

1) Monitoring Results of Noise / Vibration**Table M-1-1 Results (Noise)**

Item: Noise Unit: dB(A)

No.	Date	Measured Value						
		Intake Site	WTP Site	Pipeline site				
				St. 1	St. 2	St. 3	St. 4	St.5
Construction Phase : Period of time: 06:00 - 18:00								
1	August 14, 2017	-	52.6	-	-	-	-	-
2	August 15, 2017	51.3	-	-	-	-	-	-
3	August 18, 2017	-	-	57.4	47.0	-	-	-
4	August 19, 2017	-	-	-	-	55.6	-	-
5	August 22, 2017	-	-	-	-	-	50.7	-
Construction Phase : Period of time: 18:00 - 22:00								
1	August 15, 2017	-	41.8	-	-	-	-	-
2	August 16, 2017	48.3	-	-	-	-	-	-
3	August 18, 2017	-	-	42.6	-	-	-	-
4	August 21, 2017	-	-	-	44.0	-	-	-
5	August 22, 2017	-	-	-	-	48.7	-	-
6	August 23, 2017	-	-	-	-	-	43.8	-

Table M-1-2 Results (Vibration)

Item: Vibration Unit: dB(A)

No.	Date	Measured Value						
		Intake Site	WTP Site	Pipeline site				
				St. 1	St. 2	St. 3	St. 4	St.5
Construction Phase : Period of time: 06:00 - 18:00								
1	August 14, 2017	-	39.4	-	-	-	-	-
2	August 15, 2017	47.8	-	-	-	-	-	-
3	August 18, 2017	-	-	38.0	36.7	-	-	-
4	August 19, 2017	-	-	-	-	34.2	-	-
5	August 22, 2017	-	-	-	-	-	33.3	-
Construction Phase : Period of time: 18:00 - 22:00								
1	August 15, 2017	-	32.6	-	-	-	-	-
2	August 16, 2017	32.0	-	-	-	-	-	-
3	August 18, 2017	-	-	31.8	-	-	-	-
4	August 21, 2017	-	-	-	32.6	-	-	-
5	August 22, 2017	-	-	-	-	31.9	-	-
6	August 23, 2017	-	-	-	-	-	31.5	-

Table M-1-3 Station

Measured Station	Adopted Standard	Detailed Location
St.1	National Standard (Residential Area)	WSP 2-3, St. 0+860 (Arrival Shaft)
St. 2	National Standard (Residential Area)	WSP 2-3, St. 1+230 (Departure Shaft)
St. 3	National Standard (Residential Area)	WSP 1-2, St. 1+850 (Raw Water Pipeline)
St. 4	National Standard (Residential Area)	WSP 5-1, St. 1+085 (PJ2 Under Railway)

Table M-1-4 National Standard Value for Noise (Cambodia)

Type of Area	Standard Value (LAeq) in dB(A)		
	6:00 – 18:00	18:00 – 22:00	22:00 – 6:00
Quiet Areas (Hospital, Library, School, Kindergarten)	45	40	35
Residential Areas (Hotel, Administrative Office, Flat)	60	50	45
Commercial and Service Areas and Area of businesses	70	65	50
Small industrial factories mingling in residential area	75	70	50

Table M-1-5 National Standard Value for Vibration (Cambodia)

Standard Value (Leq) in dB(A)		
6:00 – 18:00	18:00 – 22:00	22:00 – 6:00
65	60	60

2) Monitoring Results of Dust Pollution**Table M-2-1 Results**

Item: Dust Mark: “✓” if Watering is done

No.	Date	Watering Result						
		Intake Site	WTP Site	Pipeline site				
				St. 1	St. 2	St. 3	St. 4	St. 5
Construction Phase – 2 nd Year								
1	August 10, 2017	✓	✓	✓	✓	-	-	-
2	August 22, 2017	✓	✓	-	-	✓	✓	-
3	August 25, 2017	✓	✓	-	-	-	-	✓

Table M-2-2 Station

Observed Station	Detailed Location	Remark
St.1	WSP 2-3, St. 1+230	Pipe Jacking Departure Shaft
St. 2	WSP 4-2, St. 0+860	HDPE dia. 160 mm
St. 3	WSP 5-1, St. 1+095	HDPE dia. 110 mm
St. 4	WSP 1-2 & RWT, St. 1+930	HDPE dia. 160 mm & DIP ND 400
St. 5	WSP 15-1, St. 1+580	HDPE dia. 225 mm

THE PROJECT FOR EXPANSION OF WATER SUPPLY SYSTEM IN KAMPOT

INSPECTION PICTURES

Form N^o: KHPE-KP/QF-004

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Inspection Item:

**Sound and Vibration
Monitoring**

Date: 14-Aug-2017

Location:

Water Treatment Plant

Description:

Residential Area (06:00-18:00)



Inspection Item:

**Sound and Vibration
Monitoring**

Date: 15-Aug-2017

Location:

Water Treatment Plant

Description:

Residential Area (18:00-22:00)

Remark:

THE PROJECT FOR EXPANSION OF WATER SUPPLY SYSTEM IN KAMPOT

INSPECTION PICTURES

Form N^o: KHPE-KP/QF-004

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Inspection Item:

**Sound and Vibration
Monitoring**

Date: 15-Aug-2017

Location:

Intake Facility

Description:

Residential Area (06:00-18:00)



Inspection Item:

**Sound and Vibration
Monitoring**

Date: 16-Aug-2017

Location:

Intake Facility

Description:

Residential Area (18:00-22:00)

Remark:

Handwritten signature or mark.

THE PROJECT FOR EXPANSION OF WATER SUPPLY SYSTEM IN KAMPOT

INSPECTION PICTURES

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Inspection Item:

**Sound and Vibration
Monitoring**

Date: 18-Aug-2017

Location:

Pipe Jacking Arrival

Description:

Residential Area (06:00-18:00)



Inspection Item:

**Sound and Vibration
Monitoring**

Date: 18-Aug-2017

Location:

Pipe Jacking Arrival

Description:

Residential Area (18:00-22:00)

Remark:

AP

THE PROJECT FOR EXPANSION OF WATER SUPPLY SYSTEM IN KAMPOT

INSPECTION PICTURES

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Inspection Item:

**Sound and Vibration
Monitoring**

Date: 18-Aug-2017

Location:

Pipe Jacking Departure

Description:

Residential Area (06:00-18:00)



Inspection Item:

**Sound and Vibration
Monitoring**

Date: 21-Aug-2017

Location:

Pipe Jacking Departure

Description:

Residential Area (18:00-22:00)

Remark:

A handwritten signature or mark in blue ink, consisting of a stylized 'A' or similar shape.

THE PROJECT FOR EXPANSION OF WATER SUPPLY SYSTEM IN KAMPOT

INSPECTION PICTURES

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Inspection Item:

**Sound and Vibration
Monitoring**

Date: 19-Aug-2017

Location:

**Pipeline Work
(WSP 1-2, St. 1+850)**

Description:

Residential Area (06:00-18:00)



Inspection Item:

**Sound and Vibration
Monitoring**

Date: 22-Aug-2017

Location:

**Pipeline Work
(WSP 1-2, St. 1+850)**

Description:

Residential Area (18:00-22:00)

Remark:

[Signature]

THE PROJECT FOR EXPANSION OF WATER SUPPLY SYSTEM IN KAMPOT

INSPECTION PICTURES

Form N^o: KHPE-KP/QF-004

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Inspection Item:

**Sound and Vibration
Monitoring**

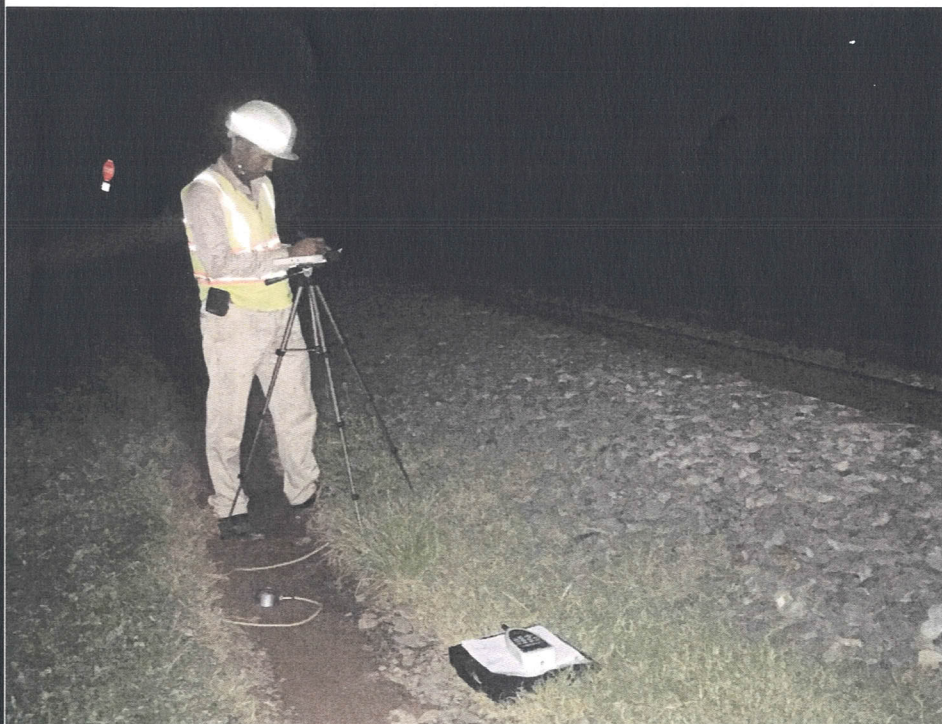
Date: 22-Aug-2017

Location:

**Pipeline Work
(WSP 5-1, St. 1+085)**

Description:

Residential Area (06:00-18:00)



Inspection Item:

**Sound and Vibration
Monitoring**

Date: 23-Aug-2017

Location:

**Pipeline Work
(WSP 5-1, St. 1+085)**

Description:

Residential Area (18:00-22:00)

Remark:

1. General Information

As specified in Environmental Management and Monitoring Plan, water test was conducted for environmental measuring of water quality. Collection of water samples was attended by SMCC and NSCC representatives. Samples were collected in 3 locations as below:



Location 1: Intake Facility ✓

Location 2: Pipe Jacking Area (Arrival Shaft) ✓

Location 3: Pipe Jacking Area (Departure Shaft) ✓

Samples were then brought to RDI Laboratory for both physical and chemical tests.

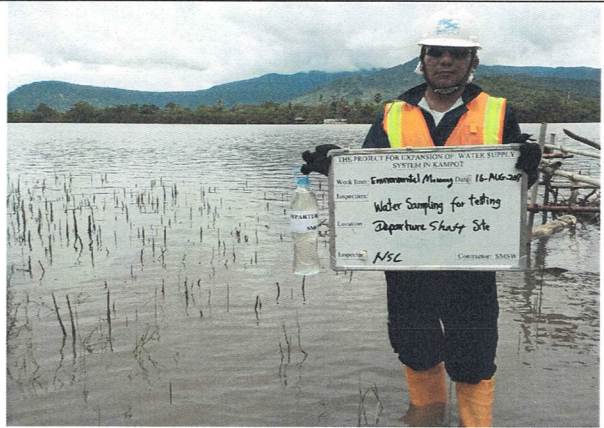
2. Water Sampling Photos

<p>“Collection of Water Sample at Intake Facility”</p> <p>(Photo S-1)</p> <p>Date : 16-08-2017 ✓</p>	
<p>“Collection of Water Sample at Pipe Jacking Area (Arrival Shaft)”</p> <p>(Photo S-2)</p> <p>Date : 16-08-2017 ✓</p>	

“Collection of Water Sample at Pipe Jacking Area (Departure Shaft)”

(Photo S-3)

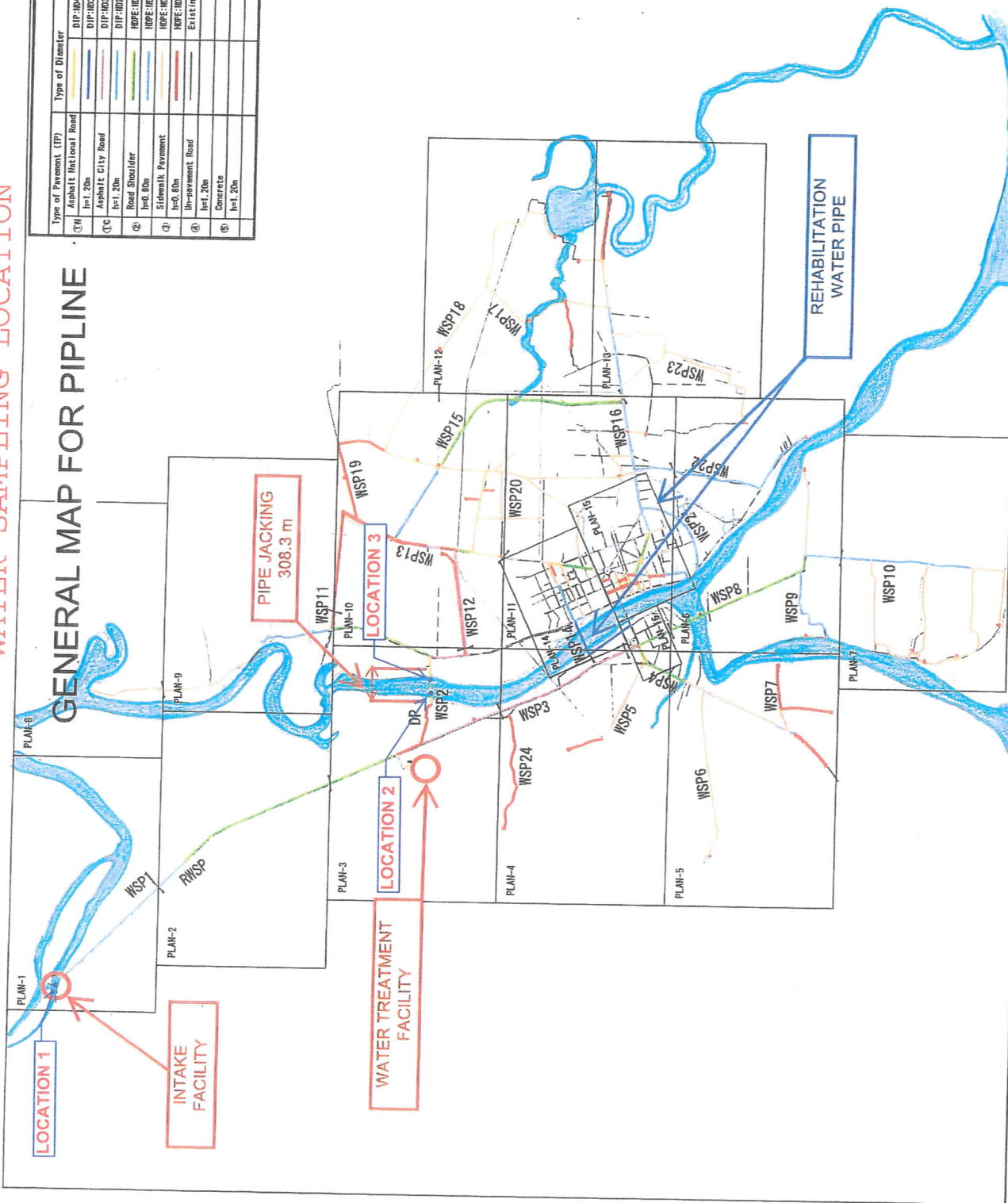
Date : 16-08-2017 ✓




ATTACHMENT 1
WATER SAMPLING LOCATION



LEGEND			
Type of Pavement (TP)	Type of Diameter	Abbreviation	
ASphalt Interlaced Road	DIP: 100000	IS	Inverted Siphon
h=1.20m	DIP: 100500	OC	Over Cross
ASphalt City Road	DIP: 100500	ISB	Inverted siphon Railway
h=1.20m	DIP: 100500	AP	Bridge-attached Pipe
Road Shoulder	RDPE: 100 (00) 225	PB	Pipe Boom
h=0.80m	RDPE: 100 (00) 160	DR	Drain Pipe
Sidewalk Pavement	RDPE: 100 (00) 110	RE	Reducer
h=0.80m	RDPE: 100 (00) 63	T	Tea
Un-pavement Road	Existing Pipe	BF	Blank Flange
h=1.20m		F50	Flanged Socket
Concrete		F50	Flanged Spigt
		MA	Flange Adaptor
		SF	State Flange

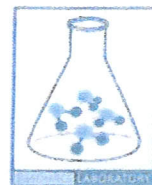


<p>PROJECT</p> <p>THE PROJECT FOR EXPANSION OF WATER SUPPLY SYSTEM IN KAMPOT</p>	<p>DESCRIPTION General Map for Pipeline Network.</p>	<p> MINISTRY OF INDUSTRY & HANDICRAFT</p>	<p>APPROVED BY</p>	<p>DATE 2015.12.15</p>	<p>DRAWING NO. K-12-1001</p>
		<p>NIHON SUJIDO CONSULTANTS CO., LTD. WATER AND SEWER BUREAU, CITY OF KITAKYUSHU</p>	<p>PREPARED BY</p>	<p>DATE 2015.12.15</p>	<p>SCALE 1:500000</p>

ATTACHMENT 2
WATER TEST RESULTS



Resource Laboratory Water Analytical Results



Client: Sumitomo Mitsui Construction Co., Ltd.

Water Source: River

Date Received: 16-Aug-17

Province: Kampot

Collection Date: 17-Aug-17

District: NA

of samples: 3

Commune: NA

Preservation: Regular

Village: NA

Sample ID:	Pipe Jacking Arrival					
Parameter	Results	Units	Method	Date Analyzed	DL	SDWPC
BOD5	0.5	DO mg/L	BOD5	17-Aug-2017		80
COD	22	DO mg/L	D, CS	17-Aug-2017	-	100
Total Suspended Solids	0	mg/L	Filtration	17-Aug-2017	-	80
Conductivity	60	µS/cm	Meter	17-Aug-2017	-	-
Dissolved Oxygen	6.9	DO mg/L	Meter	17-Aug-2017	-	>1
pH	7.6	pH units	Meter	17-Aug-2017	-	5.0 - 9.0
Total Dissolved Solids	41	mg/L	Meter	17-Aug-2017	-	2000
Turbidity	12.8	NTU	Meter	17-Aug-2017	-	-
Temperature	28.4	° Celcius	Probe	17-Aug-2017	-	45

SDWPC = Sub-Decree on Water Pollution Control, No: 27 ANRK.BK Phnom Penh, April 06, 1999, Annex 2

Exceeds Sub-Decree on Water Pollution Control

DL = Detection Limit

Date: 22-Aug-2017

Certified by
Project Manager

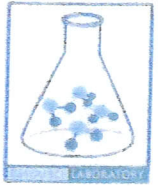

Prak Savoeun



Address: #50A, Royal Brick Road, Preah Thum Village, Sangkat Kbal Koh, Khan Chbar Ampov, Phnom Penh, Cambodia
Lab Phone: 017 794 393, Office Phone: 017 778 533, Lab Email: lab@rdic.org, Website: www.rdic.org



Resource Laboratory Water Analytical Results



Client: Sumitomo Mitsui Construction Co., Ltd.

Water Source: *River*

Date Received: 16-Aug-17

Province: *Kampot*

Collection Date: 17-Aug-17

District: *NA*

of samples: *3*

Commune: *NA*

Preservation: *Regular*

Village: *NA*

Sample ID: <i>Pipe Jacking Departure</i>						
Parameter	Results	Units	Method	Date Analyzed	DL	SDWPC
BOD5	0.4	DO mg/L	BOD5	17-Aug-2017	-	80
COD	17	DO mg/L	D, CS	17-Aug-2017	-	100
Total Suspended Solids	5	mg/L	Filtration	17-Aug-2017	-	80
Conductivity	60	µS/cm	Meter	17-Aug-2017	-	-
Dissolved Oxygen	7.2	DO mg/L	Meter	17-Aug-2017	-	>1
pH	8.4	pH units	Meter	17-Aug-2017	-	5.0 - 9.0
Total Dissolved Solids	44	mg/L	Meter	17-Aug-2017	-	2000
Turbidity	17.1	NTU	Meter	17-Aug-2017	-	-
Temperature	28.4	° Celcius	Probe	17-Aug-2017	-	45

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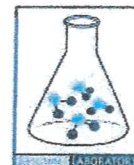


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Resource Laboratory Water Analytical Results



Client: Sumitomo Mitsui Construction Co., Ltd.

Water Source: **River**

Date Received: 16-Aug-17

Province: **Kampot**

Collection Date: 17-Aug-17

District: **NA**

of samples: **1**

Commune: **NA**

Preservation: **Regular**

Village: **NA**

Sample ID:	In Take Facility					
Parameter	Results	Units	Method	Date Analyzed	DL	SDWPC
BOD5	0.4	DO mg/L	BOD5	17-Aug-2017		80
COD	11	DO mg/L	D. CS	17-Aug-2017		100
Total Suspended Solids	0	mg/L	Filtration	17-Aug-2017		80
Conductivity	13	µS/cm	Meter	17-Aug-2017		-
Dissolved Oxygen	7.2	DO mg/L	Meter	17-Aug-2017		>1
pH	7.8	pH units	Meter	25-Aug-2017		5.0 - 9.0
Total Dissolved Solids	9	mg/L	Meter	17-Aug-2017		2000
Turbidity	2.33	NTU	Meter	17-Aug-2017		-
Temperature	26.5	Celsius	Probe	17-Aug-2017		45

SDWPC = Sub-Decree on Water Pollution Control, No: 27 ANRKBK Phnom Penh, April 06, 1999, Annex 2

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