



Bihar State Road Development Corporation Limited

(A Govt. of Bihar Undertaking)

Registered Office: Central Mechanical Workshop Campus, Near Airport, Sheikhpura, Patna-800014.

Tel: 0612-2226711/2226723

Letter No. BSRDC Ltd.- 344/2010-Part-II/2012 - 1971 (we) Patna, Dated: 01/08/15

From:

Suresh Kumar
General Manager (Project)

To,

Dr.S.Kerketta
Scientist-'E'
Govt. Of India, Ministry of Environment and Forest,
Eastern Regional Office,
A/3, Chandrashekharpur, Bhubaneswar-751023

Sub:- Improvement/Upgradation of SH-81 (Sakkadi -Nasriganj), SH-87 (Runnisaidpur-Bhiswa), SH-90 (Mohammadpur-Chhapra) and SH-91 (Birpur-Udakishunganj) Roads Under BSHP-II & BSHP-II-AF.Reg.-Submission of Six-Monthly Compliance report as per provision of EIA notification 2006 under the E(P) act,1986.

- Ref.:** (i) MoEF, New delhi,F.No.10-45/2010-IA-III,dated 19th sep.2011.
(ii) MoEF, New delhi,F.No.10-48/2010-IA-III,dated 27th June 2011.
(iii) Your Letter no.- 105-93/EPE dated 22 Nov., 2012
(iv) Your Letter no. - 105-86/EPE & 105-87/EPE dated 22 Nov., 2012
(v) Your Letter no. - 105-93/EPE dated 20 Nov., 2014
(vi) Your Letter no. - 105-79/EPE dated 20 Nov., 2014

Sir,

With reference to the above subject, six- monthly compliance reports (Oct., 2014 - March, 2015) for SH-81 (Sakkadi -Nasriganj), SH-87 (Runnisaidpur-Bhiswa), SH-90 (Mohammadpur-Chhapra) and for SH-91(Birpur-Udakishunganj) are hereby submitted in soft copy as well as in hard copy. We are uploading the report on our website.

Thanking you.

Encl. : - As above.

Yours sincerely

Suresh Kumar
01.08.15

(Suresh Kumar)

General Manager (Project)



**Bihar State Road
Development Corporation Ltd.**

Bihar State Highway Project Package – II

CONTRACT PACKAGE NO. 2 & 3 (SH-86 & SH-87)

Consultancy Services for Construction Supervision for Civil Work of Package-II
(SH-86) under BSHP-II AF Loan No.-2894-IND



Six Monthly Report (October 2014 to March 2015)–Compliance to Specific and General Conditions of Environmental Clearance in SH-87

Submitted By



Egis International S.A in JV with Egis India Consulting
Engineers Pvt. Ltd. in association with
Transtek Engineers & Services Pvt. Ltd.
Saffron Square, 12/6 Delhi - Mathura Road,
Faridabad - 121003, Haryana.





Six Monthly Compliance Report to Specific & General Conditions of Environmental Clearance (EC) -F. No.: 10-45/2010 –IA.III dated 19 September, 2011 , October 2014 to March 2015

This report presents the six monthly compliance (October 2014 to March 2015) report with respect to Specific & General conditions as stipulated in the Environmental clearance Letter (EC-MoEF, F.No.:10-45/2010–IA.III dated 19 September, 2011) for the project “Improvement/Up-gradation of Runnisaidpur-Bhiswa Road (SH-87) Length- 67.486” Kms in the state of Bihar. The compliance status w.r.t Specific & General Conditions of EC has been briefly summarized below in table 1 for the period October 2014 to March 2015.

Table 1: Compliance with Specific & General Conditions of Environmental Clearance (F. No.: 10-45/2010 –IA.III dated 19 September, 2011) From October 2014 to March 2015

S. No.	Specific Conditions	Compliance Status
(i)	The project indicated cutting of 482 trees for the widening of the road. Necessary prior permission shall be obtained for cutting of trees from the competent authority. Compensatory afforestation shall be carried out as per stipulated conditions of MoEF and State Forest Division.	The BSRDC has obtained necessary permission for roadside tree cuttings for a number of 1511 trees from the concerned DFO. A total number of 232 trees have been cut so far. [40 (girth size- 300 to 600 mm), 63 (girth size from 600 mm to 900 mm), 113 (Girth size 900 mm to 1800 mm) and 16 (Girth size above 1800 mm)]. The payment for compensatory plantation has been deposited with the forest department as per their estimation. Compensatory plantation will be carried out by the Forest Department.
(ii)	Rainwater harvesting including oil and grease trap shall be provided. Water harvesting structures shall be located at every 500 mts along the road. Vertical drain type rainwater harvesting structures shall be set up to minimize surface runoff losses of rainwater.	Presently road construction work is in progress which includes clearing & grubbing, earthwork, embankment, subgrade, GSB, WMM; construction of CD structures, bridge works etc. The rainwater harvesting structures will be provided during the side drain construction activities in the area where water table is more than 5 m below the ground level.
(iii)	R&R shall be as per the guidelines of state/Central Government.	Being Complied. Distribution of Compensation/ assistance to the project affected parties (PAPs) has been started as per the Entitled matrix approved by the State Govt.
(iv)	IRC guidelines shall be followed for widening and up-gradation of road	Being followed. The IRC guidelines and specifications have been followed for designing of widening & up-gradation of the road
(v)	The responses/commitments made during public hearing shall be complied with letter and spirit	Being complied
(vi)	All the recommendation of EMP shall be complied with letter and spirit	Being Complied. The EMP is the part of Contract Agreement between BSRDC & the Contractor. Compliance to EMP implementation is being strictly monitored. Environmental Pollution Monitoring is being carried out on Quarterly basis for air, noise &



S. No.	Specific Conditions	Compliance Status
		water and soil (once during the whole construction period). Test results for air, noise & water indicate that no exceedance w.r.t NAAQS (CPCB/BSPCB) & IS-10500-has so far taken place in any parameters for air, noise & water quality levels. The monitoring report for October to December 2014 quarter as available is enclosed as Annexure-I.
(vii)	Rainwater harvesting including oil and grease trap shall be provided. Water harvesting structures shall be located at every 500 mts along the road. Vertical drain type rainwater harvesting structures shall be set up to minimize surface runoff losses of rainwater.	Same as Sl. No. (ii)
(viii)	The seismic nature of the area shall be taken into account while designing the project.	This has already been taken into consideration during the designing of the project.
(ix)	No ground water shall be used for the project. The project proponent shall obtain necessary permission from the state irrigation department before drawing water from the river sources for the purpose of the proposed construction activities.	As per CGWA policy, 2009 the infrastructure projects are exempted from permission for windrow of water upto 2000 cubic meter per day in alluvial plain. The entire project is located on alluvial plain and the abstraction of water is below 2000 cubic meter per-day for the construction activities, therefore, NOC for abstraction of groundwater upto 2000 cubic meters is not required from CGWA.
(x)	Sidewalk shall be provided along the bridges	There is provision of 32 minor bridges in the project. Sidewalk has been incorporated in design of all the proposed bridges. The construction activities for all minor bridges are in progress.
(xi)	The drain shall be at least 1 m away from the toe of the embankment of the road adopting IRC guidelines	Permanent drainage will be provided in accordance with the IRC guidelines and specifications. The drainwork has been initiated at Km 1+450 to Km 1+700. The distance of the drains from toe of the embankment has been maintained as per specification.
(xii)	Longitudinal drains shall be provided all along the project road to ensure proper drainage of the area. In addition, adequate number of underpasses and culverts to act as cross drainage structure shall also be provided.	There is provision of 156 numbers of culverts and 32 numbers of minor bridges in the project as cross water drainage structure as per IRC guidelines for ensuring proper drainage of the area. In addition to that there is provision of viaduct at ROB which will act as underpasses.
(xiii)	The solid waste generated shall be used for rehabilitating the borrow area.	The solid waste in the form of earth work materials are generated due to roadway cutting and drain excavation shall be reused used for sub-grade and earthen shoulder and rehabilitating the borrow areas . Besides this significant quantities of materials generated during clearing and grubbing have been already has disposed off in environmentally sustainable manner and also has been re-used in the strengthening of local village roads, haul roads.
(xiv)	For providing safety to the crossing	Road safety provisions will be provided by following



S. No.	Specific Conditions	Compliance Status
	animals and avoid road accidents speed breakers/ rumble strips shall be constructed at the identified locations of the animal movements. Enough hoardings and signages shall also be put up for public and vehicles convenience.	<p>IRC guidelines and specifications.</p> <p>The temporary guiding and warning signage have been provided as per IRC: SP:55-2001 in providing all signs, diversions, delineators, barricadings and other traffic safety measures during Construction.</p> <p>There is adequate provision of permanent safety signboards, zebra crossing, barricading, speed breakers, etc. which shall be provided as per IRC specifications and guidelines before allowing the traffic over the constructed road.</p>
(xv)	Minimum of three times the number of trees to be cut shall be planted. It shall be ensured that the trees planted as a part of the afforestation shall be of the same species/ local species and survival shall be monitored. Transplantation of trees shall be carried out wherever possible. The tree plantation shall be taken up on the extreme end of the road.	At present the road construction activities are in progress. The tree plantation shall be carried in the ratio of 1:3 in consultation with the Forest Department and by following the IRC guidelines on plantation on substantially completed section in order to maintain the survival of the trees. BSRDC has tied up with government nursery for supply of healthy tree saplings for the plantation activity.
(xvi)	Necessary permission for tree felling from the concerned department shall be obtained before commencement of the project work and copies of the same shall be submitted to this Ministry.	The permission for felling of 1511 number of trees has been obtained from concerned forest department vide letter No1471 dated 16.5.2012
(xvii)	Adequate number of underpasses shall be provided in the habitation areas. The details of such underpasses shall be provided to the Ministry within 6 months from the date of issue of this letter.	The underpasses will be provided wherever warranted in accordance with the IRC guidelines. Two viaducts have been provided at ROB which can be used as underpasses.
(xviii)	Necessary Clearance from the State Government shall be obtained for extraction of sand from rivers.	Presently the sands are being procured from licensed sand quarry. The legal compliances with respect to sand extraction have been ensured and necessary royalty has been paid accordingly to the concern department. In case of opening of Contractors own quarry, the compliance with the statutory norms will be ensured prior to extraction of materials from such area.
(xix)	Proper signage shall be installed at appropriate locations for the convenience of the traffic movement.	Temporary Traffic Diversion signages have been provided during construction at the construction zones as per IRC guidelines and is strictly monitored for adequacy and effectiveness. The permanent signages will be provided on the road as per IRC Guidelines before allowing the traffic
(xx)	The embankment/slopes and the slopes left after cutting shall be provided with vegetative turfing to avoid erosion.	Presently road construction works in progress. The slope protection measures will be provided at high embankment slopes in the form of grass turfing and stone pitching to avoid soil erosion problem.
(xxi)	The hot mix plant shall be located at least 500 mts. Away from habitation and on the barren land to avoid its adverse impact on	Consents to Operate (CTOs): for HMP & Batching plant operations at Korlahiya, PO-Rampur Hari, District-Sitamarhii has been obtained vide letter



S. No.	Specific Conditions	Compliance Status
	the human population	P/T(NOC) -4813-7.14637 dated -10.05.13 and valid from 01.04.2013 to 31.03.2016. . The new site for Hotmix Plant has been identified for establishment at Bahera Village and Gopalpur village along the project stretch. The siting criteria as per norms has been followed by the contractor Consent to Establish (CTE) has been obtained for setting up a HMP/Batching Plant/WMM Plant at Khasra Nos 1328.294 and 1784, Mouza-Bahera,Jahidpur, PS- Nanpur, District-Sitamarhi. Copies of CTE submitted. Valid from 25.08.2014 till 24.08.2015.(Order no PT-936/14, dated 25.08.2015. Application filing for Consent to Operate is under process.
(xxii)	Rehabilitation and payment of compensation to the project affected people (PAPs) shall be made as per the policy of the State Government.	The updated Resettlement and Rehabilitation plan for Project Affected Peoples (PAPs) has been prepared for the project as per the policy of state government and ADB Policy. The BSRDC has appointed experienced NGO for implementing the R&R plan.
(xxiii)	Noise barriers shall be provided at appropriate locations particularly in the areas where the alignment passes through inhabited area so as to ensure that the noise levels do not exceed the prescribed standard.	Noise pollution mitigation measures shall be provided as per EMP guidelines.
(xxiv)	For road safety, IRC guidelines in respect of road signages, service roads, bus bays, intersections, pedestrians crossings, etc. shall be strictly adhered to.	Temporary Traffic Diversion signages have been provided during construction at required construction zones as per IRC guidelines and is strictly monitored for adequacy and effectiveness. The permanent signages will be provided on the road as per IRC Guidelines before allowing the traffic. There will be 4 bus-bays at Nanpur, Hariharpur, Barahi and Parihar village.13 numbers of junctions improvements have been proposed.
6. General Conditions		
(i)	Adequate provision for infrastructure facilities including water supply, fuel and sanitation must be ensured for construction workers during the construction phase of the project to avoid any damage to the environment.	The workers camp has been provided at Bahera base camp. At camp site all the basic facilities for the workers including safe drinking water facilities, toilets & bathrooms with covered septic tanks & soak pits, covered wastewater drainage system, first aid facilities, supply of LPG for cooking, other sanitation facilities have been provided as per norms and EMP guidelines. Aforementioned housekeeping issues are strictly monitored on regular basis. Periodic health checkups and HIV/AIDS awareness programme have also been organized for workers.
(ii)	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.	No incidence of water quality degradation has been encountered so far during construction activities. All precautionary measures given in the EMP are followed strictly under supervision of Consultant &



S. No.	Specific Conditions	Compliance Status
		BSRDC.
(iii)	<p>Borrow sites for each quarry sites for road construction material and dump sites must be identified keeping in view of the following:</p> <p>(a) No excavation or dumping on private property is carried out without written consent of the owner.</p> <p>(b) No excavation or dumping shall be allowed on wetland, forest areas or other ecologically valuable sensitive location.</p> <p>(c) Excavation work shall be done in close consultant with the soil Conservation and Watershed Agreed. Development Agencies working in the area and</p> <p>(d) Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate water courses and the dump sites for such materials must be secured so that they shall not leach into the ground water.</p>	<p>During borrow area selection, due consideration is being given in order to avoid environmental sensitive features in the proposed borrow area.</p> <p>Complied. Consent Letters from concerned land owners have been obtained and records are available with BSRDC/ Consultant & Contactor offices.</p> <p>Complied. No borrow area is located in wetland, forest area or any other ecologically valuable sensitive location. No excavation or dumping is being carried out on such sensitive area.</p> <p>Agreed</p> <p>The construction spoils have been/ are being reused for road construction and strengthening of local village & haul roads. The appropriate dumping site will be identified for disposal of not re-usable construction waste and will be disposed in environmentally & socially sustainable manner.</p>
(iv)	<p>The construction material shall be obtained only from approved quarries. In case new quarries are to be opened, specific approvals from the competent authority shall be obtained in this regard.</p>	<p>The construction materials are being obtained only from approved /licensed quarry. No new quarry has been opened in this project till date.</p>
(v)	<p>Adequate precautions shall be taken during transportation of the construction material so that it does not affect the environment adversely.</p>	<p>Materials are being transported in covered vehicles to prevent any spillage & dust emissions.</p>
(vi)	<p>Borrow pits and other scars created during the road construction shall be properly leveled and treated.</p>	<p>Total number of 23 borrow areas are in operation and shall be rehabilitated in post-monsoon season as per IRC /ADB guidelines as given in the IEE</p>



S. No.	Specific Conditions	Compliance Status
(vii)	Adequate financial provision must be made in the project to implement the aforesaid safeguards.	Complied
(viii)	The project proponent will set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.	The BSRDC has appointed EGIS India Consulting Engineers India Pvt Ltd as Supervision Consultant to supervise the entire work progress of construction activities including compliance to the contractual obligations and specifications by the Contractor and to monitor the compliance to EC conditions & EMP implementation including its reporting. Supervision Consultant has site office/s consisting of experienced Team Leader, Resident Engineer, Pavement & Material Engineers, Quality & Quantity Engineer & Field Engineers besides an Environmental Specialist who carries out periodic onsite assessment of EMP implementation and regular monitoring of EMP implementation & all conditions of environmental clearance by interacting with the entire team of Supervision Consultant, Contractor & BSRDC. The Contractor has appointed Environmental Health and Safety officer for implementing the environmental safeguard measures as per contract conditions and specification on day to day basis for different construction activities.
(ix)	Full support shall be extended to the officers of this Ministry/Regional Office at Bhubansewar by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.	Noted and Agreed
(x)	A six Monthly monitoring report shall need to be submitted by the project proponent to the Regional Office of this Ministry at Bhubansewar regarding the implementation of the stipulated conditions	Complied. The six monthly reports are being submitted as required.
(xi)	Ministry of Environment and Forests or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same	Noted. No additional condition or modification in the conditions has been received from MoEF or any other regulatory authority till date.



S. No.	Specific Conditions	Compliance Status
	shall be complied with	
(xii)	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry	Noted
(xiii)	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment and Forests	There is no change in project profile or change in implementing agency.
(xiv)	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concern authorities and the date of start of land development works	Date of financial closure will be intimated after physical completion of the project.
(xv)	A copy of clearance letter shall be marked to concerned Panchayat/ local NGO, if any from whom any suggestion/ representation has been made received while processing the proposal	Already Complied
(xvi)	Safety provision such as bus bays, service roads intersection improvement etc. will be carried out by the project proponent. The project proponent shall provide adequate facilities as per IRC norms/guidelines	4 numbers of additional bus bays at Nanpur, Hariharpur, Barahi and Parihar villages and 13 junction improvements have been proposed in the project as safety features others safety provisions will also be provided in the project as per IRC Guidelines.
(xvii)	State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District industries Centre and Collector's Office/ Tehsildar's office for 30 days.	Already complied
7	These stipulated would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006, including the amendments and rules made thereunder	The conditions stipulated in Environmental Clearance under EIA Notification, 2006 and Environmental (Protection) Act have been complied in the project. The other stipulations under different environmental statutes and norms shall be complied as applicable.
8	All other statutory clearance such as the approvals for storage of diesel from chief	All applicable statutory clearances have been obtained. Records available with Contractor, CSC



S. No.	Specific Conditions	Compliance Status
	controller of Explosive, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc shall be obtained as applicable by project proponents from the respective competent authority.	& BSRDC.
9	The Project Proponent shall advertise in at least two local Newspapers widely circulated in the region one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of the clearance letter are available with the Bihar State Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at http://www.envfor.nic.in . The advertisement should be made within 10 days from the date of receipt of the clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Bhubaneshwar.	Already complied and reported in the previous report
10	Environmental Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No. 460 of 2004 as may be applicable to this project.	Noted
11	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by project proponent in its website.	Shall be executed
12	The project proponent shall also submit six monthly report on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by email) to the respective Regional Office of MoEF the respective Zonal Office of CPCB and the SPCB	Complied. The six monthly compliance report is being submitted
13	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the	The six monthly report on EMP Compliance has been submitted to the Regional Office of MoEF, Bhubaneshwar vide letter no. 2177 (we) dated



S. No.	Specific Conditions	Compliance Status
	project proponent to the concerned Bihar State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company alongwith the status of compliance on EC conditions and shall also sent to the respective Regional Offices of MoEF by Email.	16.08.2013 (Indicate the BSRDC Letter no & date for April to September 14 through which last six monthly report was sent)



ANNEXURE-I

Air & Noise Quality Monitoring Report (October 2014 to March 2015)



TEST REPORT OF AMBIENT AIR QUALITY ALONG THE SH-87 UNDER BSC-C&C (JV) ALONG THE RUNNISADPUR-NANPUR-PUPRI-SURSAND-PARIHAR-BHISWA ROAD PROJECT (BIHAR) DURING CONSTRUCTION STAGE (DEC-2014)

SL. No.	Parameters	Location			Permissible Limit for Industrial Area
		Batching Plant (Babera Camp) (24 Hours) Dt: 27.12.2014	Ch: 30+850 (24 Hours) Dt: 27.12.2014	Ch: 12+910 (24 Hours) Dt: 27.12.2014	
1.	PM 10 $\mu\text{g}/\text{m}^3$	72	68	61	100
2.	PM 2.5 $\mu\text{g}/\text{m}^3$	44	41	37	60
3.	SO ₂ $\mu\text{g}/\text{m}^3$	21.4	20.9	18.6	80
4.	NO _x $\mu\text{g}/\text{m}^3$	24.7	23.2	22.5	80
5.	CO $\mu\text{g}/\text{m}^3$	0.9	2.5	3.1	4

All units are expressed in $\mu\text{g}/\text{m}^3$

CO DETECTION LIMIT ($\mu\text{g}/\text{m}^3$) = 2500 RDL = Below Detection Limit
 INSTRUMENT : Make - INSTRUMEX Respirable Dust Sampler Model : IPM115 BL
 Calibration on : Oct 2014 Due on : Oct 2015

Date of Reporting: 05.01.2015

For Microtech Systems & Services

(S.K. Sinha)
 Application Chemist.

[Handwritten signature]
 Sharad Kumar
 ME SH-87

BSRDC JV
[Handwritten signature]
 (Authorized Signatory)

[Handwritten initials]
 LG AS R.E.



RESULTS OF NOISE MONITORING ALONG THE SH-87 UNDER BSC-C&C (JV)
ALONG THE RUNNISADPUR- NANPUR-PIPRI-NIRSAID-PARIHAR-BHISWA
ROAD PROJECT (BIHAR) DURING CONSTRUCTION STAGE (DEC-2014)

2. Location : Batching Plant (Bahera Camp) Dt : 27.12.2014

PERIOD OF MONITORING	Noise level dB(A)			Permissible Limit			
	MAX	MIN	Average	Industrial	Commercial	Residential	Silence
DAY TIME	66.80	62.60	64.70	75	65	55	50
NIGHT TIME	61.30	57.90	59.60	70	50	44	40

Equipment : B&K Model No : 1351
 Calibrated on : April 2014 Due on : April 2015
 Date of Reporting: 05.01.2015

For Microtech Systems & Services

(Signature)
Application Chemist.

(Signature)
ME SH-87.

(Signature) *(Signature)* *(Signature)*
L.P. S.R. R.E.

BSC-C&C (JV)

(Signature)
(Authorised Signator)

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