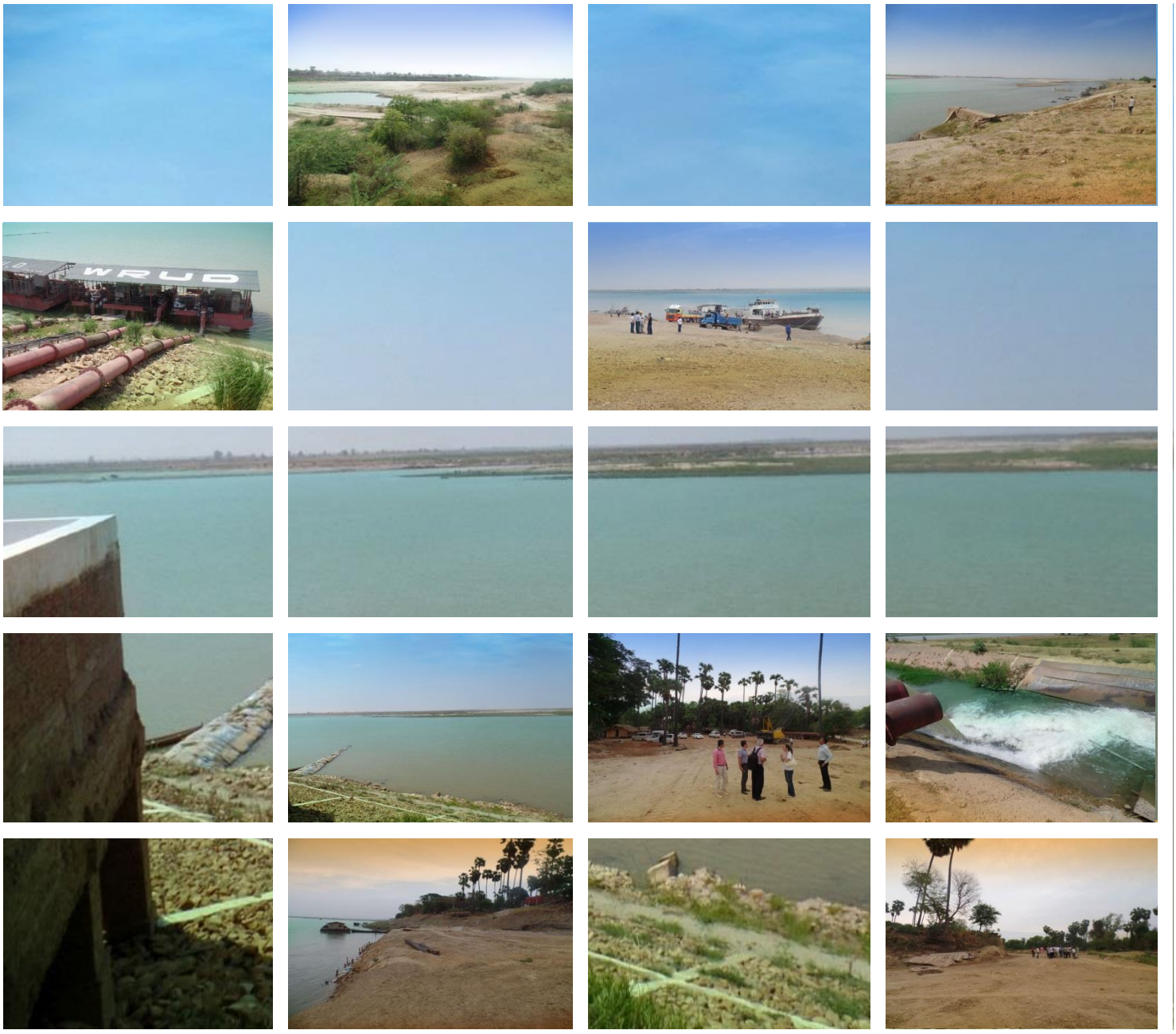

ESIA Report for Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station, Myanmar

September 2015

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REPORT

Sembcorp Utilities Pte. Ltd.

Environmental and Social Impact Assessment (ESIA) Report for Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station, Myanmar

September 2015

Prepared by: ERM-Siam Co Ltd

For and on behalf of ERM-Siam Co Ltd

Approved by: Cristina Pellegrino

Signed:

Position: IAP Partner

Date: 15 September 2015

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ABBREVIATIONS

ADB	Asian Development Bank
AIDS	Acquired Immune Deficiency Syndrome
ALARP	As Low As Reasonably Practicable
AoI	Area of Influence
API	American Petroleum Institute
ASEAN	Association of Southeast Asian Nations
ASRs	Air sensitive Receivers
AZE	Alliance for Zero Extinction
BOD	Biochemical Oxygen Demand
BOT	Build, Operate and Transfer
CBP	Concrete Batching Plant
CCCW	Closed Cycle Cooling Water system
CCGT	Combined Cycle Gas Turbine
CCW	Closed Circuit Water system
CDP	Community Development Plan
CEDAW	Convention on Elimination of All Forms of Discrimination against Women
CEO	Chief Executive Officer
CEMS	Continuous Emission Monitoring System
CH	Critical Habitat
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLO	Community Liaison Officer
CO_2e	Carbon dioxide equivalent
COC	Cycles of Concentration
COD	Commercial Operation Date
COD	Chemical Oxygen Demand
CR	Critically Endangered
DC	Direct Current
DD	Data Deficient
DICA	Directorate of Investment and Company Administration
DLN	Dry Low NOx burners
ECC	Environmental Compliance Certificate
EHS Guidelines	Environmental Health and Safety (EHS) Guidelines
EIA	Environmental Impact Assessments
EM&A	Environmental Monitoring and Audit
EPC contractor	Engineering, Procurement and Construction contractor
EPs	Equator Principles
EQS	Environmental Quality Standards
ERM	Environmental Resources Management
ESHIA	Environmental Social and Health Impact Assessments
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
FAO	Food and Agriculture Organization
FDS	Fire Detection System
FID	Foreign Investment Department

ABBREVIATIONS

GAD	General Administration Department
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIIP	Good International Industry Practice
GISD	Global Invasive Species Database
GLCs	Ground Level Concentrations
GOM	Government of Myanmar
GT	Gas Turbine
GTG	Gas Turbine Generator
GWh	Gigawatt-hours
GWP	Global Warming Potential
Ha	Hectares
HAZID	Hazard Identification
HAZOP	Hazard and Operability
HEMP	Hazard and Effects Management Process
HIV	Human Immunodeficiency Virus
HP	High Pressure
HPGE	Hydropower Generation Enterprise
HRSG	Heat Recovery System Generator
IEE	Initial Environmental Examination
IFC	International Finance Corporation
IP	Intermediate Pressure
IPIECA	International Petroleum Industry Environment Conservation Association
IPP	Independent Power Producer
ITTA	International Tropical Timber Agreement
IWTS	Industrial Wastewater Treatment System
KBAs	Key Biodiversity Areas
Km	Kilometer
kWh	Kilowatt-hours
LC	Least Concern
LCU	Landscape Character Unit
LNG	Liquefied Natural Gas
LP	Low Pressure
LPG	Liquefied Petroleum Gas
LSD	Low Sulphur Diesel
LTSA	Long Term Service Agreement
MEPE	Myanmar Electric Power Enterprise
MIC	Myanmar Investment Commission
MMIP	Mandalay Myotha Industrial Park
MNPED	Ministry of National Planning and Economic Development
MOAI	Ministry of Agriculture and Irrigation
MOECAF	Ministry of Environmental Conservation and Forestry
MOEP	Ministry of Electric Power
MOGE	Myanmar Oil and Gas Enterprise
MOI	Ministry of Industry
MSDS	Material Safety Data Sheet
MSL	Mean Sea Level

ABBREVIATIONS

$MtCO_2e$	million tons of CO_2 equivalent
MTE	Myanmar Timber Enterprise
MW	Megawatt
NCEA	National Commission for Environmental Affairs
NEMC	National Energy Management Committee
NEP	National Environment Policy
NGOs	Non-Government Organizations
NO_2	Nitrogen dioxide
NSDS	National Sustainable Development Strategy
NSRs	Noise Sensitive Receivers
NT	Near Threatened
O&M	Operation and Maintenance
OECD	Organization for Economic Cooperation and Development
OH&S	Occupational Health and Safety
PAs	Protected Areas
PCP	Public Communications Policy
PEECC	Packaged Electrical and Electronic Control Compartment
PM	Particulate Matters
PM_{10}	Particles less than 10 micrometers in diameter (or respirable suspended particulates)
$PM_{2.5}$	Particles less than 2.5 micrometers in diameter (or fine suspended particulates)
PME	Powered Mechanical Equipment
PPA	Power Purchase Agreement
PPE	Personal Protective Equipment
PS	Performance Standard
QRA	Quantitative Risk Assessment
RDMP	Risk and Disaster Management Plan
REM	Resource and Environment Myanmar Ltd
RH	Reheat
RoW	Right of Way
SEP	Stakeholder Engagement Plan
SEZ	Special Economic Zone
SIA	Social Impact Assessment
SO_2	Sulphur dioxide
SPLs	Sound pressure levels
SS	Suspended Solids
STG	Steam Turbine Generator
STP	Sewage Treatment Plant
SWL	Sound Power Level
TAR	Third Assessment Report
TB	Tuberculosis
TCB	Total Coliform Bacteria
TDS	Total Dissolved Solids
TJ	Terajoules
TSS	Total Suspended Solids
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development

ABBREVIATIONS

UNDHR	Universal Declaration of Human Rights
UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
VSR	Visually Sensitive Receptors
VU	Vulnerable
WBCSD	World Business Council for Sustainable Development
WBG	World Bank Group
WHO	World Health Organization
WRI	World Resources Institute
WWF	World Wide Fund for Nature
YESB	Yangon City Electricity Supply Board

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