MONITORING FORM [illegible]

The latest results of the below monitoring items shall be submitted to the lenders as part of Quarterly Progress Report throughout the construction phase.

Construction Phase

1. Response/Actions to Comments and Guidance from Government Authorities and the Public

Monitoring Item	Monitoring Results during Report Period	Frequency
Number and contents of formal comments made by the public	Nil	Upon receipt of comments/complaints
Number and contents of responses from Government agencies	Not applicable	

2. Pollution

- Water Quality

Item	Unit	Measured Value (Mean)	Measured Value (Max.)	Country's Standards	Standards for Contract	Referred International Standards	Measurement Point	Frequency	Method
Color	Pt units			NA	NA	ASTM, EPA CWA	Deep well or natural drainage channel at New Habarana S/S site	Quarterly (monitoring under construction)	visual
pH		7		6 - 8.5	NA				Laboratory
Total coliform	MPN/100ml			1,000	NA				Laboratory
TOC(oil)	mg/L		0	3	NA				Laboratory

Environmental Norm Feb.,2011 - BOI/ Sri Lanka

- Air Quality (Ambient Air Quality)

Item	Unit	Measured Value (Mean)	Measured Value (Max.)	Country's Standards	Standards for Contract	Referred International Standards	Measurement Point	Frequency	Method
PM10/PM2.5	µg/m3			NA	NA	WHO; 50	New Habarana S/S site	Quarterly (monitoring under construction)	PM2.5/PM10 Measuring Device, WHO, CEA/SLSI
							T/L Tower Foundation site		

Acts & Regulations - CEA/Sri Lanka

- Noise

Item	Unit	Measured Value (Day)	Measured Value (Night)	Country's Standards	Standards for Contract	Referred International Standards	Measurement Point	Frequency	Method
LAeq 'T'	dB	< 75	<50	Day; 75, Night; 50	National Environment AL ACT.No.47 of	WHO	New Habarana S/S site	Quarterly (monitoring under construction)	Integrating averaging sound level meter, BS66981986 (IEC804)
		< 75	< 50				T/L Tower Foundation site		

Acts & Regulations - CEA/Sri Lanka

- Grounding Vibration for Blasting Activities

Item	Unit	Measured Value (Mean)	Measured Value (Max.)	Country's Standards	Standards for Contract	Referred International Standards	Measurement Point	Frequency	Method
Vibration	mm/sec.	0		Type 4; 0.5	NA	BS6472:1992, ISO4855:1990 (E)	T/L Tower Foundation, Rock excavation	Every explosion (monitor under construction)	Vibration meter
Over Pressure	dB	0		Type 4; 95	NA				

Acts & Regulations - CEA/Sri Lanka

Note: As transformers/equipment not yet installed at New Habarana S/S site, present conditions of the above data not varied from original values.

3. Natural Environment

i). Although heavy rain has occurred in end September 2018 at New Habarana site area, wash away in flood, land sliding, etc., at site are not arisen.

ii). Access to the site for survey work maintained.

iii). Soil investigation by dynamic cone test (minor penetration method) does not affect environmental, no claim was observed.

4. Social Environment

- Compensation

Monitoring Item	Monitoring Results during Report Period	Measures to be Taken	Frequency
Tree cutting in right of way	Marked trees were evaluated/valued by the Divisional Secretary. Up to this period LKR119 Million has been paid to owners in Alawuva, Maypotha, Galeuala, Polpithigama and Dambulla area.	No trouble and/or complain by owner is observed so far	Quarterly
Land occupied for tower	Compensation for land in tower location, so far LKR 22 Million has been paid to respective land	No trouble and/or complain by owner is observed so far	Quarterly
Land under line	Not applicable		

- Life & Safety

Monitoring Item	Monitoring Results during Report Period	Measures to be Taken	Frequency
Stringing work	Public announcement of electricity power interruption and stringing work	Public announcements at village based	As required
Tower foundation construction work	Death of a sub-contractor's worker due to electrocution. Although the worker was wearing safety helmet and boots, not using insulated gloves while trying to connect a live LV wire to a	Strict adherence to safety measures	Continuously

Attachment 15 : Environmental Checklist

Category	Environmental Item	Main Check Items	Yes:Y No:N	Confirmation of Environmental Consi (Reasons, Mitigation Measure
1 Permits and Explanation	(1)EIAand Environmental Permits	(a) Have EIA reports been already prepared in official process? (b) Have EIA reports been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are mposed on the approval of EIA reports, are the conditions satisfied? (d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(a) Y (b) NA (c) NA (d) NA	(a) (b) (c) (d) JICA Loan project
	(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders? (b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(a) NA (b) NA	(a) (b)
	(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental	(a) NA	(a)
2 Pollution Control	(1) Water Quality	(a) Is there any possibility that soil run of from the bare lands resulting from earthmoving activities, such as cutting and filling will cause water quality degradation in downstream water areas? If the water quality degradation is anticipated, are adequate measures considered?	(a) NA	(a)
3 Natural Environment	(1) Protected Areas	(a) Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	(a) N	(a)
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)? (b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? (c) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem? (d) Are adequate measures taken to prevent disruption of migration routes and habitat fragmentation of wildlife and livestock? (e) Is there any possibility that the project will cause the negative impacts, such as destruction of forest, poaching, desertification, reduction in wetland areas, and disturbance of ecosystem due to introduction of exotic (non-native invasive) species and pests? Are adequate measures for preventing such impacts considered? (f) In cases where the project site is located in undeveloped areas, is there any possibility that the new development will result in extensive loss of natural environments?	(a) N (b) N (c) NA (d) Y (e) N (f) N	(a) (b) (c) (d) (e) (f)
3 Natural Environment	(3) Topography and Geology	(a) Is there any soft ground on the route of power transmission and distribution lines that maycause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides, where needed? (b) Is there any possibility that civil works, such as cutting and filling will cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides? (c) Is there a possibility that soil runoff will result from cut and fill areas, waste soil disposal sites, and borrow sites? Are adequate measures	(a) N (b) N (c) N	(a) Retaining wall to be constructed if necessary. (b) (c)

4 Social Environment	(1) Resettlement	(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement? (b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement? (c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement? (d) Are the compensations going to be paid prior to the resettlement? (e) Are the compensation policies prepared in document? (f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples? (g) Are agreements with the affected people obtained prior to resettlement? (h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan? (i) Are any plans developed to monitor the impacts of resettlement? (j) Is the grievance redress mechanism established?	(a) (b) (c) (d) (e) (f) (g) (h) (i) (j)	(a) (b) (c) (d) (e) (f) (g) (h) (i) (j) Not Applicable
	(2) Living and Livelihood	(a) Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary? (b) Is there a possibility that diseases, including infectious diseases, such as HIVwill be brought due to immigration of workers associated with the project? Are adequate considerations given to public health, if necessary? (c) Is there any possibility that installation of structures, such as power line towers will cause a radio interference? If any significant radio interference is anticipated, are adequate measures considered? (d) Are the compensations for transmission wires given in accordance with the domestic law?	(a) N (b) N (c) N (d) NA	(a) (b) (c) (d) NA

4 Social Environment	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?	(a)	(a) NA
	(4)Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	(a)	(a) NA
	(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples? (b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	(a) (b)	(a) NA (b)
	(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project? (b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials? (c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.? (d) Are appropriate measures taken to ensure that securityguards involved in the project not to violate safety of other individuals involved, or local residents?	(a) N (b) Y (c) Y (d) Y	(a) (b) (c) (d)

5 Others	(1) Impacts during Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)? (b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts? (c) If construction activities adversely affect the social environment, are	(a) (b) (c)	(a) NA (b) NA (c) NA
	(2) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts? (b) What are the items, methods and frequencies of the monitoring program? (c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)? (d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the form at and frequency of reports from the proponent to the regulatory authorities?	(a) N (b) N (c) Y (d) N	(a) (b) (c) See MOPE Ref. No. PE/PL/A/7/2009 (d) NA

6 Note	Reference to Checklist of Other Sectors	(a) Where necessary, pertinent items described in the Road checklist should also be checked (e.g., projects including installation of electric transmission lines and/or electric distribution facilities).	(a) Y	(a) Colombo - Kandy highway route interchange was coordinated.
	Note on Using Environmental Checklist	(a) If necessary, the impacts to transboundary or global issues should be confirmed, (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a)	(a) NA

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country w here the project is located dive appropriate environmental considerations are required to be made.

In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate sta (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics country and locality in w hich it is located.