Environmental Monitoring Plan (For the Project Construction Phase)

1. North Nawin (March, 2017)

Monitoring Form (For the Project Construction Phase)

(North Nawin Dam, March, 2017)

(1) Response and actions by the government

Monitoring Item	Monitoring Results during Report Period	Responsible Agency
Number and contents of formal comments made by the public	No comment	CON(2) and MDBW
Number and contents of responses from the people	No response	CON(2) and MDBW

(2) Air Pollution

Item	Unit	Measured Value (Mean)	Measured Value (Max)	Country's Standards	Referred Japanese Standards	Remarks (Measurement Point, Frequency, Method, etc.)	Responsible Agency
At construction site							
SO_2	ppm	0.00	0.00	-	average daily less or equal 0.04ppm/hr and less or equal 0.1ppm/hr	under limit	Investigation Branch
CO	ppm	0.00	0.00	-	average daily less or equal 10ppm/hr and average 8hr less or equal 20ppm/hr	under limit	Investigation Branch
SPM	mg/m^3	0.20	0.70	-	average daily less or equal 0.10mg/m^3/hr and less or equal 0.20mg/m^3/hr	over limit	Investigation Branch
NO_2	ppm	0.00	0.00		average daily less or equal 0.04 - 0.06ppm/hr	under limit	Investigation Branch
Ox	ppm	0.00	0.00		less or equal 0.06ppm/hr	under limit	Investigation Branch

(3) Waste

Environmental parameter	Monitoring results	Measures taken	Monitoring date	Responsible Agency
Excavated soils and old bricks	Properly handled	confirmed by check sheet for safety control	every day	CON(2) and MDBW

(4) Noise / Vibration

Item	Unit	Measured	Measured	Country's	Referred	Remarks	Responsible

		Value (Mean)	Value (Max)	Standards	Japanese Standards	(Measurement Point, Frequency, Method, etc.)	Agency
Noise	dB	61.5	70.5	-	85	3 points, March, 2017	Investigation Branch
Vibration	dB	37.7	49.1	-	75	3 points, March, 2017	Investigation Branch

(5) Working environment (Include working safety)/ Accident

Environmental parameter	Monitoring results	Measures taken	Monitoring date	Responsible Agency
Safety check for carrying the heavy machineries into the work area.	All right	confirmed by check sheet for safety control	Every day	CON(2) and MDBW
Safety check for refueling car accessing the work sites.	All right	ditto	ditto	CON(2) and MDBW
Safety check for carrying-out of the heavy machineries from the work sites.	All right	ditto	ditto	CON(2) and MDBW
Checking of the heavy machineries if keeping correct routes and speed.	All right	ditto	ditto	CON(2) and MDBW
Installation of project sign board around the field.	All right	ditto	ditto	CON(2) and MDBW

Recommendations:

For SPM: To need frequent watering access roads especially near villages and working sites.

2. South Nawin (March, 2017)_

Monitoring Form (For the Project Construction Phase)

(South Nawin Dam, March, 2017)

(1) Response and actions by the government

Monitoring Item	Monitoring Results during Report Period	Responsible Agency
Number and contents of formal comments made by the public	No comment	CON(2) and MDBW
Number and contents of responses from the people	No response	CON(2) and MDBW

(2) Air Pollution

Item	Unit	Measured Value (Mean)	Measured Value (Max)	Country's Standards	Referred Japanese Standards	Remarks (Measurement Point,	Responsible Agency

						Frequency, Method, etc.)	
At construction site							
SO_2	ppm	0.00	0.00	-	average daily less or equal 0.04ppm/hr and less or equal 0.1ppm/hr	under limit	Investigation Branch
CO	ppm	0.00	0.00	-	average daily less or equal 10ppm/hr and average 8hr less or equal 20ppm/hr	under limit	Investigation Branch
SPM	mg/m^3	0.13	0.18	-	average daily less or equal $0.10mg/m^3/hr$ and less or equal $0.20mg/m^3/hr$	under limit	Investigation Branch
NO_2	ppm	0.00	0.00		average daily less or equal 0.04 - 0.06ppm/hr	under limit	Investigation Branch
Ox	ppm	0.00	0.00		less or equal 0.06ppm/hr	under limit	Investigation Branch

(3) Waste

Environmental parameter	Monitoring results	Measures taken	Monitoring date	Responsible Agency
Excavated soils and old bricks	Properly handled	confirmed by check sheet for safety control	every day	CON(2) and MDBW

(4) Noise / Vibration

Item	Unit	Measured Value (Mean)	Measured Value (Max)	Country's Standards	Referred Japanese Standards	Remarks (Measurement Point, Frequency, Method, etc.)	Responsible Agency
Noise	dB	59.5	71.3	-	85	3 points, March, 2017	Investigation Branch
Vibration	dB	39.2	49.1	-	75	3 points, March, 2017	Investigation Branch

(5) Working environment (Include working safety)/ Accident

Environmental parameter	Monitoring results	Measures taken	Monitoring date	Responsible Agency
Safety check for carrying the heavy machineries into the work area.	All right	confirmed by check sheet for safety control	Every day	CON(2) and MDBW
Safety check for refueling car accessing the work sites.	All right	ditto	ditto	CON(2) and MDBW
Safety check for carrying-out of the heavy machineries from	All right	ditto	ditto	CON(2) and MDBW

Environmental parameter	Monitoring results	Measures taken	Monitoring date	Responsible Agency
the work sites.				
Checking of the heavy machineries if keeping correct routes and speed.	All right	ditto	ditto	CON(2) and MDBW
Installation of project sign board around the field.	All right	ditto	ditto	CON(2) and MDBW

Recommendations:

For SPM: To need frequent watering access roads especially near villages and working sites.

3. Wegyi (March, 2017)

Monitoring Form (For the Project Construction Phase)

(Wegyi Dam, March, 2017)

(1) Response and actions by the government

Monitoring Item	Monitoring Results during Report Period	Responsible Agency
Number and contents of formal comments made by the public	No comment	CON(2) and MDBW
Number and contents of responses from the people	No response	CON(2) and MDBW

(2) Air Pollution

Item	Unit	Measured Value (Mean)	Measured Value (Max)	Country's Standards	Referred Japanese Standards	Remarks (Measurement Point, Frequency, Method, etc.)	Responsible Agency
At construction site							
SO_2	ppm	0.00	0.00	-	average daily less or equal 0.04ppm/hr and less or equal 0.1ppm/hr	under limit	Investigation Branch
CO	ppm	0.00	0.00	-	average daily less or equal 10ppm/hr and average 8hr less or equal 20ppm/hr	under limit	Investigation Branch
SPM	mg/m^3	0.11	0.14	-	average daily less or equal $0.10mg/m^3/hr$ and less or equal $0.20mg/m^3/hr$	under limit	Investigation Branch
NO_2	ppm	0.00	0.00		average daily less or equal 0.04 - 0.06ppm/hr	under limit	Investigation Branch

Ox	ppm	0.00	0.00		less or equal 0.06ppm/hr	under limit	Investigation Branch

(3) Waste

Environmental parameter	Monitoring results	Measures taken	Monitoring date	Responsible Agency
Excavated soils	Properly handled	confirmed by check sheet for safety control	every day	CON(2) and MDBW

(4) Noise / Vibration

Item	Unit	Measured Value (Mean)	Measured Value (Max)	Country's Standards	Referred Japanese Standards	Remarks (Measurement Point, Frequency, Method, etc.)	Responsible Agency
Noise	dB	58.8	72.3	-	85	3 points, March, 2017	Investigation Branch
Vibration	dB	32.4	35.9	-	75	3 points, March, 2017	Investigation Branch

(5) Working environment (Include working safety)/ Accident

Environmental parameter	Monitoring results	Measures taken	Monitoring date	Responsible Agency
Safety check for carrying the heavy machineries into the work area.	All right	confirmed by check sheet for safety control	Every day	CON(2) and MDBW
Safety check for refueling car accessing the work sites.	All right	ditto	ditto	CON(2) and MDBW
Safety check for carrying-out of the heavy machineries from the work sites.	All right	ditto	ditto	CON(2) and MDBW
Checking of the heavy machineries if keeping correct routes and speed.	All right	ditto	ditto	CON(2) and MDBW
Installation of project sign board around the field.	All right	ditto	ditto	CON(2) and MDBW

Recommendations:

For SPM: To need frequent watering access roads especially near villages and working sites.

4. Taung Nyo (March, 2017)_

Monitoring Form (For the Project Construction Phase)

(Taung Nyo Dam, March, 2017)

(1) Response and actions by the government

Monitoring Item	Monitoring Results during Report Period	Responsible Agency
Number and contents of formal comments made by the public	No comment	CON(2) and MDBW
Number and contents of responses from the people	No response	CON(2) and MDBW

(2) Air Pollution

Item	Unit	Measured Value (Mean)	Measured Value (Max)	Country's Standards	Referred Japanese Standards	Remarks (Measurement Point, Frequency, Method, etc.)	Responsible Agency
At construction site							
SO_2	ppm	0.00	0.00	-	average daily less or equal 0.04ppm/hr and less or equal 0.1ppm/hr	under limit	Investigation Branch
CO	ppm	0.00	0.00	-	average daily less or equal 10ppm/hr and average 8hr less or equal 20ppm/hr	under limit	Investigation Branch
SPM	mg/m^3	0.04	0.07	-	average daily less or equal 0.10mg/m^3/hr and less or equal 0.20mg/m^3/hr	under limit	Investigation Branch
NO_2	ppm	0.00	0.00		average daily less or equal 0.04 - 0.06ppm/hr	under limit	Investigation Branch
Ox	ppm	0.00	0.00		less or equal 0.06ppm/hr	under limit	Investigation Branch

(3) Waste

Environmental parameter	Monitoring results	Measures taken	Monitoring date	Responsible Agency

Environmental parameter	Monitoring results	Measures taken	Monitoring date	Responsible Agency
Excavated soils	Properly handled	confirmed by check sheet for safety control	every day	CON(2) and MDBW

(4) Noise / Vibration

Item	Unit	Measured Value (Mean)	Measured Value (Max)	Country's Standards	Referred Japanese Standards	Remarks (Measurement Point, Frequency, Method, etc.)	Responsible Agency
Noise	dB	62.2	74.7	-	85	3 points, March, 2017	Investigation Branch
Vibration	dB	42.7	50.1	-	75	3 points, March, 2017	Investigation Branch

(5) Working environment (Include working safety)/ Accident

Environmental parameter	Monitoring results	Measures taken	Monitoring date	Responsible Agency
Safety check for carrying the heavy machineries into the work area.	All right	confirmed by check sheet for safety control	Every day	CON(2) and MDBW
Safety check for refueling car accessing the work sites.	All right	ditto	ditto	CON(2) and MDBW
Safety check for carrying-out of the heavy machineries from the work sites.	All right	ditto	ditto	CON(2) and MDBW
Checking of the heavy machineries if keeping correct routes and speed.	All right	ditto	ditto	CON(2) and MDBW
Installation of project sign board around the field.	All right	ditto	ditto	CON(2) and MDBW

Recommendations:

For SPM: To need frequent watering access roads especially near villages and working sites.