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JSW Steel Ltd., Salem works

FORM – I

Proposal to obtain Amendment in Specific conditions (vii & xi) of Environmental Clearance (F.No.J-11011/281/2006-IA.II (I) dated 7th July 2017) of Integrated Steel Plant from 1.0 MTPA to 1.3 MTPA at JSW Salem works, Pottaneri, M. Kalipatti Village, Salem, Tamil Nadu.

March 2019

Project Proponent

JSW Steel Ltd., Salem Works

Tamil Nadu

FORM 1

(As per New Notification of MoEF dated 1-12-2009 vide SO 3067 (E)

(I) Basic Information

Sl.No.	Item	Details
1.	Name of the Project:	JSW Steel Limited, Salem Expansion from 1 to 1.3 MTPA Integrated Steel Plant (ISP) at Mecheri, Mettur-Taluk, Salem District, Tamil Nadu. **Amendment in EC Specific conditions vii. & xi.**
2.	Sl.No. in the Schedule.	3 (a) Metallurgical (Ferrous and Non-ferrous)
3.	Proposed Capacity / area / length / tonnage to be handled / command area / lease area / number of wells to be drilled.	**Amendment in Specific conditions vii. & xi. of Environmental Clearance** (F.No.J-11011/281/2006-IA.II (I) dated 7th July 2017) of Integrated Steel Plant from 1.0 MTPA to 1.3 MTPA. The existing and proposed facilities as per the EC enclosed in Table-1.
4.	New / Expansion / Modernization.	**Expansion EC 1.0 MTPA to 1.3 MTPA – Amendment in Specific conditions vii. & xi.**
5.	Existing Capacity / Area etc.	1.0 MTPA/Total Available area 237.28 hectares. EC obtained for 1 to 1.3 MTPA
6.	Category of Project 'A' or 'B'	A
7.	Does it attract General Conditions? If yes, please specify.	No
8.	Does it attract Specific Conditions? If yes, please specify.	**Yes. Specific conditions serial no. vii & xi**
9.	Location.	The project site is located at M. Kallipatti & Pottaneri village, Mecheri panchayat, Mettur taluk, Salem district of Tamil Nadu., Salem city is located at about 35 km in SE. Mettur town is located at a distance of 13 km in SW direction. NH7 is passing in Eastern direction of plant site at about 22 Km.
	Plot /Survey/Khasra No.	The plant site falls in two villages Namely M. Kalipatti and Pottaneri village. Survey number: Pottaneri village: 75B,76B,77B,80B,81B, 83 to 86, 89 to 95, 98 to 103,104B,105,303 to 305, 308 to 321,106B. M.Kallipatti :189 to 191,197 to199,203,205,

Sl.No.	Item	Details
		298 to 317.
	Village	M.Kallipatti and Pottaneri
	Tehsil	Mettur
	District	Salem
	State	Tamil Nadu

Table-1 Facilities of 1.3 MTPA integrated steel plant

Sl.No	Manufacturing Facilities	Existing Capacity (MTPA)	Proposed Expansion (MTPA)	Total Capacity after Expansion (MTPA)
1	Coke Oven Plant -1 (Non – Recovery Type)	0.50	-	0.5
2	Sinter Plant – 1 (20 Square Meter)	0.175	-	0
3	Sinter Plant – 2 (90 Square Meter)	1.06	-	1.06
4	Sinter Plant – 3 (90 Square Meter)	-	1.06	1.06
5	Blast Furnace – 1 (402 to 650 Cubic Meter)	0.367	0.316	0.683
6	Blast Furnace – 2 (550 to 650 Cubic Meter)	0.578	0.105	0.683
7	Energy Optimizing Furnace – 1 (45 T to 65 T)	0.41	0.23	0.64
8	Energy Optimizing Furnace – 2 (65 T)	0.62	-	0.62
9	Ladle Furnace - 1 (45 T to 65 T)	45T/heat	20 T/heat	65 T/heat
10	Ladle Furnace – 2 (65 T)	65 T/heat	-	65 T/heat
11	Ladle Furnace - 3 (65 T)	65 T/heat	-	65 T/heat
12	Ladle Furnace - 4 (65 T)	65 T/heat	-	65 T/heat
13	Continuous Casting Machine - 1	0.35	-	0.35
14	Continuous Casting Machine - 2	0.5	-	0.5
15	Continuous Casting Machine - 3	-	0.45	0.45
16	Bar & Rod Mill Augmentation	0.4	0.08	0.48
17	Blooming Mill Augmentation	0.36	0.12	0.48
18	Pickling and Annealing Steel unit	-	0.06	0.06
19	Peeled and ground	-	0.04	0.04
20	Air Separation Plant 1 – 150 Ton/Day	150 T/day	-	150 T/day
21	Air Separation Plant 2 – 390 Ton/Day	390 T/day	-	390 T/day
22	Air Separation Plant 3 – 250 Ton/Day	-	250 T/day	250 T/day
23	Captive Power Plant - 1	7 MW	-	7 MW
24	Captive Power Plant - 2	2X30 MW	-	2X30 MW
25	Captive Power Plant - 3	-	30 MW	30 MW

Sl.No.	Item	Details
10.	Nearest railway station/airport along with distance in km.	Railway station: Salem is the nearest railway Junction at about 35 km from plant on the Southern Railway. Nearest airport: Bangalore international airport at a distance of about 200 km.
11.	Nearest town, city, district headquarters along with distance in kms	Nearest town: Mettur in SW (13 km) City: Salem in SE (35 km) District head quarters: Salem in SE (35 km)
12.	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal address with telephone nos. to be given)	M.Kallipatti & Pottaneri village, Mecheri - Panchayat Mettur - Taluk, Salem - District, Tamil Nadu - 636 453 India Tel : +91-4298-272000
13.	Name of applicant	JSW Steel Ltd, Salem Works
14.	Registered Address	JSW Steel Limited, JSW Center, Bandra Kurla Complex, Mandra East, Mumbai 4000 051, India. **Tel :** +91 -22-42861000 **Fax :** +91 -22-42863000
15.	Address for Correspondence	JSW Steel Limited, Salem Works Pottaneri P.O, Mecheri, Mettur Taluk, Salem District, Tamil Nadu 636 453, India. Tel : +91-4298-272000 Fax : +91-4298-272272
	Name	Mr. B.N.S. Prakash Rao
	Designation (Owner/Partner/CEO)	Sr. Vice President
	Address	JSW Steel Limited, Salem Works Pottaneri P.O, Mecheri, Mettur Taluk, Salem District, Tamil Nadu 636 453 India
	Pin Code	636 453
	E-mail	bns.prakashrao@jsw.in
	Telephone No.	Tel : +91 – 4298 – 272815 Mob : +91 9500410101
	Fax No.	+91 – 4298 – 272272
16.	Details of Alternative sites examined if any. Location of these sites should be shown in topo-sheets.	The proposed project is an expansion of existing plant. Thus, considerations of alternative sites are not applicable.
17.	Interlinked Projects	No

18.	Whether separate application of interlinked Project 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 C.R.Z. Notification, 1991.	 a) No b) No c) No
22.	Forest Land Involved (hectares)	Nil
23.	Whether there is any litigation pending against the project and /or land in which the project is proposed to be set-up a) Name of the Court. b) Case No. c) Orders / Directions of the Court and its relevance with the proposed project.	Nil
24.	Size of the Project: *	1.3 MTPA Integrated steel plant, The capacity of the units as approved in the EC of 1 to 1.3 MTPA expansion is shown in **Table 1.**
25.	Expected cost of the project	Rs. 1025 crores
26.	Screening Category	Primary metallurgical industry (A)
* 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.)

S.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	The proposed project is located within the existing steel plant area. The proposed plant units/buildings will be constructed in an area of about 237.28 hectares.
1.2	Clearance of existing land, vegetation, and buildings?	No	The proposed expansion area will be co-located within the existing facilities of JSW Steel works. Hence, site clearance is not expected barring a minor clearance to initiate the foundation activities.
1.3	Creation of new land uses?	No	The proposed expansion facilities will be planned within the existing facilities of JSW Steel works.
1.4	Pre-construction investigations e.g. bore houses, soil testing?	Yes	Detailed land survey, topographical surveys and soil testing/investigation studies have been carried out earlier for existing plant. The soil investigation study will be augmented if necessary.
1.5	Construction works?	Yes	Expansion activity from 1 to 1.3 MTPA is under progress. Augmentation from 1 to 1.3 MTPA comprising of marginal enhancement of Blast Furnaces #1 &2 capacity during the scheduled capital repair after its campaign life with new sinter plant of 90 Sq. m capacity, expansion of steel melt shop, additional new bloom caster and auxiliary units like oxygen plant and power plant. The facilities as per the EC are furnished in **Table – 1.** The construction work with respect to the above facilities are under progress.
1.6	Demolition works?	No	-

S.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.7	Temporary sites used for construction works or housing of construction workers?	No	Local unskilled/semi-skilled/skilled workers will be deployed from local for construction works. Temporary space will be allocated for contractor's material storage, site office. Temporary housing for workers, within the project site is not envisaged.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	The project includes construction of buildings, e.g. Plant area including storage, handling facilities etc. The construction area is fairly flat and site grading is not necessary. No major cut & fill is envisaged.
1.9	Underground works including mining or tunneling?	No	No mining/tunneling is involved. However, some underground works limited to foundation etc. will be done within the proposed plant premises.
1.10	Reclamation works?	No	-
1.11	Dredging?	No	-
1.12	Offshore structures?	No	-
1.13	Production and manufacturing processes?	Yes	Production of alloy steels for automobile industries through blast furnace route.
1.14	Facilities for storage of goods or materials?	Yes	During construction period, temporary storage facilities is being provided. During operation phase, permanent raw material storage facilities and finished goods facilities are being provided.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	Suitable treatment plant provided to treat liquid effluents. 1) Sewage treated in STP 2) Gas cleaning plant effluent treated as part of process requirement. 3) Rolling mill effluent generated is treated and mill scale sent to sinter plant. The solid waste generated from BF is stored at solid waste dump yard. 1) BF granulated slag is used in cement industry 2) After Iron bearing material recovery, EOF slag is crushed and

S.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			partially used for EOF itself and rest is used for pavered blocks and road making. 3) All used refractories is sold to suppliers/authorized vendors.
1.16	Facilities for long term housing of operational workers?	Yes	People prefer to come from nearby city and village and transportation facilities provided. A Township is existing which will cater a portion of staff requirement and who prefer to stay at site itself.
1.17	New road, rail or sea traffic during construction or operation?	No	Existing facilities of port, road and rail facilities will be used for receipt of additional raw materials and dispatch of additional products.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc.?	No	Existing infrastructure facilities are sufficient to meet the expansion plan. However, internal roads within the plant with suitable culverts will be laid between expansions and existing.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	-
1.20	New or diverted transmission lines or pipelines?	No	Existing transmission/pipelines route will not be disturbed.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	-
1.22	Stream crossings?	No	-
1.23	Abstraction or transfers of water form ground or surface waters?	Yes	No groundwater extraction is envisaged. Surface water is proposed to be withdrawn from existing downstream facilities of Mettur dam to the project site as per the existing practice.
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	Existing drainage pattern will not be altered. The plant storm water drainage net work will be designed in such way that there is no significant alteration in the existing drainage pattern.

S.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	Transport of personnel or materials through existing road & rail facilities during construction and operation as indicated in **Clause 1.17 & 1.18.**
1.26	Long-term dismantling or decommissioning or restoration works?	No	In general life of the plant is 40 years.
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	-
1.28	Influx of people to an area in either temporarily or permanently?	Yes	Temporarily during construction phase.
1.29	Introduction of alien species?	No	-
1.30	Loss of native species or genetic diversity?	No	-
1.31	Any other actions?	No	-

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)	No	The project site is co-located in the existing plant. The total plant area is 237.28 hectares. Out of this about, the expansion programme will occupy about 11.7 hectares.
2.2	Water (expected source & competing users) unit: KLD	Yes	The fresh water requirement for existing Unit - 3.17 MGD or 14409.5 KLD The total fresh water requirement after expansion is for 4.4 MGD or 20000 KLD. Government of Tamil Nadu has sanctioned 5 MGD of water for ISP. Its availability from river Cauvery downstream at about 12 km.
2.3	Minerals (MT)	Yes	Approximate yearly requirement of Raw Materials/Minerals are given in

Sl.No.	Information/checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			Table –2.
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	Yes	The construction material required like bricks, aggregate, cement, sand, steel, etc would be procured by the contractor from the licensed source. Quantity of materials are given below 1) Fine Aggregate Approx. 1.0 lakh MT 2) Coarse Aggregate Approx. 1.5 lakh MT 3) Cement approx. 0.5 lakh MT 4) Reinforcement steel 1.0 lakh MT 5) Structural steel 0.5 lakh MT 6) Sheeting 2.0 lakh sq. m.
2.5	Forests and timber (source – MT)	No	Not applicable
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	The estimated power requirement of the project 97 MW and will be from captive generation from waste heat, BF gas and coal. Provision will be made to sell the surplus power if any through the grid.
2.7	Any other natural resources (use appropriate standard units)	No	Not applicable

Table-2 : Raw material requirement

Sl. NO.	Raw material	Quantity MMT/Year	Source
1	Iron ore fines	1.47	Indigenous / Imported
2	Iron ore pellets	0.5	Indigenous source
3	Lump ore	0.705	Indigenous / Imported
4	Coking coal	0.585	Imported
5	Non coking coal (COP)	0.147	Imported
6	Non coking coal (PCI)	0.215	
7	Power plant coal	0.172	Indigenous / Imported
8	Coke breeze for SP	0.023	Imported

Sl. NO.	Raw material	Quantity MMT/Year	Source
9	Limestone	0.135	Imported /indigenous
10	Dolomite	0.147	Indigenous
11	Quartzite	0.039	Indigenous
12	Dunite	0.039	Indigenous
13	Lime powder	0.0945	Imported/indigenous
14	Mill scale	0.158	Indigenous
15	Purchase coke	0.156	Imported
16	Anthracite	0.095	Imported

Table-3 :Source and mode of transportation of solid, liquid & gaseous fuel

S.No.	Fuel	Source	Transport mode
1.	Non coking& coking coal	Imported	Rail
2.	Non coking	Imported	Rail
3.	BF coke	Captive/imported/indigenous	Rail/Road
4.	Coke breeze	captive	Road
5.	Fuel oil	local	Road
6.	LPG	Local	Road

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.

Sl.No.	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	• Furnace Oil (FO), HSD **Requirement:** • FO: 20 KL/Day during startup • HSD: 15 KL/Day OISD norms will be followed for storing FO & LSHSD
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	-
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	There will be employment for local population during and after construction work. The living conditions and welfare of people will improve by social welfare schemes which will be implemented with the project commencement.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	-
3.5	Any other causes	No	-

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

Sl.No.	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	
4.2	Municipal waste (domestic and or commercial wastes)	No	
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	1. Used or spent oil (Category 5.1) – 35.0 T/Annum 2. Empty barrels/containers/liners contaminated with hazardous chemicals /wastes (Category 33.1) - 20.0 T/Annum 3. Sludge and filters contaminated

Sl.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
			with oil (Category 3.3) - 1.0 T/Annum 4. Wastes or residues containing oil – Grease (Category 5.2) - 15.0 T/Annum 5. Wastes or residues containing oil – Oil soaked cotton waste (Category 5.2) - 25.0 T/Annum Hazardous wastes is being suitably disposed as per the applicable statutory regulations as being practiced.
4.4	Other industrial process wastes	Yes	Major solid waste generated from the industrial processes would include gas cleaning plant sludge, ESP/bag filter dust, refractories etc. All the solid waste described above would be recycled. Used refractories will be sending back to suppliers/authorized dealers.
4.5	Surplus product	No	-
4.6	Sewage sludge or other sludge from effluent treatment	Yes	Sewage sludge generated will be used as manure for green belt development and gardening.
4.7	Construction or demolition wastes	Yes	Suitably reused.
4.8	Redundant machinery or equipment	No	-
4.9	Contaminated soils or other materials	No	-
4.10	Agricultural wastes	No	-
4.11	Other solid wastes	No	-

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

Sl.No.	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	Yes	There may be some increase in levels of PM_{10}, $PM_{2.5}$, SO_2, NO_x, & CO in ambient air from sources as follows: <u>Stationary Sources</u>: • During construction emissions from asphalt and concrete batching plant are expected. This will be limited to short period. • During operation, emissions from Blast furnace, Sinter plant and Captive power plant are expected. <u>Mobile Sources:</u> • During construction phase it will be from movement of material transport vehicles & heavy earth moving machineries, equipments, etc. will generate fugitive dust. This will be for a short period limited to construction phase. Water spraying will be adopted to suppress the fugitive dust. • During operation phase it will be from transport of materials, which will be mostly by rail.
5.2	Emissions from production processes	Yes	Emitted quantity from production processes - stationary sources (Kg/hr): <u>1.</u> <u>Stack Emissions</u>: PM = 270 kg/hr. SO_X= 85 kg/hr. NO_x =142 kg/hr.

Sl.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible)with source of information data
			Provision to keep fugitive emission from process under control. Also work zone emission will be kept below 3 mg/m^3 in case of PM_{10}.
5.3	Emissions from materials handling including storage or transport	Yes	Fugitive emissions are envisaged from material handling/storage areas and transportation activities. Wagon tippler is in use for raw material handling.
5.4	Emissions from construction activities including plant and equipment	Yes	There will be some emission from construction activities. However, these emissions will last for a very short period and it will be temporary & restricted within the plant boundary. The impact will be reversible, marginal, and temporary in nature.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	There will be some dust emission from construction activities. However, these emissions will last for a very short period and it will be temporary & restricted within the plant boundary. The impact will be reversible, marginal, and temporary in nature. There will not be any odour generation.
5.6	Emissions from incineration of waste	No	-
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	-
5.8	Emissions from any other sources	No	-

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

Sl.No.	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	Yes	The noise generation sources from the proposed plant include hammer mill and crusher at sinter plant. Pumps blowers, compressed air station, etc. The noise level generated will be restricted in the range of 75-90 dB (A) at 1m from source.
6.2	From industrial or similar processes	Yes	The noise level generated will be restricted to the range of 75-90 dB (A) at 1m from source.
6.3	From construction or demolition	Yes	The noise level generated will be restricted to the range of 75 dB (A)
6.4	From blasting or piling	No	Column foundations are planned.
6.5	From construction or operational traffic	Yes	The noise level generated will be in the range of 75 dB (A)
6.6	From lighting or cooling systems	No	-
6.7	From any other sources	No	-

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:

Sl.No.	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	-
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	Yes	Sewage water is treated in STP and treated water is being used for greenery development. Trade effluent from 1 MTPA integrated Steel Plant and Captive Power Plant of 1x7 MW and 3x30 MW will be combinedly collected and treated in a dedicated waste water treatment plant. Treated waste water will be reused in Steel plant processes and Zero waste

Sl.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
			water discharge is being ensured. CCTV (PTZ) and flow meters are installed in the waste water treatment plant outlet and the data is hooked to TNPCB/CPCB server.
7.3	By deposition of pollutants emitted to air into the land or into water	Yes	Ambient Air Quality norms and waste water quality discharge limits are being complied. Zero discharge is ensured. Thus contamination of land and water bodies is not envisaged.
7.4	From any other sources	No	-
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	-

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

Sl.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	Yes	Explosions are not expected from steel plant. However, possibility of spillage due to hot metal handling, Oil from storage area exists for some accidents. However, suitable preventive measures/emergency planning will be followed to handle any eventuality.
8.2	From any other causes	No	-
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?	No	Not Applicable as the proposed project falls under **Seismic Zone II** (as per the seismic zoning map published by Bureau of Indian Standards). This zone is referred to as low damage less risk zone. Flooding levels are not recorded in this area.

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

Sl. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.1	Lead to development of supporting facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • housing development • extractive industries • supply industries • other	Yes	The expansion will result in considerable growth of service sector and will generate new industrial and business opportunities in the area.
9.2	Lead to after-use of the site, which could have an impact on the environment	No	-
9.3	Set a precedent for later developments	Yes	Future development is possible
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	The industry is not located in critically polluted zone. No major industries are located within 5 km radius.

(III) Environmental Sensitivity:

Sl.No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related values	No	-
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains,	No	Mettur Dam (Stanley) is located at about 12 km in SW direction. Dam details are given below: 1) Total capacity: 95 TMC

Sl.No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from Proposed project location boundary
	forests		2) Top level of parapets: +804.5 m (from MSL) 3) Maximum water level: +796 m (from MSL) 4) FRL: +790 m (from MSL) 5) Sill: +790 m (from MSL) 6) River bed level: +625 m (from MSL)
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	No	-
5	State, National boundaries	No	-
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	-
7	Defense installations	No	-
8	Densely populated or built-up area.	None	Mettur town is located 13 km from the project site.
9	Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)*	Yes	Primary, middle and high schools are present in 5 km radius. Similarly, health centres and public health sub-centers and dispensaries are also present.
10	Areas containing important, high quality or scarce resources *(ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)*	No	-
11	Areas already subjected to pollution or environmental damage *(those where existing legal environmental standards are exceeded)*	No	-

Sl.No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from Proposed project location boundary
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (*earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions*)	No	Not applicable as the proposed project falls under **Seismic Zone II** (as per the seismic zoning map published by Bureau of Indian Standard). This zone is referred to as low damage less risk zone. Other natural hazards like flooding, subsidence, erosion, landslides are not recorded at the site.

I hereby give under taking 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 : 15.03.2019
Place : Salem

Signature of the Applicant (Project proponent/ Authorized signatory)	
Name	**Mr. B.N.S. Prakash Rao,**
Designation	**Senior Vice President**
Address	M/S. JSW Steel Limited, Salem works, Pottaneri, Mecheri Taluk Mettur, Salem District, Tamil Nadu, Pin code – 636 453.