

**THE PROJECT FOR THE EXPANSION
OF WATER SUPPLY SYSTEM IN SVAY RIENG**

**Monthly Report
for
Environmental Monitoring
(August 2024)**

September 2024

KUBOTA Construction Co., LTD.

Contents

- (1) Monitoring Item List
- (2) Monitoring Record Sheet of EMP

(Daily)

1. Dust
2. Noise-1
3. Noise-2
4. Water Quality (Turbidity, Oil)
5. Water Quality

(Weekly)

6. Waste (Domestic)

(Monthly)

7. Condition of construction machinery and vehicles
8. Traffic management
9. Accident
10. Training and educational meeting to worker
11. Claim

(Others)

12. Land for waste dumping, Land for temporary use
13. Plan of safety transportation
14. Waste (Treatment Sludge)
15. Land for waste dumping
16. Noise and Vibration (Pump)

- (3) Photo of Environmental Activities

Monitoring Item List (Specification)

Monitoring Item List

1) Daily Monitoring

Monitoring Item		Procedure	Reference Standard		Frequency	Remarks
Dust		Visual	Acceptable or not		Daily	
Noise		Sensory	Acceptable or not		Daily	85db at boundary
		Operation Time Check	Stated Operation Time in EMP		Daily	
Water Quality		Visual	Acceptable or not		Daily (During foundation work)	
Water Quality	pH	Laboratory Test	6.0-8.0	Determined by the monitoring result	In case of abnormal observation of turbidity or oil	
	EC		80µS/cm			
	BOD		10mg/L			
	Turbidity		500NTU			

2) Weekly Monitoring

Monitoring Item	Procedure	Reference Standard	Frequency	Remarks
Dust	Visual	Acceptable or not	Weekly	Weekly Patrol

3) Monthly Monitoring

Construction Site (Monthly Monitoring)

Monitoring Item	Procedure	Reference Standard	Frequency	Remarks
Condition of Construction Machinery and Vehicles	Maintenance Record Check	Acceptable or not (Exhaust gas, Noise, Vibration, and Usual Safety Check)	Monthly	
Traffic Management	Patrol	Stated procedure in EMP	Monthly	Monthly Patrol
Accident	Patrol	Acceptable or not	Monthly	Monthly Patrol
Training and Educational Meeting to Worker	Report Check	Stated procedure in EMP (Frequency, Contents, Target, etc.)	Monthly	
Claim and Comment	Report Check	Acceptable or not	Monthly	

4) Others

Monitoring Item	Procedure	Reference Standard	Frequency	Remarks
Land for Waste Dumping Land for Temporary Use	Lease Condition	Acceptable or not	Contract of Lease	
Plan Saafety Transportation	Plan Check	Acceptable or not	At Planning	

Monitoring Item	Procedure	Reference Standard	Frequency	Remarks
Waste (Treatment Sludge)	Patrol	Acceptable or not	Monthly	
Land for Waste Dumping	Procedure Check	Acceptable or not	At Contract Agreement	
Noise and Vibration	Patrol and Maintenance	Normal Condition or not	Daily	

Monitoring Record Sheet of EMP
(August 2024)

Health Safety and Environment Control

HSE Report

Monitoring Record Sheet of EMP

The following forms shall be applied for monitoring to ensure that EMP is fully followed and implemented during the execution of the work.

August, 2024

No	Item	Monitoring Cycle	Acceptable : ✓ Not Acceptable : ✕	Remark
1	Dust	Daily	✓	
2	Noise - 1	Daily	✓	
3	Noise - 2	Daily	✓	
4	Water Quality - 1 (Turbidity, Oil)	Daily	✓	During foundation work
5	Water Quality - 2 (In case of abnormal observation of turbidity or oil)	Daily	✓	
6	Waste (Domestic)	Weekly	✓	
7	Condition of construction machinery and vehicles	Monthly	✓	
8	Traffic management	Monthly	✓	
9	Accident	Monthly	✓	
10	Training and educational meeting to worker	Monthly	✓	
11	Claim and comment	Monthly	✓	
12	Land for waste dumping, Land for temporary use	Contract of lease	✓	
13	Plan of safety transportation	At planning	✓	
14	Waste (treatment sludge)	Monthly	✓	
15	Land for waste dumping	At contract agreement	✓	
16	Noise and vibration	Daily	✓	

※ Monthly, Separate Environmental Report is Submitted.

1. Dust

Daily

Monitoring item:		Monitoring indicator:	
Dust		Procedure: Visual Inspection Reference Standard: Acceptable or not Frequency: Daily	
Location		(Intake Facility and Water Treatment Plant)	
Aug-24		Results	
Day	Time		
1	15:15	Acceptable /	Not acceptable
2	15:10	Acceptable /	Not acceptable
3	14:10	Acceptable /	Not acceptable
4	15:30	Acceptable /	Not acceptable
5	15:30	Acceptable /	Not acceptable
6	15:10	Acceptable /	Not acceptable
7	15:40	Acceptable /	Not acceptable
8	16:20	Acceptable /	Not acceptable
9	16:00	Acceptable /	Not acceptable
10	14:55	Acceptable /	Not acceptable
11	16:10	Acceptable /	Not acceptable
12	16:00	Acceptable /	Not acceptable
13	15:50	Acceptable /	Not acceptable
14	16:35	Acceptable /	Not acceptable
15	16:15	Acceptable /	Not acceptable
16	15:35	Acceptable /	Not acceptable
17	15:55	Acceptable /	Not acceptable
18	15:10	Acceptable /	Not acceptable
19	15:35	Acceptable /	Not acceptable
20	15:40	Acceptable /	Not acceptable
21	16:25	Acceptable /	Not acceptable
22	16:20	Acceptable /	Not acceptable
23	16:05	Acceptable /	Not acceptable
24	15:15	Acceptable /	Not acceptable
25	15:05	Acceptable /	Not acceptable
26	15:00	Acceptable /	Not acceptable
27	15:20	Acceptable /	Not acceptable
28	16:20	Acceptable /	Not acceptable
29	14:45	Acceptable /	Not acceptable
30	14:40	Acceptable /	Not acceptable
31	15:50	Acceptable /	Not acceptable

2. Noise - 1

Daily

Monitoring item:		Monitoring indicator:		
Noise		Procedure: Sensory Inspection Reference Standard: Acceptable or not (Site Boundary Reference Value: 85db) Frequency: Daily		
Location		(Intake Facility and Water Treatment Plant)		
Aug-24		Results	(Reference) Monitoring (db)	
Day	Time		Intake	WTP
1	8:10	Acceptable / Not acceptable	69	60
2	8:15	Acceptable / Not acceptable	68	61
3	9:10	Acceptable / Not acceptable	67	59
4	9:40	Acceptable / Not acceptable	68	62
5	9:30	Acceptable / Not acceptable	66	58
6	9:25	Acceptable / Not acceptable	69	61
7	10:10	Acceptable / Not acceptable	68	60
8	10:00	Acceptable / Not acceptable	67	62
9	9:55	Acceptable / Not acceptable	68	58
10	10:15	Acceptable / Not acceptable	69	59
11	9:00	Acceptable / Not acceptable	68	58
12	9:10	Acceptable / Not acceptable	68	60
13	9:30	Acceptable / Not acceptable	70	62
14	9:20	Acceptable / Not acceptable	69	62
15	9:40	Acceptable / Not acceptable	66	58
16	9:00	Acceptable / Not acceptable	68	59
17	9:30	Acceptable / Not acceptable	67	60
18	9:15	Acceptable / Not acceptable	68	61
19	10:00	Acceptable / Not acceptable	69	62
20	9:30	Acceptable / Not acceptable	68	60
21	9:10	Acceptable / Not acceptable	69	59
22	10:25	Acceptable / Not acceptable	67	61
23	9:40	Acceptable / Not acceptable	69	58
24	9:55	Acceptable / Not acceptable	68	62
25	9:35	Acceptable / Not acceptable	69	58
26	8:50	Acceptable / Not acceptable	68	59
27	9:10	Acceptable / Not acceptable	69	58
28	9:25	Acceptable / Not acceptable	68	60
29	9:40	Acceptable / Not acceptable	69	61
30	10:15	Acceptable / Not acceptable	67	62
31	9:50	Acceptable / Not acceptable	68	59

3. Noise - 2

Daily

Monitoring item:		Monitoring indicator :	
Noise		Procedure: Operation time check Reference Standard: Stated operation time in EMP: 7:00 AM Frequency: Daily	
Location		(Intake Facility and Water Treatment Plant)	
Aug-24		Results	
Day	Time		
1	8:10	Acceptable /	Not acceptable
2	9:10	Acceptable /	Not acceptable
3	8:15	Acceptable /	Not acceptable
4	8:25	Acceptable /	Not acceptable
5	8:35	Acceptable /	Not acceptable
6	8:10	Acceptable /	Not acceptable
7	8:45	Acceptable /	Not acceptable
8	9:10	Acceptable /	Not acceptable
9	9:00	Acceptable /	Not acceptable
10	8:00	Acceptable /	Not acceptable
11	8:30	Acceptable /	Not acceptable
12	8:20	Acceptable /	Not acceptable
13	8:40	Acceptable /	Not acceptable
14	9:30	Acceptable /	Not acceptable
15	8:15	Acceptable /	Not acceptable
16	9:00	Acceptable /	Not acceptable
17	9:10	Acceptable /	Not acceptable
18	9:20	Acceptable /	Not acceptable
19	9:25	Acceptable /	Not acceptable
20	9:15	Acceptable /	Not acceptable
21	8:30	Acceptable /	Not acceptable
22	8:10	Acceptable /	Not acceptable
23	9:10	Acceptable /	Not acceptable
24	9:20	Acceptable /	Not acceptable
25	8:40	Acceptable /	Not acceptable
26	8:50	Acceptable /	Not acceptable
27	8:00	Acceptable /	Not acceptable
28	8:35	Acceptable /	Not acceptable
29	9:00	Acceptable /	Not acceptable
30	8:50	Acceptable /	Not acceptable
31	9:40	Acceptable /	Not acceptable

4. Water Quality - 1 (Turbidity, Oil)

Daily

Monitoring item:		Monitoring indicator:	
Water Quality (Turbidity, Oil)		Procedure: Visual Inspection (Turbidity, Oil) Reference Standard: Acceptable or not Frequency: Daily (during foundation work)	
Location		(Intake Facility and Water Treatment Plant)	
Aug-24		Results	
Day	Time		
1	15:00	Acceptable /	Not acceptable
2	15:10	Acceptable /	Not acceptable
3	14:10	Acceptable /	Not acceptable
4	15:20	Acceptable /	Not acceptable
5	15:30	Acceptable /	Not acceptable
6	15:15	Acceptable /	Not acceptable
7	15:40	Acceptable /	Not acceptable
8	16:30	Acceptable /	Not acceptable
9	16:00	Acceptable /	Not acceptable
10	14:50	Acceptable /	Not acceptable
11	15:00	Acceptable /	Not acceptable
12	15:50	Acceptable /	Not acceptable
13	15:40	Acceptable /	Not acceptable
14	16:30	Acceptable /	Not acceptable
15	16:10	Acceptable /	Not acceptable
16	15:30	Acceptable /	Not acceptable
17	15:50	Acceptable /	Not acceptable
18	15:00	Acceptable /	Not acceptable
19	15:35	Acceptable /	Not acceptable
20	15:10	Acceptable /	Not acceptable
21	16:20	Acceptable /	Not acceptable
22	15:00	Acceptable /	Not acceptable
23	16:10	Acceptable /	Not acceptable
24	15:20	Acceptable /	Not acceptable
25	15:10	Acceptable /	Not acceptable
26	14:50	Acceptable /	Not acceptable
27	15:30	Acceptable /	Not acceptable
28	15:10	Acceptable /	Not acceptable
29	15:35	Acceptable /	Not acceptable
30	14:40	Acceptable /	Not acceptable
31	16:00	Acceptable /	Not acceptable

5. Water Quality - 2

Daily

*** In case of abnormal observation of turbidity or oil**

Monitoring item:		Monitoring indicator :														
Water Quality		Procedure: pH, EC, BOD, Turbidity														
		Reference Standard: Determined by the monitoring result														
		<table border="1" style="width: 100%; text-align: center;"> <tr> <td>Items</td> <td>pH</td> <td>EC</td> <td>BOD</td> <td>Turbidity</td> </tr> <tr> <td>Reference Value</td> <td>6-8</td> <td>80µs/cm</td> <td>10mg/L</td> <td>500NTU</td> </tr> </table>					Items	pH	EC	BOD	Turbidity	Reference Value	6-8	80µs/cm	10mg/L	500NTU
Items	pH	EC	BOD	Turbidity												
Reference Value	6-8	80µs/cm	10mg/L	500NTU												
		Frequency: Daily (during foundation work)														
Location		(Intake Facility and Water Treatment Plant)														
		Results														
Day	time															
		<table border="1" style="width: 100%; text-align: center;"> <tr> <td>Items</td> <td>pH</td> <td>EC</td> <td>BOD</td> <td>Turbidity</td> </tr> <tr> <td>Monitoring Value</td> <td colspan="4" style="color: red;">Water quality analysis was not required as no turbidity or oil abnormality was observed.</td> </tr> </table>					Items	pH	EC	BOD	Turbidity	Monitoring Value	Water quality analysis was not required as no turbidity or oil abnormality was observed.			
Items	pH	EC	BOD	Turbidity												
Monitoring Value	Water quality analysis was not required as no turbidity or oil abnormality was observed.															
		Acceptable / Not acceptable														
		Measures to be taken (if result is not acceptable);														

6. Waste (Domestic)

Weekly

Monitoring item:		Monitoring indicator :				
Waste (Domestic)		Procedure: Patrol				
		Reference Standard: Acceptable or not				
		Frequency: Weekly				
Location		(Intake Facility, Water Treatment Plant, and Stock yard)				
Date	Time	Results				
6-Aug-24	9:00	Acceptable / Not acceptable				
12-Aug-24	9:00	Acceptable / Not acceptable				
19-Aug-24	9:00	Acceptable / Not acceptable				
26-Aug-24	9:00	Acceptable / Not acceptable				

7. Condition of construction machinery and vehicles

Monthly

Monitoring item:		Monitoring indicator :				
Condition of construction machinery and vehicles		Procedure: Maintenance record check				
		Reference Standard: Acceptable or not (Exhaust gas, noise, vibration, and usual safety check)				
		Frequency: Monthly				
Location		(Intake Facility and Water Treatment Plant)				
Date	Time	Results				
1-Aug-24	7:30	Acceptable / Not acceptable				
31-Aug-24	7:30	Acceptable / Not acceptable				

8. Traffic management Monthly

Monitoring item:		Monitoring indicator:	
Traffic management		Procedure: Patrol Reference Standard: Stated procedure in EMP Frequency: Monthly (Weekly by KCC)	
Location		(Intake Facility and Water Treatment Plant)	
Date	Time	Results	
22-Aug-24	14:00	Acceptable / Not acceptable	
		Acceptable / Not acceptable	
		Acceptable / Not acceptable	
		Acceptable / Not acceptable	

9. Accident Monthly

Monitoring item:		Monitoring indicator:	
Accident		Procedure: Patrol Reference Standard: Acceptable or not Frequency: Monthly	
Location		(Intake Facility and Water Treatment Plant)	
Date	Time	Results	
31-Aug-24	18:00	Acceptable / Not acceptable	
		Measures to be taken (if result is not acceptable);	

10. Training and educational meeting to worker Monthly

Monitoring item:		Monitoring indicator:	
Training and educational meeting to worker		Procedure: Report check Reference Standard: Stated procedure in EMP (frequency, contents, target, etc.) Frequency: Monthly	
Location		(Intake Facility and Water Treatment Plant)	
Date	Time	Results	
13-Aug-24	7:00	Carry out / Not carry out	
15-Aug-24	7:00	Carry out / Not carry out	

11. Claim Monthly

Monitoring item:		Monitoring indicator:	
Claim		Procedure: Report check Reference Standard: Acceptable or not Frequency: Monthly	
Location		(Intake Facility and Water Treatment Plant)	
Date	Time	Results	
No have		Acceptable / Not acceptable	
		Measures to be taken (if result is not acceptable);	

12. Land for waste dumping, Land for temporary use

Others

Monitoring item:		Monitoring indicator:
Land for waste dumping, Land for temporary use.		Procedure: Lease Condition
		Reference Standard: Appropriate or not
		Frequency: Contract of lease
Location-1		Construction Site (Intake)
Location-2		Construction Site (WTP)
Location-3		Temporary Disposal Area (WTP)
Location-4		Waste Dumping (Public Garbage Dump Area)
Location-5		Temporary Stockyard for Pipeline Material and Equipment)
Date	Time	Results
01-Aug-24	9:30	Location-1: Construction Site (Intake) <input checked="" type="checkbox"/> Appropriate / <input type="checkbox"/> Not appropriate
01-Aug-24	7:30	Location-2: Construction Site (WTP) <input checked="" type="checkbox"/> Appropriate / <input type="checkbox"/> Not appropriate
01-Aug-24	8:30	Location-3: Temporary Disposal Area (WTP) <input checked="" type="checkbox"/> Appropriate / <input type="checkbox"/> Not appropriate
01-Aug-24	15:30	Location-4: waste Dumping (Public Garbage Dump Area) <input checked="" type="checkbox"/> Appropriate / <input type="checkbox"/> Not appropriate
01-Aug-24	15:00	Location-5: Stockyard of Pipeline <input checked="" type="checkbox"/> Appropriate / <input type="checkbox"/> Not appropriate

13. Plan of safety transportation

Others

Monitoring item:		Monitoring indicator:
Plan of safety transportation		Procedure: Plan check
		Reference Standard: Appropriate or not
		Frequency: At planning
Location		(Intake Facility and Water Treatment Plant)
Date	Time	Results
01-Aug-24	8:00	Location: WTP (Treatment facilities) <input checked="" type="checkbox"/> Appropriate / <input type="checkbox"/> Not appropriate
01-Aug-24	8:30	Location: INTAKE (Pump Room, Channel, and Cofferdam) <input checked="" type="checkbox"/> Appropriate / <input type="checkbox"/> Not appropriate

14. Waste (Treatment Sludge)**Monthly**

Monitoring item:		Monitoring indicator:
Waste (Treatment Sludge)		Procedure: Patrol Reference Standard: Appropriate or not Frequency: Monthly
Location		(Intake Facility and Water Treatment Plant)
Date	Time	Results
No have		Appropriate / Not appropriate Measures to be taken (if result is not acceptable);

15. Land for waste dumping**Others**

Monitoring item:		Monitoring indicator:
Land for waste dumping		Procedure: Procedure check Reference Standard: Appropriate or not Frequency: At contract agreement
Location-1		Temporary Disposal Area (WTP)
Location-2		Waste Dumping (Public Garbage Dump Area)
Date	Time	Results
01-Aug	8:30	Location-3: Temporary Disposal Area (WTP) <input type="checkbox"/> Appropriate / <input type="checkbox"/> Not appropriate
01-Aug	15:00	Location-4: Waste Dumping (Public Garbage Dump Area) <input type="checkbox"/> Appropriate / <input type="checkbox"/> Not appropriate

16. Noise and vibration**Daily**

Monitoring item:		Monitoring indicator:
Noise and Vibration (Pump)		Procedure: Patrol and maintenance Reference Standard: Normal condition or not Frequency: Daily
Location		(Intake Facility and Water Treatment Plant)
Date	Time	Results
No have		Normal condition / Not normal condition Measures to be taken (if result is not acceptable);