quality Standards issued by the Ministry vide G.S.R.No.826 (E) dat.16th Nov ,2009 should be followed	We are complying with the National Ambient Air Quality Standards and have installed 3 nos. of continuous ambient air quality stations with online connectivity to APPCB and CPCB servers.
iii	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the ministry and regularly monitored. Guidelines/Code of practice issued by the CPCB should be followed.	We have installed latest technology Bag Houses designed to control the stack emission well below the stipulated norms. Pulse bag filters are installed at all the material transfer points for controlling fugitive emissions. In additions, water sprinklers are provided at belt conveyors, wherever required, to effectively suppress the dust during material conveying. Emissions from stacks as well as

		ambient air quality parameters are continuously monitored and displayed in public domain.
iv	The company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points, handling (unloading, conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. All the raw materials stock piles should be covered. A closed clinker stockpile system shall be provided. All Conveyors should be covered with GI sheets. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos. Pneumatic system shall be used for fly ash handling	Pulse bag filters are installed at all the material transfer points for controlling fugitive emissions. All the internal roads meant for vehicular movement are concrete paved. Roads are regularly swept to control fugitive emission during vehicular movement. Gypsum, Laterite and coal stockpiles are covered. Clinker is stored in RCC silo. All the conveyors are fully covered with GI sheets. No fly ash is generated as so far we have not installed CPP,
v	Asphalting/Concreting of roads and water spray all around the stockyard and loading /unloading areas in the cement plant shall be carried out to control fugitive emissions. Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM and RSPM such as haul road, loading unloading points ,transfer points and other vulnerable areas. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central pollution control board in this regard.	We have provided concrete paved internal approach roads around the stockyard and raw material storage areas. All the approach roads connecting to storage yards and loading unloading areas have been concreted. We are also deploying water tankers regularly to spray water on unpaved areas for dust suppression. Roadside water sprinklers have also been provided and regularly operated for dust suppression. Currently, we are also installing water sprinklers along the stockpiles. The ambient air quality norms are maintained within the prescribed norms.
vi	Efforts shall be made to reduce impact of the transport of raw materials and end products on the surrounding environment including agriculture land. All the raw materials including flyash should be transported in the closed containers only and should not be overloaded. Vehicle emissions shall be regularly monitored.	We have constructed a 10 M x 30 Km concrete road from factory to Nandyal town to reduce the impact of transport of raw material/ finished goods on the environment/ agriculture land. We are also covering the trucks carrying raw material and finished products with tarpaulin in compliance with the CPCB guidelines. Loose powdery material viz. cement /GGBS/ fine coal etc. are transported in bulkers. PUC check of company owned vehicles is regularly done whereas random PUC certificates checked at factory gate for the vehicles entering our premises.
vii	Water requirement from bore wells for the proposed expansion shall not exceed 200 m^3/day. Efforts shall be made to further	Our total ground water requirement is less than the permitted 200 m3/day and no waste water is being generated from the cement grinding unit. We have also

	reduce water consumption by using air cooled condensers. All the treated wastewater should be recycled and reused in the process and /or for dust suppression and greenbelt development and other plant related activities etc. No process waste waster shall be discharged outside the factory premises and zero discharge should be adopted	constructed & commissioned STP within the plant premises to treat the domestic waste water. The treated water is being used onland for plantation and Green belt development.
viii	Efforts shall be made to make rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from the other sources.	We have adopted the following measures for rainwater harvesting and groundwater recharge: - Constructed rooftop rainwater harvesting structure at Old Project Office Building, Stores Building ,Coal storage shed, Workshop building and Bilakalagudur School building. - 4 nos. of percolation tanks in mining area - 20 Nos. of recharge wells inside plant premises to harvest rainwater from the storm drains.
ix	All the bag filters dust and cement dust from pollution control devices shall be be recycled and reused in the process used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers/reprocesses only.	All the fine dust is collected at bag filters from all operations and automatically recycled into the system. Spent oil and batteries are sold to authorized recyclers.
x	The green belt shall be developed in at least 33% area in and around the cement plant as per CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.	Greenbelt in an area of 239 Acres (37%) has been developed.
xi	At least 5% of the total cost of the project shall be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry Regional office at Bangalore. Implementation of such programme shall be ensured accordingly in a time bound manner	We have earmarked 5% of the project cost towards corporate social responsibility. Item wise details along with time bound action plan has been submitted to R.O. MoEF. We have implemented various CSR schemes during the year 2016-17 with an expenditure of Rs.252 Lakhs. Budget for 2017-18 is Rs.2.5 Crores.
xii	The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water,	The project has been completed and the necessary infrastructure was provided during construction.

	medical for health care , crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project.	

A	GENERAL CONDITIONS	
I	The project authorites must strictly adhere to the stipulations made by the Andhra Pradesh State Pollution Control Board and the State Government.	We are adhering to the stipulations made by the Andhra Pradesh State Pollution Control Board and the State Government. We have obtained combined consent for Air and Water and authorization for Hazardous Waste from APPCB. We are complying with all the stipulations made in the Consent Order. The consent is renewed in a timely manner.
Ii	No further expansion or modifications in the plant shall be carried out without prior approval of the ministry of Environmental and Forests	Agreed. We have been granted EC for expansion of clinker production capacity from 2.0 MTPA to 2.5 MTPA.
iii	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19 May ,1993 and standards prescribed from time to time. The State PCB may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	Gaseous and particulate emissions from various sources are within the limits prescribed by APPCB. Interlocking facilities are provided in the Pollution Control Equipments. Average values of particulate emissions from the various stacks for the period 01.10.2016 to 31.03.2017 are as under:
Iv	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM10, SO2 and NOx are anticipated in consultation with the SPCB.Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional office Bangalore and the SPCB/CPCB once in six months.	We have installed Ambient Air Quality Monitoring stations and the ambient air quality including Ambient Noise Levels are not exceeding the standard stipulated. Monitoring of Ambient air quality and stack emission is being carried out regularly and reports are being submitted to the APPCB quarterly and six monthly to the Ministry. We have also installed 3 nos. of Continuous Ambient Air Quality Stations (CAAQMS) and the realtime data are continuously being transmitted to APPCB website on public domain. Air Quality data are also displayed at the main factory gate.

#	Stack attached to	SPM - Mg/Nm^3 (average)
1.	Slagmill-1	13.65
2.	Slagmill-2	13.95

26/12/18

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<tr><td>V</td><td>Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 May, 1993 and 31st Dec,1993 or as amended from time to time. The treated water shall be utilized for plantation purpose.</td><td>No waste water generated from the process. Treated waste water form STP is used onland for gardening/ greenbelt development.</td></tr>
<tr><td>vi</td><td>The overall noise levels in and around the plant area shall be kept well within the plant standards 85 dB(A) by providing noise control measures including acoustic hoods, silencers, enclosures etc.on all sources of noise generation.</td><td>The overall noise levels in and around the plant area is well within the standards. The following measures are adopted for control on noise:
1. Grinding of raw material and finished products is performed by Roller Press that generates less noise compared to traditional ball mills.
2. All major industrial fans are fitted with silencers.
3. DG sets are provided with acoustic enclosures & installed in enclosed rooms.
4. Compressors are installed within enclosed rooms
5. Speed limit restrictions for vehicles within plant premises
6. Regular preventive maintenance of plant and machinery by competent staff.
Average values of ambient noise levels for the period 01.10.2016 to 31.03.2017 are as under:
<table>
<tr><th>#</th><th>Location</th><th>Nose levels dBA (avg.)</th></tr>
<tr><td>1</td><td>Near New Security Gate</td><td>66.1</td></tr>
<tr><td>2</td><td>Near MRSS Building</td><td>63.0</td></tr>
<tr><td>3</td><td>Near Old Security Gate</td><td>61.1</td></tr>
<tr><td>4</td><td>Near Colony Gate</td><td>57.8</td></tr>
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</td></tr>
<tr><td>vii</td><td>Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.</td><td>Occupational health surveillance of the workers is being done on regular basis and records maintained as per the Factory Act. For this purpose, we have set up a dispensary inside the factory premises with qualified doctors, paramedical staff and all emergency arrangements including ambulance. In addition, the company, as part of its CSR programme, has also deployed one Mobile Health Care Van for providing medical aid to nearby villages.

As part of Occupational health Surveillance programme, we are conducting 6 monthly health checkup of workers exposed to dust and noise. The health check up includes spirometry (lung function test), audiometry, chest X-Ray, blood examination among others. Records of periodic health checkups are maintained at</td></tr>
</table>

		the health centre.
viii	The company shall develop surface water harvesting structures to harvest the rainwater for utilization in the lean season besides recharging the ground water table.	We have constructed rain water harvesting structures for harvesting the roof tops water and storm water in cement plant. Rainwater is harvested from the storm water drains through recharge wells. In addition, rainwater in mining area is also harvested through 4 nos. of percolation tanks. The harvested water is recharged into groundwater. Rainwater is also collected in mine pits.
ix	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must under take socio-economic development programme, educations programmes, drinking water supply and heath care.	We are complying with all environmental protection measures and safeguards recommended in their EIA/EMP report. Also our company has undertaken various socio-economic development activities in the surrounding villages. The key areas of community/ socio economic development are as follows: 1) Promotion of education 2) Reducing child mortality rate 3) Combating HIV/ AIDS, malaria and other communicable diseases 4) Employment enhancing/ vocational training programmes 5) Promoting gender equality and empowering women 6) Environmental sustainability 7) Social infrastructure development We have implemented various schemes under the above heads to achieve the CSR objectives.
x	The requisite funds shall be earmarked towards capital cost and recurring cost/annum for environmental pollution control measures to implement the conditions stipulated by the MOEF as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Bangalore. The funds so provided shall not be diverted for any other purpose.	As part of Environment management, we have so far invested around Rs. 36.07 Crores till 31.03.2016 (including slag unit and mines). We also spent Rs.121 Lakhs as recurring expenditure towards environment and pollution control during 2016-17.
xi	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad /Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing of the proposal. The clearance letter shall be put	A copy of clearance letter had been sent to all the concerned and no suggestions and representation were received so far. We have also put the clearance letter on the website of the company.

	on the web site of the company by the proponent.	
xii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitoring data on their website and shall update the same periodically. It shall simultaneously be sent to the regional office of MOEF at Bangalore. The respective zonal office of CPCB and SPCB. The criteria pollutant levels namely,PM 10 ,SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the gate of the company in the public domain.	Status of compliance and monitored data are regularly uploaded on the company's website (www.jswcement.in) and reports are being sent to the regional Office of the MoEF at Bangalore and the respective Zonal Office of CPCB and monitored data are being displayed through electronic display board at the main gate of the company in the public domain.
xiii	The project proponent shall also submit six monthly report on the status of the compliance of the stipulated environmental conditions including results of the monitored data to the regional office of MOEF,the respective zonal office of CPCB and SPCB.	We are regularly submitting the six-monthly compliance reports and ambient air quality monitoring data. We are also uploading our six-monthly compliance reports in the company's website, www.jsw.in.
xiv	The Environmental statement for each finical year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned state PCB.	We are regularly submitting the environmental statement in Form-V to the APPCB, MoEF and CPCB. Copy of the Environment Statement is also uploaded on the company website (www.jsw.in).
xv	The project proponent shall inform the public that the project has been accorded environmental clearance by Ministry and copies of the clearance letter are available with SPCB and may also be seen at Website of the MOEF at http;/envfor.nic.in.This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to regional office at Bangalore.	We have already advertised in two local newspapers (Vartha and Deccan Chronicle dated 23.09.2008) widely circulated in the region and copies of the same had been forwarded to the regional office, MoEF.
xvi	The project authorities shall inform the regional office as well as the ministry date of financial closure and final approval of the projec5t by the concerned authorities and the date of commencing the land development work.	Project has been completed and is ongoing and we are communicating our progress periodically.
7	The ministry may revoke or suspend the clearance if	Noted

	implementation of any of the above conditions is not satisfactory.	
8	The ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner shall implement these conditions.	Noted.
9.	The above conditions shall be enforced, interalia, under the provisions of the Water (Prevention and Control of pollution) Act, 1974, The Air (Prevent5ion & Control of pollution) Act 1981 and The Environmental Protection Act, 1986, Hazardous Waste (management, handling and transboundary) Rules, 2008 and Public (Insurance) Liability Act, 1991 alongwith their amendments and Ruiles.	Agreed.

(Authorized Signatory)

JSW Cement Limited