

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 : CEECO

Location : J1 section at Nha Be District, HCMC
and Can Gio district, HCM City

Enforcement Agency : Contractors

Date : Sep 2016

Contractor(s) : J1 Contractor Shimizu-Vinaconex E&C JO

Reporting Period: 3rd Quarter of 2016

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	J1 construction site				
5. No cutting trees out side the project ROW	Yes	1	J1 construction site				
6. Replanting vegetation damaged by site clearance	Not yet implement		J1 construction site				
7. No dumping of all kinds of wastes and cut trees in rivers, canals, ponds and field	Yes	2	J1 construction site				
8. General site condition and cleanliness	Yes	1	J1 construction site				
9. Covering of all trucks moving to and from site	Yes	2	J1 construction site				
10. Watering road, construction site on rainless day	Yes	2	J1 construction site				
11. Registration papers and compliance certificates of construction vehicles with Vietnam Register Authority of Police approved environmental emissions standards	Yes	2	J1 construction site				
12. Installation of temporary waste storage areas at each construction site including segregation of hazardous and non-hazardous wastes.	Yes	2	J1 construction site				
13. Sanitation conditions at construction worker camps, included sewage treatment facilities (toilets), domestic solid wastes management, house keeping etc.	Yes	1	J1 construction site				
14. Clean water and safe food supply for workers	Yes	2	J1 construction site				
15. Requirements for vegetation waste (cut trees) burning met	Yes	2	J1 construction site				
16. Proper organization of material transport to minimize environmental pollution and community disturbance	Yes	2	J1 construction site				
17. Condition and effectiveness of erosion controls	Yes	2	J1 construction site				
18. Condition and effectiveness of construction waste management	Yes	2	J1 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	Not occurred	J1 construction site				

20. Evidence of direct or indirect disturbance of mangroves and other vegetation outside defined worksite boundaries	Not occurred	Not occurred	J1 construction site				
21. Stabilization, rehabilitation and landscaping of all land surfaces affected by construction activities	Yes	2	J1 construction site				
22. Installation of noise and dust control walls	Yes	2	J1 construction site				
23. Dust generation during windy conditions	None	2	J1 construction site				
24. Number and type of community complaints on environmental issues received	None	1	J1 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	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 air Monitoring (JICA section: Package J1)

Parameter	Measured by	Monitoring Equipment	Result ($\mu\text{g}/\text{m}^3$)	Limited values (*) ($\mu\text{g}/\text{m}^3$)	Exceedance	Action Required	Contractor Responses / Comments	Endorsed by:		Date/ Location
								Implementing Agency	Monitoring Agency	
SO ₂	CEECO	TCVN 5971-1995	38-82	350	None	None	None			Date: 19-20 Sep 2016 Location: A1: Household area near Pier P2 at Sta: (21+799.500) – the beginning point of the package A2: Household area at Sta: (22+200.00) – nearly the gate of construction site on Road No. 01 A3: Between workcamp N.2 and batching plant at Eastern bank – nearly Pier P28 at Sta: (24+1670.00)
NO _x	CEECO	TCVN 6137-1996	34-78	200	None	None	None			
CO	CEECO	52 TCN 352-89/MOH	1710-4630	30,000	None	None	None			
TSP	CEECO	TCVN 5067-1995	75-249	300	None	None	None			

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

4. Noise and vibration (JICA section: Package J1)

Parameter	Measured by	Monitoring Equipment	Result	Limited values (*)	Exceedance	Action Required	Contractor Responses / Comments	Endorsed by:		Date/ Location
								Implementing Agency	Monitoring Agency	
Noise	CEECO	TCVN 7878 - 1:2008	51.4 - 62.1	6:00-21:00 70 dBA	None	None	None			Date: 19-20 Sep 2016 Location: 1. A1: Household area near Pier P2 at Sta: (21+ 799.500) – the beginningpoint of the package 2. A2: Household area at Sta: (22+200.00) – nearly the gate of construction site on Road No. 01 3. A3: Between work camp N.2 and batching plant at Eastern bank– nearly Pier P28 at Sta: (24+1670.00)
	CEECO	TCVN 7878 – 2:2010	43.5 - 54.1	21:00-06:00 55 dBA	None	None	None			
Vibration	CEECO	TCVN 6963-2001	39.5-52.6	6:00-21:00 75 dB	None	None	None			
	CEECO		32.4-45.3	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 J1)

Parameter	Measured by	Monitoring Equipment	Result	Limited values (*) (mg/L) B2 Grade	Exceedance	Action Required	Contractor Responses / Comments	Endorsed by:		Date/ Location
								Implementing Agency	Monitoring Agency	
pH	CEECO	TCVN 6492-2011	6.11-6.28	5.5-9.0	None	None	None			Date: 20th Sep, 2016 Location: SW1-1: Soai Rap river - high tide (upstream) SW1-2: Soai Rap river - low tide (upstream) SW2-1: Soai Rap river - high tide (downstream) SW2-1: Soai Rap river – low tide (downstream)
DO	CEECO	TCVN 7324-2004	5.03-5.43	≥2	None	None	None			
TSS	CEECO	TCVN 6185-2008	25-76	100	None	None	None			
BOD ₅	CEECO	TCVN 6625-2000	8-12	25	None	None	None			
COD	CEECO	TCVN 6001-2008	16-21	50	None	None	None			
Ammonium (as N)	CEECO	SMEWW 5220C-2012	0.041-0.067	1	None	None	None			
NO ₃ (as N)	CEECO	TCVN 6180-1996	0.167-0.294	15	None	None	None			
NO ₂ (as N)	CEECO	TCVN 6178-1996	NDT	0.05	None	None	None			
PO ₄ ³⁻ (as P)	CEECO	TCVN 6202-2008	0.019-0.026	0.5	None	None	None			
Zinc (Zn)	CEECO	SMEWW 3111B-2012	0.027-0.039	2	None	None	None			
Iron (Fe)	CEECO	SMEWW 3111B-2012	0.126-0.218	2	None	None	None			
Arsen (As)	CEECO	TCVN 6182-1996	NDT	0.1	None	None	None			
Total oil & grease	CEECO	SMEWW 5520B-2012	0.15-0.26	0.3	None	None	None			
Coliform	CEECO	TCVN 6187-2-1996	110-410	10000	None	None	None			

(*) National Technical Regulation for surface water quality QCVN 08-MT:2015/BTNMT/B2

6. Groundwater quality

Parameter	Measured by	Monitoring Equipment	Result	Limited value (*) (mg/L)	Exceedance	Action Required	Contractor Responses / Comments	Endorsed by:		Date/ Location
								Implementing Agency	Monitoring Agency	
pH	CEECO	TCVN 6492-2011	6.97	5.5-8.5	None	None	None			<p>Date: 20th Sep 2016</p> <p>Location: Wells of residents, along with alignment, 200-300m from the central line on western bank (Nha Be district)</p>
EC	CEECO	SMEWW 2510B-2012	218	-	None	None	None			
COD (KMnO ₄)	CEECO	TCVN 6001-2008	2.14	4	None	None	None			
NH ₄ ⁺ -N	CEECO	SMEWW 5220C-2012	0.041	0.1	None	None	None			
NO ₃ ⁻ -N	CEECO	TCVN 6180-1996	0.216	15	None	None	None			
NO ₂ ⁻ -N	CEECO	TCVN 6178-1996	NDT	1.0	None	None	None			
Zn	CEECO	SMEWW 3111B-2012	0.043	3.0	None	None	None			
Mn	CEECO	SMEWW 3111B-2012	0.038	0.5	None	None	None			
Fe	CEECO	SMEWW 3111B-2012	0.076	5	None	None	None			
As	CEECO	TCVN 6182-1996	NDT	0.05	None	None	None			
E.Coli	CEECO	TCVN 6187-2-2009	NDT	NDT	None	None	None			

(*) National Technical Regulation on groundwater quality QCVN 09:2008/BTNMT

7. Environmental Incidents During Reporting Period (if relevant): There is no accident, no oil spill, no complaint during 3rd quarter 2016

Environmental Incidents (accidents, spills, complaint)	Date / Location	Reported by	Description / Location	Action Taken	Further Action Required	Endorsed by:	
						Implementing Agency	Monitoring Agency
No Accidents							
No Oil/Chemical spills							
No People Complaint							

8. Natural environment monitoring: Will be implemented when the mangrove replanting program being carried out

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 Long Thoi commune (Nha Be district) and						
Biomass of mangroves (kg/m ²)							
Density of predominant species (individuals/m ²)							

Species diversity measured by Shannon Weaver index	at Can Gio district (HCM City)						
Average height and stem diameter							
Wild terrestrial animals (species composition and density)							
Aquatic organisms Monitoring							
Phytoplanktons: species composition, density and Bioindexes.	Soai Rap river						
Zooplanktons: species composition, density and Bioindexes							
Benthos: species composition, density and Bioindexes							

9. Summary of Actions Required and Follow-up (if relevant):

Action Required	Timeframe (e.g. within one week)	Responsible Parties	Follow-up (to be completed if inspection/monitoring indicates actions are required)
None			