

FORM – 1

FOR

**2.4 MTPA (GGBS & PSC) CEMENT GRINDING UNIT
AT
SALBONI, WEST BENGAL, INDIA**

Submitted by



JSW CEMENT LIMITED

Prepared by



DEVELOPMENT CONSULTANTS PVT. LTD.

An ISO 9001 : 2008 COMPANY &

NABET / QCI ACCREDITED EIA CONSULTANT ORGANIZATION

CONSULTING ENGINEERS

KOLKATA ♦ MUMBAI ♦ DELHI ♦ CHENNAI

APPENDIX I (See paragraph – 6)

FORM - 1

(I) Basic Information

Serial Number	Item	Details
1	Name of the Project	2.4 MTPA Portland Slag Cement (PSC) and Ground Granulated Blast Furnace Slag (GGBS) Grinding Unit at Salboni, West Bengal by M/s JSW Cement Limited
2	S. No. in the Schedule	3 (b)
3	Proposed capacity / area / length / tonnage to be handled / command area / lease area / number of wells drilled	2.4 MTPA Portland Slag Cement (PSC) and Ground Granulated Blast Furnace Slag (GGBS) Grinding
4	New / Expansion / Modernisation	New
5	Existing Capacity / Area etc.	Not Applicable
6	Category of Project i.e. 'A' or 'B'	B
7	Does it attract the general condition? If yes, please specify.	No
8	Does it attract the specific condition? If yes, please specify.	No
9	Location	The Project Site is located at Salboni, West Bengal. The site is 4.5 km away from NH 60.
	Plot / Survey / Khasra No.	1. Nutanbankati - 1,2,3,4 2. Jambedia - 349 3. Gaighata - 1, 321, 322 4. Kulpheni - 194, 171, 172, 170, 110, 173, 174, 175, 176, 177, 178, 179, 180, 450, 190, 191, 192, 196, 197, 198, 199, 200, 201, 202, 203, 454, 451, 189, 188, 448, 453, 186, 184, 204, 183, 449, 187, 452, 181, 447, 109, 108, 105, 107, 106.
	Village	Salboni
	Mouza	1. Nutanbankati - 446 2. Jambedia - 445 3. Gaighata - 455 4. Kulpheni - 456

Serial Number	Item	Details
	District	Paschim Medinipur
	State	West Bengal
10	Nearest railway station / airport along with distance in kms.	Nearest railway station is Salboni which is 2 km from project site. Salboni is under south eastern railway Adra division Nearest domestic and international airport is at Kolkata which is approximately 160 km from the project site.
11	Nearest town, city, District Headquarters along with distance in kms.	Nearest Town : Salboni (7 km), District Headquarter – Medinipur (17 km).
12	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal addresses with telephone nos. to be given)	Village Panchayats - All the mouzas are under GP no:4. Zilla Parishad - Midnapore, Local body Address: Ankur complex, Vill-Jambedia, P.O - Sayedpur via Salboni, Paschim Medinipur, West Bengal-721147. Tel No: - (03222) 308000.
13	Name of the applicant	JSW Cement Limited
14	Registered Address	JSW Cement Ltd., JSW Centre, MMRDA Ground, Bandra Kurla Complex, Bandra (East) MUMBAI 400 051
15	Address for correspondence:	
	Name	Anil Kumar Pillai
	Designation (Owner / Partner / CEO)	Director & CEO
	Address	M/S. JSW Cement Limited, #501, Sai Anandam Residency, TTD Road, Srinivas Nagar, P.O. Nandyal, Distt. Kurnool (A.P.)
	Pin Code	518 501
	E-mail	ceo.cement@jsw.in
	Telephone No.	08514202303
	Fax No.	02242863000
16	Details of Alternative Sites examined, if any. Location of these sites should be shown on	Location of the Project Site on a toposheet is enclosed as Exhibit – 1 .

Serial Number	Item	Details
	a toposheet.	No alternative site examined as the proposed cement grinding unit is set up in the vicinity of JSW Bengal Steel's proposed Steel Plant from where the slag can be sourced in future.
17	Interlined Projects	None
18	Whether separate application of interlined projects has been submitted	Not Applicable
19	If Yes, date of submission	Not Applicable
20	If No, reason	Not Applicable
21	Whether the proposal involves approval / clearance under: (a) The Forest (Conservation) Act, 1980 (b) The Wildlife (Protection) Act, 1972 (c) The CRZ Notification, 1991	None
22	Whether there is any Govt. order / policy relevant / relating to the site?	None
23	Forest land involved (hectares)	None
24	Whether there is any litigation pending against the project and/or land in which the project is propose to be set up (a) Name of the Court (b) Case No. (c) Orders / directions of the Court, if any & its relevance with the proposed project.	None

* Capacity corresponding to sectoral activity (such as production capacity for manufacturing, mining lease area and production capacity for mineral production, area for mineral exploration, length for linear transport infrastructure, generation capacity for power generation etc.,)

(II) Activity

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

Sl. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	Yes	<p>The total identified land for the proposed project is 57 acres. The total land is under possession of JSW.</p> <p>Since the identified land is mostly fallow and totally uninhabited, there will be no social impact arising out of resettlement. Since the land to be acquired / being acquired do not include any Reserved or Protected forest, the impact due to loss of those forests will not be there. The greenery to be developed will not only counter the loss of vegetation but may improve the situation as well as aesthetics of the area.</p>
1.2	Clearance of existing land, vegetation and buildings?	Yes	The removal of scattered bushes will be required.
1.3	Creation of new land uses?	No	Uninhabited land will be converted to Industrial land.
1.4	Pre-construction investigations e.g. bore holes, soil testing?	Yes	Geo-technical investigations like bore holes, soil testing etc. are required for design of civil structures.
1.5	Construction works?	Yes	Civil/ structural works, mechanical and electrical erection etc. to implement the proposed project.
1.6	Demolition works?	No	Not Applicable
1.7	Temporary sites used for construction works or housing of construction workers?	Yes	<p>The proposed plant site has adequate space for construction yard.</p> <p>To take care of the housing of construction workers to be migrated from outside, proper temporary housing will be arranged by JSW through contractors. The contractors will be made to accept</p>

Sl. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			the condition of constructing Workers' Colony while land for the same will be provided by JSW on temporary basis.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	The plant buildings/structure will include clinker silo, gypsum storage, cement mill feed hoppers, cement mill building, weigh bridge, cement silo, packing plant building & empty bag store, truck loading bay, wagon loading platform, wagon tippler, compressor room, laboratory and technical office, general store, workshop & security office etc.
1.9	Underground works including mining or tunneling?	No	Not applicable
1.10	Reclamation works?	No	Not applicable
1.11	Dredging?	No	Not applicable
1.12	Offshore structures?	No	Not applicable
1.13	Production and manufacturing processes?	No	<p>Conventional cement grinding unit for manufacture of Cement. The Salboni Plant will adopt most modern Roller Press Combination Technology in finish mode with high efficiency separator with the state of art technology in the whole process of PSC / G G B S production line. Modern high technology features will ensure high quality product, high yield in energy savings, environmental protection, as well as large- scale automation.</p> <p>Clinker and Gypsum in a definite proportion are ground for the production of Ordinary Portland Cement (OPC). Clinker, Slag & Gypsum received through trucks/railway wagons are unloaded by truck/wagon-tippler and transported through belt conveyor system for storage in Clinker silo, Slag & Gypsum covered sheds</p>

Sl. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			<p>respectively. Clinker, Slag and Gypsum are subsequently extracted and transported in definite quantity as per the quality requirements to mill feed hoppers from where these materials are fed to Cement mill for Grinding.</p> <p>The Roller Press mill consists of Rollers and grind Clinker and Gypsum to produce OPC, whereas slag alone is ground to produce GGBS.</p> <p>Both the OPC as well GGBS are stored in separate silos. For the production of Portland Slag Cement, GGBS and OPC are extracted from the respective silos and blended in definite proportion in paddle mixer and stored in PSC silo.</p> <p>In Cement Silos, the cement is homogenised by fluidisation method (for blending) and then extracted through specific equipments installed and fed to Electronic Roto-Packing Machine for packing in bags. After packing in bags, the cement bags are transported by means of belt conveyor and loaded in Railway Wagons/Trucks by automatic Wagon/Truck Loading machines for onward dispatch to the customer.</p>
1.14	Facilities for storage of goods or materials?	Yes	Storage silos/ covered sheds, stockpiles etc. will be constructed.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	<p><u>Solid Waste</u></p> <p>No solid waste will be generated from the manufacturing process. Other solid waste will be in the form of rejected conveyor belts, torn/damaged cement bags, paper/ wooden/ plastic waste etc. which are not hazardous in nature and will be sold to recyclers on regular basis.</p>

Sl. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			<u>Liquid Effluents</u> Around 8 m ³ /day of domestic waste water is expected to be generated from the proposed project and the same will be treated in septic tanks followed by soak pits.
1.16	Facilities for long term housing of operational workers?	No	The nearby area has a good number of housing facilities. Rented accommodations are also available in the locality.
1.17	New road, rail or sea traffic during construction or operation?	Yes	Approach road etc. will be developed. In addition, the nearby railway line is to be connected to the proposed plant site.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	Approach road etc. will be developed. In addition, the nearby railway line is to be connected to the proposed plant site.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	None
1.20	New or diverted transmission lines or pipelines?	No	None
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	None
1.22	Stream crossings?	No	None
1.23	Abstraction or transfers of water from ground or surface waters?	Yes	The water requirement for the proposed project is about 600 m ³ /day and the same will be sourced from underground bore wells.
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	None

Sl. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	<p>Construction material will come to site in rail or road, as convenient.</p> <p>Around 185 O & M personnel will be required during operation phase of the project.</p> <p>In addition to the permanent staff, around 75 persons shall be engaged in construction activities. Most of the unskilled and semi skilled labour shall be from nearby villages and towns. Responsibility of bringing labours to site will lie with the respective contractor.</p> <p>During construction phase, all construction material will be transported through road and transportation of personnel will involve transportation of local workers to the site.</p> <p>During operation phase, raw materials & products shall be transported by road as per the requirement.</p>
1.26	Long-term dismantling or decommissioning or restoration works?	No	None
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	None
1.28	Influx of people to an area in either temporarily or permanently?	Yes	<p>There will be immigration of people in two phases :</p> <p>During construction phase there will be an influx of about 75 persons. Most of the unskilled and semi skilled labour shall be from nearby villages and towns.</p> <p>During operation phase, around 185 O & M personnel will be required.</p>

Sl. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			The site being easily accessible from the nearby areas that also have a good number of housing facilities, local housing will not be stressed to any degree of concern.
1.29	Introduction of alien species?	No	None
1.30	Loss of native species or genetic diversity?	No	None
1.31	Any other actions?	Yes	JSW shall also ensure adequate dialogue with the local bodies / local population, as and when necessary, to implement the project.

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

Sl. No.	Information/checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data								
2.1	Land especially undeveloped or agricultural land (ha)	Yes	The total identified land for the proposed project is 57 acres. The total land is under possession of JSW. The identified land is to be graded and leveled as per the site requirement.								
2.2	Water (expected source & competing users) unit: KLD	Yes	The water requirement for the proposed project is about 600 m ³ /day and the same will be sourced from underground bore wells.								
2.3	Minerals (MT)	Yes	<table border="1"> <thead> <tr> <th><u>Raw Material</u></th> <th><u>Tons per annum</u></th> </tr> </thead> <tbody> <tr> <td>Clinker</td> <td>9,60,000</td> </tr> <tr> <td>Slag</td> <td>14,40,000</td> </tr> <tr> <td>Gypsum</td> <td>96,000</td> </tr> </tbody> </table> <p>Clinker will be bought from domestic / international market. Slag will be bought from steel plant of TISCO / IISCO. Gypsum will be imported / bought from fertilizer plant.</p>	<u>Raw Material</u>	<u>Tons per annum</u>	Clinker	9,60,000	Slag	14,40,000	Gypsum	96,000
<u>Raw Material</u>	<u>Tons per annum</u>										
Clinker	9,60,000										
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Sl. No.	Information/checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.4	Construction material - stone, aggregates, sand / soil (expected source – MT)	Yes	Construction materials (stone chips / sand) are locally available abundantly.
2.5	Forests and timber (source – MT)	No	None
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	The power requirement for the project will be 27 MVA and will be will be sourced from WBSEDCL. Moreover, DG sets will be also there.
2.7	Any other natural resources (use appropriate standard units)	No	None

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

Serial Number	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	Yes	Spent Oil from the gear boxes will be disposed to the authorized vendors as per the Hazardous Wastes (Management and Handling) Amendment Rules, 2008.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	None
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	As JSW strongly believes that it is a part of the larger community where it operates, the company has taken cognizance of the cultural ethos and socio economic environment of the locality where its plants are located. With this approach, JSW shall consider the following general measures for the socio – economic upliftment / welfare

Serial Number	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
			of the nearby villages : √ Local infrastructure development √ Social Afforestation √ Extending support to games, sports and culture to local community
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	None
3.5	Any other causes	No	None

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

Serial Number	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	No	None
4.2	Municipal waste (domestic and or commercial wastes)	No	None
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	No	Spent Oil from the gear boxes.
4.4	Other industrial process wastes	Yes	None
4.5	Surplus product	No	None
4.6	Sewage sludge or other sludge from effluent treatment	No	None
4.7	Construction or demolition wastes	No	None
4.8	Redundant machinery or equipment	No	None
4.9	Contaminated soils or other materials	No	None
4.10	Agricultural wastes	No	None
4.11	Other solid wastes	No	None

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

Serial Number	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	No	None
5.2	Emissions from production processes	No	Particulate emissions from Venting Stacks will be below 30 mg/Nm ³ . Bag filter Dust collectors will be installed for venting stacks & also for transfer points.
5.3	Emissions from materials handling including storage or transport	Yes	Fugitive emissions are expected from unloading and handling of clinker and gypsum. Fugitive emissions are also envisaged from loading of cement bags into trucks and railway wagons. Pollution control equipment like bag filters, automated dust suppression and sprinkler systems will be installed for handling of raw material and the finished products.
5.4	Emissions from construction activities including plant and equipment	Yes	<p>The main and visible pollution during construction phase is fugitive dust generated during excavation and other earthmoving activities and during concreting work. Due to use of construction machinery mainly some NO_x and little amount of SO₂ emission will be there. This is temporary and will be taken care of by good maintenance of the construction machinery.</p> <p>JSW authority will ensure use of water sprinklers</p>

Serial Number	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
			liberally to minimize/eliminate fugitive dust nuisance during construction phase.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Dust mitigation is discussed under 5.4. Waste generated as construction waste will be handled / disposed / recycled as per accepted practice.
5.6	Emissions from incineration of waste	No	None
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	None
5.8	Emissions from any other sources	No	None

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

Serial Number	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	No	None
6.2	From industrial or similar processes	No	The main source of noise generation from the plant will be cement mill, compressors/blowers and cement loading site (railway siding & truck loading).
6.3	From construction or demolition	Yes	During site development and construction of the plant, noise will be generated from the machineries used. Noise will also be generated due to vehicular movement.
6.4	From blasting or piling	No	Piling for foundation will be done, if necessary.

Serial Number	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data
6.5	From construction or operational traffic	Yes	Noise will be generated due to movement of trucks and other vehicles used during construction and operational phase. Use of horns near human habitat and other sensitive receptors shall be restricted. The contribution will be nominal and tolerable.
6.6	From lighting or cooling systems	No	None
6.7	From any other sources	No	None

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

Serial Number	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	No	Spent Oil from the gear boxes JSWCL will store the hazardous waste in a designated area. This area will be isolated from the other utility areas.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge).	No	Waste water generation from a cement plant is generally low compared to other process industries. Wastewater in cement plants results mainly from surface run off. For the proposed project, the chance of generation of surface run off is absent since clinker will be stored in silo and slag and gypsum will be stored under covered shed. Around 8 m ³ /day of domestic waste water is expected to be generated from the proposed project and the

Serial Number	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
			same will be properly disposed in septic tanks followed by soak pits. Thus the proposed project will cause no substantial contribution to water pollution.
7.3	By deposition of pollutants emitted to air into the land or into water	No	None
7.4	From any other sources	No	None
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	None

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment

S.No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	No	None
8.2	From any other causes	No	None
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?	No	None

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

Serial Number	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.1	<p>Leads to development of supporting. Utilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.:</p> <ul style="list-style-type: none"> • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • housing development • extractive industries • supply industries • other 	Yes	<p>It is most likely that implementation of this project will help to improve the social infrastructure of the surrounding area.</p> <p>There will be some positive socio-economic impact on the local people. The proposed project has the potential of direct and indirect employment generation. The proposed project has the following potential of employment :</p> <p>(a) Temporary employment of 75 during construction phase.</p> <p>(b) Long-term employment of up to 185 people in the operation and maintenance of the cement grinding unit.</p> <p>Moreover, the proposed project will also produce additional jobs generated by local business in the supply of goods and services.</p> <p>All these will also help to uplift the employment status of the locality.</p>
9.2	Lead to after-use of the site, which could have an impact on the environment	No	None
9.3	Set a precedent for later developments	Yes	Development of good landscape and greenery
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	Other existing or planned projects within proximity to the proposed plant are of small sizes. No significant cumulative effects are expected.

III) Environmental Sensitivity

Serial Number	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
1.	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	No	
2.	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Yes	Rivers in the vicinity: Tamal
3.	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	No	
4.	Inland, coastal, marine or underground waters	Yes	Rivers in the vicinity: Tamal
5.	State, National boundaries	No	
6.	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	
7.	Defence installations	No	
8.	Densely populated or built-up area	No	
9.	Areas occupied by sensitive man-made land uses (<i>hospitals, schools, places of worship, community facilities</i>)	Yes	Only few shops are in the vicinity of the plant site. There are markets within 5 to 6 km radius.

Serial Number	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
10.	Areas containing important, high quality or scarce resources <i>(ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)</i>	No	
11.	Areas already subjected to pollution or environmental damage. <i>(those where existing legal environmental standards are exceeded)</i>	No	
12.	Areas susceptible to natural hazard which could cause the project to present environmental problems <i>(earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)</i>	No	

(IV) Proposed Terms of Reference for EIA studies

The proposed Terms and Conditions of the EIA studies are furnished as **Annexure - A.**

I hereby given undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance give, if any to the project will be revoked at our risk and cost.

Date : _____

Place : _____

Signature of the applicant
With Name and Full Address
(Project Proponent / Authorised Signatory)

NOTE :

1. The projects involving clearance under Coastal Regulation Zone Notification, 1991 shall submit with the application a C.R.Z map duly demarcated by one of the authorized agencies, showing the project activities, w.r.t. C.R.Z (at the stage of TOR) and the recommendations of the State Coastal Zone Management Authority (at the stage of EC). Simultaneous action shall also be taken to obtain the requisite clearance under the provisions of the C.R.Z Notification, 1991 for the activities to be located in the CRZ.
2. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-a-vis the project location and the recommendations or comments of the Chief Wildlife Warden thereon (at the stage of EC).
3. All correspondence with the Ministry of Environment & Forests including submission of application for TOR / Environmental Clearance, subsequent clarifications, as may be required from time to time, participation in the EAC Meeting on behalf of the project proponent shall be made by the authorized signatory only. The authorized signatory should also submit a document in support of his claim of being an authorized signatory for the specific project.

ANNEXURE – A : TERMS OF REFERENCE (TOR) FOR EIA STUDY

The TOR for EIA Study for the proposed project will be the following :

- 1) Executive summary of the project.
- 2) Photographs of the proposed plant area.
- 3) A line diagram/flow sheet for the process.
- 4) A site location map on toposheet
- 5) Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing landuse / landcover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
- 6) A list of industries within 10 km radius of the plant area.
- 7) Details and classification of total land (identified and acquired) will be included.
- 8) Project site layout plan showing raw materials and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
- 9) List of raw material required and source along with mode of transportation should be included.
- 10) Quantification & Characterization of solid /hazardous waste & its action plan for management should be included.
- 11) Mass balance for the raw material should be included.
- 12) Mass balance for products should be included.
- 13) Energy balance data for all the components of plant should be incorporated.
- 14) JSW has collected baseline data on air, water and noise for one season (during December 2013 to March 2014) comprising the following at the same site for proposed 1x 660 MW Thermal Power Plant Project:
 - a) **Air** - The parameters include RSPM (PM₁₀, PM_{2.5}), SO₂ and NO_x.
 - b) **Water** - Five (5) water samples (3 Surface Water and 2 Ground Water) are collected and analysed in total during ambient air quality monitoring. Parameters are as per the recommendation of MoEF / SPCB.
 - c) **Noise** - Noise level in decibel (dBA) are measured at the same locations where AAQ monitoring is done.
 - d) **Site-specific micro-meteorological data** – comprising temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.

JSW now proposes to use the same data for the proposed project.

- 15) Air quality modeling for specific pollutants, if any, arising out from combustion of any

fossil fuel needs to be done.

- 16) APCS for the control of emissions will be included to control emissions within 50 mg/Nm³.
- 17) Permission for the drawl of water should be obtained. Water balance diagram must be provided.
- 18) A note on the impact of drawl of water on the nearby River during lean season, if applicable.
- 19) Action plan for rainwater harvesting measures.
- 20) Pretreatment of raw water, treatment plant for waste water should be described in detail. Broad design specifications may be included.
- 21) Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources should also be included.
- 22) Acton plan for the green belt development plan should be included.
- 23) Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
- 24) Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
- 25) Detailed R&R plan/compensation package in consonance with the National / State R&R Policy for the project affected people, if any, shall be prepared taking into account the socio economic status of the area, homestead oustees, land oustees, landless laboureres.
- 26) Socio economic development activities should be included.
- 27) Point-wise clarification and commitments made to the public during public hearing should be included.
- 28) Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.