

**ANNEX 4 FORM OF MONITORING RESULTS SHEET FOR SUBMITTING TO JICA (J1 PACKAGE)**

**Project:** Greater Mekong Subregion (GMS) Ben Luc - Long Thanh Expressway Project **Implementing Agency:** Vietnam Expressway Corporation (VEC)

**Sub-Project:** Package J1 **Supervision Consultant:** KEI-DNE-OCG-TEDI

**Location:** J1 Construction site **Contractor(s):** J1 Contractor Shimizu-VN CN E&C JO

**Date:** January 2025 **Environmental Sub-contractor:** Monitoring CEECO

**Reporting Period:** 4th Quarter 2024 **Implementation Phase:** Construction

**Contractor(s)**

Contractor(s)' Environmental Awareness	Yes/No	Actions Required	Contractor Response / Comment
Contractor(s) is/are aware of mitigation requirements?	Yes	No	
Contractor(s) have a copy of EMP?	Yes	No	

**1. Mitigation Measure Compliance**

Impact/ Mitigation Measure (From EMP)	Mitigations Implemented (Yes/No)	Mitigations Effective?*	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		No	No		
2. Preparation of tender document included detailed requirements in pollution control and protection of natural ecosystems.	Yes	1		No	No		
3. Proper preparation of CEMP by contractors	Yes	1		No	No		
4. Evidence of marking of work site boundaries	Yes	1		No	No		
5. No cutting trees outside the project ROW	Yes	1		No	No		
6. Replanting vegetation damaged by site clearance	No site clearance			No	No		

7. No dumping of all kinds of wastes and cut trees in rivers, canals, ponds and field	Yes	2		No	No	
8. General site condition and cleanliness	Yes	1		No	No	
9. Covering of all trucks moving to and from site	Yes	2		No	No	
10. Watering road, construction site on rainless day	Yes	1		No	No	
11. Registration papers and compliance certificates of construction vehicles with Vietnam Automobile Registration Authority. Certification of environmental emissions standards.	Yes	1		No	No	
12. Installation of temporary waste storage areas at each construction site including segregation of hazardous and non-hazardous wastes.	Yes	2		No	No	
13. Sanitation conditions at construction camps, included sewage treatment facilities (toilets), domestic solid wastes management, storage etc.	Yes	1	pH at sedimentation tank at CBP at the time of monitoring is too high (12).	Yes. Neutralization of alkaline wastewater is needed	No	
14. Clean water and safe food supply for workers	Yes	2		No	No	
15. Requirements for vegetation waste (cut trees) burning met	No burning of waste vegetation	2		No	No	
16. Proper organization of material transport to minimize environmental pollution and community disturbance	Yes	2		No	No	
17. Condition and effectiveness of erosion controls	Yes	2		No	No	
18. Condition and effectiveness of construction waste management	Yes	2		No	No	
19. Evidence of soil and/or water acidification due to leakage of acidic water from construction site to surrounding field, canals	No leakage of water from site	1		No	No	
20. Evidence of direct or indirect disturbance of mangroves and other vegetation outside defined	No disturbance on outside vegetation	1		No	No	

worksite boundaries															
21.Stabilization, rehabilitation and landscaping of all land surfaces affected by construction activities	Yes	2			No			No							
22.Installation of noise and dust control walls	Yes	1			No			No							
23.Dust generation during windy conditions	Yes	1			No			No							
24.Number and type of community complaints on environmental issues received	No complaints received				No			No							
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 applicable during construction phase				No			No							

\*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)

## 2. Ambient Monitoring (J1 package)

Parameter	Measured by	Monitoring Equipment	Result	Standard µg/Nm3	% Exceedance	Action Required	Contractor Responses/ Comments	Endorsed by:		Date/ Location
								Implementing Agency	Monitoring Agency	
SO <sub>2</sub>	CEECO	SKC 224-PCXR8	<78	350		No	No			<b>Date:</b> 13/12/2024 <b>Locations:</b> A1, A2, A3
NO <sub>x</sub>	CEECO	SKC 224-PCXR8	43-74	200		No	No			
CO	CEECO	SKC 224-PCXR8	<15,000	30,000		No	No			
TSP	CEECO	RIDECO	76-174	300		No	No			
PM10*	Sent to subcontractor		23-27	100		No	No			

\*Average of 24 hours

### 3. Noise and vibration (J1 package)

Parameter	Measured by	Monitoring Equipment	Result	Standard	% Exceedance	Action Required	Contractor Responses/ Comments	Endorsed by:		Date/ Location
								Implementing Agency	Monitoring Agency	
Noise	CEECO	RION	53.2-66.8	6:00-21:00 70 dBA	No	No				Date: 13/12/2024 Locations: A1, A2, A3
	CEECO	RION	53.8-61.8	21:00-06:00 55 dBA	No	No				
Vibration	CEECO	RION VM-83	37.4-48.2	6:00-21:00 75 dB	No	No				
	CEECO	RION-83	35.5-40.4	21:00-06:00 Baseline Level	No	No				

#### 4. Surface water quality (J1 package):

Date: 13/12/2024

Locations: SW1, SW2, SW3

Measured by: CEECO

No.	Parameter	Unit	Result						QCVN 08-2023				% Exceedance	Action required	Contractor Responses /	Endorsed by				
			SW1			SW2			SW3			Level A				Level B	Level C	Level D	Implementing	Implementing
			High time	Low tide	High time	Low tide	High time	Low tide	High time	Low tide										
1	pH	-	7.52	7.45	7.54	7.79	7.52	7.52	7.52	7.52	7.52	7.28	6.5-8.5	6.0-8.5	< 6.0 or > 8.5	No	No			
2	DO	mg/L	5.24	5.21	5.27	5.24	5.26	5.26	5.26	5.26	5.21	5.21	≥ 6.0	≥ 4.0	≥ 2.0	No	No			
3	Turbidity	NTU	30.5	16.7	21.1	8.47	23.0	23.0	23.0	23.0	24.4	24.4	-	-	-	No	No			
4	EC	mS/cm	20700	8470	21700	8700	20600	20600	20600	20600	9400	9400	-	-	-	No	No			
5	TSS	mg/L	32	28	18	30	34	34	34	34	38	38	≤ 25	≤ 100	>100 and none floating garbage	No	No			
6	BOD <sub>5</sub>	mgO <sub>2</sub> /L	8	10	10	12	10	10	10	10	12	12	≤ 4	≤ 6	> 10	No	No			
7	COD	mgO <sub>2</sub> /L	19	23	21	25	22	22	22	22	26	26	≤ 10	≤ 15	> 20	No	No			
8	NO <sub>2</sub> <sup>-</sup> (as N)	mg/L	NDT MDL=0.005	NDT MDL=0.005	NDT MDL=0.005	NDT MDL=0.005	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	-	-	-	No	No			
9	NO <sub>3</sub> <sup>-</sup> (as N)	mg/L	0.193	0.428	0.128	0.652	0.151	0.151	0.151	0.151	0.413	0.413	-	-	-	No	No			
10	PO <sub>4</sub> <sup>3-</sup> (as P)	mg/L	<0.06	MDL=0.02	MDL=0.02	<0.06	<0.06	<0.06	<0.06	<0.06	MDL=0.02	MDL=0.02	-	-	-	No	No			
11	Asen (As)	mg/L	NDT MDL=0.002	NDT MDL=0.002	NDT MDL=0.002	NDT MDL=0.002	NDT MDL=0.002	NDT MDL=0.002	NDT MDL=0.002	NDT MDL=0.002	NDT MDL=0.002	NDT MDL=0.002	-	-	-	No	No			
12	Zinc (Zn)	mg/L	NDT MDL=0.0	NDT MDL=0.0	NDT MDL=0.0	NDT MDL=0.0	NDT MDL=0.0	NDT MDL=0.0	NDT MDL=0.0	NDT MDL=0.0	NDT MDL=0.0	NDT MDL=0.0	-	-	-	No	No			

No	Parameter	Unit	Result									% Exceedance	Action required	Contractor Responses /	Endorsed by					
			SW1			SW2			SW3						Level A	Level B	Level C	Level D	Implementing	Implementing
			High time	Low tide	High time	Low tide	High time	Low tide	High time	Low tide										
13	Iron (Fe)	mg/L	0.502	0.242	0.406	0.222	0.272	0.544	0.272	0.544	-	-	-	No	No					
14	Total oil & grease	mg/L	NDT MDL=1.0	NDT MDL=1.0	NDT MDL=1.0	NDT MDL=1.0	NDT MDL=1.0	NDT MDL=1.0	NDT MDL=1.0	NDT MDL=1.0	NDT MDL=1.0	NDT MDL=1.0	-	No	No					
15	Colliform	MPN/100ml	610	1100	820	1400	580	920	1.000	≤ 5.000	≤ 7.500	> 7.500	No	No	No					

Note: "NDT": Not detected; "MDL": Minimum detectable level, QCVN 08:2023/BTNMT: National technical Regulation on Surface Water Quality.

- **Level A:** Good water quality. Aquatic ecosystems have high dissolved oxygen (DO) content. Water can be used for domestic water supply. swimming. and water play purposes after applying appropriate treatment measures.

- **Level B:** Average water quality. Domestic ecosystems consume a lot of dissolved oxygen due to large amounts of pollutants. Water can be used for industrial and agricultural production purposes after applying appropriate treatment measures.

- **Level C:** Poor water quality. Domestic ecosystems have a sharply reduced amount of dissolved oxygen due to containing a large amount of pollutants. The water does not cause unpleasant odors and can be used for industrial production purposes after applying appropriate treatment measures.

- **Level D:** Water quality is very poor. can greatly affect fish and other organisms living in the water environment due to low dissolved oxygen concentration and high pollutant concentration.

QCVN 08:2023/BTNMT takes effect from September 12<sup>th</sup>. 2023. replacing QCVN08-MT:2015/BTNMT. Environmental consultants will focus on evaluating the parameters in Table 2. Limit values of parameters in surface water Serves for classifying the water quality of rivers. streams. canals. ditches. slits. and ditches and protecting aquatic habitats.

### 5. Groundwater quality

Samples were not collected because the wellbore in residential area in previous monitoring period was destroyed.

### 6. Waste water quality (J1 package)

Parameter	Measured by	Monitoring Equipment	Result	Standard (mg/kg)			% Exceedance	Action Required	Contractor Responses / Comments	Endorsed by:		Date/ Location
				Residential land	Agri. land	Forest land				Implementing Agency	Monitoring Agency	
pH	CEECO		WW 1 12.30	WW 3 6.76	B 1 5-9	B2 5-9	130	Yes	No			Date: 13/12/2024 Locations : WW1. WW3
BOD (mgO <sub>2</sub> /L)	CEECO		39	43	30	50	No	No	No			
TSS (mg/L)	CEECO		54	36	50	100	No	No	No			
H <sub>2</sub> S (mg/L)	CEECO		NDT	NDT	1	4	No	No	No			
N-NO <sub>3</sub> (mg/L)	CEECO	UV-VIS spectrophotometer	<0.06	<0.06	30	50	No	No	No			
P-PO <sub>4</sub> <sup>3-</sup> (mg/L)	CEECO	UV-VIS spectrophotometer	NDT	<0.06	6	10	No	No	No			
Total Oil and Grease (mg/L)	CEECO		NDT	NDT	10	20	No	No	No			
Coliforms (MPN/100mL)	CEECO		1700	2100	3000	5000	300%	No	No			
NDT: Not detected												

### 7. Soil quality (J1 package)

Parameter	Measured by	Monitoring Equipment	Result		Standard (mg/kg)			% Exceedance	Action Required	Contractor Responses / Comments	Endorsed by:		Date/ Location
			S1	S2	Residential land	Agri. land	Forest land				Implementing Agency	Monitoring Agency	
Asen (As) mg/kg	CEECO	AAS	7.4	8.0	12	12	12	No	No	No			Date: 13/12/2024 Locations: S1, S2
Cadimi	CEECO	AAS	1.6	2.3	2	2	5	No	No	No			

(Cd) mg/kg																						
Lead (Pb) mg/kg	C EECO	AAS	16	21	50	70	70	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Copper (Cu) mg/kg	CEECO	AAS	16	14	70	100	120	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Zinc (Zn) mg/kg	CEECO	AAS	58	59	200	200	200	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Iron (Fe) %	CEECO	AAS	2.11	2.39	Baseline level	Baseline level	Baseline level															
NDT: Not detected																						

### 8. Environmental Incidents During Reporting Period (if relevant)

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

### 9. Natural environment monitoring (for whole project):

Mangroves and Aquatic Organism Monitoring	Date / Location	Reported by	Assessment	Action Taken	Further Action Required	Endorsed by:	
						Implementing Agency	Monitoring Agency
<b>Mangroves Monitoring</b>							
Total area (ha) at each site.							
Biomass of mangroves (kg/m <sup>2</sup> )							
Density of predominant species (individuals/m <sup>2</sup> )							
Species diversity measured by Shannon- Weaver index							
Average height and stem diameter							
Wild terrestrial animals (species composition and density)							
<b>Aquatic organisms Monitoring</b>							





**10. 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			<p><b>Required Action Taken:</b></p>
			<p><b>Effectiveness:</b></p>
			<p><b>Further Action Required?:</b></p>
			<p><b>Prepared by:</b></p>
			<p><b>Date:</b></p>

**Inspection Completed by:** NGUYEN TRINH MINH ANH

**Date:** Jan 14. 2025

**Signature:**



**Notes:**

## Annex 1: Description of sampling locations

### Phụ lục 1: Mô tả vị trí lấy mẫu

No	Symbol	Coordinates		Description
		N	E	
<b>Air, noise and vibration (*)</b>				
1	A1	10°39'43.0"	106°43'52.2"	Construction site office area between the package - Nha Be bank
2	A2	10°39'49.8"	106°43'39.9"	Household area at Sta: (Km 22+100.00) – nearly the gate of construction site on Road No. 01 - Nearly the intersection with Nguyen Van Tao street
3	A3	10°39'44.9"	106°44'2.5"	The Northern residential area of the package is nearly construction yard of Pier P19 - Nha Be Bank
<b>Emission (If any) (**)</b>				
1	E1	10°39'37.6"	106°44'7.7"	Concrete batching plant (Nha Be side)
<b>Surface water</b>				
1	SW1	10°39'44.6"	106°44'16.9"	Soai Rap river - 500m upstream of Binh Khanh bridge
2	SW2	10°39'30.9"	106°44'23.8"	Soai Rap river - 500m downstream of Binh Khanh bridge
3	SW3	10°39'20.9"	106°44'30.7"	Binh Khanh bridge construction area - Soai Rap river
<b>Sediment (***)</b>				
1	SD1	-	-	-
2	SD2	-	-	-
<b>Underground water (If any) (***)</b>				
1	GW1	-	-	-
<b>Soil Quality (****)</b>				
1	S1	10°39'44.2"	106°43'51.2"	Pier P10 at Sta: (Km22+400.00)
2	S2	10°39'38.6"	106°44'7.6"	Area nearly construction yard of Pier P19
<b>Waste water (****)</b>				
1	WW1	10°39'36.7"	106°44'7.8"	Clarifier outlet of concrete batching plant (Nha Be side)
2	WW3	10°39' 36.7"	106°44'5.6"	Worker camp (Nha Be side)

**Note:**

- (\*) Sampling locations are changed at residential area nearly construction areas are working according to Letter No. BLLT/C5/J1/SV-770 dated December 16, 2023 of Shimizu - VNCN E&C Joint Venture. Location A2 - coincides with uEMP's monitoring program and should be maintained.
- (\*\*) According to Letter No. BLLT/C5/J1/SV-770 dated December 16, 2023 of the Shimizu - VNCN E&C Joint Venture, the Nhon Trach Shore Emissions location is not being implemented.
- (\*\*\*) Sediment and groundwater were collected to assess the impact of the construction process on the potential release of pollutants into surface water sources and underground aquifers, especially during bored pile drilling. However, the drilling process has now ended, so sediment and underground water monitoring is temporarily suspended to suit the actual situation and uEMP 2022.
- (\*\*\*\*) According to Letter No. BLLT/C5/J1/SV-770 dated December 16th, 2023, the wastewater location of batching plant on Nhon Trach bank is not collected. According to Letter No. BLLT/C5/J1/SV-770 dated December 16th, 2023, Aquatic quality is not implemented

**Annex 2: Pictures of ambient air, noise and vibration sampling**

**Phụ lục 2: Hình ảnh thu mẫu khí, đo tiếng ồn và độ rung**



**A1: Day time/ Ban ngày**



**A2: Day time/ Ban ngày**



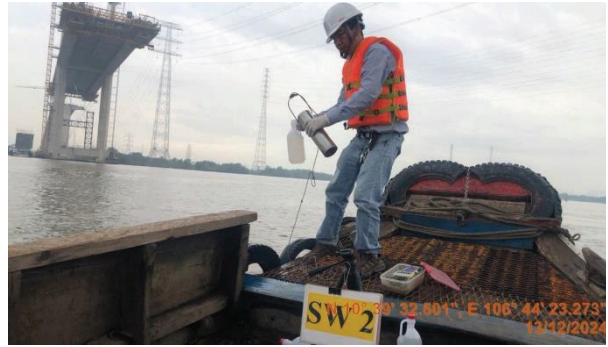
**A3: Day time/ Ban ngày**



**Annex 3: Pictures of surface water, soil, and wastewater sampling**  
**Phụ lục 3: Hình ảnh thu mẫu nước mặt, đất, và nước thải**



**Surface water sampling at SW1 /  
Thu mẫu nước mặt tại SW1**



**Surface water sampling at SW2 /  
Thu mẫu nước mặt tại SW2**



**Surface water sampling at SW3 /  
Thu mẫu nước mặt tại SW3**



**Soil sampling S1 /  
Thu mẫu đất S1**



**Soil sampling S2 / Thu mẫu đất S2**



**Wastewater sampling at WW1 /  
Thu mẫu nước thải tại WW1**



**Wastewater sampling at WW3 /  
Thu mẫu nước thải tại WW3**



**Emission sampling at E1/  
Thu mẫu khí thải tại E1**



Annex 4: Sampling location diagram

