

Environmental monitoring form reported to JICA

Site Environmental Compliance Inspection and Monitoring Form

Provided below is a sample form which may be utilized (and adapted as needed) to record the results of a compliance inspection or source or ambient monitoring at a project site.

Project : BLLT Expressway Project **Implementing Agency** : KEI-NE-OC-TEDI
Sub-Project : **Monitoring Agency** : Centre of Environment and Ecology Applied (CEEEO)
Location : J2 section at Can Gio District, HCMC **Enforcement Agency** : Contractors
Date : October 2015 **Contractor(s)** : J2 Contractor SMCC – CIENCO 04 JO
Reporting Period: The 3rd Quarter of 2015 **Implementation Phase** : Construction

1. Contractor(s)

Contractor(s) Environmental Awareness	Yes / No	Actions Required	Contractor Response / Comment
Contractor(s) aware of mitigation requirements?	Yes	None	None
Contractor(s) have a copy of EMP?	Yes	None	None

2. Mitigation Compliance Inspection

Impact / Mitigation Measure (From EMP)	Mitigations Implemented (Yes, No)	Mitigations Effective? (1 to 5)*	Impact Observed / Location	Action Required	Contractor Response / Comment	Endorsed by:	
						Implementing Agency	Monitoring Agency
1. Completion of detailed design in accordance with EMP requirements	Yes	1	-				
2. Preparation of tender document included detailed requirements in pollution control and protection of natural ecosystems.	Yes	1	-				

3. Proper preparation of CEMP by contractors	Yes	1	-				
4. Evidence of marking of work site boundaries	Yes	1	J2 construction site				
5. No cutting trees outside the project ROW	Yes	1	J2 construction site				
6. Replanting vegetation damaged by site clearance	Not yet, will implement after finish		J2 construction site				
7. No dumping of all kinds of wastes and cut trees in rivers, canals, ponds and field	Yes	2	J2 construction site				
8. General site condition and cleanliness	Yes	1	J2 construction site				
9. Covering of all trucks moving to and from site	Yes	2	J2 construction site				
10. Watering road, construction site on rainless day	Yes	2	J2 construction site				
11. Registration papers and compliance certificates of construction vehicles with Vietnam Register Authority of Police approved environmental emissions standards	Yes	2	J2 construction site				
12. Installation of temporary waste storage areas at each construction site including segregation of hazardous and non-hazardous wastes.	Yes	2	J2 construction site				
13. Sanitation conditions at construction worker camps, including sewage treatment facilities (toilets), domestic solid wastes management, house keeping etc.	Yes	1	J2 construction site				
14. Clean water and safe food supply for workers	Yes	2	J2 construction site				
15. Requirements for vegetation waste (cut trees) burning met	Yes	2	J2 construction site				

16. Proper organization of material transport to minimize environmental pollution and community disturbance	Yes	2	J2 construction site				
17. Condition and effectiveness of erosion controls	Yes	2	J2 construction site				
18. Condition and effectiveness of construction waste management	Yes	2	J2 construction site				
19. Evidence of soil and/or water acidification due to leakage of acidic water from construction site to surrounding field, canals	Not occurred		J2 construction site				
20. Evidence of direct or indirect disturbance of mangroves and other vegetation outside defined worksite boundaries	Not occurred		J2 construction site				
21. Stabilization, rehabilitation and landscaping of all land surfaces affected by construction activities	Yes	2	J2 construction site				
22. Installation of noise and dust control walls	Yes	2	J2 construction site				
23. Dust generation during windy conditions	Yes	2	J2 construction site				
24. Number and type of community complaints on environmental issues received	None	0	J2 construction site				
25. Mangrove replanting for compensation of mangrove area lost by the project at the Thi Vai river, Long Tau and Soai Rap river banks	Not yet implement						

* Mitigation Effectiveness Rating Criteria (Indicative examples)

1. Very Good (all required mitigations implemented)
2. Good (the majority of required mitigations implemented)
3. Fair (some mitigations implemented)
4. Poor (few mitigations implemented)

5. Very Poor (very few mitigations implemented)

3. Ambient Monitoring (JICA section: Package J2)

Parameter	Measured by	Monitoring Equipment	Result	Limited values (*) µg/m ³	% Exceedence	Action Required	Contractor Responses / Comments	Endorsed by:		Date/ Location
								Implementing Agency	Monitoring Agency	
SO ₂	CEECO	TCVN 5971-1995	32-69	350	None	None	None			<p>Date: 1st July, 3rd&4th Aug and 7th&8th Sep.</p> <p>Location: 1. KK1: Residential area near by J2 – Way the service road of 100 m to the South. 2. KK2: Household area that is nearly batching plan No.02 3. KK3: Residential area near the dump excavated soil</p>
NO _x	CEECO	TCVN 6137-1996	23-58	200	None	None	None			
CO	CEECO	52 TCN 352-89/MOH	893-3750	30,000	None	None	None			
TSP	CEECO	TCVN 5067-1995	48-271	300	None	None	None			

(*) National Technical Regulation for ambient air quality QCVN 05:2009/BTNMT

4. Noise and vibration (JICA section: Package J2)

Parameter	Measured by	Monitoring Equipment	Result	Limited values (*)	% Exceedence	Action Required	Contractor Responses / Comments	Endorsed by:		Date/ Location
								Implementing Agency	Monitoring Agency	
Noise	CEECO	TCVN 7878 - 1:2008 TCVN 7878 – 2:2010	48.1-74.1	6:00-21:00 70 dBA	52.8% exceed the standard but same with the baseline	Check the action for noise pollution as presented in CEMP	Agreed			Date: 1st July, 3rd&4th Aug and 7th&8th Sep. Location: 1. KK1: Residential area near by J2 – Way the service road of 100 m to the South. 2. KK2: Household area that is nearly batching plan No.02 3. KK3: Residential area near the dump excavated soil
	CEECO		43.2-69.9	21:00-06:00 55 dBA	95% exceed the standard but same with the baseline	Re-arrange Construction schedule avoid high noise level equipment running in night-time	Agreed			
Vibration	CEECO	TCVN 6963-2001	38.4-54.2	6:00-21:00 75 dB	None	None	None			
	CEECO		30.2-46.5	21:00-06:00 Baseline Level	None	None	None			

(*) Limited values:

1. For Noise: National Technical Regulation QCVN 26:2010/BTNMT
2. For vibration: National Technical Regulation QCVN 27:2010/BTNMT

5. Surface water quality (JICA section: Package J2)

Parameter	Measured by	Monitoring Equipment	Result	Limited values (*)	% Exceedence	Action Required	Contractor Responses / Comments	Endorsed by:		Date/ Location
				(mg/L)				Implementing Agency	Monitoring Agency	
pH	CEECO	TCVN 6492-2011	6.04-6.76	5.5-9	None	None	None			Date: 7th&8th Sep. Location: NM1: Soai Rap River - at location that receive wastewater from Accommodation Workers No.1 NM2: Cha river – at location that build Song Cha bridge NM3: Soai Rap River - at location that receive wastewater from concrete batching plant NM4: Canal - at location that receive wastewater
DO	CEECO	TCVN 7324-2004	4.53-5.13	≥2	None	None	None			
BOD	CEECO	TCVN 6001-2008	5-12	25	None	None	None			
COD	CEECO	SMEWW 5220C-2012	9-23	50	None	None	None			
NO ₂ ⁻	CEECO	TCVN 6178-1996	NDT	0.05	None	None	None			
NO ₃ ⁻	CEECO	TCVN 6180-1996	0.577-2.25	15	None	None	None			
NH ₄ ⁺	CEECO	-	Not analysis	1	None	None	None			
PO ₄ -P	CEECO	TCVN 6202-2008	0.014-0.026	0.5	None	None	None			
Fe	CEECO	SMEWW 3111B-2012	0.211-0.898	2	None	None	None			
TSS	CEECO	TCVN 6625-2000	43-73	100	None	None	None			
As	CEECO	SMEWW 3500-2012	NDT	0.1	None	None	None			
Cd	CEECO	SMEWW 3500-2012	NDT	0.01	None	None	None			

Cr (6+)	CEECO	TCVN 7939-2008	NDT	0.05	None	None	None			from Accommodation Workers No.2 NM5: Rach Dia River - at location nearby Disposal No.02
Pb	CEECO	SMEWW 3500-2012	NDT	0.05	None	None	None			
Zn	CEECO	SMEWW 3111B-2012	0.024-0.045	2	None	None	None			
Oil&grease	CEECO	SMEWW 5520B-2012	0.07-0.08	0.2	None	None	None			
Coliforms	CEECO	TCVN 6187-1-2009	70 – 230	10.000 MPN/100ML	None	None	None			

(*) National Technical Regulation for surface water quality QCVN 08:2008/BTNMT

6. Groundwater quality: There is not any groundwater well around J2 site

Parameter	Measured by	Monitoring Equipment	Result	Limited value (*) (mg/L)	% Exceedence	Action Required	Contractor Responses / Comments	Endorsed by:		Date/ Location
								Implementing Agency	Monitoring Agency	
EC				-						
Cl-				250						
Hardness (CaCO3)				500						
pH				5.5 -8.5						
COD				4						
TDS				1500						
NH ₄ ⁺				0.1						
NO ₂ ⁻				1						
NO ₃ ⁻				15						
SO ₄				400						
Fe				5						
Cd				0.005						
As				0.05						
Mn				0.5						
Zn				3						
E. Coli				Not detected						

(*) National Technical Regulation for underground water quality QCVN 09:2008/BTNMT

7. Domestic waste water:

Parameter	Measured by	Monitoring Equipment	Result	Limited value (*) (mg/L)	% Exceedence	Action Required	Contractor Responses / Comments	Endorsed by:		Date/ Location
								Implementing Agency	Monitoring Agency	
pH	CEECO	TCVN 6492-2011	8.23-7.58	5.5 – 9	None	None	None			Date: 7th&8th Sep.
Turbidity	CEECO	TCVN 6184-1996	12.1-43.7	-	None	None	None			

TSS	CEECO	TCVN 6625-2000	28-36	100	None	None	None			Location: 1. Wastewater from Accommodation Workers No.1 2. Wastewater from Accommodation Workers No.2
BOD5	CEECO	TCVN 6001-2008	15-21	50	None	None	None			
Amoni (as N)	CEECO	TCVN 5988-1995	3.61-6.87	10	None	None	None			
Oil total	CEECO	SMEWW 5520B-2012	1.74-3.52	-	None	None	None			
Coliform	CEECO	TCVN 6187-1-2009	930-1100	5000	None	None	None			

(*) National Technical Regulation on domestic wastewater QCVN 14:2008/BTNMT

8. Waste water of batching plant:

Parameter	Measured by	Monitoring Equipment	Result	Limited value (*) (mg/L)	% Exceedence	Action Required	Contractor Responses / Comments	Endorsed by:		Date/ Location
								Implementing Agency	Monitoring Agency	
pH	CEECO	TCVN 6492-2011	8.36-8.67	5.5 – 9	None	None	None			Date: 7th&8th Sep.
Turbidity	CEECO	TCVN 6184-1996	9.32-57.6	-	None	None	None			
TSS	CEECO	TCVN 6625-2000	31-65	150	None	None	None			Location: 1. Wastewater from concrete batching plant of Area 1 2. Wastewater from concrete batching plant of Area 2
BOD5	CEECO	TCVN 6001-2008	26-42	50	None	None	None			
Amoni (as N)	CEECO	TCVN 5988-1995	1.15-2.36	10	None	None	None			
Oil total	CEECO	SMEWW 5520B-2012	0.47-0.58	-	None	None	None			
Coliform	CEECO	TCVN 6187-1-2009	23-70	5000	None	None	None			

(*) National Technical Regulation on industrial wastewater QCVN 40:2012/BTNMT

9. Monitoring of emissions at concrete batching plants:

Parameter	Measured by	Monitoring Equipment	Result	Limited value (*) (mg/L)	% Exceedence	Action Required	Contractor Responses / Comments	Endorsed by:		Date/ Location
								Implementing Agency	Monitoring Agency	
Dust	CEECO	TCVN 5977-2009 TESTO 350	97-104	200	None	None	None			7th&8th Sep.
SO2	CEECO		<3	500	None	None	None			
NOx	CEECO		<3	850	None	None	None			
CO	CEECO		12.8-15.3	1000	None	None	None			Location: 1. Emission from concrete batching

										plant of Area 1 2. Emission from concrete batching plant of Area 2
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(*)National Technical Regulation on industrial wastewater QCVN 19:2009/BTNMT – Level B

10. Environmental Incidents During Reporting Period (if relevant): There is not any accidents, spills, complaint

Environmental Incidents (accidents, spills, complaint)	Date/Location	Reported by	Description / Location	Action Taken	Further Action Required	Endorsed by:	
						Implementing Agency	Monitoring Agency
Accidents							
Oil/Chemical spills							
People Complaint							
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.....							
.....							
.....							

11. Natural environment monitoring: This task has not yet implemented in this moment

Mangroves and Aquatic Organism Monitoring	Date / Location	Reported by	Assessment	Action Taken	Further Action Required	Endorsed by:	
						Implementing Agency	Monitoring Agency
Mangroves Monitoring							
Total area (ha) at each site.	Mangrove areas at Phuoc Khanh commune (Can Gio district) and at Thi Vai river bank (Dong Nai province)						
Biomass of mangroves (kg/m ²)							
Density of predominant species (individuals/m ²)							
Species diversity measured by Shannon Weaver index							
Average height and stem diameter							
Wild terrestrial animals (species composition and density)							
Aquatic organisms Monitoring							
Phytoplanktons: species composition, density and Bioindexes	Long Tau, Soai Rap and Thi Vai rivers						
Zooplanktons: species composition, density and Bioindexes							
Benthos: species composition, density and Bioindexes							

12. Summary of Actions Required and Follow-up (if relevant): Not any action required in this moment

Action Required	Timeframe (e.g. within one week)	Responsible Parties	Follow-up (to be completed if inspection/monitoring indicates actions are required)
			Required Action Taken:
			Effectiveness:
			Further Action Required?:
			Prepared by:
			Date:

Inspection Completed by: _____

Date: _____

Signature:

Notes: