

Patratu Vidyut Utpadan Nigam Ltd

(A subsidiary of NTPC in Joint Venture with JBVNL)

Ref: PVUNL/Phase-I/EC/5

Date: 16.12.2018

To,

Additional Principal Chief Conservator of Forests (C),
Ministry of Environment, Forest and Climate Change
Regional Office (ECZ),
Bungalow No. A-2, Shyamali Colony
Ranchi – 834002

Sub. : Submission of 4th Half Yearly Compliance report (07.05.19-06.11.19) for Environmental Clearance for Patratu Super Thermal Power Project, Phase-I (3 X 800 MW), Patratu.

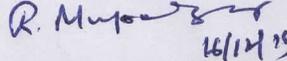
Ref: MoEF letter ref. no. J-13012/21/2015-IA.I(T) dated 07.11.2017

Sir,

Enclosed please find the 4th Half yearly Compliance Report (07.05.19-06.11.19) for Environment Clearance conditions stipulated vide the above referred MoEF&CC letter for the Patratu Super Thermal Power Project, Phase-I (3 X 800 MW), Patratu. This is in consent with the competent authority of PVUN.

Thanking you,

Yours Sincerely,


16/12/19
R Mukhopadhyay
AGM(EMG)

Copy to

1. ranchijspcb@gmail.com
2. zokolkata.cpcb@nic.in

Patratu Vidyut Utpadan Nigam Ltd
 (A subsidiary of NTPC in Joint Venture with JBVNL)
Patratu STPP, Phase-I (3X800 MW)
HALF YEARLY ENVIRONMENT MONITORING REPORT
(07.05.2019- 06.11.2019)

Compliance Status of Environmental Clearance conditions by MoEF&CC
 vide letter no. J-13012/21/2015-IA.I(T) dated 07.11.2017

A. SPECIFIC CONDITION:

Sr. No.	CONDITIONS	To be submitted in 4 th HYC
i	Forest land of 431.522 ha is involved in the proposed project. The FC is in the name of M/s Jharkhand Bijli Vitaran Limited. Now, the present PP viz. M/s PVUNL must get this diversion changed in its name before carrying out any work in the diverted forest land under the provisions of Forest (Conservation) Act, 1980.	162.06 acre of land out of 431.22 acre of land had already been de-notified vide notification no. 1042-R dtd. 09.05.1963, Revenue Department, Govt. of Bihar. For change of FC in the name M/s PVUN for remaining 268.920 acre of land, matter has been taken up with DFO, Ramgarh. (Note : the land area is 431.522 acre not hectore)
ii	Fly ash deposits along the water body shall be excavated immediately. The removal of fly ash deposits in the water bodies shall be completed before the onset of next monsoon.	Removal of Fly ash deposition in Bawandhara nallah (adjoining to the ash dyke) has been completed by October 2019.
iii	If ash in the existing pond is not evacuated as per the recommendations given by previous sub-committee, embankment shall be constructed around the periphery of ash pond. A retaining wall shall also be constructed alongside of the stream to prevent wash off.	Comprehensive work of ash dyke restoration with spill way, rising of dyke with draining facility, etc. is in progress and expected to be completed by March 2020.
iv	The ash pond shall be covered with sweet soil of sufficient width so that surface runoff can be controlled and also can act as slope stabilisation.	Work is in process and expected to be completed by March'20.
v	Reclamation and stabilization of the existing ash pond shall be carried out in scientific manner (both biological and engineering measures).	Work in progress expected to be completed by March'20
vi	All other measures such as constructing gabian wall, spillways & filters, drains on the toe, slope protection, etc. shall be implemented. Regional Office of the Ministry shall inspect the progress at least once in three months. The status of the ash pond and dredging of ash deposits shall be submitted along with the six monthly compliance report to Regional Office as well as MoEF&CC, New Delhi.	Work is in progress expected to be completed by March'20. Construction of gabian wall, spillways & filters completed. Work of retaining wall and toe wall is in progress.

vii	If the breach of ash pond is reported in future, PP shall have to evacuate the total ash from the pond.	Noted and shall be complied
viii	Construction and demolition waste from dismantling the existing power plant shall be disposed of in accordance with the Construction and Demolition Waste Management Rules, 2016.	Noted and shall be complied
ix	Minimum distance of 500m from the HFL of Nalkari river shall be maintained. Ash mound shall be developed in 340 acres and the height of the ash mound shall be restricted to 35 m (in two benches of 20 m and 15 m height each).	Stipulated minimum distance from Nalkari river will be maintained. Ash mound shall be developed as per guidelines.
x	Ash mound shall be used only in case of emergency. Fly ash utilisation shall be done as per the fly ash notification and its subsequent amendments issued from time to time.	Fly ash utilisation shall be done as per the fly ash notification and its subsequent amendments issued from time to time
xi	Garland drains along with stone pitching and gabian wall around the ash mound/ existing ash pond shall be constructed so that no wash off is let out into the Nalkari river.	Construction of garland drains and other requisite measures will be adopted in order to avoid ash wash off into the river from ash mound. For existing ash pond work in progress and expected to be completed by March'20.
xii	Action plan for dredging and de-silting of ash deposited along the streams, rivers and reservoirs including Damodar and Nalkari as recommended by Sub-group in their site visit on 28.1.2013 shall be submitted within three months.	Removal of Fly ash deposition in stream (Bawandhara nallah) has been completed by October 2019. Study of Ash deposition in Nalkari & Damodar river and its removable feasibility has been completed. There are no reservoirs along flow path of the stream—Nalkari-Damoder river. Action plan submitted to regional office MOEFF&CC – Ranchi vide PVUNL letter dated 09.02.2018 & 07.05.2018.
xiii	Volume of ash pond and quantity of fly ash shall be assessed. Time bound action plan for evacuating and using fly ash before starting the operations of proposed project.	Estimated quantity of pond ash is approx..8.5 lakh tons. Agreement for use of approx. 3 lac cum of pond ash for construction of Ranchi ring road, Section –VII of which a part was lifted. However as stipulated in specific condition no (iii) the stabilization work of the ash dyke has already been initiated.
xiv	Authenticated as well as primary baseline data for flora, fauna and bio diversity shall be submitted within one month.	The primary baseline data for flora fauna and bio-diversity duly authenticated by DFO, Ramgarh has been submitted to MoEF &CC vide PVUNL letter dated 17.01.2018.
xv	Time bound action plan along with financial break-up for implementing CSR activities and public hearing commitments shall be submitted within three months.	Community development (CD) plan based on Need base assessment survey and EC recommendations had been approved by DC, Ramgarh and PVUN/NTPC management. The

		CD plan is enclosed herewith in Annexure-I.
xvi	Action plan (area, species, density, financial allocation) for achieving 33% green belt development of the total project area shall be submitted within three months.	Plantation of 5000 samplings has been done through Dept. of Forest (Ramgarh) for PVUNL on depository basis at the cost of Rs.1,14,58,170/-. Plantation will be taken up at all available place in the plant premises after completion erection work.
xvii	As per the Revised Tariff Policy notified by Ministry of Power vide dated 28.01.2016, project proponent shall explore the use of treated sewage water from the Sewage Treatment Plant of Municipality/local bodies/similar organization located within 50 km radius of the proposed power project to minimize the water drawl from surface water bodies.	After several rounds of discussion between PVUNL & Ranchi Municipal Corporation (RMC), a formal agreement for supply of treated sewage water including lying of cross country pipeline from Ranchi STP up to PSTPP plant doorstep has been worked upon. Minutes of Meeting chaired by Secretary, UD&HD, Govt. of Jharkhand, dated 18.07.19 has been issued by UD&HD for use of treated STP water of RMC by PVUNL. The draft agreement between RMC, JUIDCO and PVUNL is under finalization, subject to techno-economic feasibility of the scheme, as the pipeline will travel through hilly terrain and forest area covering two districts.
xviii	Compliance of EC conditions, E (P) Act, 1986, Rules and MoEF&CC Notifications issued time to time shall be achieved by a qualified environment officer to be nominated by the Project Head of the Company who shall be responsible for implementation and necessary compliance.	An Environment management group (EMG) shall be set up at Patratu STPP with sufficient trained manpower and equipment for environmental monitoring and other environmental related activities to ensure compliance with statutory requirements.
xix	MoEF&CC Notification S.O.3305 (E) dated 7.12.2015 and subsequent notifications issued time to time shall be implemented with respect to specific water consumption, zero liquid discharge and revised emission standards. The PM, SO ₂ , NO _x and Hg emissions shall not exceed 30 mg/Nm ³ , 100mg/Nm ³ , 100mg/Nm ³ and 0.03mg/Nm ³ respectively. The specific water consumption shall not exceed 2.5m ³ /MWh and zero wastewater discharge shall be achieved.	MoEF &CC Notification S.O.3305 (E) dated 07.12.2015 and subsequent notifications shall be complied. High efficiency Electrostatic precipitators (ESP), flue gas desulphurisation (FGD) system, NO _x emission control systems to maintain emissions within the prescribed limit will be installed in Patratu STPP. Stipulation on specific water consumption and zero liquid discharge shall also be complied.
xx	MoEF&CC Notifications on fly ash utilization S.O. 763(E) dated 14.09.1999, S.O. 979(E) dated 27.08.2003, S.O. 2804(E) dated 3.11.2009, S.O. 254(E) dated 25.01.2016 and subsequent amendments shall be complied with	MoEF&CC Notifications on fly ash utilization shall be complied
xxi	Separate Environmental Clearance may be obtained for the proposed Township as applicable under EIA Notification 2006.	Environment clearance for the township has been issued on 07/02/2019 by SIEAA, Jharkhand vide Letter No.-EC / SEIAA / 2018-19 / 2088 / 2018 / 52

xxii	Solar rooftops shall be installed in the surrounding villages as part of CSR activities.	Site identification and assessment of requirement for solar rooftop in the surrounding villages are under process.
xxiii	Skill mapping of the Project Affected People (PAF) be carried out on a long term basis for their livelihood generation. A report is to be submitted within 3 months to the Ministry from the date of issuance of environmental clearance.	The land for PatratuSTPP is transferred by Govt. of Jharkhand to PVUN, so as such there is no Project affected people. However, skill development programs / activities are planned for livelihood generation of local people. Skill mapping is done through Need Assessment Survey by Xavier Institute of Social Science, Ranchi. The Perspective Plan, Suggestions & Conclusion enclosed as Annexure-II . Details report is available with PVUN.
xxiv	Modern methods of agriculture organic farming, compost/ vermin culture making and utilization, drip/direct to root irrigation) to be promoted in and around the Project area.	A training program was organized in November 2018, participating 66 number of villagers. More training program will be organized.
xxv	While implementing CSR, <ul style="list-style-type: none"> • Women empowerment is important. Therefore, proper skill based training/ long term livelihood revenue generation be created for all them. • Computer facilities may be provided in the school along with a trained computer teacher to inculcate computer skill among the youths. • Water supply provisions shall be made for all the bio-toilets under Swachh Bharat Abhiyan. • Preventive health programme may be preferred than the curative health programme such as nutrition development of small children in and around the project. 	<p>- Training programs for beauty parlor and tailoring was organized in October & November, 2018, participating 30 and 50 no. of villagers respectively. More training program will be organized</p> <p>- In 1st phase 30 no. of computers were given to Patratu College. In 2nd phase, 90 computers to be given to 10 local schools.</p> <p>- Water is being provided through water tanker to the adjacent villages during summer season.</p> <p>- Till date 31 medical camps were organized and 2609 villagers benefited. More medical camp will be organized.</p> <p>A Eye Check up camp for villagers as organized in March 2019 benefitting 386 villagers.</p>
xxvi	Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within six months.	Vision document Submitted along with First half yearly compliance report.
Xxvi i	Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.	Scheme for harnessing solar power from rooftops within the premise of the upcoming plant has been included in the Turnkey EPC Package of the entire upcoming 3X800 MW plant. The status report regarding implementation including actual generation of solar power will be available for submission during operational phase.
xxvi ii	A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute and results thereof analysed every two year and reported along with monitoring reports. Thereafter mechanism for an in-built	Heavy metals and radioactivity for coal samples from Banhardi coal block assigned for Patratu SSTP Phase I has been carried out and submitted along with EIA report. Further long term study on heavy metals and radioactivity contents in coal and ash will be carried out

	continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.	through reputed institute periodically during the operation phase of the plant.
xxix	Online continuous monitoring system for stack emission, ambient air and effluent shall be installed.	Shall be complied
xxx	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 30 mg/Nm ³ or as would be notified by the Ministry, whichever is stringent. Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided along with an environment friendly sludge disposal system.	High Efficiency Electrostatic Precipitators (ESP) will be installed in order to comply with particulate emission norms. Dust extraction and water spray systems are included in the design of the plant to suppress/avoid dust emissions from coal & ash handling areas along with suitable sludge disposal systems.
xxxi	Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	Shall be complied in response to specific condition no. (xxx). Already envisaged in Technical specification.
xxxi i	Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall also be undertaken and results/findings submitted along with half yearly monitoring report	Monitoring of surface water quality and quantity will be conducted regularly and reports will be submitted to Ministry during operation stage of the project. Monitoring for heavy metals in ground water shall be undertaken and results/findings will also be submitted during operation phase of the plant.
xxxi ii	A well designed rain water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed record kept of the quantity of water harvested every year and its use.	Rainwater harvesting system has been envisaged in the design of the plant and will be put in place. Records shall be maintained during operation phase of the plant.
xxxi v	No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/operation of the power plant.	The stipulation will be complied during both the construction as well as operation phase of the plant.
xxx v	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	Additional soil for leveling of the proposed site shall be done from within the sites with all necessary precaution to protect natural drainage system of the area.
xxx vi	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) shall be monitored in the bottom ash. No ash shall be disposed off in low lying area	Fly ash shall be collected in dry form and stored in intermediate and main silos for direct supply of dry ash to the potential users. The un-used fly ash will be stored in dedicated ash mound in dry form and will be supplied to the users as per demand. No ash will be disposed off in low lying

		areas. Periodic monitoring of mercury and other Heavy metals (Ag, Hg, Cr, Pb etc.) shall be conducted in the bottom ash during operation stage.
xxx vii	No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.	Noted and shall be complied if mine void filling to be adopted as an option for ash utilisation.
xxx viii	Fugitive emission of fly ash (dry or wet) shall be controlled such that no agricultural or non-agricultural land is affected. Damage to any land shall be mitigated and suitable compensation provided in consultation with the local Panchayat.	Fugitive emission of fly ash and dust will be controlled and other points will be complied.
xxx x	Green Belt consisting of three tiers of plantations of native species all around plant and at least 50 m width shall be raised. Wherever 50 m width is not feasible a 20 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 per hawth survival rate not less than 80%.	Green belt area will be developed after completion of construction of the plant in the free spaces where ever available.
xi	Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary.	Green belt will be developed around the ash mound during operational phase of the plant.
xli	The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.	A Corporate environment Policy has been submitted with EIA report. An Environment Management group (EMG) having sufficient manpower will be formed to ensure adherence to the policy and compliance with all statutory requirements.
xlii	CSR schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programmes.	All the CD activities are being implemented in consultation with local representatives & district administration. Total allocated fund for Community development: Rs. 59.99 Cr. Total amount spent till date : Rs. 402.8 lakh (L), Break up - Education, skill development & woman empowerment – Rs. 34.2 L Health & sanitation- Rs. 16.7 L Safe drinking water -Rs.30.5 L Infrastructure – Rs. 301.8 L Welfare & Cultural events – Rs. 18.75 L

		Environment & others-Rs.0.85 L
xliii	For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final.	For the monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable credible external agency shall be appointed. during the operational phase / revenue-earning phase of the organization. During construction phase, community development activities are being executed in consultation with local representatives & district administration

B. GENERAL CONDITIONS

Sr. No.	CONDITIONS	
i	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. Arrangements shall be made that effluent and storm water does not get mixed.	Zero liquid discharge (ZLD) system shall be implemented in the plant for reuse of treated effluents conforming to the prescribed standards. An independent drainage system will be constructed to ensure that plant effluents do not mix with the storm water drainage.
ii	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation.	All sewage emanating from plant will be treated in a sewage treatment plant. The treated sewerage conforming to prescribed standards shall be utilized for plantation and raising green belt to the extent possible.
iii	Adequate safety measures shall be provided in the plant area to check/ minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	Adequate fire fighting system to check/ minimize fire in coal stockyard and entire power station including all the auxiliaries and buildings will be implemented in the plant. Copy of these measures with full details will be submitted after commissioning of the system.
iv	Storage facilities for auxiliary liquid fuel such as LDO/ HFO/ LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	Storage facilities for auxiliary liquid fuel LDO/HFO are designed conforming to the safety standards. Sulfur content in the liquid fuel to be used in the plant will not exceed 0.5%. A detailed disaster management plan shall be prepared by a reputed institute which is under progress.
v	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	All arrangements related to first aid and sanitation for workers during construction phase of the project have been kept under the scope of EPC contractor. However PVUN will ensure effective compliance of the said stipulations.
vi	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) from source. For people working in the high noise area, requisite personal protective	Design specification for the equipments has been made to comply with the stipulation. Personal protective equipments have been arranged through contractors during construction phase.

	equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audio metric record and for treatment for any hearing loss including shifting to non-noisy/less noisy areas.	The workers in high noise area will be provided with appropriate ear protection devices during operation phase. Periodic examination and necessary treatment of the workers during operation phase shall be done as stipulated.
vii	Regular monitoring of ambient air ground level concentration of SO ₂ , NO _x , PM _{2.5} & PM ₁₀ and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the company.	Regular monitoring of ambient air ground level construction of SO ₂ , NO _x , PM _{2.5} & PM ₁₀ and Hg shall be carried out and reports will be submitted Jharkhand SPCB and regional office(ECZ) MoEFF & CC, Ranchi during operation phase of the project. The data shall also be put in the website of the company.
viii	Utilization of 100% Fly Ash generated shall be made from 4th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	Ash utilisation in compliance with various stipulations shall be carried out during operational phase of the project. The status of ash utilisation shall be submitted to regional office of the Ministry during operation phase.
ix	Provision shall be made for the housing of construction labour (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Necessary infrastructure & facilities such as housing, sanitation, toilet, medical facilities, safety, drinking water supply etc. are provided for construction labour through EPC contractor. PVUNL ensures effective compliance of the said stipulations.
x	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at the Website of MoEF&CC at http://envfor.nic.in .	Complied. The information on accord of Environmental clearance by MOEF&CC was published in widely circulated newspapers in the region namely: 1 Times of India (English) dated 13.11.2017. 2 Hindustan (Hindi) dated 14/11/2017
xi	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZilaParisad/ Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the	Copy of environmental clearance letters were submitted to concerned panchayats, zila parishad on 30.01.18. The environmental clearance is also uploaded in PVUN website.

	proponent.	
xii	The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their web site and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM (PM2.5&PM10), SO2, NOx (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.	The Half yearly compliance of environmental conditions is submitted to regional office (ECZ) MoEFF & CC, Ranchi, JSPCB, CPCB Kolkata and also upload on PVUN website. Ambient air quality in terms of SO ₂ , NO _x , PM _{2.5} & PM ₁₀ shall be displayed at convenient location near main gate of company and in the public domain during the operation phase of the project.
xiii	The environment statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned 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 along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.	The environment statement for each financial year ending 31st March in Form-V will be submitted to the Jharkhand State Pollution control Board(JSPCB) and regional office (ECZ) MoEF&CC Ranchi and will also be put on website of the company once the plant becomes operational.
xiv	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to MoEF&CC, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, MoEF&CC.	The said stipulation is being regularly complied
xv	The progress of the project shall be submitted to CEA on six monthly basis.	Being complied.
xvi	Regional Office of the MoEF&CC will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will upload the compliance status in their website and up-date the same from time to time at least six monthly basis. Criteria pollutants levels including NOx (from stack & ambient	The environmental Impact Assessment report & Environment Management plan submitted to regional office(ECZ) MoEFF & CC, Ranchi vide PVUN letter dated 20.11.2017. Other points are noted and shall be complied.

	air) shall be displayed at the main gate of the power plant.	
xvii	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-/expenditure should be reported to the Ministry.	A separate fund for Environment protection measures is allocated and statement of which submitted with EIA report. The cost is included in the total project cost. The financial provision stipulated towards environment protection measure will not be diverted for any other purpose.
xviii	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	Date of financial closure- 30.10.2017. Date of final approval of the project- 07.11.2017. Date of start of land development-19.06.2018 Other dates will be intimated as and when the stipulated activities are initiated/ completed.
xix	Full cooperation shall be extended to the Scientists/ Officers from the Ministry/ Regional Office of the Ministry/ CPCB/ SPCB who would be monitoring the compliance of environmental status	Full cooperation shall be extended to the Scientists/Officers from the Ministry/Regional office of the ministry at Ranchi/CPCB/Jharkhand SPCB during monitoring of the project.
xx	An as built or as completed report on EMP to be submitted stating the scope/ extent of work envisaged in the EIA along with estimated cost vis-à-vis the actual completed works and cost incurred. A certificate/ completion certificate accordingly, shall have to be submitted before commissioning of the TPP.	Noted
xxi	The Ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction. The Ministry may also impose additional environmental conditions or modify the existing ones, if necessary.	Noted
xxii	The environmental clearance accorded shall be valid for a period of 7 years from the date of issue of this letter to start operations by the power plant.	Noted
xxiii	Concealing factual data or submission of false/ fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted
xxiv.	In case of any deviation or alteration in the project proposed including coal transportation system from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental	Noted

	protection measures required, if any.	
xxv	The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.	Noted
xxvi	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010. This issues with the approval of the Competent Authority.	Noted

उत्पाद्युक्त-सह-जिला दण्डाधिकारी का कार्यालय, रामगढ़



(विकास शाखा)

पत्रांक २०५ / वि०

प्रेषक,

उप विकास आयुक्त,
रामगढ़।

सेवा में,

अपर महाप्रबंधक (मानव संसाधन)
पतरातु विद्युत उत्पादन निगम लिमिटेड,
पतरातु।

रामगढ़, दिनांक 18/8 / 2018

विषय: सामुदायिक विकास योजनाओं के संबंध में।
प्रसंग:- आपका पत्रांक PVUN/HR/CD/01 दिनांक 06.07.2018

महाशय,

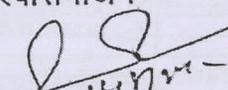
उपर्युक्त विषयक प्रासंगिक पत्र द्वारा Plan for Community Development Activities in the vicinity of the project within a span of 07 years. के लिए प्राप्त हुआ है जो निम्नवत है:-

Sl.no	Head	Strategically important Activities/Events	
1	Education & Women Empowerment	a	Providing Computers & peripherals / Furniture / Books for library / Sweaters / School bags with stationeries / Tat-Patti / Training & workshop on computer as per requirement etc.
		b	Electrification of Govt. Schools and providing of Ceiling/pedestal fan to schools/Solar lanterns to students etc.
		c	Providing of play equipment & sports items, Installation of Jhools in schools.
		d	Assistance to meritorious students.
	Skill Development & Women Empowerment	e	Short Term & long term Skill development training shall be imparted after Skill mapping of the villagers on the following area:- Skill Development training on Plastic Engineering, Sewing, Knitting & embroidery , Modern method of agriculture organic farming -compost/vermiculture making and utilization, Mobile Repairing training, Basic Computer Training, Training on Animal Husbandry, Dairying & Fisheries, Motor vehicle repairing training, Mushroom production training, Tourism & Hospitality training, Electrician, Driving, Fitter etc., Beautician training for girls/women.
		f	Workshop & Guidance on Modern Methods of agriculture organic farming, training on compost / vermiculture making and utilization, drip / direct to root irrigation shall be promoted in and around the project area.
2	HEALTH & SANITATION	a	Health Check-up camps & Mobile Health Care Services at project vicinity.
		b	Primary Health facilities & health Aid and infrastructure support.
		c	Blood donation camps/ Eye check-up camps/ Maternity check-up Camps
		d	Sanitation awareness camps for school going girls etc.
		e	Support to blind students like Bailer / Hearing aid/machines to deaf students, villagers / Tri-cycles to physically challenged etc.
		f	Under Sanitation Prog. construction of toilets with water facilities for girls and boys at schools under Swachh Bharat Abhiyan

		g	Preventive Health programme / Mother and Child nutrition camps for small children in and around the project. Animal Health Camp/Animal treatment camp etc.
3	SAFE DRINKING WATER	a	Installation of Bore well with overhead water tank & connection through pipe line at villages' common place & Schools. Providing hand pumps in different village. RO water System in Villages/schools and other strategic locations etc.
4	INFRASTRUCTURE	a	Construction of approach road/ internal road with drainage system / Culverts with guarding wall.
		b	Infrastructural support in street lighting.
		c	Construction of samudaik Bhawan/Anganwari centre/community hall. Shed & Chabutra in Cremation ground. Construction of Bus stop/yatri Sheds.
		d	Construction boundary wall of Panchayat Bhawan/Govt. Schools / land levelling & earth filling of school play grounds. Renovation & construction of additional class rooms & Gate.
		e	Deepening & beautification of existing ponds and construction of Ghat with changing rooms.
		f	Promotion of Rain water harvesting scheme.
		g	Installation of Solar rooftops for providing light to villagers.
		h	Construction of toilets at common places with water facility and Water supply provisions shall be made available for all the bio-toilets under Swachh Bharat Abhiyan.
		i	Misc. infrastructure development as per guidance of District Administration.
5	WELFARE & CULTURAL EVENTS	a	Village/School level competition with coach/Promotion of Rural sports/Cultural events on festivals and other occasions.
		b	Assistance for Sports activities in school and clubs. Support to NGOs/CBO for welfare activities/ etc.
6	ENVIRONMENT & OTHERS	a	Tree plantation / distribution of fruit bearing plants and area beatification and other Misc. Expenses such as social Audit etc.
		b	Social Audit / evaluation of CD/CSR activities thru an independent external agency etc.
		c	Misc. activities as per requirement.
7	MID DAY MEAL	a	Provision for setting up centralised kitchen in Ramgarh district to support the mid-day meal programme of the Jharkhand CSR Council

अतः वर्णित Plan for Community Development Activities in the vicinity of the project within a span of 07 years. के लिए सहमति दी जाती है।

विश्वासभाजन


उप विकास आयुक्त,
रामगढ़।

FINAL REPORT

ON

**Need Assessment Study of the
Surrounding Village**

Sponsored by

PVUNL

**Patratu Vidyut Utpadan Nigam Limited (PVUN Limited)
P.O. – PTPS (Patratu), District - Ramgarh,**

Conducted by



XAVIER INSTITUTE OF SOCIAL SERVICE
Dr. Camil Bulcke Path (Purulia Road), P.B. # 7, Ranchi – 834001, Jharkhand

July 2017

Executive Summary

1. Introduction

The study entitled: ‘*Need Assessment Survey*’ in ten surrounding villages of Patratu Vidyut Utpadan Nigam Limited [PVUNL], Patratu Ramgarh is as per the requirement of MOEF TOR. Since PVUNL, is going to undertake various developmental activities in the neighboring villages, it felt the necessary to assess the needs of those villages from the perspectives of the villagers through a neutral agency. Thus, Xavier Institute of Social Service (XISS), Ranchi being a neutral agency undertook it as per the terms and conditions specified in the **Purchase Order (PO) No. 4600043177-017-2025 dated 14/01/2017**. The study is conducted in accordance with the Scope of Work and Terms of Reference (ToR) annexed as a part of the PO. However, XISS has done it independently without any precondition or prejudice.

2. Objectives of the Study

The specific objectives as per the TOR Provided are:

The specific objectives of the present study are:

1. To identify the various infrastructural needs of the selected villages in the area of education, Road, health care facilities, water, sanitation facilities, electricity supply, community building, food grain processing facility, banking facility and self help groups etc.
2. To know the basic socio-economic profile of the selected villages in terms of population, sex ratio, number of people in different age groups like infant, children, adult, old age, vulnerable group etc.
3. To identify employment needs, scope of self employment, level of employment and agricultural development for higher economic growth.
4. To identify areas of interventions where CSR activities can bring gender equality.

3. Area of the Study

The study was conducted in 10 surrounding villages of Patratu Vidut Utpadan Nigam Limited (PVUNL) Patratu, belonging to Patratu block and coming under two police stations Patratu and Basal of Ramgarh district in the State of Jharkhand in India. All the villages are under the Community Development Block Patratu and are situated within a radius of 8 to 9 Km from the newly proposed plant of PVUNL.

4. Methodology Adopted

The methodology adopted for conducting the study is as follows:

4.1. Designing the Project

The project has designed in the following manner:

- Pilot Study
- Preparation and finalization of 2 sets of schedules for doing the field survey as per the following tools:
 1. village Schedule for the collection of the qualitative and quantitative information regarding the village
 2. Household schedule for assessment of the Socio-economic status of the selected households from each village

- Field work in all 10 villages and primary data collection
- Collection of secondary data from different offices as required
- Data entry, data analysis and report writing

4.2. Pilot Survey

Pilot Survey for pre-testing the schedules in consultation with the PVNUL authorities; introduction with village Heads (Mukhyas); formation of local survey team and training for field surveys.

4.3. Selection of Research Design

The study was a cross-sectional one, bearing an exploratory research design. It intended to explore the reasons behind the problem and find out the causality and the same time it also tried to find out the possible solution to the problems.

4.4. Methods of Data Collection

The study used both the survey and participatory methods for data collection. Data were primary and secondary in nature, as well as quantitative and qualitative. Primary data are collected by conductive extensive fieldwork not only through interview and questionnaire but also through observation in all villages. Qualitative data were collected through the interview method. One set of schedule is for the collection of village information on various aspects. Besides, the survey team also made observation on different activities.

Secondary data were collected from the Census of India and the official records like Primary Health centre (PHC), Anganwadi centre, School, Block office, Circle office etc.

4.5. Data Analysis and Interpretation

Analysis and interpretation of the collected information both from the primary and the secondary sources were done, which entails the summary of all findings. Quantitative data were put in different tables and analysis was done through percentage and ratio techniques. Data collected through qualitative techniques were analyzed through description and explanation.

4.6. Report Writing and Submission

Consolidated draft report with all findings and recommendations is to be submitted first for review and on receipt of the comments and suggestions from the expert of PVUNL, final report will be submitted after incorporating them.

5. General Profile of the Villages

The general profile show the aspect of social life in these villages like population, number of households, sex ratio, status of children, status of SC & ST, literacy rate and status of working population.

Out of the 10 studied villages the SC population exists in 9 villages and ST population in all the 10 villages.

The decadal change in between 2001 & 2011 of the households shows that Patrattu has the lowest HH decadal change ie 11.2 % and Sahitanr the highest i.e. 17.0 %.

The sex ratio of the villages shows that Patrattu village has increased maximum upto 7.1% and Jainagar village has increased the lowest upto 0.1%.

Sex wise fig. of different cast categories are as follows. The population of OBC is the highest (M - 31.2% + F - 28.7%) followed by others (M - 12.0% + F - 11.2%). The population of SC & ST is (M - 4.3% + F - 3.9%) and (M -4.6% + F - 4.2%) respectively.

The maximum increase in the total population of below 6 years is at Sahitanr village and the minimum change at Sakul village. These changes are 29.3% and 8.7% respectively.

The highest literacy rate is 76.12% at Hesla and the lowest literacy rate is 43.40% at Katia village.

The male and female workers are available in all the villages. The highest male workers are 88.3% at Hesla village and the lowest male workers are 65.5% at Sahitanr village. Similarly the highest female workers are 34.5% at Sahitanr village and the lowest is 11.7% at Hesla village.

6. Socio-Economic Profile of the Households

It deals with individual household interviewed in each of the villages to know the standard of living in the selected villages. The purpose of this chapter is to know the opinion of the individual household about socio- economic life .

Gender composition of the population reveal that 52.9 % of them are males and 47.1% are females, and the sex ratio is 890.

Religious composition indicates that 85.7% belongs to the Hindu community, 1.6% to the Muslim community and 13.7% to Sarna community.

The caste/category reveals that HHs belonging to ST category are the highest (36.8%) followed by OBC (32.6%) HHs. The SC and the General HHs belong to 22.1% and 8.5% respectively.

The educational status reveal that majority (29.7 %) of the population is primary level. Out of total, 16.5% population has middle level and 18.8% population secondary level of education. Further 6.9% population has high school level of education while 3.3% population has graduation level and 0.1% population post graduate level of education.

The marital status indicates that the married are 49.4%, unmarried 46.6 %, and widowed 5.0%.

The occupational status reveal that majority of them (35.4%) are dependents, 11.5% belongs to the housewives and 25.4% are students. Out of the working persons, 10.5 % are involved in private service, 13.3% in casual labour (contractual job), and 3.2% in agriculture, 0.6% in driver category and 1.1% in business/shop. The government service holders are only 0.9% .

The annual income reveal that majority (70.0%) of them have annual income between rupees 50,000/-to 100,000/- followed by 20.6% HHs having annual income below rupees.50,000/-.

Out of the remaining, 5.5% HHs have annual income between rupees 100,000/- to 200,000/- and 5.9% HHs have net annual income above rupees 200,000/- .The table also shows the average income of each village.

7. Specific Needs of the villages

From the analysis it is found in detail the main specific needs of the 10 villages. The specific needs are in all fields like education (Aganwadi centre, Primary, Middle and High Schools), health, water supply, community building, sanitation, environment, agriculture, road and other types of needs are highlighted.

8. Perspective Plan

From the study it is found that there is plenty of scope for PVNUL in the fields of education, healthcare, and development of infrastructure (like water, community building and sanitation, roads and streets etc.), employment generation, and development of sports, culture and women empowerment through SHGs in the 10 villages where the study was conducted. The following perspective plan may be taken note of by PVNUL for its future plan and action.

The plan is divided into 3 categories: i) short-term plans, ii) medium-term plans and iii) long-term plans.

8.1. Short-term Plans

Short-term plans are recommended in order to solve the immediate relief of the problems of the villagers in terms of their current requirements within 2 year time period:

A. Anganwadi Centre

Development of Anganwadi centres should be considered on a priority basis since it is one of the most important institutions as far as the pre-school education of children is concerned. The following needs of the Anganwadi Centres need to be fulfilled:

1. Repairing of the older buildings need to be done wherever it is required, particularly roof leakage and floor damage apart from repairing of doors and windows. The construction of new centres with toilet wherever it is required.
2. The toilets and urinals need to be renovated.
3. Manual Water Filter may be provided for safe keeping of the drinking water as the requirement and water supply by connecting through pipes in some centers.
4. Tables, chairs including small chairs, kitchen utensils, container for storing grain and carpets may be provided to the centers as per their requirements.
5. Learning materials for kids like toys, pictorial charts like animal, alphabet, birds etc. should be provided to all the centres as per the requirement.
6. Dresses, Sweaters, and small bags should be provided to all the centres as per the requirements.

B. School

Since PVUNL needs to give importance in the development of education so it is necessary to provide basic infrastructural facilities in the schools. The following needs to be fulfilled:

1. Repairing of the older buildings & boundary wall needs to be done wherever it is required, particularly of the roof leakage and floor damage apart from repairing of doors & windows.
2. Construction of kitchen room with shed and rooms wherever required.
3. Tables, chairs, benches, desks and carpets need to be provided as per the requirements of the schools.
4. Manual Water filters may be provided in those schools where there is no filtration facility available for safe drinking water.
5. Apart from providing the notebooks (2 notebooks to class II & III, 5 notebooks to class IV to VI and 10 notebooks to class VII to X), practice notebooks, school bags and other education materials to students, teaching material charts, some other materials like school uniform, sweaters and different kinds of books like short story, GK & dictionary in local language for the library may be provided.
6. Various kinds of sports items like football, cricket kits, badminton, volley ball, ludos, carom, skipping and discuss throw both for boys and girls as per the need of the schools may also be provided for the promotion of sports at the school level.
7. The girl students residing in those villages without having the secondary and higher secondary schools may be provided with bicycles to promote higher education among the girls.
8. Various kinds of inter school competitions may be organized to promote competitive spirit among the students as well as to promote the talents. These competitions should be on co-curricular activities (creative writing, essay writing, debate, drawing etc.), on extra-curricular activities (dancing, singing, play etc.) and on different kinds of sports and games.

9. Special coaching facility should be provided to the senior students for better results in their board exams.
10. Construction & repairing of the stage for cultural activity in some schools.
11. Installation of Hand Pump as per requirement in the schools
12. Apart from the merit scholarships, the poor and needy students may also be provided with some kind of financial assistance to support their study.
13. Installation of Fire Extinguisher and Lightening conductor in all schools.

C. Healthcare

The healthcare facilities in the villages are found to be not very satisfactory and thus, there is a need of improvement in this field. The following plans may be made operational in future for the improvement of healthcare facilities:

1. Mobile health service unit may be started, where a van may be used by covering the 10 villages along with common medicines in regular intervals.
2. Number of patients specially TB, BP, Diabetic, Malaria, Diarrhea, Hernia, Heart and Skin problem are in the villages. There should be monthly treatment in the villages by PVUNL.
3. General family Health Awareness programme should be organized time to time.
4. The service of Accredited Social Health Activist (ASHA) may also be utilized in the same manner as she works for the government hospitals under NRHM scheme. For the emergency service, a medical van with 24 hour service facility may be arranged and a helpline number of the service should be made available to all VCDC.
5. Fogging operation need to be conducted in the villages from time to time to move away mosquitoes and prevent the villagers from being affected with malaria.

D. Water Supply

The following requirements of the villages in relation to water supply may be fulfilled:

1. Installation of new hand pumps in the villages as per requirement.
2. Repairing of damaged hand pumps in the villages as per the requirement.
3. Renovation & construction of ponds in the villages as per requirement.
4. Arrangement of water supply through installation of pipes in the nearby villages.

E. Community Building and Sanitation

The following requirements of the villages in relation to community building and sanitation may be fulfilled:

1. In those villages where there exists no community hall, it may be constructed at proper places after consultation with the villagers. Community halls not in good condition and require renovation need to be undertaken as per the requirements. The villagers must also be sensitized for the good maintenance of those buildings.
2. Construction of common meeting place (Chabutra) at the proper place after consultation with the villagers as per the requirement in the villages.
3. Construction of club building as per the requirement.
4. Construction of boundary wall/ shed at the cremation/ burial ground as per the requirement.
5. New shed for the bus stop need to be constructed in those villages where it does not exist at proper places after consultation with the villagers.
6. Construction of shop (raised platforms) in weekly market places.
7. The sanitary habits of the villagers need to be sensitized by campaigning against open defecation and construction of toilets at home. Those who are interested for toilet may be provided with funding so that it may encourage many villagers to go for individual toilets.

F. Roads, Streets and Other Related Infrastructures

The following requirements of the villages in relation to roads, streets and other related infrastructures may be fulfilled:

1. Roads in the villages that require repairing works need to be done in order to maintain them in proper way.
2. Internal kutchra roads of the villages need to be converted into PCC (Concrete or Brick Soling) roads as per requirement in the villages.
3. Solar street lights may be provided in the villages as per the requirements at common places.
4. Drainage facilities are not found in many villages and thus construction of drains at roadsides needs to be done on priority basis.

8.2. Medium-term Plans

Medium-term plans are recommended in order to focus in areas of agricultural development, promotion of livestock, healthcare, women empowerment, promotion of sports and culture within 3 year time period:

A. Agricultural Development

The following actions may be undertaken for the development of agriculture:

1. Vegetable cultivation may be promoted in the villages through the use of waste water for irrigation among those having some amount of land. Kitchen garden may also be encouraged for those villagers who have small plots of extra land near their house.
2. Culture of waste management as digging pits for solid waste disposal and production of vermi-compost may be encouraged among the villagers that may be used as organic manure in the cultivation process.
3. Training in advanced cultivation method may be initiated in the area for increase in the yield from less water and low production cost.

B. Promotion of Livestock

- The area has the livestock population like cow, bullock, pig, duck, goat and chicken. For the promotion of livestock in the villages the following programmes may be introduced:
 - Poultry farming
 - Farming of goats
 - Pig rearing among the Tribals
 - Dairy farming and trading of milk
- The potential for cross-breeding programme for domestic cattle may also be explored.

C. Promotion of Healthcare

1. Different kinds of health camps like: General Health Check-up Camp, Eye Treatment Camp, Immunization Camp etc. may be organized time to time. Prior notification should be given in the villages regarding the date and venue so that the villagers would come to the camp accordingly.
2. Animal Health Camp cum Cattle Immunization Programme may also be organized for cluster of villages for providing service to the cattle owners.

D. Women Empowerment

1. Women empowerment through SHG and their awareness generation should be given prime importance. SHGs exist in most of the study villages but hardly any programme is going on. Women should be convinced for their self employment through income generating activities. They should be assisted by providing trainings and working capital to start a business. Market linkage if possible may also be extended. All SHGs should be monitored and followed up time to time.

2. Besides, women members of all SHGs must be provided with need based trainings so that they can function in a better manner instead of depending on others especially their male counterparts.

E. Promotion of Sports

1. Development of playgrounds in required, villages may be considered apart from providing sports equipments and organization of various tournaments may be thought of at inter village level. Talented sports persons and potential champions especially in the field of cricket, football and other events from the villages may be given sponsorships to take admission in the academy of Sports Authority of India.

F. Preservation of Traditional Culture

1. Preservation of local cultures, customs and traditions may be given importance in the villages. PVUNL may contribute to the villages for celebration of different local festivals & cultural activities so that the tradition can be preserved and passed on to the succeeding generations.
2. Traditional musical instruments can be arranged for the village committee as it is costly and difficult for them to purchase.

8.3. Long-term Plans

Long-term plans are recommended in order to eradicate the unemployment through technical training, skill up gradation and setting up technical training institute within 5 year time period:

A. Skill Mapping and Vocational Training of Village Youth

1. Skill assessment of youth in all villages needs to be done in order to map out their self-employment prospects regarding the eradication of unemployment and promotion of income generation activities. Through this training needs like: electrician, carpentry, masonry, ITI Training, tailoring, beautician training, driving, fitter, automobile mechanic, computer operator, etc. can be assessed in terms of their interests and subsequently vocational training programmes can be organized accordingly in phased manner.

2. B. Tree Plantation

1. Plantation of trees should be encouraged in every village. Villagers may be provided with saplings of different horticultural and timber species like mango, lichi, guava, papaya gambhar, sagwan, jack fruit banana & lemon in order to plant them in their backyard or at the roadside or unused field that may help them to boost their economy as well. Programmes on the awareness generation regarding plantation should also be organized.

C. Awareness Generation

1. PVUNL may contribute to the villages on awareness generation with regard to various issues like illiteracy, sanitation cleanliness, education, birth control, adverse sex ratio, condemnation of alcoholism etc. Information-Education-Communication campaign can be organized in all the villages for this purpose through hoardings. It will also simultaneously build good will among the people towards PVUNL.

9. Suggestion

1. PVNL need to start development works in the surrounding villages as early as possible so that existing unrest in the area can be minimized.

2. Any type of commitment should be avoided among the villagers because at present PTPC is closed and many persons are eagerly waiting for employment opportunities with PVUNL.
3. Any NGO can help and guide the CSR Department of PVUNL in implementing the development work in all the villages. PVUNL can contact any reputed NGO for this purpose.
4. Various types of skilled/ non -skilled labourers are available in the selected villages. The priority should be given to those labourers who are residing in these villages on contractual job. Contractor must take those labourers at the time of any petty work

10. Conclusion:

To conclude it may be said here that before undertaking any developmental activity in any of the villages, PVUNL may think of consulting the concerned Mukhya and natural leaders in those villages. The intervention plans as proposed by PUVNL may be sent to the Mukhyas and village leaders for thorough discussion in their meetings and decisions taken in the meeting may be sought from the members in writing. PVUNL may revise the action plan accordingly as per the decisions of Mukhya and village leaders.

Proper monitoring may be done by PVUNL for each developmental work. PVUNL should also try to generate awareness among the people regarding their rights, responsibilities and participation in promoting these programmes. IEC (Information-Education-Communication) campaign may be organized regularly from time to time in this regard.